

# BARCLAYS

## *Executive Doctorate*

*“Perceived Environmental Uncertainty: Examining  
The Implications For Strategy Development Processes  
Across Barclays Bank PLC”*

*Thesis  
Final Version*



<i>Lead Supervisor:</i>	<i>Professor Malcolm McDonald</i>
<i>Panel Supervisor:</i>	<i>Doctor Frank Fishwick</i>
<i>Panel Chair:</i>	<i>Doctor Joe Jaina</i>
<i>Author:</i>	<i>Jansen Ryder</i>
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## **1. RESEARCH ABSTRACT**

The managerial issue being addressed in this research is perceived environmental uncertainty (experienced by corporate strategists) and its implications for strategy development processes at the strategic business unit level (or business-level strategy) across Barclays Bank PLC.

The objectives of the research are achieved through: an extensive review of the strategy and uncertainty literature (Project 1); a series of semi-structured interviews with fifteen members of the Group Executive Committee at Barclays (Project 2); and the completion of 731 self-administered questionnaires covering the seventeen strategic business units within the Barclays portfolio (Project 3).

Through its findings, this research concludes that any link between perceived environmental uncertainty (at the corporate level) and strategy development processes (at the business unit level) across the Barclays portfolio is largely irrelevant. Strategists at Barclays are concerned mainly with the maximisation of shareholder value and concepts such as uncertainty, change and complexity are not within the managerial lexicon.

Based on this observation, strategy development at Barclays does not involve a carefully managed reciprocal relationship between the firm and its environment, or a skilfully manipulated balance of the degree of change and the level of complexity with which the organisation is deemed able to cope.

Strategy development involves the dedicated and ruthless stewardship of a highly successful and resilient business model that could not fail within the economic environment experienced during the period of this research (1999–2005). Consequently, the Bank's strategic capability (e.g. people) and assets (e.g. brand and technology) are geared towards protecting and developing the business model, or in simpler managerial terms, 'defending the money-printing machine'.

## **2. INTRODUCTION**

### **2.1 Background**

#### **2.1.1 The Origins Of Barclays Bank PLC**

Hudson Gurney (1900, p.140), the nineteenth-century East Anglian banker and descendant of the Barclays family, emphasised the importance of recognising the origins of Barclays Bank as a starting point for assessing its future:

“You may perhaps lay it down as a universal proposition, that he who judges merely by time present, judges wrong; and if you do not know what went before, you cannot calculate what follows after.”

The origins of Barclays Bank PLC can be traced to a modest business based in the heart of London’s financial district in the late seventeenth century. At the time, Lombard Street was the location of merchants, goldsmiths, jewellers and coin dealers, and of banking in its nascent stage (Ackrill and Hannah, 2001). John Freame founded the original goldsmith–banker partnership in Lombard Street in April 1690; it was to be the address of Barclays’ headquarters for over three hundred years.

John Freame was the son of Robert Freame, a prosperous Quaker textile merchant from Cirencester in Gloucestershire. The Quaker connection was to prove critical to the development of the partnership and still has relevance for Barclays today. Freame began trading as a goldsmith after he had completed his seven-year apprenticeship and became a freeman of the City of London. Freame’s partner, Thomas Gould, was also a Quaker. He was formally named in the business some months later, after he too completed his London apprenticeship and became a freeman of the City.

Similarly to the original partners, the Barclay family were also newcomers to London and had made their way by a judicious mixture of Quaker business connections and strategic marriages (Ackrill and Hannah, 2001). David Barclay was the second son of a Scottish Quaker family of landed gentry. His father, Robert Barclay ‘the Apologist’, was influential in Quaker politics and long revered in Quaker circles – according to Ackrill and Hannah a reverence that is perhaps second only to that accorded to the founder of the Quakers himself, George Fox.

Robert Barclay died in 1690 when David was still a child. As a result of his inheritance, David was able to fund a London apprenticeship and, in 1707, married Ann, daughter of a London linen draper, James Taylor. After Ann died, leaving David a widower turned 40, David Barclay married Priscilla Freame, John Freame’s daughter.

Ten years later, in 1733, James Barclay (David Barclay’s eldest son by his first wife) married Priscilla’s younger sister Sarah. James, already the stepson of a daughter of the founder, John Freame, joined the bank on becoming his son-in-law too. The Lombard Street bank was thereafter known as Freame & Barclay, Bankers.

As a private banking business in the eighteenth century the partnership thrived, keeping their clients’ gold deposits secure and lending to creditworthy monarchs and merchants. During the coming years the partnership operated under a variety of names before settling down to the name of Barclay, Bevan, Tritton & Co in 1783.

In 1896 twenty private banking businesses merged to form a new joint-stock bank. The senior partners of the new limited liability company, which was named Barclay & Company, were already connected through an intricate web of family, business and religious relationships (Ackrill and Hannah, 2001). The new company became known as ‘the Quaker Bank’, reflecting the family tradition of its Quaker founders.

The new Barclay & Company had 182 branches based predominantly in South East England, holding deposits in excess of £26m – a substantial sum at the time. The Bank expanded rapidly through the acquisition of competitors, including Bolithos in the South West of England in 1905, and the United Counties Bank in the Midlands in 1916. In 1917 the Bank became known as Barclays Bank Ltd, latterly known as Barclays Bank PLC, and the following year amalgamated with the London, Provincial and South Western Bank. This gave the Bank a distribution network of 1,837 branches and status as one of the ‘big five’ banks in the UK.

The latter half of the twentieth century brought further merger and acquisition activity with the purchase of Martins Bank in 1969, followed by the purchase of the Woolwich in 2000, and Gerrard Investment Co. in 2003.

The international development of the Barclays business began in earnest in 1925, with the merger of three banks – the Colonial Bank, the Anglo Egyptian Bank and the National Bank of South Africa. This merger added businesses in much of the old British Empire, primarily Africa, the Middle East and the West Indies.

International expansion gained momentum in 1981 when Barclays became the first foreign bank to file with the US Securities and Exchange Commission and raise long-term capital on the New York market. In 1986 Barclays became the first British bank to have its shares listed on the Tokyo and New York stock exchanges.

At the same time, Barclays’ global expansion was given added impetus with the creation of an investment banking operation. This has now developed into Barclays Capital, which manages larger corporate and institutional business. In 1995 Barclays purchased the US fund manager Wells Fargo Nikko Investment Advisers, and the business was successfully integrated with Barclays de Zoete Wedd to form Barclays Global Investors.

Over the course of the last three centuries Barclays has grown from a group of English Quaker partnerships to a truly global bank operating in Europe, the United States of America, Latin America, Africa, the Caribbean, Asia, the Middle East and Australasia.

### **2.1.2 Barclays: Building A Reputation As An Innovator And Pioneer**

Throughout its history Barclays has built a reputation as a pioneer in financing industry and retail banking, and this reputation has ramifications for the way the Group develops strategy today. Early signs of innovation and entrepreneurship were displayed back in 1697 when the Bank launched its first advertisement relating to a Gloucestershire client's lost horse at a race meeting in Newmarket. At the same time the Freame & Gould partnership was dealing in the stock of the Bank of England helping the new regime of William and Mary finance its debt more securely following the Glorious Revolution. The early eighteenth century saw the Group at the heart of financing the commercial activities of new pioneers in the Industrial Revolution. The Bank was a major stockholder in the Welsh Copper Company, and in 1703 financed the development by the London Lead Company of Dr. Edward Wright's reverberatory furnace for lead smelting.

In this new industrial age the role of Quaker bankers was critical to financing the pioneers of new large-scale industry. The Bank provided funding for the pioneering Stockton and Darlington Railway (1825), the Battersea Bridge (1771–2) and the Leeds–Liverpool Canal (1770–7). The new joint-stock bank of the late eighteenth century further enhanced its tradition of breaking new ground, being the first bank to formally recognise the emerging status of trade unions following the First World War, and the first to employ women in the 1920s. In 1956 Barclays was the first to promote a woman to the role of branch manager.

Over the last fifty years Barclays has further enhanced its reputation as a pioneer in large-scale retail banking through a series of innovative developments. In 1966 it was the first to launch the credit card into the UK, and the following year it was responsible for the first automated teller machine in the world. During the 1970s the Bank was the first to introduce personal bankers; in 1982 it was the first to re-open its branches on a Saturday; and it launched the first UK debit card in 1987. The 1990s were no different: in 1995 the Bank was the first to launch an internet-based website and in 1998 was the pioneer of the first 'drive thru' cash machine. In 2001 the Group maintained its reputation as an innovator of new products when it launched its OpenPlan product, the first bank to offer truly 'joined-up' banking.

### 2.1.3 The Strategy Development Process: Value-Based Management

As the research identified in Section 2.1.2, the development of strategy has been central to the evolution of Barclays Bank PLC. In September 2000, the Bank's new Chief Executive Officer, Matthew Barrett (2000, p.1), announced the Group's commitment to adopting value-based management as its new process for developing strategy:

“Positioning Barclays among the leading value-creating companies is my highest priority. This year we will move ‘managing for value’ to the top of the organisational agenda. Building a structure based on strategic business units was a step in the right direction, but now it’s time to put value creation at the heart of everything we do.”

Value-based management is a management philosophy that applies analytical tools and processes to focus an organisation on the single objective of creating shareholder value (Martin and Petty, 2000). Therefore the Barclays approach to developing strategy is based on the belief that the overriding goal is to maximise shareholder value over time, and at any point in time. Consequently this belief is intended to underpin all strategic decisions made within Barclays and is the key criterion that should never be compromised (Barrett, 2000).

The application of value-based management as the process for developing strategy across a portfolio of businesses involves a series of four rational steps (Condon and Goldstein, 1998). Initially the business creates the ‘*value model*’, which allows it to recognise which areas of the business create or destroy value, thereby allowing it to build a strategic plan. Second the organisation develops its ‘*value maximising strategy*’ by identifying and evaluating strategic options and choosing the option deemed to add the most value. Third, the business ‘*implements the strategy*’ by linking the drivers of value with the strategic initiatives to form the plan. The final step is the development of the ‘*value climate*’, which in Barclays ensures that its people understand their role in delivering value and empowers them to contribute to the maximisation of shareholder value.

The application of a rational model for developing strategy across a diverse portfolio of businesses, operating in very different environments, is pivotal to this research.

## 2.1.4 Barclays: Introducing The Portfolio Of Businesses

Today Barclays is a UK-based, sophisticated global financial services group engaged primarily in banking, investment banking and investment management. In terms of assets employed, Barclays is one of the largest financial services groups in the UK. It is also a leading provider of co-ordinated global services to multi-national corporations and financial institutions worldwide. The Group currently operates in over sixty countries with over 74,800 employees.

During the period of the research (1999–2005) Barclays was organised into seven business groupings (see Table 1 below):

*Table 1 – The Structure Of The Barclays Businesses 2002–3*

<b>Barclays' Businesses</b>	<b>Nature Of Business</b>
<b>Barclays Africa</b>	Provides a range of banking services to personal and corporate customers in North Africa, sub-Saharan Africa and islands in the Indian Ocean
<b>Barclaycard</b>	Provides more than 11m credit cards to personal and corporate customers in Europe, Africa and the Caribbean
<b>Barclays Capital</b>	The investment banking division, focused on financing, risk management and corporate finance advisory services. It is unique among investment banks in its exclusive concentration on these products and services
<b>Barclays Global Investors</b>	Manages financial assets principally for institutional customers such as pension funds. It is one of the world's largest institutional asset managers
<b>Barclays Private Clients</b>	The wealth management business providing personal financial services and asset management for affluent clients in over 160 countries
<b>Business Bank</b>	Provides a full range of corporate banking services to small, medium and large businesses in the UK
<b>UK Retail Bank</b>	Combines Barclays and Woolwich and provides a wide range of products and services to 14m personal customers in the UK.

**\*Source – Barclays Bank PLC, Audited Accounts 2003, Published February 2004**

## 2.1.5 Barclays' Performance In 2003: The Creation Of Shareholder Value

One aspect of the Barclays' business objectives that has remained constant since the days of the Quaker partnerships is the desire to create value for its owners or, in today's terms, its shareholders. During 2003 the Group achieved record pre-tax profits of £3,845m (economic profit: £1,420m). In the Barclays Bank PLC Audited Accounts, the Chief Executive Officer Matthew Barrett (2004, p.1) explains the importance of the 2003 results:

“These are strong results, which demonstrate the momentum we have generated over our first four-year goal period. We have strengthened our diversified portfolio of businesses while maintaining downward pressure on costs and a prudent approach to risk. As a result, we have achieved top quartile total shareholder return relative to our peers. This is an important milestone for Barclays.”

Again it is possible to draw parallels with the Quaker traditions of serving the community as the Group paid £1,067m in taxes, and contributed £32m to community involvement in education, the environment, the arts, sports, disability and social inclusion. The financial summary for 2003 is set out in Table 2 below:

Table 2 – Barclays Bank PLC: Financial Summary 2003

Financial Measure	2003 £m	2002 £m	% Variance
Operating income	12,411	11,327	9.57%
Operating expenses	-7,253	-6,624	9.50%
Provisions for bad and doubtful debts	-1,347	-1,484	-9.07%
Operating profit	3,812	3,218	18.46%
Profit before tax	3,845	3,205	19.97%
Profit after tax	2,769	2,250	23.06%
Economic profit	1,420	1,237	14.79%
Earnings per share	42.3p	33.7p	25.52%
Dividend per share	20.5p	18.35p	11.72%
Post-tax return on average shareholders' funds	17%	15%	2.00%

\*Source – Barclays Bank PLC, Audited Accounts 2003, Published February 2004

## 2.1.6 The Creation Of Shareholder Value: Economic Profit

A supporting goal of the Barclays Group during the four-year period (2000–2003) was to double economic profit. Economic profit is defined as:

“Profit after tax and minority interests plus certain gains (and losses) reported within the statement of total recognised gains and losses where they arise from the Group’s business activities and which are in respect of transactions with third parties, less a charge for the cost of average shareholders’ funds (which includes purchased goodwill).” (Barclays Bank PLC, 2004)

When computing economic profit, the cost of shareholders’ funds is calculated using the capital asset pricing model for the Group. The cost of equity comprises three key components: the equity risk premium, the market beta, and the risk-free rate of capital.

It is important to note that the success criterion across the Group is purely the measured growth of economic profits across the portfolio – against the four-year goal set out in the previous section. No consideration or weighting is given to additional competitive factors (or volatility), for example relative market growth across the portfolio or prevailing economic conditions. The performance of the seven clusters during 2003 is set out in Table 3 below:

*Table 3 – Value Creation: Economic Profit Across The Barclays Group In 2003*

	<b>2003 (£m)</b>	<b>% Contribution</b>	<b>2002 (£m)</b>	<b>% Variance</b>
Barclaycard	319	22.46%	267	19.48%
Barclays Africa	36	2.54%	22	63.64%
Barclays Capital	320	22.54%	178	79.78%
Barclays Private Clients	163	11.48%	328	-49.70%
UK Retail Bank	460	32.39%	395	16.46%
Business Bank	623	43.87%	574	8.54%
Barclays Global Investors	112	7.89%	56	100.00%
Head Office Functions	-98	-6.90%	-126	22.33%
Goodwill <sup>1</sup>	-442	-31.13%	-398	-11.06%
Variance To Shareholders Funds	-73	-5.14%	-59	-23.7%
<b>TOTAL</b>	<b>1,420</b>	<b>100.00%</b>	<b>1,237</b>	<b>14.79%</b>

\*Source – Barclays Bank PLC, Audited Accounts 2003, Published February 2004

<sup>1</sup> Cost of equity charge on purchased goodwill

### **2.1.7 Mapping The Future For Barclays: The Current Strategy**

After looking at the origins of Barclays Bank PLC, together with its current structure and performance, it is appropriate to take a look at what the future may bring through implementation of the current strategy. From the statement of strategic intent it is again possible to identify the recurring themes of: recognition as an innovator; close relationships with its people; caring for the community; and finally, adopting a value-based management approach. Of primary interest to this research from the strategy statement in the Barclays 2003 Audited Accounts is the Group's application of a very rational approach to the process of strategy development (Barclays Bank PLC, 2004, p.4):

“We aspire to be one of the most admired financial services organisations in the world, recognised as an innovative, customer-focused company that delivers superb products and services, ensures excellent careers for our people and contributes positively to the communities in which we live and work.

Our long-term strategy is to remain a financial services company. We will continue to grow in the UK, and build our business in retail and commercial banking outside the UK, with a bias towards continental Western Europe. We will develop our services and products for wealthy customers, and we will build our global businesses, such as investment banking and credit cards.

Our strategy also determines the way in which we will achieve our goals. This includes the way we're organised, our management beliefs and practices, and the way we behave towards our customers and each other.

Foremost among our practices is the use of a management framework that shapes the way in which we make business decisions, and ties all of our planning and operations to the creation of economic value.”

### **3. OVERALL SYNOPSIS: Linking The Research Projects**

#### **3.1 Identifying The Managerial Issue**

##### **3.1.1 Strategy Development Processes Across A Portfolio Of Businesses**

This section moves on to set out the managerial issue being addressed through this research, within the context of the introduction set out in Section 2, which recognised that Barclays has: a long and successful reputation as an innovator and pioneer; a strong sense of community responsibility; a real commitment to caring for and developing its people; continued the Quaker belief in the maximisation of shareholder value through the effective financing of industry and the provision of large-scale banking for the mass affluent retail market.

It is also clear from Section 2 that Barclays has a portfolio of strategic business units operating in very diverse competitive environments. Clearly these businesses operate in different markets. However they also differ in terms of: geographical locations, technologies, regulatory and legal obligations, distribution networks, brands, product and service offerings, customer bases, competitors, political and social surroundings, and economic surroundings.

Based on the above, and on the Group's commitment to the creation of shareholder value, reinforced through the application of value-based management as a process for developing strategy, it is possible to identify the managerial issue:

Within an organisation that has such a diverse portfolio of strategic business units, operating in very different competitive environments, experiencing varying degrees of uncertainty, change and complexity, what are the implications of different degrees of perceived environmental uncertainty for strategy development processes across the Barclays Group?

As a financial services organisation and international bank operating in the United Kingdom in the twenty-first century, the Barclays Group is regulated by the Financial Services Authority and as such is obligated to produce medium-term strategic plans. It is therefore not surprising that across the organisation there is a juxtaposition of terms like 'strategy development' and 'planning'. Consequently, the management issue for Barclays is to understand whether strategic plans are produced to support the implementation of corporate or business-level strategy, or whether such plans are developed to meet the Group's legal and regulatory obligations or satisfy the needs and expectations of key stakeholders.

Other key managerial issues associated with strategy development processes and the varying levels of perceived environmental uncertainty experienced by strategists across Barclays are:

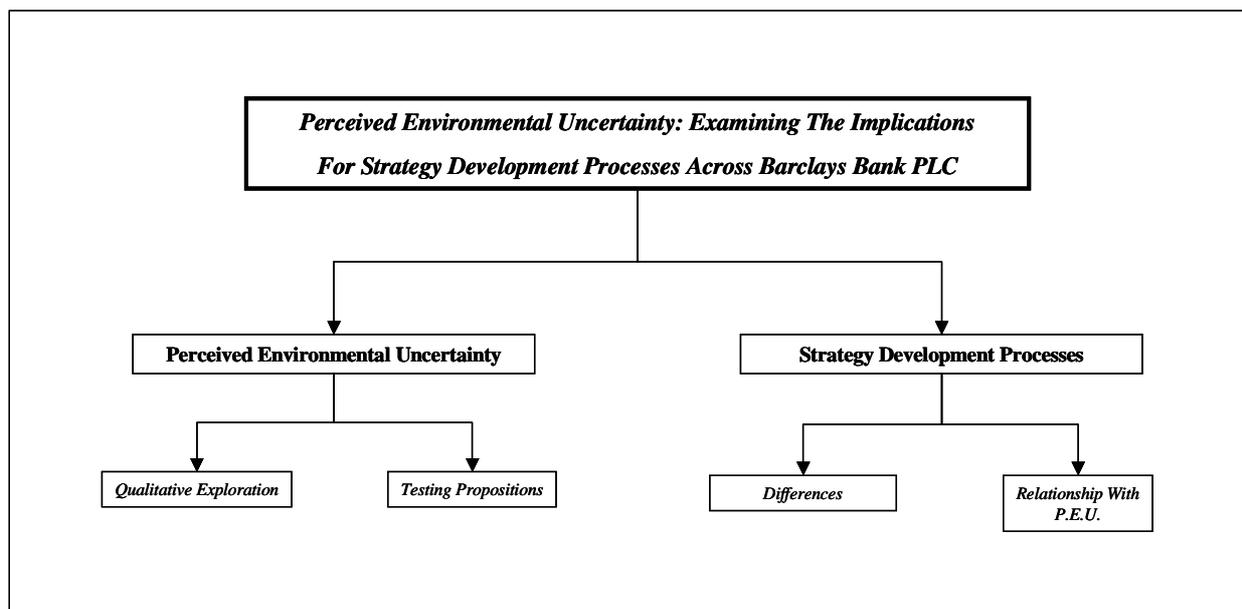
1. How appropriate is it for a Group that has such a diverse range of strategic business units to apply a single process for developing strategy (planning), based on a rational model for developing strategy (value-based management)?
2. Given the diversity of the various strategic business units within the Barclays Group, is the significant investment made in the development of strategic plans truly aligned to the organisational objective of maximising shareholder value?
3. When strategists within the Group are experiencing increased levels of perceived environmental uncertainty, is it appropriate for the organisation to rationally adopt less prescriptive processes for developing strategy, for example incrementalism, politics and the cultural approach to strategy development?
4. When strategists within the organisation are able to forecast that the Group is moving into a period where levels of perceived environmental uncertainty are likely to rise for strategists (for example, high levels of unemployment, high interest rates, economic recession or large merger and acquisition programmes), can the organisation take the opportunity to vary its process for developing strategy as appropriate?
5. It is important for corporate strategists in an organisation like Barclays to be aware that colleagues will experience different and varying levels of perceived environmental uncertainty. Consequently, is there an opportunity to vary the process for developing strategy in accordance with the individual's (or team's) experience of the competitive environment?

### 3.1.2 Breaking The Managerial Issue Down Into Its Component Parts

In order to address the managerial issue, the research investigates two aspects of the strategy development process at Barclays (see Figure 1). The first part is an exploratory study of the organisational context, through the identification of qualitative factors that create perceived environmental uncertainty. This part of the research then goes on to examine a series of propositions: first, the relationship between change and complexity as contributory factors to the phenomenon referred to as perceived environmental uncertainty; second, the level of consensus among strategists at Barclays; and finally, the relationship between perceived environmental uncertainty, the ability to cope, and the importance of being able to cope.

The second facet of the research identifies the processes used for developing strategy across the various strategic business units within the Barclays portfolio. Following this, the research investigates whether the strategic business units modify their strategy development processes in response to varying degrees of perceived environmental uncertainty; to ascertain how the Barclays Group maintains effectiveness in the above relationship in order to maximise shareholder value.

Figure 1 – Breaking The Managerial Issue Down Into Its Component Parts

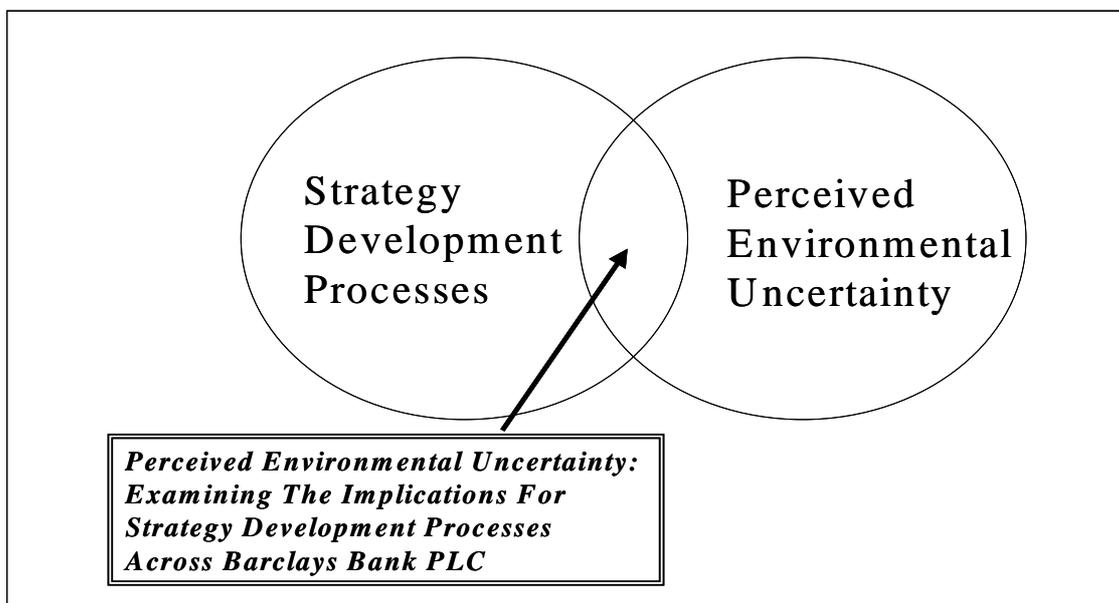


## 3.2 Theoretical Overview: Synthesis Of The Literature Review

### 3.2.1 The Linking Of Two Theoretical Concepts

This Executive Doctorate investigates a link between two theoretical concepts: strategy development processes at the strategic business unit level; and levels of perceived environmental uncertainty experienced by strategists on the Group Executive Committee at Barclays Bank PLC, illustrated in Figure 2 below:

*Figure 2 – Examining The Implications Of Perceived Environmental Uncertainty For Strategy Development*



In many ways, it is useful to regard the two theoretical concepts as separate studies. The research collected 731 questionnaires (Bailey, Johnson, and Daniels, 2000) from senior managers across the seventeen business units within the Barclays Group to discern the processes applied for developing strategy. At the same time (2003), the researcher interviewed fifteen members of the Group Executive Committee to ascertain their perspective on the level of perceived environmental uncertainty faced by the various businesses, the ability of each business unit to cope with such uncertainty and the importance of their being able to cope. The third aspect of the research, the key contribution, is to understand the relationship that exists between the two theoretical concepts and the ramifications of these findings for Barclays.

### **3.2.2 Summarising Key Theoretical Arguments Informing The Research**

Following an extensive review of the literature, this section identifies the central theoretical arguments that inform the study. However, prior to that it is important to clarify a twofold working assumption, namely that: a) the various businesses within the Barclays portfolio are of more value to Barclays than to anyone else, otherwise they would have been sold; and b) by the same token, no other organisation believes it could create significantly more value from these businesses than Barclays does, or they would have acquired them.

The theoretical starting point lies in the assertion that there is a reciprocal relationship between a firm and the environment within which it operates (Mintzberg, 1973). Therefore the challenge for top management is to ensure that the firm adapts to its external environment in order to remain viable and survive (Lenz, 1980; Chaffee, 1985). Senior management achieve an alignment or ‘fit’ (Hatch, 1997) between the external environment and the internal structure and processes of the firm, through a process which organisational theorists refer to as strategy.

The next theoretical argument pertains to an understanding of how organisations develop strategy in order to achieve alignment with their external environments. Chakravarthy and Doz (1992) recognised strategy as a process. They contend that the distinct and fundamental questions for the process are threefold. The first question pertains to an understanding of the relationship between a firm’s administrative systems and / or decision processes, and its competitive and / or resource positions. The second is to understand how a firm maintains effectiveness in the above relationship. The third basic question relates to how a firm modifies its decision processes in response to environmental changes, and through its own actions.

Some theorists suggest that the strategy process is a rational process which, as the name suggests, involves a logical, deliberate and rational approach to combining selected courses of action with the allocation of resources to achieve strategic fit or alignment (Fredrickson, 1984; Fredrickson and Mitchell, 1984). This rational approach has been challenged by behavioural theorists (Simon, 1957; Cyert and March, 1963) who argue that individuals, and organisations, can only achieve rationality within certain parameters, therefore such rationality is necessarily ‘bounded’. Lindblom (1959) referred to this as ‘muddling through’.

The next theoretical argument relates to the process applied by the organisation as it attempts to achieve a 'fit' (Hatch, 1997) between its external environment and its internal structure and decision processes. Evidently this 'fit' may have been achieved as a consequence of an integrated system of planning (Chandler, 1962; Ansoff, 1965; Andrews, 1971). The perspective offered by Quinn (1980) suggests that strategy is primarily a decision-making process. Therefore a more productive area of research may be to study how firms make individual decisions, and whether they attempt to integrate decisions into an overall strategy (Fredrickson and Mitchell, 1984).

The work of Bailey et al. (2000) investigated the specific processes adopted by organisations to develop strategy and it is this approach that is applied to the research. Through an extensive search of the literature, reviewed in Section 4.2, and an analysis of other models of strategy development, most notably the work of Hart (1992), Bailey et al. discovered six discrete dimensions of strategy development within three broad approaches to the strategy process. This research programme adopts the conceptualisation developed by Bailey et al. and utilises their questionnaire (with some modifications) to identify the strategy development processes adopted by Barclays at the strategic business unit level. The research instrument (a self-administered questionnaire) is set out in Appendix A.

Once strategy development has been defined as a process, it is possible to move on to the next theoretical argument, the environment within which managers develop strategy. Brown and Eisenhardt (1998) recognised that traditional approaches to strategy prove problematic in the face of rapid and unpredictably changing environments. They suggest that issues arise because strategists over-emphasise the degree to which it is possible to predict the growth of industries, competences or the strategic positions that may provide a competitive advantage, and the length of time for which they are likely to sustain such advantages. Brown and Eisenhardt found that problems are compounded because strategists also under-emphasise the importance, and challenge, of actually creating and then executing a chosen strategy.

Duncan's (1972) conceptual dimensions are central to the research into the organisational context or environment (Boyd and Fulk, 1996), and provide the next theoretical argument for the investigation, namely perceived environmental uncertainty and its role in the organisational context. Through the integration of work carried out by organisational theorists (Emery and Trist, 1965; Thompson, 1967) and decision theorists (Luce and Raiffa, 1957), Duncan proposed that perceived environmental uncertainty can be described along two constructs: the simple–complex dimension and the static–dynamic dimension. Using this conceptualisation, Duncan argued that any rise in change or complexity results in an increase in the level of perceived environmental uncertainty being experienced by strategists.

The literature on perceived environmental uncertainty and strategy development processes appears to be based on an assumption that any lack of stability in the external environment creates a barrier to effective decision-making, and is therefore dysfunctional to an organisation achieving a 'fit' between its environment and its internal structures and decision processes. The logical corollary of this theoretical argument (when applied to the Barclays Group) is that any lack of stability in the organisational context or environment creates a barrier to the effective development of strategy and therefore to the maximisation of shareholder value. Consequently, based on this argument the challenge for strategists at Barclays must be to reduce the lack of stability (or to create stability) in the organisational context or environment.

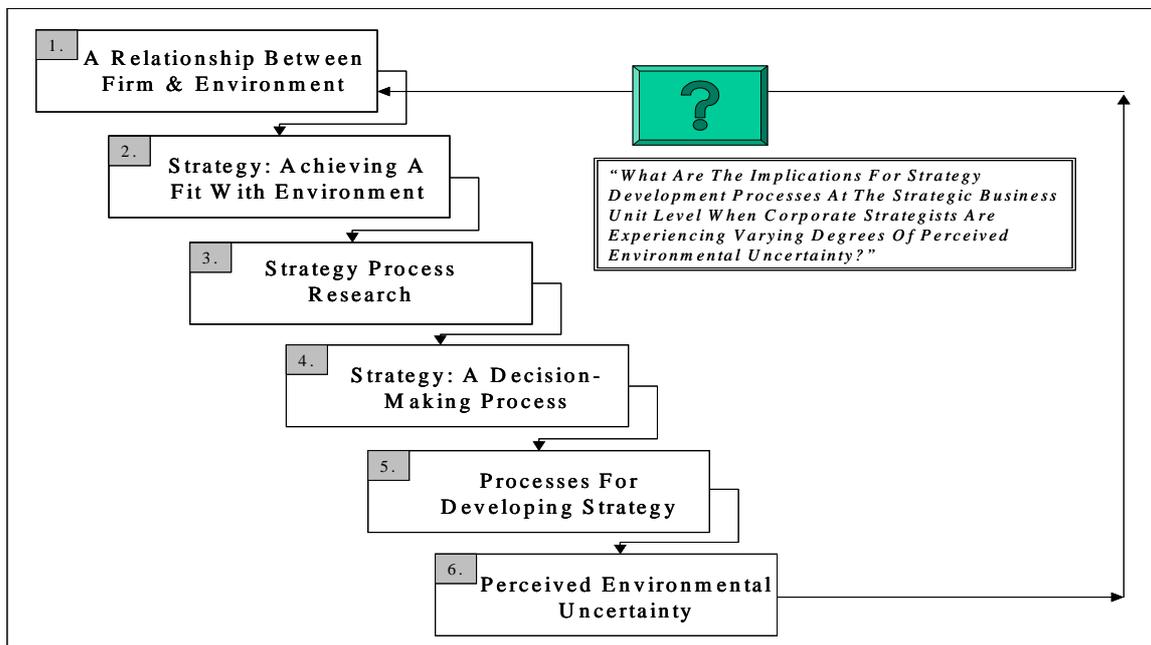
The final theoretical argument that the research investigates is the relationship between the level of perceived environmental uncertainty experienced by strategists and the processes adopted by senior managers to make strategic decisions as they seek to achieve an alignment between the external environment and the internal structures and processes of the strategic business unit. The theoretical argument underpinning this study is that the challenge for strategists lies in achieving congruence in the above relationship, and that failure to achieve congruence is necessarily dysfunctional and a barrier to effective strategic decision-making.

### 3.2.3 Linking Theoretical Arguments To Frame The Research Question

Following on from the previous section, it is possible to illustrate how the literature links theoretical arguments to frame the research question, as illustrated in Figure 3 below:

1. There is a reciprocal relationship between the organisation and the environment within which it operates (Mintzberg, 1973).
2. Strategy is the process by which an organisation seeks to achieve an alignment or ‘fit’ with its external environment (Hatch, 1997).
3. Strategy is a process, and relates to how a firm modifies its decision processes in response to environmental changes and through its own actions (Chakravarthy and Doz, 1992).
4. The above points are achieved through a process of decision-making (Quinn, 1980); therefore the research adopts a decision-making perspective on strategy.
5. From the review of the strategy development literature it has been possible to discern six discrete processes for developing strategy (Bailey et al., 2000).
6. Strategists experience a rise in levels of perceived environmental uncertainty when they make decisions in environments typified by high velocity change and complexity (Duncan, 1972) or when they lack the relevant information (Perrow, 1967) or experience (Weick, 2001).

Figure 3 – Linking Theoretical Arguments To Frame The Research Question



## **3.3 Identifying The Research Gap**

### **3.3.1 The Research Question**

Before considering the research question for this Executive Doctorate, there are three key considerations to note at Barclays. First, the organisation is committed to the maximisation of shareholder value. Second, organisational performance is measured within the context of value-based management, therefore growth in economic profit is the universal criterion by which to measure success – and by this measure Barclays is a highly successful organisation. And finally, there are seventeen strategic business units within the Barclays Group, all experiencing varying degrees of perceived environmental uncertainty in their competitive environments.

Within this context, the research question for the Executive Doctorate is:

“What are the implications for strategy development processes at the strategic business unit level when corporate strategists are experiencing varying degrees of perceived environmental uncertainty?”

The history of the Barclays Group, the organisational structure and the process of value-based management as the criterion for success are outlined in the introduction (see Section 2.1). The literature review on both perceived environmental uncertainty and strategy development processes is covered in Project 1 (see Section 4). The research design and methodology are also covered in Project 1 (see Section 4.6). The exploratory study of perceived environmental uncertainty is covered in Project 2 (see Section 5). The investigation of strategy development processes and the examination of the implications of perceived environmental for strategy development process is covered in Project 3 (see Section 6).

## **3.4 The Research Programme**

### **3.4.1 Project 1**

#### **3.4.1.1 The Literature Review**

##### **3.4.1.1.1 Strategy Development Processes**

The literature review identified that traditional approaches to strategy development argue that there is a reciprocal relationship between an organisation (in this case Barclays) and the environment within which it operates. Therefore, an organisation's strategy development process reflects the extent of alignment between the organisation's external environment and its internal structure. Consequently, the challenge for strategists is to adapt to their external environment in order for their organisation to remain viable and survive, achieved through a strategy development process that is effective (or fit for purpose).

The literature also identified that strategy development can be addressed from many different perspectives, for example: planning, (Andrews, 1971; Chaffee, 1985) strong leadership, politics or culture. This research into effective strategy development under varying degrees of perceived environmental uncertainty addresses the issue from a decision-making perspective. This range of views in the literature has spawned an array of conceptual models, with scores of strategy-making typologies, both competing and overlapping.

Through a review of the literature, Project 1 identified a multi-dimensional model of strategy development processes proposed by Bailey et al. (2000). Within three broad approaches to the strategy process – strategic choice, social processes and environmental factors – Bailey et al. identified six discrete dimensions of strategy development: command, planning, incremental, political, cultural and enforced choice. As a component of their research, Bailey et al. were able to develop a self-administered questionnaire, which they believed represented the characteristics attributable to each of the dimensions. This research adopts the approach to strategy development processes proposed by Bailey et al. and uses an adaptation of their self-administered questionnaire to identify strategy development processes across the seventeen strategic business units in the Barclays portfolio (see Appendix A).

### **3.4.1.1.2 Perceived Environmental Uncertainty**

In the same way that the literature review of strategy development process identified a level of confusion that has arisen over the liberal use of the term ‘strategy’, the literature review also revealed confusion over the use of the term ‘uncertainty’. Primarily this confusion arises because theorists and researchers take different positions over outcomes that are ‘certain’ and outcomes that are ‘probable’.

The review identified that the debate is split into two schools of thought because the term ‘environmental uncertainty’ is used to describe both the state of the competitive environment, and the state of mind of an individual who perceives himself or herself to be lacking critical information pertaining to the environment and is therefore ‘uncertain’. This has led to the misleading nature of the term ‘environmental uncertainty’, where theorists assert that as environments have no cognitive ability, they cannot feel uncertain, therefore only people experience uncertainty. Acceptance of the objective perspective, implies that it is possible to characterise environments in terms of how objectively uncertain they are. In contrast, if one accepts that environmental uncertainty is inherently ‘in the eye of the beholder’, it ought to be investigated as a subjective, or perceptual, phenomenon.

This research addresses environmental uncertainty as a perceptual phenomenon with the environment depicted from the perspective of individuals within the organisation. Through the integration of work carried out by organisational theorists and decision theorists, Duncan (1972) proposed that perceived environmental uncertainty could be described along two constructs: the simple–complex dimension and the static–dynamic dimension. This research utilises the conceptual dimensions developed by Duncan to research perceived environmental uncertainty.

This thesis applies the work of Duncan to identify different levels of perceived environmental uncertainty being experienced by strategists, and any subsequent implications for strategy development process. This investigation is not concerned with the modelling, measurement and management of objective, archival or economic uncertainty (Boyd, Dess, and Rasheed, 1993); therefore concepts like ‘uncertainty absorption’ (March and Simon, 1958) sit outside the scope of the literature review. This distinction is clearly set out in Section 4.3.10.

### **3.4.1.1.3 Managing For Value: Introducing The Ability To Cope**

The literature review indicated that theoretical concepts like strategy development processes and perceived environmental uncertainty are only of interest within an organisation such as Barclays if they are considered within the context of the organisation's strategic objective, the maximisation of shareholder value. Consequently, the relationship between these two theoretical concepts must be considered within the context of value-based management or the year-on-year growth in economic profit.

As strategy development is portrayed as being the process through which the organisation adapts in order to create a match or 'fit' with its competitive environment (in order to maximise the creation of shareholder value), the inherent assumption in the literature is that any complexity or lack of stability in the external environment creates a barrier to strategy development, and is therefore dysfunctional to an organisation maintaining its equilibrium and achieving its strategic objectives (the maximisation of shareholder value).

Based on an extensive review of the literature this research concludes that, however sophisticated theorists become in explaining the concept of perceived environmental uncertainty, the phenomenon will not influence strategists at organisations such as Barclays unless research includes a combination of two additional key factors that contribute to successful strategy development: first, the ability of a strategic business unit to cope with the degree of uncertainty, the rate of change, and the level of complexity in its competitive environment; and second, the importance of a strategic business unit being able to cope with the degree of uncertainty, the rate of change, and the level of complexity in its competitive environment.

Within the context of value-based management, the literature review suggested that theorists and researchers must develop a far more sophisticated understanding of the relationship between perceived environmental uncertainty and the process for developing strategy. Therefore, a key consideration when considering the strategic capability of an organisation like Barclays Bank PLC is to understand the relative abilities of its various businesses to cope with their competitive environments coupled with the importance of their being able to cope.

### **3.4.1.2 The Research Design And Methodology**

#### **3.4.1.2.1 Research Design**

Through the literature review, it is possible to identify two groups of people within the unit of analysis: first, the Barclays Group Executive Committee, who are the people responsible for developing corporate strategy at Barclays; and second, the senior management teams across the seventeen strategic business units at Barclays, who are responsible for developing business strategy. The period of time on which the research focused was 2003.

Through a series of semi-structured interviews, fifteen members of the Group Executive Committee were asked to assess the seventeen strategic business units (in the Barclays Group) on a scale of 0–100 (0 representing no uncertainty and 100 being total uncertainty) in terms of the degrees of uncertainty, change and complexity they are deemed to face in their competitive environment. Following this, they were asked to plot on a numeric scale the ability of the business unit to cope with uncertainty, change and complexity and the importance of its being able to cope. The senior management team within each strategic business unit was asked to complete the self-administered questionnaire developed by Bailey et al. (2000). The data were analysed using principal components analysis.

#### **3.4.1.2.2 Research Methodology**

The phenomenon of interest for this research programme is the process for developing strategy at the strategic business unit level. The research condition is the perception of environmental uncertainty experienced by strategists at the corporate level. The study seeks to identify implications arising from the research condition for the phenomenon of interest.

The research is founded on the basic premise of polemics – the art or practice of dispute or argument. The art of polemics is demonstrated in the wide-ranging review of the literature where a host of strong opinions and arguments are offered on a wide range of subjects resident within the research domain: perceived environmental uncertainty and strategy development process. The purpose of the literature review is therefore twofold: first, to set out the body of knowledge within which the research resides – the research domain; and second, to build propositions based on the literature which the research goes on to examine.

As the research is concerned with theory-building, the researcher has developed logical corollaries from the literature to build a series of propositions for testing in the field at Barclays. The researcher uses these literature-guided propositions to direct the assessment of theory, which is a critical step in the ongoing process of theory development. The researcher then goes on to use the results obtained from testing these literature-guided propositions to improve current theory.

During the course of the investigation, the research process has emerged in three key areas: first, a wide-ranging coverage and understanding of existing literature and research in the field of perceived environmental uncertainty and strategy development processes; second, the author developing his skills as a researcher through the collection of both primary and secondary research data; and finally, the author developing a deeper understanding of strategy development processes at Barclays Bank PLC by working within the organisation prior to and throughout the period of the research.

Two of the most central concepts in the philosophy of science are ontology and epistemology. In social enquiry, ontology refers to the claims or assumptions that the research makes about the nature of social reality – claims about what exists, what reality looks like, what units it comprises, and how these units interact with each other. For this study, the researcher adopts a realist ontology, where theoretical, or hypothetical, entities characterised by a true theory actually exist even though they cannot be directly observed. As the research is concerned with the examination of perceptions, the researcher has designed the logic and strategy of the programme in a manner consistent with a subjectivist epistemological position.

As this research programme is an Executive Doctorate, the methodological approach is applied research, as the investigation is intended to lead to the resolution of a specific problem for Barclays. In terms of its theoretical grounding, the research is both inductive and deductive, because it involves inference from new empirical work and combines this with received theory to deduce new conclusions. In terms of researcher involvement, the position adopted by the researcher for this research programme is independent of the unit of analysis.

Another issue to be addressed is sample size. In order to complete the data collection, the researcher interviewed fifteen members of the Barclays Group Executive Committee – the researcher was unable to obtain access to Matthew Barrett the Chief Executive of Barclays Bank PLC. At the same time the researcher gathered 731 strategy development questionnaires from senior managers across the seventeen strategic business units.

The methodological approach combines the testing of received theory, identified through the literature review, with the development of new theory. The design of the data collection was influenced mainly by earlier research. However, from the data, the research was able to explore relationships that had not previously been studied. Data were collected from strategists on their experience of perceived environmental uncertainty while data were being collected on strategy development processes across the Barclays portfolio. Through the data, the researcher was able to investigate correlations that exist in the above relationship.

The realist epistemology is founded on the building of models that, if they were to exist and act in the postulated way, would account for the phenomena under investigation – the research programme is therefore concerned with theory building, as well as theory testing. The theory being developed is based on the proposition that there may be a relationship between the levels of perceived environmental uncertainty experienced by corporate strategists and the processes adopted for developing strategy at the strategic business unit level.

This doctoral research programme applies various techniques and procedures for completing research, which can be classified into two categories: qualitative and quantitative. As with the theoretical groundings, the distinction between the two is not always clear. Within the qualitative classification, researchers argue that data collection and analysis tends to be a continuous and iterative process designed to uncover emerging patterns or concepts that inform the investigation. By way of contrast, quantitative research utilises formally structured techniques such as questionnaires and surveys. The structure enables the research to focus the data on the central theme, restricting deviations. This investigation comprises qualitative research as it explores in detail perceptual measures of uncertainty, and perceptions among strategists of the processes used for developing strategy across Barclays. It does however use quantitative measures to analyse summary measures of the variables identified.

## **3.4.2 Project 2: Perceived Environmental Uncertainty**

### **3.4.2.1 Setting The Context For The Qualitative Exploration**

This section looks at the key qualitative and quantitative findings emanating from the research into perceived environmental uncertainty completed in Project 2. However, as a pre-text for the key findings it is important to remember that the primary purpose of Project 2 was to obtain the quantitative assessment of perceived environmental uncertainty from the most senior corporate strategists in the Barclays Group. The exploration of the qualitative constructs that contribute to variances in the levels of environmental uncertainty being perceived by strategists was very much secondary to the Project 2 investigation.

The relative importance of the quantitative and qualitative components of Project 2 is catered for in the research design and methodology (see Section 4.6), and was successfully piloted at the outset of Project 2 (see Section 5.4). The research design enabled respondents to give a numeric assessment of: the level of uncertainty, change and complexity being experienced across the portfolio; the ability of the various organisations within the Group to cope with uncertainty, change and complexity; and the importance of the various strategic business units being able to cope with uncertainty, change and complexity. Where time allowed, and time did not allow in 50% of the interviews, respondents were asked to state the qualitative constructs that underpinned their quantitative assessments. These factors have been compared to the literature (see Section 5.8) and presented as findings, but they are very much secondary to the objectives of Project 2.

It is important to remember that this Executive Doctorate is concerned with understanding the implications of the relationship between levels of perceived environmental uncertainty experienced by strategists, and the application of strategy development processes across the Barclays Group. The collection of the qualitative constructs was useful in understanding different factors that contribute to (or explain) variances in the levels of perceived environmental uncertainty experienced by strategists. However, it was not an objective of this research to apply the qualitative constructs in an attempt to measure, manage or model levels of perceived environmental uncertainty.

### **3.4.2.2 Qualitative Exploration: Key Findings**

The first key finding is that the term ‘uncertainty’ is not commonly used in the managerial lexicon at Barclays and therefore strategists on the Group Executive Committee manage the organisation without even considering an abstract concept such as perceived environmental uncertainty. This preference to observe the competitive environment from a positive perspective is explained by Naguib Kheraj<sup>2</sup>, Chairman, Barclays Global Investors:

“I do not think it is useful to consider the competitive environment as inherently ‘certain’ or ‘uncertain’. I tend to view the marketplace as offering our various strategic business units a whole range of exciting opportunities and interesting challenges.”

The second key finding is that when strategists at Barclays are asked to consider the degree of uncertainty, the rate of change, and the level of complexity being faced across the Group, a level of managerial logic is applied. This logic dictates that it is not the level of uncertainty, change or complexity that is significant but the ability of the strategic business units to cope and the importance of the various businesses being able to cope. John Varley<sup>3</sup>, Group Finance Director, explains:

“The nature of the business model determines the level of uncertainty faced by particular business units. Where we have a well-proven business model operating in a traditional marketplace, for example the Woolwich, then uncertainty is typically quite low. When a business unit is operating a fee-based business model in a complicated and volatile marketplace, for example Barclays Capital or Barclays Global Investors, then one would expect levels of uncertainty to be considerably higher.”

<sup>2</sup> Group Executive Committee Interview With Naguib Kheraj, Wednesday 9<sup>th</sup> July 2003

<sup>3</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

The research also finds that the ability to cope with uncertainty, change and complexity is not achieved by creating a ‘match’ or strategic ‘fit’ between the organisation and its competitive environment but through the protection of a highly successful and resilient business model, banking. For more than 300 years, banking in the UK has proved a successful business model with which an organisation such as Barclays cannot fail to create shareholder value in favourable economic conditions such as those experienced during 2003. One of the members of the Group Executive Committee<sup>4</sup> explains:

“Developing strategy at Barclays is not uncertain and certainly not complex; we have a terrific business model, a wonderful brand, great people and the most sophisticated management information. Our people are so good that we on Group Executive Committee could probably go to sleep for a year and still make £3 billion.”

The fourth key finding is that the importance of being able to cope with perceived environmental uncertainty at Barclays is driven by the strategic objective to maximise shareholder value, that is either the current creation of value or the expectation of value creation at some time in the future. The importance of being able to cope is not a function of the degree of uncertainty, the rate of change, or the level of complexity assumed to be present in the Group’s competitive environment but the level of value each business unit creates and the likelihood of it being able to sustain and improve its value contribution to the Group over the long term. John Varley<sup>5</sup>, Group Finance Director, explains:

“All our strategic business units are not equally important; they are either central to how we create value at present – ‘jam today’ – or they will be central to how we create value at some time in the future – ‘jam tomorrow’. Therefore the key factor that drives strategic importance is the level of value contribution forecasted by each of the business units. Clearly it is important that the business units that make the most value contribution are the ones most able to cope with uncertainty.”

<sup>4</sup> Group Executive Committee Interview, Summer 2003

<sup>5</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

Project 2 also finds that although there is a high degree of synergy between the qualitative factors that create uncertainty (e.g. technology), enable business units to cope (e.g. talented leaders), and make it important that businesses are able to cope (e.g. value creation), there is a high level of difference in perspectives among strategists at Barclays as to how the various strategic business units are impacted by uncertainty, change, and complexity. This lack of consensus is covered in further detail in the quantitative investigation. One of the members of the Group Executive Committee<sup>6</sup> explains:

“At Barclays we have great people who thrive on ambitious challenges and opportunities, and it never ceases to amaze me how our people respond so positively to uncertainty, complexity and change. As strategists it is our responsibility to ensure that the Group is faced with the apposite degree of uncertainty in order to leverage the greatest value from our resources. Consequently there are times when it is appropriate to deliberately create, or actively seek, uncertainty, change and complexity.”

A sixth key finding from Project 2 is that there appears to be a substantive difference between the qualitative factors that contribute to the rate of change being experienced across the Barclays portfolio, and the qualitative factors that contribute to the level of complexity being perceived across the Group.

The crucial difference that arose from the research in Project 2 is that the factors that create change are very externally focused, for example competition, regulations and customer requirements. By contrast, the factors that create complexity appear to be very internally focused, for example managing and developing people, internal politics, effective cross-Group integration, and the lack of high quality management information.

<sup>6</sup> Group Executive Committee Interview, Summer 2003

One of the members of the Group Executive Committee<sup>7</sup> explains the key differences in the factors that create change and the qualitative factors that contribute to complexity:

“When we as a senior team consider our strategic response to the rate of change, the agenda tends to be dominated by external issues, for example customers or interest rates – and let me tell you we have a great track record in being able to cope with such strategic issues. However, when it comes to levels of complexity we have a history of ‘doing things to ourselves’. As you can imagine Barclays becomes a pretty complex organisation when the left hand does not know what the right hand is doing. Be assured that the level of complexity really goes through the roof, and the fun and games really start, when the left hand tries to control the right hand.”

The seventh key finding from Project 2 is that the perceptual assessments of the degree of perceived environmental uncertainty, the ability to cope with perceived environmental uncertainty, and the importance of being able to cope fluctuate over time. Such fluctuations can be driven by events or by experience and knowledge.

An example of a fluctuation in the degree of perceived environmental uncertainty could be the ‘dot-com revolution’ of 2001; examples of event-driven fluctuations in the ability to cope could be the survival of a crisis such as the large Russian debt write-offs by Barclays Capital in 1998, or the successful acquisition and merger with the Woolwich by the UK Retail Bank in the late 1990s. An example of a fluctuation over time would be where strategists claim to develop a level of ‘immunity’ to uncertainty as their career develops and they feel better able to cope with higher levels of uncertainty, or they increase their ability to cope by gaining more experience.

<sup>7</sup> Group Executive Committee Interview, Summer 2003

The fluctuation is the experience of perceived environmental uncertainty over time is explained by one of the members of the Group Executive Committee<sup>8</sup>:

“My experience of uncertainty is that it fluctuates over time. I remember having sleepless nights in the 1980s about whether or not we should buy the Trustees Savings Bank. During the 1990s the break up of BZW and the purchase of the Woolwich created great uncertainty. With the advent of the new millennium we worried about the dot.com revolution or whether to buy the Bradford & Bingley. Our current sources of uncertainty are our regulation obligations, competition, and whether or not we will acquire or be acquired. Yes, I think it is safe to say that the degree of uncertainty we have experienced on Group Executive Committee over the years has fluctuated greatly over time.”

Finally Project 2 finds that diversity and debate is actively encouraged in the development of corporate strategy, therefore the ability to develop one’s own perspective on the competitive environment and the Group’s strategy and be able to contribute effectively to the strategy process is actively encouraged. The Group has developed fora and focus groups where corporate strategists present the Bank’s strategy and members of the organisation are invited to engage in the debate. The findings show that the Group goes to great lengths to ensure that a diverse range of individuals, irrespective of gender or ethnic background, is able to contribute to the strategy process.

The research in Project 2 also finds that under certain circumstances, strategists deliberately create uncertainty and change, but not complexity. Uncertainty is created to ensure managers are able to think creatively and be challenged; change is created to ensure the Group is able to transform itself and continue to meet ambitious value targets. Complexity is avoided because it is seen as a barrier to the strategic objective of maximising shareholder value.

<sup>8</sup> Group Executive Committee Interview, Summer 2003

One of the members of the Group Executive Committee<sup>9</sup> highlights the importance of diversity and debate in the strategy development process:

“Under Matt Barrett’s leadership we have built a Group Executive Committee made up of very different personalities and backgrounds, and over the last five years Matt has worked very hard to build an environment of trust, empathy, commitment and teamwork. We don’t feel ‘*consensually uncertain*’ if one of our colleagues interprets the competitive environment differently or proposes a different strategic course. Personally, I enjoy having my views and assumptions challenged by highly experienced and knowledgeable colleagues – invariably it informs and develops my own strategic thinking. A diversity of views expressed within a mature debate is the sign of a high-performing team and this is a very important aspect of the strategy development process at Barclays.”

<sup>9</sup> Group Executive Committee Interview, Spring 2003

### 3.4.2.3 Quantitative Exploration: Key Findings

The key findings from the quantitative investigation into perceived environmental uncertainty carried out in Project 2 fall into three categories: first, the investigation into the modernist perspective on perceived environmental uncertainty; second, the examination of the lack of managerial consensus concerning degrees of uncertainty being experienced in different strategic business units; and finally, the identification of key managerial implications arising out of the quantitative investigation into perceived environmental uncertainty.

Beginning with the *investigation into the modernist perspective on perceived environmental uncertainty*, Project 2 finds that academic research needs to develop a far more sophisticated model for conceptualising perceived environmental uncertainty than the modernist notion that the degree of uncertainty is merely a product of the rate of change and the level of complexity. This research also finds that the rate of change and the level of complexity cannot be regarded as independent variables, with the degree of uncertainty being measured as the dependent variable. Project 2 has uncovered a statistically significant relationship between the rate of change and the level of complexity at Barclays, leading to the conclusion that an increase in the rate of change is reflected in an increase in the level of complexity and vice versa.

Moving on to the *examination of the lack of managerial consensus or individual perspectives concerning degrees of uncertainty*, Project 2 finds that there is a high degree of variance, or lack of consensus, in the perceptual assessments made by corporate strategists at Barclays on the level of perceived environmental uncertainty being encountered across the Group, the ability to cope with such uncertainty, and the importance of the business units being able to cope. This finding suggests that corporate strategists on the same Executive Committee in the same organisation have developed very different perspectives on the competitive environments within which the various business units operate, the ability of these latter to cope, and the importance of their being able to cope. This finding is evidenced in the nebulous use of terms such as ‘uncertainty’, ‘strategy’ and ‘complexity’, which appear to have very different meanings for different members of the Group Executive Committee. It is an important finding for strategists to be aware that the terms that they use in the development of strategy may not be the terms that are heard by colleagues in the same organisation.

Finally this section moves on to look at the *identification of key managerial implications arising out of the quantitative investigation*. First, Project 2 finds that when strategists begin to think about the managerial implications of perceived environmental uncertainty, then a managerial logic becomes evident in their assessments which appears to be missing in some cases when they are asked to assess uncertainty, change and complexity as abstract concepts. This is evidenced in the strong correlation between the ability to cope with uncertainty and the ability to cope with change and complexity, and the strong reciprocal relationship between the importance of being able to cope with uncertainty and the importance of being able to cope with change and complexity.

Interestingly this managerial logic extends across the section of the research concerned with the managerial implications and is evidenced by some logical and fairly predictable reciprocal relationships. Illustrations of such relationships are the strong correlation between the ability to cope with uncertainty and the ability to cope with change, and the correlation (albeit much weaker) between the degree of uncertainty and the rate of change being faced, and the correlation (again weak) between the ability to cope with uncertainty and the ability to cope with change. From a managerial perspective, however, the key finding here is the lack of correlation between the ability to cope and the importance of being able to cope.

This finding suggests that the Bank does not send its most talented strategists into the areas where it is deemed most important for the Group to be able to cope with uncertainty, change or complexity. The finding suggests that the Group uses other factors to determine where it sends these strategists. The results of Project 2 appear to suggest that the strategists most capable of coping with uncertainty, change and complexity are sent to the areas of the Group that create the highest shareholder value, or where the most shareholder value is at stake.

This finding also suggests that successful strategy development cannot be regarded merely as reducing levels of perceived environmental uncertainty in order to maximise the match or 'fit' between the organisation and its competitive environment. It would appear that strategy development in an organisation like Barclays involves effectively protecting and defending the areas of the business that create the most shareholder value, and acting as responsible stewards of a resilient and highly successful business model or 'money-printing machine'.

### **3.4.2.4 Project 2: Conclusions**

Based on the findings of Project 2, the research draws four key conclusions counter to some of those in the literature review set out in Project 1:

1. Academic research needs to develop a far more sophisticated conceptualisation of perceived environmental uncertainty than the one offered by the modernist perspective (Duncan, 1972). Project 2 concludes that the rate of change and the level of complexity cannot be regarded merely as independent variables with perceived environmental uncertainty measured as the dependent variable. The research also concludes that the effect of these two variables on perceived environmental uncertainty is not equally weighted and that the rate of change actually contributes to the level of complexity for strategic business units within the Barclays portfolio.
2. The research challenges the modernist perspective on strategy and concludes that strategy at Barclays cannot be described simply as creating a ‘match’ (Chaffee, 1985) or a ‘fit’ (Hatch, 1997) between the Bank and its competitive environment. Strategy at Barclays is a process of identifying the areas of the Group that create shareholder value and then protecting, defending and growing them by acting as effective stewards of a resilient and highly successful business model that, in favourable economic conditions, cannot fail. There is a presumption that the resilience of the business model enables the Group to cope with the challenges presented in its competitive environment.
3. The notion of ‘consensual uncertainty’ (Huff, 1978) is inappropriate for the strategy development process at Barclays because the Group consistently seeks to encourage diversity and debate in the strategy process. The research therefore concludes that strategists seek to minimise consensus, and indeed there is evidence that too much consensus can cause uncertainty in the process.
4. There is a high degree of variance, or lack of consensus (Bowman and Ambrosini, 2000), in the perceptual assessments of strategists as to the impact of uncertainty, change and complexity on the various business units in the Barclays portfolio (Bowman and Ambrosini, 2003a). This research concludes that the wide range of diversity, debate and multiple perspectives on the strategy development process on the Group Executive Committee and across the organisation as a whole makes an invaluable contribution to the overall and ongoing success of the Group.

### **3.4.3 Project 3: Strategy Development Processes**

#### **3.4.3.1 Key Methodological Findings**

Project 3 discovered two key methodological findings: first, that the self-administered strategy process questionnaire (Bailey, 2000) is an effective instrument for identifying strategy development processes at Barclays; second, that in order for the research instrument to produce the required results at Barclays then changes needed to be made to the questionnaire. Allied to this adaptation of the questionnaire to the organisational context at Barclays, it was necessary to test and validate the research instrument in the research field and undertake a comprehensive analysis of the data prior to finalising the method for statistical analysis.

#### **3.4.3.2 Key Empirical Findings**

The investigation in Project 3 produced empirical findings in four key areas: the identification of strategy development processes across Barclays PLC; consistency of the Barclays results with the literature review and existing academic research; the identification of significant differences in strategy development processes across the Barclays portfolio; and finally, the existence across the Barclays Group of significant differences in degrees of perceived environmental uncertainty, the ability to cope with perceived environmental uncertainty and the perceived importance of being able to cope with such uncertainty.

Beginning with the *identification of strategy development processes across Barclays PLC*, the first key empirical finding from Project 3 is that the strategy development process at Barclays is typified by the incremental and planning approaches to strategy development. The results also produced significantly low scores on the political and enforced choice dimensions. Moving on to a *comparison of the Barclays results with the literature review and existing academic research*, the research found that the Barclays results were highly consistent with both the literature review and existing research – most notably the work of Bailey et al. (2000) and Collier, Fishwick and Floyd (2004).

The third key empirical finding is the *discovery of significant differences in strategy development processes across the Barclays portfolio*. In keeping with the Group results, there is a predominance of incrementalism and planning across the portfolio. However, some areas showed statistically significant evidence of other dimensions, for example the enforced choice dimension at Investment Management. Others showed a statistically significant move away from certain dimensions, for example the lack of the command dimension at Barclaycard, and the significantly low presence of the enforced choice dimension within Barclays Capital.

The final key empirical finding is the *discovery of significant differences in degrees of perceived environmental uncertainty across the Group*. In Project 3, the data on perceived environmental uncertainty have been revisited to identify significant differences between business units and to determine whether these differences are related to strategy development. Here, Project 3 identifies significant differences in the degree of uncertainty and the level of complexity being experienced across Barclays. However, the findings show no significant differences in the rate of change being perceived across the Group. Interestingly, there were significant differences in the ability of the various units to cope with perceived environmental uncertainty, and the importance of their being able to cope with such uncertainty.

### **3.4.3.3 Key Inductive Findings**

Two key inductive findings emerge from Project 3. First is the correlation between organisational performance and strategy processes. Here, the research found that the organisations that create the most value at Barclays are more likely to adopt the incremental or planning approach to strategy development. By way of comparison, the less successful organisations are more likely to adopt the political or the enforced choice dimensions.

The next key inductive finding is a significant correlation between perceived environmental uncertainty and organisational performance. The research found a significant positive correlation between the importance of being able to cope with perceived environmental uncertainty and the level of value created. The study was unable to prove a negative correlation between organisational performance and the degree of perceived environmental uncertainty, or between performance and the ability to cope with such uncertainty.

### 3.4.3.4 Project 3: Conclusions

There are eight key conclusions from the research in Project 3:

1. The strategy process questionnaire built by Bailey (2000), and enhanced by Bailey et al. (2000), with minor modifications, has proved robust in its application in the research field at Barclays. The consistency of results derived from the total population of responses with the predictions from Bailey et al. is shown in Table 4 below:

*Table 4 – The Group Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.041873	1				
Cultural	0.066435	0.181822	1			
Planning	<b>0.429834</b>	-0.113938	-0.167811	1		
Political	-0.047269	<b>0.319822</b>	<b>0.401973</b>	<b>-0.428980</b>	1	
Enforced Choice	-0.083750	0.187310	<b>0.229983</b>	<b>-0.273104</b>	<b>0.392108</b>	1

Note: Critical Values Are 0.196 at 5% Significance Level (Bold Text) & 0.258 At 1% Significance Level (Red & Bold Text)

The predicted consistency between the dimensions is shown in Table 5 below:

*Table 5 – Group Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<1%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	Not Significant
Planning	Enforced Choice	Negative	✓	<1%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<5%

Note: Critical Values Are 0.196 at 5% Significance Level & 0.258 At 1% Significance Level

2. The strategy development process across Barclays is multi-dimensional and processes transpire in combination, most notably the incremental approach to strategy development and the planning dimension.

3. A relationship between the command and enforced choice dimensions emerges in certain clusters of strategic business units at Barclays, which appears to be peculiar to the organisational structure of the Group.
4. The emergence of a relationship between the command and culture dimensions in certain clusters of strategic business units at Barclays, highlights that the research instrument may not be entirely applicable to every organisation.
5. There are significant differences in the processes that are applied for developing strategy across the strategic business units within the Barclays Group.
6. There are also significant differences in the degree of uncertainty and the level of complexity being experienced by strategic business units across the Barclays Group. However, none of the strategic business units is deemed to face a significantly higher or lower rate of change than elsewhere across the Group.
7. The worst-performing cluster of strategic business units (Barclays Private Clients) shows a significantly lower score on the incremental and planning dimensions than the Group as a whole – and a significantly higher score on the political and enforced choice dimensions. The cluster with the second highest performance (Barclays Capital) has a significantly above-average score on planning and significantly below-average scores on the political and enforced choice dimensions. These results offer some support to the conclusions of Bailey et al. (2000), see Table 6 below:

*Table 6 – Variance In Value Contribution (Economic Profit) And Key Dimension Differences*

Cluster	% Change In Value Contribution	Variation From Group (Significance Level)			
		Incremental	Planning	Political	Enforced Choice
Barclaycard	19.48%	+ ( <b>5%</b> )	+ (NS)	- (NS)	- (NS)
Barclays Africa	63.64%	+ (NS)	+ (NS)	- (NS)	- (NS)
Barclays Capital	79.78%	+ (NS)	+ ( <b>5%</b> )	- ( <b>1%</b> )	- ( <b>1%</b> )
Barclays Private Clients	-49.70%	- ( <b>1%</b> )	- ( <b>1%</b> )	+ ( <b>1%</b> )	+ ( <b>1%</b> )
UK Retail Bank	16.46%	+ (NS)	+ ( <b>5%</b> )	- (NS)	- (NS)
Business Bank	8.54%	+ (NS)	+ ( <b>1%</b> )	- (NS)	- (NS)
Barclays Global Investors	100.00%	- (NS)	+ (NS)	- (NS)	- (NS)

Note: Critical Values Are 0.196 at 5% Significance Level (Bold Text) & 0.258 At 1% Significance Level (Red & Bold Text)

8. There is a significant positive correlation between the perceived importance of ability to cope with uncertainty (of each of the seven clusters of strategic business units) and the size of the value contribution of that cluster. There is however no correlation between the importance of being able to cope with perceived environmental uncertainty and performance measured by the growth of value contribution (seconomic profit). The results are set out in Table 7 below:

*Table 7 – The Importance Of Being Able To Cope And Organisational Performance (Value Contribution)*

Cluster	Importance Of Being Able To Cope	Value Created (Economic Profit)				% Change 2002-03
		Rank	2003	Rank	2002	
Business Bank	73.56	1	£1,308m	1	£1,227m	6.60%
Barclays Capital	66.66	2	£782m	3	£580m	34.83%
Barclaycard	64.00	3	£722m	4	£615m	17.40%
UK Retail Bank	61.44	4	£967m	2	£871m	11.02%
Barclays Global Investors	58.67	5	£192m	6	£111m	72.97%
Barclays Private Clients	55.14	6	£328m	5	£368m	-10.87%
Barclays Africa	44.67	7	£113m	7	£89m	26.97%

### **3.4.4 Linking The Research Projects**

#### **3.4.4.1 Addressing The Managerial Issue**

The managerial issue being addressed in this research is perceived environmental uncertainty (experienced by corporate strategists) and its implications for strategy development processes at the strategic business unit level (or business-level strategy), across Barclays Bank PLC. Or in managerial terms, the implications of the conclusions of Project 2 for the conclusions drawn in Project 3 – within the context of the comprehensive literature review set out in Project 1.

### 3.4.4.2 Key Links – Findings

The key findings in terms of the linkage between perceived environmental uncertainty and strategy development process are as follows:

1. Data from Barclays do not support the emphasis placed in the strategy literature on the role of perceived environmental uncertainty in the strategy development process. Perceived environmental uncertainty is a nebulous concept and is not within the managerial lexicon at Barclays. This finding is revealed by Table 8 (below), which shows the lack of consensus among the fifteen members of the Group Executive Committee as to their perception of the environmental uncertainty being faced by each of the seventeen strategic business units.

*Table 8 – The Degree Of Uncertainty Faced By The Various Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Maximum</b>	<b>Minimum</b>
<b>Woolwich</b>	44.73	15.271	70	15
<b>UK Retail Bank</b>	46.40	15.838	70	20
<b>Caribbean</b>	46.67	15.774	75	20
<b>Europe</b>	55.67	15.453	90	30
<b>International Bank</b>	46.67	18.190	80	20
<b>Private Bank</b>	51.73	16.607	75	20
<b>Premier Bank</b>	46.00	18.342	75	10
<b>Barclays Global Investors</b>	50.07	21.349	85	10
<b>Business Bank</b>	42.00	19.254	85	10
<b>Barclays Africa</b>	49.00	15.721	75	15
<b>Barclaycard Corporate</b>	37.67	15.453	70	10
<b>Barclaycard International</b>	58.33	15.774	80	25
<b>Barclaycard UK</b>	48.40	16.513	70	10
<b>Collateralised Financing</b>	50.38	17.775	80	20
<b>Global Financing</b>	55.77	17.097	80	20
<b>Global Markets</b>	62.00	17.595	90	20
<b>Private Equity</b>	58.57	17.158	80	30

2. Strategists at Barclays are focused on the strategic objective of maximising shareholder value. Consequently, perceived environmental uncertainty (as with all other managerial issues) only becomes a strategic issue if it is perceived to create a barrier to the maximisation of shareholder value. Therefore, the important strategic issue is not the level of perceived environmental uncertainty experienced across the portfolio but the ability of the various strategic business units to cope and the importance of their doing so.

3. Banking in the UK has been a successful business model for over 300 years. Consequently, the challenge for strategists at Barclays is not managing a lack of stability in the competitive environment but merely defending and growing a highly successful business model; or, in managerial terms, effective management of a profit and loss account that cannot fail by: growing revenues, reducing costs, minimising bad and doubtful debt provisions and managing capital expenditure.
4. At Barclays, the importance of being able to cope with perceived environmental uncertainty is not a function of the importance of being able to cope with the degree of change or the level of complexity but a function of the level of economic profit produced by the strategic business units.
5. Strategic business units in Barclays that were successful during 2003 applied the incremental and planning dimensions of strategy development. The businesses that were less successful applied the political dimension and experienced enforced choice in their strategy development process. Therefore, the strategic business units that were deemed most able to cope with perceived environmental uncertainty applied the incremental and planning dimensions of the strategy development process.
6. Although there is a high degree of synergy regarding the qualitative factors that create uncertainty, change and complexity (e.g. technology, regulation and competition), there is a low level of managerial consensus regarding the impact of perceived environmental uncertainty across the Barclays portfolio and therefore the strategy development process.

### **3.4.4.3 Key Links – Conclusions**

There are two key conclusions that emanate from this research: first, the nature of the relationship between perceived environmental uncertainty and strategy development processes across Barclays; and second, the correlation between strategy development processes and organisational performance across the Barclays portfolio. These two conclusions are drawn within the context of value-based management where strategists are primarily concerned with the maximisation of shareholder value.

Beginning with the *relationship between perceived environmental uncertainty and strategy development processes*. The research concludes that concepts like uncertainty, change and complexity are not within the managerial lexicon at Barclays. The lack of consistency among the Group Executive Committee members' perceptions of the environmental uncertainty faced by strategic business units reduces the dispersion of the mean values for these units and only one statistically significant correlation was found: a negative one between perceived environmental uncertainty and culture. Strategy development at Barclays does not involve a carefully managed reciprocal relationship between the firm and its environment, or a skilfully manipulated balance of the degree of change and the level of complexity with which the organisation is deemed able to cope.

Based on this conclusion, strategy development involves the dedicated and ruthless stewardship of a highly successful and resilient business model that cannot fail within the economic environment experienced during the period of this research (1999–2005). Consequently, the Bank's strategic capability (e.g. people) and assets (e.g. brand and technology) are geared towards protecting and developing the business model, or in simpler managerial terms, 'defending the money-printing machine'.

The conclusion here is that Barclays is operating a mature and successful business model in an environment within which it is impossible to fail to create significant levels of shareholder value. The Group operates in a highly regulated environment with considerable barriers to entry, a dominant market position and a strong brand. To conclude, at Barclays the relationship between strategy development process and perceptions of environmental uncertainty is largely irrelevant.

The examination of the correlation between *strategy development processes and organisational performance across the Barclays portfolio* provides some very interesting conclusions. The first observation is that high performing clusters within the portfolio show high levels of the incremental and planning dimensions of strategy development. These organisations apply planning in a logical and incremental form, displaying the ability to predict and understand their competitive environments, but also the ability to be flexible in applying the strategy process and a willingness to allow strategy to emerge as events occur.

By way of comparison, the lowest performing clusters in the Barclays portfolio apply politics and experience enforced choice in the strategy development process. Strategy for these organisations is a process of power and negotiation with corporate strategists on the Group Executive Committee. For their part, members of the Group Executive Committee lack confidence in the ability of the clusters to cope and therefore either prescribe solutions to strategic issues or take action to ensure that the cluster conforms. This can be done by changing Chief Executive Officers or sending specialist teams from the Group or consultancies to determine strategy. Under these circumstances, the strategic business units (or clusters) interpret this intervention as politics or interference (enforced choice).

### **3.5.4 The Original Contributions**

#### **3.5.4.1 Methodological Contributions**

The Executive Doctorate programme has produced two key methodological contributions: the research matrix (see Appendix B), and the modification and application of the strategy development questionnaire (Bailey, 2000) in the research field at Barclays.

Beginning with *the research matrix*, the research instrument is the operationalisation of the conceptual dimensions of perceived environmental uncertainty proposed by Duncan (1972). The matrix also includes the operationalisation of the ability to cope with perceived environmental uncertainty, and the importance of being able to cope with such uncertainty.

Clearly, the purpose of the research matrix is to enable the researcher to examine empirically the impact of perceived environmental uncertainty across a portfolio of seventeen strategic business units. However, it is also designed to enable the researcher to facilitate a semi-structured interview with the most senior executives at Barclays, where criteria like the organisational power of the respondent, interview time (50 minutes), the face validity of the researcher, and confidentiality of the response are catered for in an elegant, sophisticated, and easily accessible format.

The second important methodological contribution emanating from this research programme is *the modification and application of the strategy development questionnaire in the research field at Barclays*. This research took a well-developed research instrument and tailored it to a global financial services organisation, making important modifications in both the structure of the questionnaire and the method of analysing the research data.

In Project 3, the researcher completed the largest scale collection of data (within a single organisation) using this instrument, to illustrate significant differences in strategy development process across a diverse portfolio of strategic business units – within a single parent organisation. The distribution and collection of the questionnaires was very successful (48% response rate) and led to a highly sophisticated comparison with the results collected from the research matrix in Project 2.

### **3.5.4.2 Theoretical Contributions**

This research programme has achieved significant theoretical contributions, and these fall within three categories: theoretical contributions that have been confirmed; theoretical contributions that have been contradicted; and theoretical contributions that are new.

There are four *theoretical contributions that have been confirmed*. First, the literature in the domain of both strategy and perceived environmental uncertainty is both confused and fractured (see Sections 4.1–4.5). Second, the strategy development questionnaire developed by Bailey (2000) and further enhanced by Bailey et al. (2000) is an effective instrument for empirically examining strategy development processes across a portfolio of strategic business units. Third, the research has found a high degree of consistency between the qualitative factors that create uncertainty (e.g. competition), change (e.g. regulation) and complexity (e.g. globalisation) at Barclays on the one hand and, on the other, the qualitative factors that are deemed to create uncertainty, change and complexity in the literature (see Section 4.5). And finally, there is a low level of managerial consensus (or high level of individual perspectives) on the impact of perceived environmental uncertainty on strategy development across Barclays.

Two key theoretical contributions have been contradicted. First, the two conceptual dimensions proposed by Duncan (1972) – the simple–complex dimension and the static–dynamic dimension – are too simplistic in their conceptualisation of a concept like perceived environmental uncertainty. The illustration of perceived environmental uncertainty on a two-by-two matrix by Hatch (1997) highlights that researchers need a far more sophisticated model (and understanding) of the certainty–uncertainty construct. As an example, this research finds that the behaviours of people can create uncertainty – clearly, the actions and perceptions of people are not two-dimensional.

Second, this research also challenges the notion of consensual uncertainty (Huff, 1978) as a source of perceived environmental uncertainty. This research finds that diversity and debate is encouraged in the strategy development process at Barclays and, rather than acting as a barrier to effective strategic management, debate and discussion are encouraged as an integral part of the process.

The final category is the *theoretical contributions that are new*, and here there are two key contributions. The first is that within the context of value-based management, there is no relevant relationship between perceived environmental uncertainty (at the corporate level) and strategy development process (at the business unit or business level). The relevant relationship at Barclays is that if a strategic business unit is successful, that is it creates year-on-year growth in economic profit, it is deemed more able to cope with perceived environmental uncertainty.

Where the strategic business unit creates a large level of economic profit (relative to its peers), it is deemed more important that the strategic business unit is able to cope with uncertainty. The empirical evidence shows that the most successful organisations in Barclays use the incremental and planning dimensions of strategy development, which makes them more able to cope, more successful and therefore more important to the parent organisation. Their success is not necessarily a reflection on the level of perceived environmental uncertainty they are deemed to face.

The second key theoretical contribution that is entirely new is the observation that strategy development at Barclays does not involve a carefully managed reciprocal relationship between the Bank and its environment, or a skilfully manipulated balance of the degree of change and the level of complexity with which the organisation is deemed able to cope.

This research programme has found that strategy development at Barclays involves the dedicated and ruthless stewardship of a highly successful and resilient business model. The evidence at Barclays suggests that over the last 300 years this business model cannot fail within favourable economic conditions. The economic environment experienced during the period of this research (1999–2005) has been favourable, typified by low interest rates, low inflation and a prosperous property market. Consequently, the Bank’s strategic capability (e.g. people) and assets (e.g. brand and technology) are geared towards protecting and developing the business model, or in simpler managerial terms, defending a highly successful and resilient ‘money-printing machine’.

### **3.5.5 Developing A Deeper Knowledge Of Practice**

There are four key learning areas for practitioners at Barclays that have been developed through this research:

1. Within the context of value-based management, the primary strategic objective at Barclays is the maximisation of shareholder value. Within this context, all programmes of activity (e.g. customer service, regulatory change) are designed to serve the objective of value maximisation – not the reduction of uncertainty change or complexity.
2. Despite the global nature of the organisation and diverse range of strategic business units, Barclays has a very simple business model. The Bank ‘buys’ money at the base rate of interest, or attracts savings deposits and then ‘sells’ it at very wide margins. It also sells associated financial products (e.g. pensions and buildings insurance) through its distribution network on a commission basis. This simple business model has four strategic ‘levers’: revenue in (income), revenue out (costs), bad and doubtful debt provisions and capital expenditure.
3. Within this simple (but highly successful and resilient) business model, many potential managerial issues become largely irrelevant. To illustrate this point, it is very difficult as an individual manager to show how one has made a positive contribution. It is also difficult as a project team to show how the benefits of a particular change programme have been realised. The profits of the Bank are driven by a large stock (or back-book) of highly profitable lending, therefore the role of the strategist is to motivate and reward talented people and leave the business model to continue creating value.
4. This research has shown that successful organisations (at Barclays) adopt both the incremental and planning dimensions to strategy whereas the strategy development process at the less successful organisations (within Barclays) is typified by enforced choice and politics. The key learning point here is that strategic business units must ensure that they are more involved in the process (less enforced choice) and that they reduce dysfunctional politics. Allied to this, strategic business units must develop the ability to create plans but be prepared to re-visit and re-schedule strategic plans at appropriate times during the strategy development process.

### **3.5.6 Personal Development**

As a student on the Executive Doctoral Programme at Cranfield School of Management, the period of the programme (1999–2005) has proved a very stimulating ‘journey’. The key personal development learnings of the researcher are set out below:

1. The wide-ranging literature review developed an ability to observe concepts (e.g. strategy and uncertainty) through multiple perspectives. The level of reading required in order to complete the literature review was an entirely new and very demanding experience.
2. The sheer size of the research programme has created demands, with a concomitant need to balance the requirements (and demands) of a senior full-time role at Barclays, a family and a personal life. In retrospect, it might have been more practical to investigate either perceived environmental uncertainty or strategy development processes – as the combination of the two concepts has created a significant programme of research.
3. In retrospect, the ambition to interview the fifteen most senior executives at Barclays proved very difficult to manage logistically, primarily owing to the demands of their diaries and their constantly changing priorities. Also, the circulation and collection of 1,522 self-administered questionnaires across the Barclays portfolio was a substantial logistical exercise whose scale was under-estimated at the planning stage.
4. The quantitative analysis in both Projects 2 and 3 was very demanding and far beyond the demands experienced by the researcher in previous courses. The invaluable contribution, dedication, patience and professionalism of Dr Frank Fishwick are acknowledged with gratitude.
5. The requirement to ensure that the investigation of the managerial issue was of interest to both academics and practitioners proved challenging – particularly with regard to Project 2. The inestimable commercial insight, experience and professionalism of Professor Malcolm McDonald are acknowledged with gratitude.
6. The production of the final thesis is probably the most demanding life experience encountered so far by the researcher, and its completion is a source of great personal satisfaction.

### 3.5.7 Examining The Performance Of Barclays Bank PLC During 2004

#### 3.5.7.1 The Performance Of The Barclays Group During 2004

As this research programme examines the organisational performance of Barclays Bank PLC during 2003, it is useful to examine briefly the results of the Barclays Group during 2004 as they are now in the public domain. During 2004 the Barclays Group moved from strength to strength with: profit before tax rising 20% to £4,603m; earnings per share up 21% to 51.2p; and the dividend per share rising by 17% to 24.0p. The overall return on equity across the Group during 2003 was 19.3%. The detailed results for 2004 are set out in Table 9 below.

*Table 9 – Barclays Bank PLC: Financial Summary 2004*

<b>Financial Measure</b>	<b>2004 £m</b>	<b>2003 £m</b>	<b>% Variance</b>
<b>Operating income</b>	13,945	12,411	12.36%
<b>Operating expenses</b>	-8,350	-7,253	15.12%
<b>Provisions for bad and doubtful debts</b>	-1,091	-1,347	-19.01%
<b>Operating profit</b>	4,504	3,812	18.15%
<b>Profit before tax</b>	4,603	3,845	19.71%
<b>Profit after tax</b>	3,314	2,769	19.68%
<b>Economic profit</b>	1,885	1,420	31.82%
<b>Earnings per share</b>	51.2	42.3p	21.04%
<b>Dividend per share</b>	24.0	20.5p	17.07%
<b>Post-tax return on average shareholders' funds</b>	19.2	17%	12.94%

\*Source – Barclays Bank PLC, Audited Accounts 2004, Published February 2005

With a total shareholder return of 23%, Barclays ranked top within its global peer group<sup>10</sup>, this performance was almost double the average for the peer group and the Financial Times Stock Exchange 100 Stock Index. John Varley<sup>11</sup>, the newly appointed Group Chief Executive reflects on the strength of the performance during 2004 in the Barclays Annual Accounts (2005):

“Barclays had a record year, with strong profit growth across the Group. The combination of income momentum and accelerated investment during 2004 creates a good platform for future growth.”

<sup>10</sup> Abbey, ABN Amro, BBVA, BNP Paribas, Citigroup, Deutsche Bank, Halifax Bank of Scotland, HSBC, Lloyds TSB, Royal Bank of Scotland and Standard Chartered

<sup>11</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

### 3.5.7.2 The Performance Of The Various Clusters During 2004

Based on the performance of the Barclays Group, it is possible to examine the value contributions made by the individual clusters during 2004. As detailed in Sections 2.1.5–2.1.6, the single measure of organisational performance applied at Barclays (and therefore used in this research) is annual growth in economic profit. As detailed in Section 2.1.6, no weighting is applied to market volatility or risk in the allocation of economic capital.

The 2004 results show a 31.82% growth in economic profit across the Barclays Group, which is impressive. The results show a total transformation at Barclays Private Clients with economic profit growing by 260.53%. It is important to note that this is more likely to reflect the acquisition of: Charles Schwab Europe, the Bank of Zaragozano and Gerrards; rather than a transformation of the cluster. Elsewhere across the Group, Barclays Capital (53.01%) and Barclays Global Investors (82.14%) were once again the highest performing clusters. The results from Barclaycard (5.59%) and the UK Retail Bank (-0.17%) were considerably lower than the Group as a whole. Interestingly, the results show a greatly increased cost of running Head Office Functions. To conclude, the 2004 results are highly encouraging and the business model continues to generate impressive levels of shareholder value, see Table 10 below:

*Table 10 – Value Creation: Economic Profit Across The Barclays Group In 2004*

	<b>2004 (£m)</b>	<b>% Contribution</b>	<b>2003<sup>12</sup> (£m)</b>	<b>% Variance</b>
Barclaycard	321	17.03%	304	5.59%
Barclays Africa	127	6.74%	91	39.56%
Barclays Capital	534	28.33%	349	53.01%
Barclays Private Clients	137	7.27%	38	260.53%
UK Retail Bank	595	31.56%	596	-0.17%
Business Bank	717	38.04%	527	36.05%
Barclays Global Investors	204	10.82%	112	82.14%
Head Office Functions <sup>13</sup>	-149	-7.90%	-68	119.12%
Goodwill <sup>14</sup>	-490	-25.99%	-442	10.86%
Variance To Shareholders Funds <sup>15</sup>	-111	-5.89%	-77	44.16%
<b>TOTAL</b>	<b>1,885</b>	<b>100.00%</b>	<b>1,430</b>	<b>31.82%</b>

**\*Source – Barclays Bank PLC, Audited Accounts 2004, Published February 2005**

<sup>12</sup> Barclays 2003 figures adjusted to reflect changes in organisational structures and accounting policies in the audited accounts for 2004

<sup>13</sup> Includes transition businesses

<sup>14</sup> Cost of equity charge on historical purchased goodwill

<sup>15</sup> Economic capital charge based on capital held at the Group Centre

## **4. PROJECT 1: Literature Review And Research Methodology**

### **4.1 Literature Review: Strategy Development**

#### **4.1.1 Strategy Development Under Conditions Of Uncertainty**

Many traditional approaches to strategy development argue that there is a reciprocal relationship between an organisation and the environment within which it operates (Mintzberg, 1973). Therefore an organisation's strategy reflects the extent of match or alignment between the organisation's external environment and its internal structure and processes. Consequently the challenge for strategists is to adapt to their external environment in order for their organisation to remain viable and survive (Lenz, 1980; Chaffee, 1985).

Some theorists suggest that this alignment, or 'fit' (Hatch, 1997), is achieved through an integrated system of planning (Chandler, 1962; Ansoff, 1965; Andrews, 1971). Quinn (1980) argues that this alignment is more likely to reflect the impact of countless strategic decisions that have been made, one at a time, over a period of years.

Brown and Eisenhardt (1998) recognise that traditional approaches to strategy can prove problematic in the face of rapid and unpredictably changing environments. They suggest that issues arise because strategists over-emphasise the degree to which it is possible to predict industries, competences or the strategic positions that will provide a competitive advantage, and the length of time for which they are likely to be able to sustain such advantages. Such problems are compounded because strategists also under-emphasise the importance, and challenge, of actually creating and then executing the chosen strategy.

D'Aveni (1995) agreed when he identified that managers, and indeed strategy researchers, have discovered traditional models of strategy development to be nearly obsolete in today's high speed, hyper-competitive and increasingly complex environment.

A significant amount of research has found that an increase in the rate of change and the level of complexity within the competitive environment leads to a rise in the degree of perceived environmental uncertainty experienced by strategists (Emery and Trist, 1965; Lawrence and Lorsch, 1967; Perrow, 1967; Duncan, 1972).

Duncan (1972) is generally credited with initiating the study of perceived environmental uncertainty, and his conceptual dimensions are central to the research into organisational environments (Boyd and Fulk, 1996). Through the integration of work carried out by organisational theorists (Emery and Trist, 1965; Thompson, 1967) and decision theorists (Luce and Raiffa, 1957), Duncan proposed that perceived environmental uncertainty could be described along two constructs: the simple–complex dimension and the static–dynamic dimension. The logical corollary from this proposition is that any lack of stability in the external environment creates a barrier to strategy development, and is therefore dysfunctional to an organisation maintaining its equilibrium and achieving its strategic objectives (Jauch and Kraft, 1986).

Subsequently research has therefore focused on identifying and prescribing methods designed to reduce, or absorb, the negative consequences of environmental uncertainty. Cyert and March provide evidence of this underlying assumption (1963, p.120):

“firms will devise and negotiate an environment so as to eliminate uncertainty ... and make the environment controllable.”

Through its explorations at Barclays Bank PLC, this research extends a different perspective on perceived environmental uncertainty and strategy development to that set out in the literature. This research investigates whether effective strategy development can be regarded simply as a reflection of the organisation’s ability to manage what the literature refers to as perceived environmental uncertainty (Emery and Trist, 1965; Lawrence and Lorsch, 1967; Perrow, 1967; Duncan, 1972). The research also investigates whether the Bank is able to influence its environment, and whether strategy is simply a process that enables the organisation to adapt its internal structure and decision processes to its external environment.

Based on a comprehensive review of the literature this research is built on the assumption that, however sophisticated theorists become in explaining the concept of perceived environmental uncertainty, the phenomenon will not influence strategists at organisations such as Barclays unless research develops to include a fuller combination of the factors that contribute to successful strategy development (Jauch and Kraft, 1986).

Theorists argue that in order to prosper and grow in rapidly and unpredictably changing environments, organisations must return to the fundamental issues of strategy (Brown and Eisenhardt, 1998). Traditional approaches have created a construct with strategy content at one end of the continuum, typified by the dilemma ‘what do you want to do?’; and strategy process, typified by the dilemma ‘how are you going to do it?’, at the other (Schendel, 1992).

The basic premise for this research is that strategists are able to influence their competitive environments by adapting the strategy development process to the demands of the marketplace as they create opportunities and defend against threats faced by the organisation. The challenge for strategists therefore is to modify decision processes according to their perception of the characteristics of the competitive environment. The starting point for this research is that successful organisations, like Barclays, are able to develop congruence between the levels of perceived environmental uncertainty experienced by strategists, and the processes that are adopted by senior managers for developing strategy at the business unit level.

So what processes can strategists adopt to ensure that their businesses are capable of a strategic response in environments typified by change and complexity, or perceived environmental uncertainty (Duncan, 1972). The literature suggests: scenario planning (van der Heijden, 1996); game theory (Dixit and Nalebuff, 1991); real options theory (Dixit and Pindyck, 1997); systems dynamics (Senge, 1990); big bets / reserving the right to play (Courtney, Kirkland, and Viguerie, 1997); patching (Eisenhardt and Brown, 1999); simulation (Bertsche, Crawford, and Macadam, 1996); and revisiting strategic planning at Hewlett Packard through the Hoshi Kanri Planning and Deployment System (Marsden, 1998). Some researchers have suggested even more innovative approaches: Evans and Wurster (2000) suggest a total transformation of the business model; Means and Faulkner (2000) have prescribed a Continuous Asset Transformation Engine as a method of business transformation.

#### **4.1.2 Strategy: Understanding The Process Of Strategy Development**

According to the literature, traditional approaches to strategy appear problematic under conditions of perceived environmental uncertainty (Brown and Eisenhardt, 1998), therefore this section of the report revisits the basic concept of strategy and the process of strategy development, or strategic decision-making.

Derived from the Greek *stratēgia* meaning the art or function of a general, the concept of strategy, a military metaphor, has been associated with the field of organisational theory since the late 1950s (Hatch, 1997). Hatch explained that strategy is distinguished from tactics: strategy involves the planning and directing of large-scale military operations, to find the best possible position prior to engaging the enemy in battle, whereas tactics are concerned with manoeuvring military forces during battle. In the business context Hatch depicted competitors as the enemy, and resources as forces to be moved into combat. Through this metaphor, practitioners and researchers apply the term strategy to this phenomenon.

Chaffee (1985) recognised some confusion as to the use of this metaphor; she contended that it has led individuals to refer very generally to strategy, in the belief that they are all making reference to the same conceptual model. As a consequence of this generalisation, Chaffee argued that practitioners and researchers assume that there is no question pertaining to the existence of strategy, and no doubt surrounding the nature of its anchoring concept. Mintzberg (1973) recognised that it has multiple definitions, but maintained that all are equally legitimate. In Game Theory it represents the sets of rules that govern the moves of players. In sport it is used interchangeably with tactics, for example a ‘two-stop strategy’ in motor racing.

Chaffee (1985) contended that virtually everyone writing on strategy agrees that there is very little consensus on a definitive explanation (Bourgeois, 1980b; Gluck, Kaufman, and Walleck, 1982). Hambrick (1980) argued that such inconsistency is due primarily to two factors: first he suggested that strategy is multi-dimensional, and second that it is situational therefore it varies across industries. It is differences such as these that contribute to a lack of consensus over single definitions for strategy, and explain multiple definitions in the literature (Mintzberg, 1973).

Some of the most frequently cited definitions of organisational strategy emphasise concepts such as goals, resource allocations and plans (Chandler, 1962; Ansoff, 1965; Andrews, 1971). Consequently the term strategy has become synonymous with an integrated plan (Fredrickson and Mitchell, 1984). This has led to a proliferation of research seeking to classify firms as formal or informal planners (Bourgeois, 1980b; Hambrick, 1980).

Other researchers have argued that an organisation's strategy reflects the extent of match, or alignment, between its external environment and its internal structure and decision processes (Mintzberg, 1973). Evidently this 'fit' (Hatch, 1997) may have been achieved as a consequence of an integrated system of planning, produced by a formal or informal planning system. However, as the report identified earlier, Quinn (1980) found that it was more likely to reflect the impact of countless strategic decisions that have been made, one at a time, over a period of years.

The perspective offered by Quinn suggested that strategy is primarily a decision-making process. Therefore a more productive area of research may be to study how firms make individual strategic decisions, and whether they attempt to integrate decisions into an overall strategy (Fredrickson and Mitchell, 1984). Since all organisations make strategic decisions, Fredrickson and Mitchell argued that it is possible to move away from a view of strategy based on planning towards one more closely associated with decision-making.

When tackling strategy from a decision-based perspective, it is important to note that the strategic decision process is an organisation-level phenomenon (Fredrickson, 1984). Fredrickson suggested that decision processes are patterns of behaviour that develop in organisations, and therefore persist over time. These patterns of behaviour withstand turnover of personnel and variations in the attitudes displayed by individuals who contribute to such behaviour. Weick (1979) also recognised the existence of this pattern through contributions made by interchangeable people; this pattern distinguishes the firm from other firms. As a result of this uniformity the process remains constant over time across the organisation, and can become self-perpetuating (Herold, 1972). The end result is that the process becomes consistent across all decisions that are perceived as strategic (Fredrickson and Mitchell, 1984).

### **4.1.3 Strategic Context**

The Concise Oxford Dictionary (1999) defines strategic as ‘serving the ends of strategy: useful or important with regard to strategy’. However, since the previous section has highlighted a lack of consensus over definitions of the term strategy (Bourgeois, 1980b; Gluck et al., 1982; Chaffee, 1985) this poses the question, useful with regard to what? If one chooses to address strategy from a planning perspective (Chandler, 1962; Andrews, 1971) then strategic can be regarded as useful with regard to planning. If strategy is addressed from a decision-making perspective (Bourgeois and Eisenhardt, 1988), incorporating the rational–incremental construct offered by Lindblom (1959) and the notion of bounded rationality (Simon, 1957) somewhere along the continuum, then the term strategic becomes useful with regard to decision-making.

If one accepts that strategy is situational and multi-dimensional (Hambrick, 1980), then the issue of defining strategic is exacerbated, because it becomes important with regard to a multitude of concepts, such as: command (Bourgeois and Brodwin, 1984); planning (Rhyne, 1986); incrementalism (Quinn, 1980); power and politics (Cyert and March, 1963); culture (Johnson and Scholes, 1999a); vision (Pascale, 1985); and the growing complexity becomes apparent.

Given that the term strategic is used throughout the literature, and subsequently this document, it is necessary to anchor the concept in relation to this research. Eisenhardt and Zbaracki (1992) tied it to decision-making, and defined strategic as involving the fundamental decisions which shape the course of the organisation. Mintzberg, Raisinghani and Theoret (1976) defined strategic as important in terms of the actions taken, the resources committed, or the precedents set. Schendel and Hofer (1979, p.11) provided a definition that is highly relevant to the use of strategic in this document, as they highlight the processual nature and character of strategic management:

“Strategic management is a process that deals with the entrepreneurial work of the organisation, with organisational renewal and growth, and more particularly, with developing and utilising the strategy which is to guide the organisation’s operations.”

#### **4.1.4 Strategy Process: Histories, Metaphors And Multiple Perspectives**

Whether the concept of strategy is viewed from a planning perspective, formal or informal, or a decision-based perspective, the approach itself reveals very little about what actually occurs during the strategy process (Fredrickson and Mitchell, 1984). Hatch (1997) offered an insight into the historical development of the study into organisational strategy, through the application of multiple perspectives and organisational metaphors, set out in Table 11 below:

*Table 11 – Multiple Perspectives Of The Strategy Process*

<b>Perspective</b>	<b>Authors</b>	<b>Period</b>	<b>Metaphor</b>	<b>Strategy Process</b>
Classical	Fayol, Taylor, Barnard	1950s & 60s	Machine	Guidelines directing managers to best strategies for particular situations.
Modernist	Ansoff, Andrews, Chandler	1960s & 70s	Organism	Planned efforts by top management that influence outcomes, by managing the organisation's relationship with its environment.
Symbolic-Interpretivist	Quinn, Mintzberg, Weick, Gilfillan, Chaffee, Pettigrew	1980s & Early 1990s	Culture	Action by management produces strategy, which becomes a powerful symbol; this legitimises previous actions and communicates to others new ideas and openness.
Post-Modernist	Foucault	Late 1990s & 2000s	Collage	Strategy, organisation and environment are narrative constructions, the result of actors (practitioners and researchers) concocting notions; they are not objective realities but are objectivised through social construction.

Hatch observes that many studies have been conducted within the normative tradition, closely associated with classical management theory of the 1950s and 1960s. Here the organisation is viewed as a machine, and strategists develop guidelines that direct managers to the best strategies for particular situations. The late 1960s and the 1970s heralded the modernist perspective, where the concept of strategy refers to efforts by top management to achieve desired outcomes, managing the relationship between the organisation and its environment. The 1980s and 1990s brought a symbolic-interpretive focus on processes of enacting strategies, advocating the symbolic role of strategy in the social construction of organisations. The post-modernist perspective is still emerging, and postulates that 'the strategy' and 'the organisation' do not really exist as objective realities but are objectivised through social construction, by practitioners and researchers.

#### **4.1.5 Strategy Content, Strategy Process And Different Levels Of Strategy**

Chaffee (1985) recognised that theorists who segment the strategy construct implicitly agree that the study of strategy includes the actions taken or to be taken, the content of the strategy; and the processes by which actions are decided and implemented, the strategy process.

Therefore a construct is created with strategy content (typified by ‘what’) and strategy process (typified by ‘how’) at the two extremes of the continuum (Schendel, 1992).

Chakravarthy and Doz (1992) made the distinction that strategy content research focuses exclusively on those strategic positions of the firm that lead to optimal performance, under varying environmental conditions; whereas strategy process research is concerned with how an organisation’s administrative systems and decision processes influence its strategic positions. Evidently both segments of the construct are interested in improving the performance of the firm, but emphasise different aspects of the strategic challenge for management.

A useful way to illustrate the strategy content–process construct is to consider different levels of strategy within the firm (Ansoff, 1965; Hill and Jones, 1998). Ansoff argued that strategy exists at three levels: the corporate level, the business level and the operational level. Ansoff suggested that corporate-level strategy focuses on what businesses the firm should be in, to maximise long-term profitability; business-level strategy resolves the way a company positions itself within its marketplace; and operational-level strategy addresses issues of efficiency and quality at a functional level. Hill and Jones agreed: they refer to the operational level as the functional level and introduce a global level of strategy, a subset of corporate-level strategy.

Using these different levels of strategy it is possible to distinguish that strategy content is concerned with corporate-level strategy, including the global-level strategy introduced for modern global economies by Hill and Jones. Strategy process, meanwhile, is more concerned with the effective positioning of the firm vis-à-vis its environment (Chakravarthy and Doz, 1992) – that is, business-level strategy and aspects of operational-level strategy, as defined by Ansoff (1965).

#### **4.1.6 The Strategy Process: A Rational Or Incremental Dilemma?**

As this review has recognised, strategy process is concerned with the effective positioning of the firm vis-à-vis its environment (Chakravarthy and Doz, 1992). The normative tradition, associated with classical and modernist management theory (see Table 11 in Section 4.1.4), tackles strategy as a rational process (Ansoff, 1965; Weick, 1979; Wood and LaForge, 1979; Utomi, 1998), sometimes referred to in the literature as linear (Chaffee, 1985), comprehensive (Mintzberg, 1978; Fredrickson, 1984; Fredrickson and Mitchell, 1984), deductive (Allison, 1971), or systematic (Ansoff, 1965). The rational model, as the name suggests, takes a logical, deliberate and rational approach to strategy development. Within this approach the organisation finds ways of intentionally, and rationally, combining selected courses of action with the allocation of resources to achieve strategic ‘fit’, and thereby obtains a competitive advantage (Hatch, 1997).

Hatch (1997) identified an inherent assumption within the rational perspective that it is possible to plan organisational activities, and performance, and therefore to equate strategy to a rational decision-making process. Rhyne (1986) found in his study of strategic planning and financial performance that the use of the term planning was synonymous with the theory of strategic management. The juxtaposing of planning and strategy is evident within the definition of a rational model of strategy offered by Chandler (1962, p.13):

“Strategy is the determination of the basic long-term goals of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals.”

Hart (1992) argued that true rationality implies that a decision-maker must go through a series of rational steps. Meyerson and Banfield (1955) stressed that this sequence involves a consideration of all available alternatives leading to the identification, and evaluation, of all of the consequences likely to follow the adoption of each alternative. The final step in the process is the selection of the most favourable alternative, in terms of the most valued ends.

Hart (1992) argued that if this level of rational decision-making, or comprehensiveness (Fredrickson, 1984; Fredrickson and Mitchell, 1984), is to be applied to the strategy process then management must undertake a systematic environmental analysis, an assessment of internal strengths and weaknesses, explicit goal setting and the evaluation of numerous alternative courses of action. Hart recognised that this can only be achieved through an effective, formal strategic planning system (Wood and LaForge, 1979).

Not surprisingly the rational model, which calls for comprehensive and exhaustive analysis prior to a decision (Fredrickson, 1984; Fredrickson and Mitchell, 1984), has been challenged by behavioural theorists (Simon, 1957; Cyert and March, 1963). The argument here is that individuals, and indeed organisations, can only achieve rationality within certain parameters, therefore such rationality is necessarily 'bounded'. At the individual level these boundaries may be set by, for example, cognitive limits, whereby managers may choose to simplify the information they require to make a decision (Lindblom, 1959). Alternatively individuals within the organisation may use techniques such as cognitive maps to organise the world into more 'manageable chunks' (Schwenk, 1988).

Lindblom (1959) also recognised a simplified process which he referred to as 'muddling through' at the organisational level, where, for example, strategic assumptions are made which form the basis for what Mason and Mitroff (1981) referred to as organisational frames of reference. Behavioural theorists identified another simplified process, the 'garbage can' model of strategic choice (Cohen, March, and Olsen, 1972), where strategy is a consequence of 'organised anarchy'.

Eisenhardt and Zbaracki (1992) characterised organisations as political systems, arguing that the organisation acts as a coalition of people with competing and conflicting interests. These differences arise from conflicting views of the future, biases induced by the position of individuals within the organisation and clashes in personal objectives, motivations and ambitions (Allison, 1971). Therefore decisions follow the desires, and consequent choices, of the most powerful people within the organisation, primarily those occupying senior management positions (Salancik and Pfeffer, 1974).

In summary, behavioural theorists challenged rationality as an approach to strategic decision-making by suggesting that individuals within the organisation are key to the process (Mintzberg, 1978; Nonaka, 1988). Such individuals are constrained from being entirely comprehensive in their approach as a consequence of their cognitive limits and personal motivations (Braybrooke and Lindblom, 1963; Cyert and March, 1963).

An alternative to the normative ideal of strategy as a rational process is an option proposed by Quinn (1980), advocating a process of ‘logical incrementalism’, sometimes referred to in the literature as adaptive (Chaffee, 1985; Shrivastava and Grant, 1985), reactive (Ansoff, 1965), or collaborative (Bourgeois and Brodwin, 1984). Quinn found that top management were capable of predicting a broad strategic direction for the organisation, but were rarely capable of predicting the precise strategy at the level of granularity mandated by the rational model.

Similarly to Mintzberg (1978), in her studies at Honda, Nonaka (1988) found that the incremental model required involvement in strategy making from all levels of the organisation, as opposed to the top-down prescriptive nature of the rational model. Nonaka identified that an inductive approach can be adopted towards strategy making; consequently it follows a process of reasoning. Therefore strategy can be seen as the direction an organisation takes, irrespective of whether or not that direction was intentional. It is thus apparent that strategy can be planned, but when it is not, it can emerge or be inducted from the activities of individuals within the organisation. Not surprisingly it is sometimes referred to in the literature as emergent strategy (Mintzberg, 1987).

The final development of the incremental model captured the symbolic-interpretive management theory of the 1980s with the notion of strategic vision (Peters and Waterman, 1982; Pascale, 1985; Kotter, 1988), sometimes referred to in the literature as entrepreneurial (Mintzberg and Lampel, 1999), perspective (Mintzberg, 1987) or cybernetic (Grandori, 1984). Within this view, rather than seeking to be rational or comprehensive, managers create a sense of purpose that organisational members interpret as a general sense of strategic direction. This direction is symbolic in that it guides individuals within the organisation, and influences decision-making.

#### **4.1.7 The Historical Development Of The Strategy Process**

Earlier in this report, the literature review recognised that there has been considerable debate over the use of the term strategy which has led to many definitive explanations (Mintzberg, 1973), and some confusion among scholars and practitioners alike (Chaffee, 1985).

Mintzberg, Quinn and Ghoshal (1998) gave a brief historical background on how the strategy process has developed through different perspectives.

Mintzberg et al. (1998) started by recognising the normative approach to the intended strategy process closely associated with the 1970s and dominated by the work of Andrews (1971); they then moved on to the more analytical approaches to the strategy process synonymous with the 1980s, particularly the development of strategy formulation most notably within the work of Porter (1980). Mintzberg et al. contended that Porter introduced economics into the debate by observing industry structures and introducing generic strategies. Around the same time Mintzberg (1978) identified patterns of strategy, and recognised that strategy can be a crafting process. The 1990s ushered in the era of Hamel and Prahalad (1996) with their work on strategic intent and various other insights such as the cultural web (Johnson and Scholes, 1993).

It is evident that there is some consistency across these perspectives, primarily that the majority of these theorists view strategy as a process: Andrews (1971) highlighted the separation of formulation from implementation; Mintzberg (1978) identified positioning and then incremental patterns of emerging strategies; Johnson and Scholes (1993) recognised strategic analysis as being distinct from choice and ultimately implementation. Applying this to the Executive Doctorate, the recognition of strategy as a process is significant, because this distinction has ramifications for another process, the research process (Pettigrew, 1992).

## **4.1.8 Strategy Process Research**

### **4.1.8.1 Distinguishing Process Research From Content Research**

Once strategy has been identified as a process (Mintzberg et al., 1998), it is important to recognise the implications of this observation for the research (Pettigrew, 1992). Chakravarthy and Doz (1992) argued that as a starting point to understanding strategy process research, it is useful to distinguish it from strategy content research. Chakravarthy and Doz recognised strategy process research as being concerned with how an organisation's administrative systems and decision processes influence its strategic position. In contrast, they argued that strategy content research focuses exclusively on which strategic positions lead to optimal performance under varying environmental contexts.

Chakravarthy and Doz recognised that although strategy content and process are both concerned with improving the performance of the organisation, they emphasise fundamentally different aspects of the problem for management. Clear distinctions are made between the two sub-fields and, in terms of research, the differences lie in three key areas: the focus of the research; the disciplinary bases on which the research is built; and finally the methodology that can be applied.

Beginning with focus, Chakravarthy and Doz argued that the focus of strategy content is the scope of the organisation (Porter, 1980), and the ways of competing within individual markets (Porter and Montgomery, 1991), sometimes referred to as business-level strategies (Ansoff, 1965). In contrast the focus of strategy process is the positioning of the organisation vis-à-vis its environment: strategy process describes how firms achieve and maintain positioning through deliberate (Andrews, 1971) or trial-and-error (Quinn, 1980) actions. Hirsch (1991) is cited as a little disparaging towards strategy content research; he referred to it as black and white as opposed to the full cinematography of process research. Through his analogy Hirsch challenged content research to improve its focus, to attain the level achieved by process research. These two fields were covered in more detail earlier in Section 4.1.5.

After recognising the comparative focus of the two forms of research, Chakravarthy and Doz went on to discuss the disciplinary bases, recognising that process research unlike content research accepts bounded rationality (Simon, 1957). Most importantly for this research, strategy process research also deals with the behavioural interactions of individuals and groups within the firm, as opposed to content research which is predominantly concerned with organisation–environment relations (Porter, 1980). Chakravarthy and Doz (1992, p.6) recognised that:

“The multiple disciplines contributing to strategy process research can give it unique vitality, provided this broad interest is funnelled through a shared understanding of the fundamental questions for the sub-field.”

Chakravarthy and Doz asserted that the distinct and fundamental questions for strategy process research are threefold. The first question pertains to an understanding of the relationship between a firm’s administrative systems and / or decision processes, and its competitive and / or resource positions; in the case of this investigation, how Barclays develops strategy. The second is to understand how a firm achieves and maintains effectiveness in the above relationship; in this study, the process Barclays adopts to develop strategies as defined by the model (Bailey et al., 2000). The third basic question is how a firm modifies its decision processes in response to environmental changes, and through its own actions; in this enquiry, the implications of perceived environmental uncertainty among strategists for strategy development processes at the business unit level.

Given that this investigation is strategy process research as defined by Chakravarthy and Doz (1992), the study can begin to look at the ramifications for the methodological approach. Chakravarthy and Doz argued that for strategy process research to address the three questions outlined above, the organisation must be observed from within – the proverbial ‘black box’ must be opened. Again this differs from strategy content research, which they argued could be accomplished through secondary data. The Executive Doctorate research comprises strategy process research, which is best suited to this study of Barclays, where the author is within the ‘black box’ and the research methods include questionnaires, interviews and other intrusive methods.

#### **4.1.8.2 Understanding The Meaning Of The Term Process**

As the literature review identified in the previous section, this research is by definition strategy process research (Chakravarthy and Doz, 1992; Pettigrew, 1992). In Section 4.1.3 this paper covered in detail the meaning of the term strategic and in Section 4.6 it will move on to look in detail at the specifics of the research process; it is therefore useful to dwell, if only for a short time, on how the research is using the term process.

Van de Ven (1992) identified that the body of strategy process is diverse, and cannot be contained within a single paradigm. He asserted that researchers adopt very different views on the strategy process, which influences the questions they ask, the methods they employ and consequently the contributions they make. To help address these problems van de Ven offered three interrelated suggestions for studying the strategy process: he argued that defining the meaning of process, clarifying the theory of process and designing research to observe process helps researchers better understand the conceptual basis of their research. As the theory of process is covered in Section 4.1.8.1, this section looks at defining the meaning of process for this research.

Van de Ven contended that the numerous process models within the strategy literature (Mintzberg, 1973; Bourgeois and Brodwin, 1984; Hart, 1992; Hart and Banbury, 1994) indicate that the term process is used in many different ways. In order to avoid confusion he recognised three meanings of process: first process is a logic that explains a causal relationship between independent and dependent variables; second it is used to describe a category of concepts or variables that refers to actions of individuals or organisations; and finally it is used to explain a sequence of events that describe how things change over time.

As this investigation is concerned with a category of concepts or variables, in this case the level of perceived environmental uncertainty experienced by strategists and the implications this has for strategy development processes at the business unit level, then van de Ven's (1992) second definition is relevant to this investigation.

## **4.2 Literature Review: Strategy Development Processes**

### **4.2.1 Strategy Development: A Decision-Making Perspective**

The earlier review of literature identified that strategy development can be addressed from many different perspectives, for example: planning (Chandler, 1962; Ansoff, 1965; Andrews, 1971); achieving a match with the competitive environment (Lenz, 1980; Chaffee, 1985); strong leadership (Bourgeois and Brodwin, 1984); politics (Eisenhardt and Zbaracki, 1992); or culture (Johnson and Scholes, 1993). This research into effective strategy development under conditions of uncertainty addresses the issue from a decision-making perspective (March and Simon, 1958; Cyert and March, 1963; Quinn, 1980).

The research investigates the phenomenon of uncertainty and tests the assumptions that it leads to a lack of stability for the organisation, and that in order to achieve superior performance strategists must adapt the firm to return to a state of equilibrium. The research investigates how Barclays maintains effectiveness in its strategic decision-making processes as it positions itself vis-à-vis its external environment. Gore, Murray and Richardson (1993, p.8) define a decision-making process as:

“the whole range of activities involved in making a decision, not merely the point of decision.”

The literature in the area of strategic decision-making processes shows very little consensus about the number of stages that exist within the process or what each stage involves. Some theorists suggest that this is not surprising owing to the heterogeneity of decision situations (Nash, 1998).

Simon (1960) argued that there were three major elements to the decision-making process: finding occasions for making a decision; finding possible courses of actions; and choosing among the courses of action. Schendel and Hofer (1979) identified six stages to the process: goal formulation; issue identification; alternative generation; alternative evaluation; choice; and finally implementation. Mintzberg et al. (1976) identified three common stages: identification; development; and selection. Mintzberg et al. (1976, p.246) defined the process as:

“a set of actions and dynamic factors that begins with the identification of a stimulus for action and ends with a specific commitment to action.”

The common stages identified in the literature suggest a rational decision process, which calls for comprehensive and exhaustive analysis prior to a decision (Fredrickson and Mitchell, 1984). These various stages of the process are set out in Table 12 below:

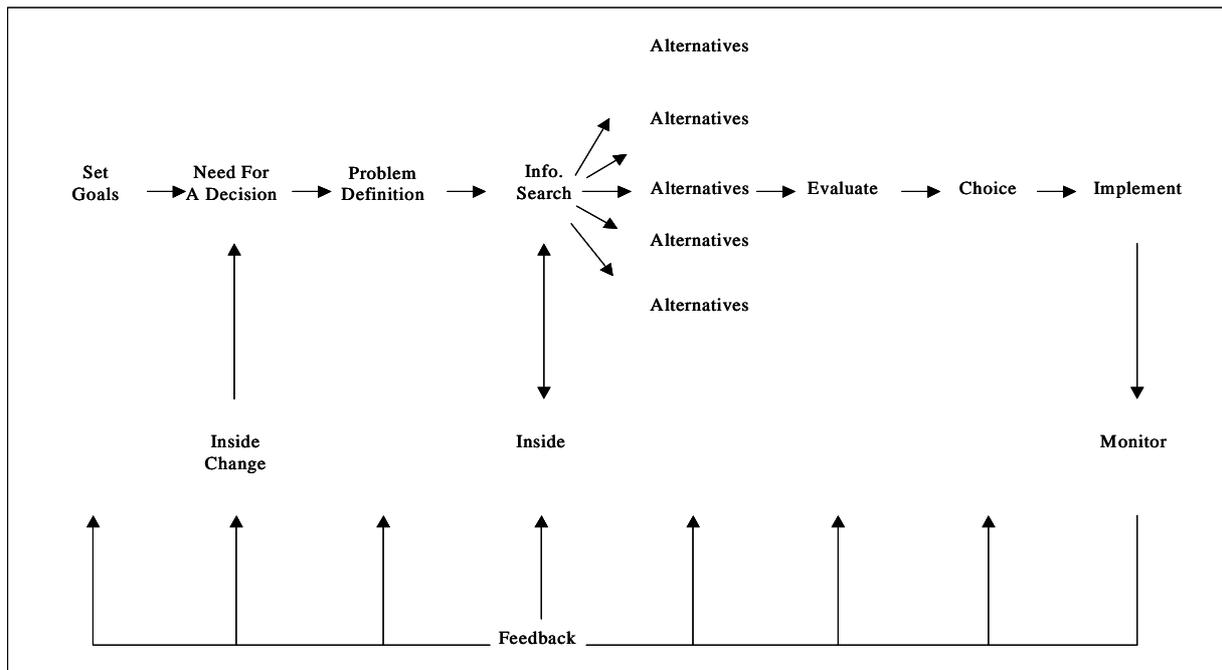
*Table 12 – Literature Review: Stages Of The Strategic Decision-Making Process (Gore et al., 1993)*

<b>Author</b>	<b>Set Goals</b>	<b>Need</b>	<b>Define Problem</b>	<b>Info. Search</b>	<b>Develop Options</b>	<b>Evaluate Options</b>	<b>Choice</b>	<b>Implement</b>	<b>Monitor</b>
Simon (1960)		✓			✓		✓		
Janis (1968)		✓					✓	✓	✓
Schrenk (1969)		✓			✓		✓		
Witte (1972)				✓	✓	✓	✓		
Mintzberg et al. (1976)		✓	✓	✓	✓	✓	✓		✓
Gordon and Pressman (1978)	✓		✓		✓		✓		✓
Gilligan, Neale and Murray (1983)	✓			✓			✓	✓	✓
Harrison (1987)	✓			✓			✓	✓	✓
Bridge (1989)	✓				✓		✓		
Hill (1989)		✓			✓		✓	✓	

Through his studies in the area of public administration, Lindblom (1959) argued that developing strategy through rational, logical and sequential processes was unrealistic. He argued that strategists could not possibly evaluate all the alternatives, consider all possible outcomes and appraise these alternatives against pre-set unambiguous strategic objectives. Cyert and March (1963) recognised that this was predominantly the case in organisational contexts typified by conflicting views, values and power bases.

If all the individual stages identified in Table 12 above were to be incorporated into a single decision process model then it would be possible to form a rational path through the decision process, as set out in Figure 4 below:

Figure 4 – A Rational Decision Process: Gore et al. (1993)



Consequently the challenge for strategists lies in comparing options and considering which would be the best strategic alternative to implement. Lindblom (1959) referred to this method of strategy development as ‘successive limited comparisons’, which occur in the day-to-day environment of strategists, rather than through exhaustive analysis and integrated planning systems. It is therefore argued that strategy emerges (Mintzberg, 1987) as a consequence of resolving often disconnected problems through a decision process captured by the notion of ‘muddling through’ (Lindblom, 1959), ‘logical incrementalism’ (Quinn, 1980) and ‘disjointed incrementalism’ (Braybrooke and Lindblom, 1963).

This research investigates the decision processes that exist at Barclays and examines how strategists modify these processes under conditions of change and complexity, referred to in the literature as perceived environmental uncertainty (Emery and Trist, 1965; Lawrence and Lorsch, 1967; Perrow, 1967; Duncan, 1972).

## **4.2.2 Strategic Decision-Making**

Strategic decision-making has emerged as one of the most active areas of current management research (Papadakis, Lioukas, and Chambers, 1998). The subject has benefited significantly from research traditions such as behavioural decision theory and transaction cost economics, which has enabled it to gain its own momentum (Schwenk, 1995). As this paper identified earlier, strategy development can be addressed from numerous perspectives, for example planning or decision-making (Section 4.1.2) and rational or incremental (Section 4.1.6). The report will also address further perspectives when it considers the nature of the relationship between the organisation and its environment (Section 4.4).

These disparate perspectives have been mirrored in the literature as researchers and practitioners have also investigated strategy from numerous perspectives (Lindblom, 1959; Ansoff, 1965; Andrews, 1971; Quinn, 1980; Chaffee, 1985; Mintzberg, 1987; Eisenhardt and Zbaracki, 1992). The range of views has spawned an array of conceptual models, both competing and overlapping (Hart, 1992; Hart and Banbury, 1994). Hart (1992) recognises model proliferation where authors have developed scores of different strategy-making typologies (Ansoff, 1965; Allison, 1971; Andrews, 1971; Miles and Snow, 1978; Quinn, 1980; Bourgeois and Brodwin, 1984; Grandori, 1984; Chaffee, 1985; Mintzberg, 1987; Eisenhardt and Zbaracki, 1992).

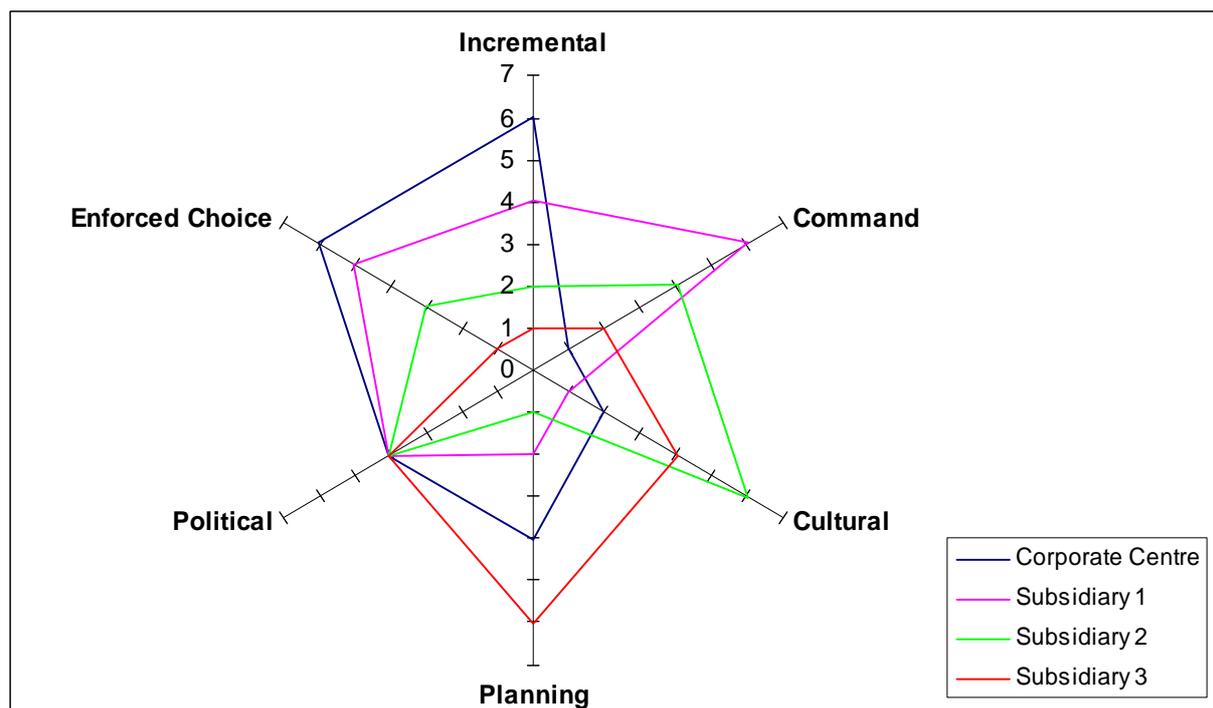
This element of the paper covers the literature using a multi-dimensional model of strategy development processes proposed by Bailey et al. (2000). The structure of this section is therefore aligned to the six dimensions of strategy development identified in their model: command, planning, incremental, political, cultural and enforced choice. While the headings used later in this section reflect the terms used by Bailey et al., the review attempts to embrace research in all areas of the strategy development literature closely associated with these classifications.

### 4.2.3 A Multi-Dimensional Model Of Strategy Development Processes

From the literature review that informed their research Bailey et al. (2000) uncovered numerous explanations and theories of strategy development processes (Bourgeois and Brodwin, 1984; Chaffee, 1985; Eisenhardt and Zbaracki, 1992; Hart, 1992; Hart and Banbury, 1994). Within three broad approaches to the strategy process – strategic choice (Ansoff, 1965; Child, 1972), social processes (Cyert and March, 1963; Johnson, 1987) and environmental factors (Hannan and Freeman, 1989) – Bailey et al. (2000) identified six discrete dimensions of strategy development.

As a component of their research Bailey et al. were able to develop a self-administered questionnaire, which they believed represented the characteristics attributable to each of the dimensions. The content of each question was validated by a panel, which was considered to be expert, comprising academics and practitioners. The panel were introduced to the model, each dimension was discussed and referenced in the literature; they were then asked to analyse the item pool and indicate questions which they regarded as inappropriate. Over a period of time the instrument was validated. An exemplar of a possible profile of strategy development is illustrated as a radar graph in Figure 5 below (Bailey et al., 2000):

Figure 5 – A Possible Profile Of Strategy Development Processes: Bailey et al. (2000)



Following validation there was a final selection of 44 items, which were developed into single questions attributable to each of the dimensions. Each question was rated on a ‘7-point’ Likert scale (Black, 1999) anchored at the extremes with ‘strongly disagree’ (1) and ‘strongly agree’ (7) – such a scale is common in this type of investigation (Duncan, 1972; Hart and Banbury, 1994). To ensure that questions were asked in a consistent manner, respondents were asked to assess ‘how strategic decisions are made in your organisation’.

Strategic decisions were defined as: being characterised by a large commitment of resources; dealing with issues of substantial importance; having a long-term rather than short-term impact; involving more than one function; and involving significant change. The scores from each respondent were aggregated to give an indicative measure of the dimensions involved, illustrated in Figure 5 above.

The six dimensions developed by Bailey et al. (2000) are covered individually in the body of the literature review later in this section. Through the review it is evident that Bailey et al. build on or closely relate their findings to other models of strategy development, most notably the work of Hart (1992). This is detailed in Table 13 below. The development of Hart’s work is particularly evident where Bailey et al. have not assumed the same level of managerial discretion as Hart, and have instead introduced the dimensions of culture and enforced choice, an extension of Hart’s symbolic dimension.

*Table 13 – Bailey et al. (2000): Developing The Work Of Hart (1992)*

<b>Hart (1992)</b>	<b>Bailey et al. (2000)</b>	<b>Section</b>	<b>Key Reference To Literature Source</b>
Command	Command	4.2.4	Bourgeois and Brodwin (1984), Hayward and Hambrick (1997)
Rational	Planning	4.2.5	Ansoff (1965), Andrews (1971), Mintzberg (1978)
Transactive	Incremental	4.2.6	Lindblom (1959), Quinn (1980)
Generative	Political	4.2.7	Cyert and March (1963), Hickson, Butler, Gray, Mallory and Wilson (1986)
Symbolic	Cultural	4.2.8	Schein (1985), Johnson and Scholes (1999a), Schön (1999)
–	Enforced Choice	4.2.9	Aldrich (1979), Hannan and Freeman (1989)

#### **4.2.4 The Command Dimension**

As the name for this construct of strategy development suggests, the Command Dimension identified by Bailey et al. (2000), sometimes referred to as the Commander Model (Bourgeois and Brodwin, 1984; Hart and Banbury, 1994), is an extension of the military metaphor associated with the term strategy itself. This dimension assumes that strategy lies within the remit of a single individual, usually the Chief Executive Officer (C.E.O.), who is assumed to benefit from institutionalised authority, and is regarded as solely responsible for the strategic direction of the organisation.

From a systems perspective, this Command Dimension is grounded in classical and modernist management theory, where the organisation is regarded as a ‘closed-system’ (Hatch, 1997). The C.E.O., or Commander, is responsible for internal operations, trying to determine a strategic alignment between organisational competences and environmental opportunities. The C.E.O. goes through a rational process, first identifying organisational objectives; moving on to generating courses of action, which may achieve these objectives; evaluating them, subject to economic efficiency; and finally choosing the preferred course of action for execution. This model identifies the role of the C.E.O. with that of a rational actor issuing directives from the seat of power. The actor is rational because the model assumes that exhaustive analysis is completed prior to taking action (Fredrickson, 1984).

As with all rational models, the Command Dimension is challenged on its assumption that the C.E.O. has access to complete information and perfect foresight; as a result this dimension has a normative bias towards the rational, or comprehensive (Fredrickson and Mitchell, 1984), model for developing strategy. As identified in Section 4.1.6, theorists recognise that rationality is bounded under certain conditions (Simon, 1957); therefore the C.E.O. cannot consider all options or acquire perfect foresight. The Command Dimension is also challenged on the assumption that the C.E.O. holds absolute power – the influence of politics is only considered when precipitated outside the organisation – whereas research suggests that internal politics and power impact on the decision-making of individuals within organisations, and therefore on the strategy process itself (Cyert and March, 1963; Pettigrew, 1973).

Another area of contention surrounds whether the Command Dimension represents an overlap with the incremental approach (Quinn, 1980). It is not clear which dimension is relevant in the scenario where the C.E.O. identifies the existing strategy, evaluates opportunities and threats, and then makes modifications to current strategy owing to changed environmental conditions.

In support of the dominant leader model offered by Bailey et al. (2000) in their Command Dimension, Hayward and Hambrick's study of C.E.O. pride and presumption (1997) found that strong C.E.O. personalities could both benefit, and be the detriment to, strategic decisions; however, there is also evidence of leaders taking responsibility for strategy making and leading organisations to desired future states through strategy development processes that are by nature visionary (Grandori, 1984; Chaffee, 1985).

Kotter (1988) asserted that the development of strategy as a consequence of an association between the individual, in this case the C.E.O., and the organisation owed as much to the contextual situation as to the individuals themselves. In their study of the high velocity micro-computer industry, Bourgeois and Eisenhardt (1988) found that observers can wrongly attribute responsibility for successful or unsuccessful strategies to the C.E.O., as he or she is perceived as a strong leader, exercising power and influence over strategic direction.

It is evident that the Command Dimension is a useful way of conceptualising the strategy development process (Bourgeois and Brodwin, 1984), particularly in firms where the C.E.O. enjoys a great deal of centralised power, and his or her objective function matches that of the managers who implement strategy. The Command Dimension is also beneficial in the event that current systems and structures are not expected to impede new behaviours, or the strategy brings small, unthreatening change for example not involving large job losses.

Given its centralised function, Bourgeois and Brodwin argued that the Command Dimension is best suited for organisations in stable environments with a low degree of diversity and change; they argued that it should be effective when the organisation is in a strong competitive position, enjoying a high degree of munificence, or slack, free to be utilised during strategic implementation.

#### **4.2.5 The Planning Dimension**

The second construct of strategy development identified by Bailey et al. (2000) is the Planning Dimension. Similarly to the Command Dimension reviewed in Section 4.2.4, this dimension identifies strategic management as the province of the organisational elite (Bourgeois, 1985). However, within this dimension strategy formulation falls within the remit of a group of individuals, usually the top management team. This dimension is closely associated with the rational model of strategy development, sometimes referred to as ‘the planning school’ (Mintzberg and Lampel, 1999). As a school of thought it dominated the modernist literature of the 1970s, but faltered in the 1980s with the advent of the symbolic-interpretive theory of strategy (Hatch, 1997).

The basic assumption underpinning the Planning Dimension is that the development of strategy is an intentional, rational process which involves a logical, sequential, analytical and deliberate set of procedures (Chandler, 1962; Ansoff, 1965; Andrews, 1971). Therefore it is subject to all the generic challenges to rational, comprehensive models of strategy development proposed against the Command Dimension in the previous section.

With a few notable exceptions (Mintzberg, 1978; Quinn, 1980), various strategic management theorists have recommended planning as an essential tool for managers (Rhyne, 1986). However the value of planning systems has been increasingly questioned (Peters and Waterman, 1982; Campbell, 1999); Rhyne (1986) argued that most of the criticism aimed at planning is not so much critical of planning itself, but the manner in which planning is actually carried out.

Rhyne asserted that the normative view of strategic management assumes the fundamental objective of organisation-wide planning is to achieve a match, fit or alignment between the external environment and the internal capabilities of the organisation. Consequently the assumption is made that strategy is determined by the environment, not constrained by it (Bourgeois, 1985). This view of the relationship between the organisation and its environment is covered in more detail later in Section 4.4.

The concept of a strategic ‘fit’ between the organisation and its environment (Hatch, 1997), sometimes referred to as ‘the design school’ (Mintzberg and Lampel, 1999), develops concepts such as goals, objectives and resource allocations which all contribute to the formal planning process (Andrews, 1971). The identification of a planning process has enabled researchers to characterise organisations along a dichotomous construct, with planners at one end of the continuum, and non-planners at the other. This dichotomy is subject to the extensiveness of the formal planning process (Bourgeois, 1980b; Hambrick, 1980).

Rhyne (1986) recognised there can be an overemphasis on the importance of planning, which can lead strategists to forget that planning represents only one element of the strategy formulation and implementation process. He goes on to argue that the presence of an elaborate planning system does not necessarily ensure that a firm’s planning process will be effective.

There are other problems associated with planning. First there is an inherent assumption that well-defined strategic goals are set by senior managers and therefore strategy is a top-down process. As the review identified earlier, this perspective has been challenged by Nonaka (1988) and Mintzberg (1978). There is also an assumption that strategic thinking only takes place at the outset of the planning process; this premise is most notably challenged by Quinn’s (1980) notion of incrementalism, covered in Section 4.2.6. Studies have found that true strategic planning has taken place in relatively few organisations (Gluck et al., 1982).

To conclude, it is evident that the Planning Dimension is a useful method of conceptualising a prescriptive strategy development process (Ansoff, 1965). Planning is useful because it reflects the consolidation of ideas and actions that has already begun to occur (Rhyne, 1986); and reflects the concerns and objectives of the senior management team (Campbell and Alexander, 1997). As with the Command Dimension the centralised function of planning is best suited for firms in stable environments with a low degree of diversity and low rate of change; it should be particularly effective when a firm is in a strong competitive position, enjoying a high degree of munificence, or slack, free to be utilised in the planning process (Bourgeois and Brodwin, 1984).

#### **4.2.6 The Incremental Dimension**

Evidently the strategy process can be viewed as a rational process, as in the Command and Planning Dimensions; or it can be viewed as an incremental process (Lindblom, 1959), as outlined in Section 4.1.6. It can also be split into stages, for example formulation and implementation (Andrews, 1971; Porter, 1980). However, some theorists argue that most existing strategy-making processes do not fully capture the complexity, and variety, of the phenomenon when it is portrayed in such dichotomous terms (Hart and Banbury, 1994). With this caveat in mind the literature review moves on to discuss the Incremental Dimension (Bailey et al., 2000). The Incremental Dimension of the model refers to the incremental end of the rational–incremental construct identified by Lindblom (1959). Unfortunately this is where the simplicity ends, as reviewing the Incremental Dimension forces the study to understand the true meaning of the term incremental. Lindblom himself recognised disjointed incrementalism which, when applied to strategic choice, takes the form of successive limited comparisons.

Probably the most cited reference in the incremental literature is Quinn (1980), whose notion of logical incrementalism is heavily cited by Bailey et al. (2000) in the development of their model. Quinn argued that logical incrementalism is purposeful and intentional and is used when managers cannot analyse all aspects of the environment or establish precise objectives, owing to the high level of complexity. Using this method of strategy development, managers accept environmental uncertainty and do not attempt to predict the future; any strategic goals and objectives that are stated are couched in non-specific terms, so as not to stifle potentially advantageous experimentation or new ideas; commitment to strategic options tends to be tentative, therefore subject to early review.

As identified earlier, Hart and Banbury (1994) contended that the Incremental Dimension of the model might lead to confusion. As a starting point they agreed that it is not entirely rational or comprehensive, as defined by Fredrickson and Mitchell (1984). However, they asserted that the rational–incremental dichotomous construct is problematic because goals are stated, objectives set and strategic options chosen, therefore pure incrementalism is misleading.

Hart and Banbury (1994) recognised other problems with incrementalism; evidently decisions are made, albeit with incomplete information, therefore a level of rationality is applied, although such rationality is bounded (Simon, 1957). In addition Hart and Banbury argued that a process is applied, hence the use of the word logical; decisions are made at the outset and during the process, therefore strategy making appears to follow a deductive and inductive process which, when combined, can be described as compressive or symbiotic (Nonaka, 1988).

Applying the Incremental Dimension also encourages middle management to develop new opportunities as they arise; this characteristic fits with the crecive model developed by Bourgeois and Brodwin (1984) and the middle-up-down model offered by Nonaka (1988). It is important to be a little careful drawing parallels with the work of Bourgeois and Brodwin because the Incremental Dimension offered by Bailey et al. (2000) also includes elements of their change model through the setting of goals, albeit at a high level, and their collaborative model, where multiple inputs to group decisions lead to the emergence of strategy.

Developing this review, incrementalism is closely associated with emergent strategy (Mintzberg, 1987) as it enables strategists to identify current strategies and adapt them in the light of changes to environmental conditions. Mintzberg also recognised this ability to change the strategy, and used the term ‘adaptive’ to describe this form of strategy development. Chaffee (1985) also used the term ‘adaptive’, but she used it to recognise adaptation of the organisation to its environment as opposed to adaptation of the strategy itself. Again it is important to be careful drawing comparisons across strategy-making typologies, because the Incremental Dimension offered by Bailey et al. also includes elements of Chaffee’s linear model, such as setting goals and objectives and following a logical sequence.

The emergent approach to strategy within the Incremental Dimension, sometimes referred to as ‘the learning school’ (Mintzberg and Lampel, 1999), has a clear area of synergy as a result of the intertwining of so-called formulation and implementation; this characteristic is close to the retrospective sense-making mode of learning developed by Weick (1979), the notion of venturing (Bower, 1970; Burgelman, 1983) and the reactor mode (Miles and Snow, 1978).

The element of the Incremental Dimension that enables strategists to set goals and objectives, albeit at a high level, takes logical incrementalism into the realms of strategic vision; here senior management use broad and deliberately vague perspectives to describe a desired future state (Peters and Waterman, 1982; Pascale, 1985; Kotter, 1988). Evidently this form of strategy making throws the onus for development back on either the strategist, as in the Command Dimension, or the strategists, as in the Planning Dimension. This provides further evidence that it is important to be aware of overlapping typologies (Hart and Banbury, 1994).

Grandori (1984) recognised a visionary or cybernetic process of strategy development as discrete from the incremental construct; Grandori's incremental mode incorporates emergent strategy. Like Grandori, Mintzberg and Lampel (1999) separated their visionary or entrepreneurial school from their emergent or 'learning' school, which includes incrementalism.

Mintzberg and Lampel (1999) argued that retaining the visionary process of strategy development within the Incremental Dimension can lead to barriers breaking down between the rational (Fredrickson and Mitchell, 1984), boundedly rational (Simon, 1957) and incremental (Lindblom, 1959) models. Mintzberg and Lampel contended that the strategist (Command Dimension) or strategists (Planning Dimension) maintain such close control over the implementation of their formulated vision, that the distinction between the three perspectives becomes unclear. Using this argument the boundary can also become blurred between the Incremental Dimension and the Cultural Dimension when strategy is developed from the very fabric of the organisation (Johnson and Scholes, 1999a); this is covered further in Section 4.2.8.

To conclude this section, it is evident that the Incremental Dimension of the model developed by Bailey et al. (2000) offers a useful way of conceptualising strategy development, particularly when strategy development is not a centralised function, and where reflection, experimentation and adaptation are inherent throughout the process. Bourgeois and Brodwin (1984) asserted that elements of this format of strategy development prove beneficial where the organisation is operating in an unstable environment.

#### **4.2.7 The Political Dimension**

The next element of the Bailey et al. (2000) model is the Political Dimension. Eisenhardt and Zbaracki (1992) recognised that all individuals within an organisation engage in politics, at least some of the time; they defined politics as observable and usually covert actions individuals take to enhance their power to influence a decision-making process.

Eisenhardt and Zbaracki argued that the roots of the political perspective on strategy development lie in the political science literature of the 1950s; they asserted that during this period various studies developed a view of decision-making in government which emphasised the conflictual nature of the legislative process. This led them to conclude that decisions are the result of a process in which decision-makers have different goals, come together through coalitions, and in which the preference of the most powerful triumphs. Eisenhardt and Zbaracki recognised, as one might expect in government, that competing interests, sharply defined coalitions and clear distinctions between winners and losers were inherent within the decision-making process.

March (1962) developed the argument further and identified the organisation as a political system. In much the same way that the bounded rationality model for strategy development (Simon, 1957) challenged rationality (Lindblom, 1959), March challenged the underlying assumption that organisations possess a single, superordinate goal. He also took issue with underlying assumptions pertaining to group behaviour – namely that although people are individually rational, they are not necessarily collectively rational.

In his study of the Cuban missile crisis, Allison (1971) also found examples of politics in decision-making, where organisations are coalitions of people with competing interests. Allison recognised that deep divisions existed among President Kennedy's advisors regarding an appropriate reaction to the deployment of Russian missiles in Cuba. This led Allison to conclude that conflicting preferences arose from different visions of the future, biases induced by position, and clashes in personal ambitions.

Evidently organisations are political arenas, and strategy development and decision-making is a political matter (Pettigrew, 1973). Differences are resolved through bargaining, negotiation and compromise, leading to the development of strategies that are generally accepted across the whole organisation. This is sometimes referred to as the consensus mode for developing strategy (Mintzberg and Waters, 1985), or making strategic decisions (Ouchi and Price, 1981).

As the review identified earlier, one observation of the political perspective is that strategic decisions follow the desires and objectives of the most powerful people (March, 1962; Hinings, Hickson, Pennings, and Schenk, 1974; Salancik and Pfeffer, 1974). The investigation by Baldrige (1971) into conflict resolution at New York University provided a colourful case study into the influence of power and politics in strategy development processes.

Hickson et al. (1986) also recognised that when strategy development is addressed from a decision-making perspective, it is important to recognise that organisations are political systems and, as such, are susceptible to the influence of internal and external stakeholders. Cyert and March (1963) found that under certain circumstances, stakeholders serve their own self-interests, taking actions directed towards serving their own ends.

Pfeffer and Salancik (1978) take a less extreme view, recognising that stakeholders may have different concerns and therefore differing priorities. They recognised that the influence these stakeholders are able to exert over the strategy development process is conditional on the organisation's dependency on such a group for its resources. Some theorists (Schwenk, 1988) found that power and influence of the stakeholders is directly related to the difficulty the organisation would expect to encounter should it choose to dispose of them.

In another colourful case study in the area of strategic choice, Pettigrew (1973) observed influences impacting on the decision processes of three managers during the procurement of a new computer. Pettigrew recognised that power and influence over the decision-making process could be achieved when individuals filtered information in a manner that reflected their own priorities and preferences.

To summarise this section on the Political Dimension of the model offered by Bailey et al. (2000), most theorists accept the central ideas of the political perspective (Eisenhardt and Zbaracki, 1992): first that organisations consist of people with partially conflicting priorities; second that strategic decision-making is inherently political and that the most powerful people tend to get what they want; and finally that people engage in politics such as coalitions (Allison, 1971) and use information (Pettigrew, 1973) to enhance their power.

Eisenhardt and Zbaracki (1992) went so far as to say that the debate over whether organisations have single or multiple goals is no longer controversial. They developed a more interesting debate concerning the process by which conflicts are resolved among people with conflicting preferences, and recognised a divide in the literature. As the review has already identified, the normative view is that politics arise from conflict (March, 1962); and people with conflicting preferences engage in politics in the hope of securing a favourable decision. Furthermore politics are deemed to be fluid, and strategists move from one alliance to another (Allison, 1971); consequently politics are essential to the firm (Quinn, 1980), helping create change and adaptation (Pascale, 1985).

The alternative to the normative view offered by Eisenhardt and Zbaracki (1992) is that politics are triggered by imbalances of power, and strategists turn to politics as a last resort in order to secure due consideration of their views. Within this school of thought politics are static, with decision-makers relying on the same allies and the same politics time after time (Pettigrew, 1973). However Bourgeois and Eisenhardt (1988) argued that lobbying is a waste of valuable time, particularly in high velocity environments, and that it inevitably leads to poor performance; politics can therefore be regarded as ineffective, unpleasant and unnecessary (Gandz and Murray, 1980).

To conclude, it is apparent that the Political Dimension is an important element of the strategy development model proffered by Bailey et al. (2000), particularly if the phenomenon is to be addressed from a decision-making perspective. What is not clear is whether politics are a positive conflict-driven phenomenon or a power-driven process signalling dysfunctional decision-making as proposed by Bourgeois and Eisenhardt (1988).

#### **4.2.8 The Cultural Dimension**

The fifth element of the model developed by Bailey et al. (2000) is the Cultural Dimension. Bourgeois and Brodwin (1984), who also have a cultural element within their five approaches to strategic implementation, argued that the proponents of this perspective lie in the classical management theory approach to human relations of the 1950s (Likert, 1961); or the modernist perspective of human resources entreaties of the 1970s (Miles, 1975).

According to Bourgeois and Brodwin (1984), the modernist perspective on culture, which emerged in the late 1970s, led to the more sophisticated symbolic-interpretive perspective synonymous with the 1980s. Bourgeois and Brodwin argued that as this understanding advanced and became more sophisticated than the earlier writings (Martin, Feldman, Hatch, and Sitkin, 1983; Schein, 1985; Johnson, 1988), then the area of organisational culture improved in three ways.

The first improvement Bourgeois and Brodwin (1984) identified is that theorists are much more subtle in their approach. Theorists observe that variables manipulated by organisational culture go beyond the sharing of work-related decision-making. To illustrate this, theorists observe that the symbolic-interpretive approach, as may be expected, includes intangibles such as symbols and leader behaviour patterns (Peters, 1978); organisational clans (Ouchi and Price, 1981); and the observation of different national cultures, for example the Japanese (Ouchi, 1978; Pascale and Athos, 1981).

The second improvement brought about by the symbolic-interpretive approach to the Culture Dimension, according to Bourgeois and Brodwin (1984), is that writers now focus on the entire organisation. This widening of focus provides a significantly larger unit of analysis than the face-to-face nature of the human relations era that dominated the modernist perspective. Ouchi's studies at Hewlett Packard (Ouchi and Price, 1981) identified the 'H.P. way', which encouraged product innovation at every level and at every workbench. Pascale and Athos (1981) found similar uniform behaviour and ritual values across the entire organisation at I.B.M., for example the ritual singing of company songs and the displaying of national flags in offices.

The final area of improvement brought by the symbolic-interpretive perspective is that culture serves as the handmaiden of strategy development within the firm (Bourgeois and Brodwin, 1984), rather than proselytising the balancing of power and the like for its own sake, as suggested by the modernist perspective (Miles, 1975). Johnson and Scholes (1999a) develop this cultural view of strategy development when they identify that strategies are the outcome of assumptions and taken-for-granted routines; consequently management is about the application of experience, rather than the manipulation of tools and techniques. Johnson and Scholes identify that expertise is not only rooted in the individual but that groups will accumulate experience, and this can also be reflected back in routines and behaviours.

This ‘taken-for-grantedness’ identified by Johnson and Scholes develops a cultural frame of reference that can be handed down, over time, within a firm; they argue that it is these frames of reference that influence managers, and can have a profound effect on the strategy development process. Illustrations of such frames of reference could be marketing, finance or accounting, for example, which one would expect to be prevalent in a financial institution like Barclays or any of its competitors.

Johnson and Scholes map these frames of reference into a cultural web, which graphically displays the organisational paradigm. When the review studies the relationship between the organisation and its environment in Section 4.4, it observes that institutional theorists argue that such synergies explain why firms operating in similar environments resemble each other in terms of cultural norms, and therefore in the strategies they develop and pursue (Hatch, 1997). Johnson (1988) warned that although embedded frames of reference in organisational activities may provide a repertoire for change, in turn they could also create resistance.

To conclude, it is evident that the Cultural Dimension of the model offers a useful way of looking at the strategy development process. Again it is important to be aware of overlapping typologies (Hart and Banbury, 1994), and that the influence of individuals moves it close to the Political Dimension and the Incremental Dimension of the model owing to the incremental use of norms and routines. Also if the leader, or top management team, takes too tight a grip on the culture, it may overlap with the Command or the Planning Dimension.

#### **4.2.9 The Enforced Choice Dimension**

The final element of the Bailey et al. (2000) model is the Enforced Choice Dimension, which considers whether strategy is determined by the organisation or constrained by the environment. Some researchers view the role of the strategist as determining strategic decisions and processes in order to adapt the organisation to its environment (Papadakis et al., 1998). Such adaptation enables the firm to create a strategic 'fit' (Hatch, 1997), sometimes referred to as 'the design school' (Mintzberg and Lampel, 1999), between the competences of the organisation and the demands of the environment (Andrews, 1971).

Achieving such a fit creates a competitive advantage (Porter, 1985), which assures long-term profitability, reputation and ultimately survival (Porter and Montgomery, 1991). Evidently this perspective assumes that managers are aware of the possibility of creating a 'fit' between the organisation and its environment and, more importantly, that managers are capable of achieving such a 'fit' (Hatch, 1997). Hatch developed three perspectives on the nature of the relationship between the organisation and its environment when this 'fit' is achieved: first the organisation is selected and retained, the population ecology view; second it is provided with resources, the resource dependence view; and finally it is legitimised, the institutional theory view.

Based in the modernist organisation theory literature, population ecology theory is underpinned by the assumption that the environment exercises considerable influence over the organisation, which is dependent on it for resources (Hannan and Freeman, 1977; Aldrich, 1979). This perspective argues that the environment determines the patterns of success and failure among organisations competing within the same resource pool.

Therefore, according to Hatch (1997), a Darwinian principle applies which determines the survival of the fittest. An illustrative example for Barclays, within the financial services industry, would be the movement of the resource pool from London to West Yorkshire during the 1990s. It could be argued that inflated house prices and a subsequent increase in the cost of living drove this section of the working population out of the environment, the single resource pool in London.

The resource dependence view also embraces the assumption that organisations depend on their environment for resources; yet, unlike the population ecology view, it adopts the perspective of the organisation (Hatch, 1997). Here the organisation is vulnerable to its environment for resources, which are controlled by the environment. Hatch argued that the challenge is to learn how to navigate the harsh seas of environmental domination. Managers do this by creating counter-dependence, identifying organisation–resource exchanges.

The final perspective of the environment is institutional theory, which puts demands on the organisation in two ways (Hatch, 1997): first, the environment makes technical and economic demands that require organisations to produce their goods and services in a marketplace; second, the environment makes social and cultural demands that require organisations to play particular roles in society, and maintain certain outward appearances. Again applying this to Barclays it could be argued that much of the bad publicity surrounding the closure of branches is associated with the social and cultural demands made on a Bank. It is evident that the location, and in many cases the similar appearance, of the majority of High Street Bank branches is driven by the requirement / enforced choice to maintain outward appearances.

Rooted in classical management theory, Hatch identified contingency theory, built on the observation that firms differ considerably depending on whether they operate in stable or rapidly changing environments; she argued that the organisation is therefore necessarily constrained (Papadakis et al., 1998). Contingency theory postulates that in stable environments, organisations operate in a mechanistic manner, specialising in routine activities with strict lines of authority and distinct areas of responsibility. However, modernist theory developed the need for organisations to become organic in order that they are able to adapt to circumstances (Hatch, 1997).

In conclusion the Enforced Choice Dimension offers a very useful concept when considering the strategy development process. It recognises the role of prevailing environmental conditions and challenges strategists to consider contingencies. Issues associated with the impact of rapidly changing environments on strategy development lie at the heart of this research and are therefore covered in more detail in Sections 4.4 and 4.5.

## **4.3 Literature Review: Understanding The Concept Of Uncertainty**

### **4.3.1 Introducing Uncertainty**

The use of the term uncertainty is synonymous with everyday life: news bulletins report uncertainty over interest rates and inflation projections; journalists report uncertainty over the war in Iraq or the next leader of the Labour Party; sports columnists report uncertainty over the future of Silverstone as a future venue for Formula One motor racing. Invariably the news and sport are followed by the weather forecast, which sometimes describes the outlook for the Bank Holiday weekend or the prospects of a hot summer as ‘uncertain’.

The Oxford Concise Dictionary (1999) defined uncertainty as ‘the fact or condition of not certainly knowing’. In the same way that Chaffee (1985) identified a problem with a level of confusion that has arisen over the liberal use of the term strategy, the same can be said of the term uncertainty (Milliken, 1987). The word uncertainty is so commonly used that Downey and Slocum (1975, p.562) noted in their review of the uncertainty literature that:

“... it is all too easy to assume that one knows what he or she is talking about.”

Confusion arises because theorists and researchers take different positions over outcomes that are certain and outcomes that are probable. Others take issue with the certainty–uncertainty construct recognising that strategists make sense of their environments in different ways (Weick, 1979), typified by the dilemma ‘how do we know when we are certain?’. Milliken (1987) recognised that unclear assumptions may cause researchers to pay insufficient attention to the conceptualisation, and operationalisation, of the uncertainty construct. Consequently she postulated that practitioners and researchers must be careful concerning definitions of uncertainty. Milliken (1987, p.134) drew attention to this point when she warned that:

“Researchers who assume agreement may interpret the literature as though there is agreement when, in fact, there is tremendous inconsistency and confusion about how an uncertainty construct is defined and used.”

### 4.3.2 A Knightian View Of Uncertainty: The Economic Perspective

A search of the uncertainty literature invariably leads back to the school of economics and the work of Frank Knight. In the final section of his book, *Risk, Uncertainty and Profit* (1921), Knight takes issue with the orthodox theory of imperfect competition, the opposite end of the continuum to perfect competition, which he argued is the reduction of significant tensions between economic freedom, economic power and economic efficiency.

Knight's key concern with orthodox theory was that it failed to make a distinction between risk and uncertainty. The broad distinction that Knight draws is between situations in which the decision-maker is guided by a 'known chance' and situations in which he or she is not (Runde, 1998). The traditional 'Knightian' distinction is therefore defined as being between: *situations of risk* where the decision-maker assigns probabilities to events on the basis of 'known chances'; and *situations of uncertainty* where the decision-maker is unable to assign probabilities to events because it is not possible to calculate probabilities or 'known chances'.

Consequently risk, according to Knight (1921), refers to the description of a set of possible outcomes, where it is possible to discern a frequency distribution with the aid of statistical data. The probability of an outcome occurring can be determined either on the basis of an *a priori* calculation, or alternatively through statistical inference derived from experience of the past, an *a posteriori* calculation.

In contrast uncertainty refers to a situation where the frequency distribution of possible outcomes is unknown, therefore statistical techniques cannot be applied to individual decisions. Knight postulated that the high degree of uniqueness of individual business decisions invariably leads to a set of possible outcomes that are not subject to mathematical statistics. In essence Knight's position is that outcomes of business decisions are so unique that it is impossible to quantify the likelihood of the outcome occurring.

### 4.3.3 Discussing The Knightian Distinction Between Risk And Uncertainty

The very general formulation set out in Section 4.3.2 appears to cover what most people seem to have in mind when referring to Knight's (1921) distinction between risk and uncertainty. Runde (1998) postulates that it is important to note that the definition of risk is broad enough to encompass the classical, or what Knight refers to as the *a priori*, conception of probability, frequency theories (Toffler, 1990; Thompson, 2003), certainty-equivalence (McCall, 1967; Clarke, 1985; Rosenhead and Mingers, 2001) and even some non-standard interpretations of probability such as Popper's (1997) propensity theory.

Runde (1998) argues that Knight's (1921) position is much more subtle than the simple risk–uncertainty distinction might imply. Runde focuses not on a dichotomy, but on a trichotomy of 'probability situations'. He argues that Knight summarises *a priori* probability, statistical probability, and estimates.

According to Runde (1998), Knight (1921) defines *a priori* probability as an absolutely homogeneous classification of instances completely identical except for wholly indeterminate factors. The calculation of probability is therefore made on the same logical plane as the propositions of mathematics.

By comparison Knight's statistical probability, according to Runde (1998), is an empirical evaluation of the frequency of association between predicates, not analysable into varying combinations of equally probable alternatives. Consequently any high degree of confidence that the proportions found in the past will hold in the future is still based on an *a priori* judgment of indeterminateness. Runde (1998, p.540) argues that the main distinguishing characteristic of this type is that it rests on an empirical classification of instances. In order to achieve this, Knight (1921) keeps two complications separate:

“The impossibility of eliminating all factors not really indeterminate; and the impossibility of enumerating the equally probable alternatives involved and determining their mode of combination so as to evaluate the probability by an *a priori* calculation.”

The third dimension to Knight's trichotomy of 'probability situations', identified by Runde (1998), is estimates. The distinction made here is that the decision-maker has no valid basis of any kind for classifying instances, sometimes referred to as trials. Runde asserts that this form of probability is involved in the greatest logical difficulties of all, and therefore no very satisfactory account of it can be given. However he emphasises its distinction from other types and highlights some of its complicated relations.

As it is possible to assign numerical probabilities to events on the basis of the relevant probabilities or 'chances' in each case, *a priori* probability and statistical probability fall into the category of what Knight (1921) refers to as 'risk'. As the third category of 'estimates' covers decision scenarios where there is 'no valid basis for classifying instances' then this category corresponds to the situation of Knightian uncertainty. Runde (1998) argues that this categorisation is made on the basis that it is impossible to assign probabilities to events because the relevant instances are so dissimilar as to preclude classification and the calculation of chances.

The discussion of Knight's (1921) work offered by Runde (1998) appears to develop a continuum of probability situations, depending on the degree of homogeneity of the 'instances', events or decisions in question. At the two extremes are decisions in which instances are perfectly homogeneous save for 'wholly indeterminate factors' – corresponding to the *a priori* probability; and situations in which there are insufficient instances similar enough to be grouped together as members of the same class – corresponding to estimates. Statistical probability falls somewhere between these two poles, that is, where it is possible to arrive at groupings of only one more or less homogeneous instance.

To conclude, it is evident that Knight's (1921) main reason for distinguishing between *a priori* probability and statistical probability is to highlight that *a priori* probability is practically never met within business while statistical probability is extremely common; and that statistical probability never gives particularly accurate quantitative results. In Knight's view it is inconceivable that the classes with which decision-makers are faced in everyday life can be sub-divided into decisions that are sufficiently homogeneous to permit the determination of what he refers to as 'real probability'.

#### 4.3.4 Developing The Debate: A Keynesian Perspective On Uncertainty

As the review of Knight's (1921) work in the previous section identified, the probabilities on which strategic decision-makers are forced to rely invariably fall short of the standards of accuracy expected in situations involving throws of a perfect die, or spins of a well-calibrated roulette wheel. Taken in isolation, Knight's description of the differences between mathematical or *a priori* probability and statistical probability are unobjectionable and therefore entirely useful (Runde, 1998). Interestingly the manner in which Knight portrays the differences between the two classifications of probability or risk, and the ways in which these differ from estimates, or uncertainty, are echoed by another theorist who is often mentioned in connection with the subject of risk and uncertainty: John Maynard Keynes.

In his book *The General Theory Of Employment, Interest And Money* (1936), Keynes took issue with Knight's (1921) objectivist conceptualisation of uncertainty and argued from a subjectivist perspective that confidence in decision-making is conditional on the degree of uncertainty recognised or admitted by the decision-maker, therefore uncertainty is attached to beliefs about the material world. By way of contrast Knight took the position of a rational expectations theorist arguing that it is possible to attach probability and therefore uncertainty to the material world (Dow and Hillard, 1995).

Keynes (1936) agreed with Knight (1921) that in general, uncertainty refers to situations where probability cannot be measured. However Keynes argued that where it is not possible to measure the outcome of a decision objectively, it is possible to estimate frequency distributions subjectively, through the application of what he referred to as subjective probability. Here decision-makers subjectively establish measures of probability and Keynes recognised that these probabilities can change from time to time under the weight of new evidence.

Dow and Hillard (1995) recognised that Keynes' (1936) subjective probability allows uncertainty to be understood as a relative concept. Therefore more weight can be attached to an assessment of probability proportionate to the amount of relevant evidence available, irrespective of whether it makes the proposition more, or less, probable.

In this sense Keynes uses weight as both an absolute and a relative concept. As an absolute concept weight is measured by the absolute amount of relevant evidence. As a relative concept Keynes introduces the notion of relative ignorance, which opens up possibilities for further refinements because increased evidence, rather than increased weight, may reduce weight if it reveals new realms of ignorance. Dow and Hillard (1995) illustrate this, suggesting that new evidence can reveal that what was understood to be appropriate is in fact now inadequate.

From the work of Keynes (1936) it is possible to discern three orders of uncertainty (Dow and Hillard, 1995). The first category accepts the rational expectations theorist view (Knight, 1921), that uncertainty is inherent in reality and can therefore be captured in the stochastic term of relationships. Consequently any degree of uncertainty may be measured by the variance of the stochastic term.

The second category of uncertainty is aligned to the subjectivist perspective that uncertainty is associated with matters of belief. Therefore where probability is measurable, the lower the degree of belief in the argument; where belief in the proposition is conditional on available evidence, the greater the degree of uncertainty experienced by the decision-maker.

Finally Dow and Hillard (1995) offer the third category of Keynesian uncertainty, which makes reference to the completeness of the evidence on which the judgment of probability is based. It recognises weight as a measure of completeness of relevant evidence; therefore the lower the weight of probability estimate, the greater the uncertainty experienced by the agent.

Consequently uncertainty of this type may be measured by the opposite of what Keynes (1936) refers to as weight. Here Keynes uses the measure in two senses: absolute completeness and relative completeness. Absolute completeness is the inverse of weight, where weight is a measure of the absolute amount of relevant evidence. In the latter, relative completeness, uncertainty is measured as a ratio of relevant evidence available relative to the total of relevant evidence and ignorance. Measurement of both absolute and relative completeness requires knowledge of what constitutes relevance and that knowledge and ignorance are of the same dimension.

### **4.3.5 Criticisms Of The Keynesian Perspective On Uncertainty**

Dow and Hillard (1995) criticise Keynesian uncertainty on the grounds that logic dictates that where knowledge of structure, the weight measure relevant to known situations, is completely absent and ignorance is absolute then the decision-maker literally does not know. However this absolute state, like that of complete certainty, is not feasible because absolute ignorance is incompatible with knowledge of absolute uncertainty. Keynes (1936) fails to make a clear distinction between rational argument and rational decision-making, because decisions are taken and action undertaken in situations where rational argument would suggest that decision-makers simply do not know, for example a twenty-year investment in a copper mine or oil well.

Theorists also take issue with Keynes' theory of probability in terms of grounds for rational belief, which assumes that all relevant information is employed by decision-makers. As identified earlier in the review, Pettigrew (1973) observed that strategists use information to serve the ends of different stakeholders. Keynesian uncertainty also argues that confidence is inspired by weight of argument, when the degree of evidence relative to ignorance is high. Dow and Hillard citing Loasby (1976) argue that confidence may be the direct result of ignorance if additional information were to detract from presumed knowledge.

The final criticism of the Keynesian perspective on decision-making under uncertainty addresses the assumption that managers gather all available information based on their knowledge of given processes, weigh up the absence of evidence relative to that knowledge, weigh up their ignorance of the processes relative to that knowledge, weigh up their understanding of knowledge and ignorance of processes relative to lack of understanding and so on. In essence Keynes (1936) assumed that managers act as though are fully informed; that there is no shortfall between managerial competence and the complexity of problems encountered; and that managers are 'utility maximising persons' who make decisions or choices after studying well-defined probability distributions. Like Knight (1921), Keynes ignores the fact that the world may be evolving in such a way as to produce situations that never existed before so that, in fact, probability distributions can never be well defined.

### 4.3.6 Developing The Work Of Keynes: The Bayesian Perspective

Runde (1995) argues that the widespread acceptance of Bayesian decision theory has eroded Knight's (1921) famous distinction between risk and uncertainty. As outlined in Section 4.3.2, decision-making under conditions of risk refers to situations in which managers can numerically assess the probabilities of the possible consequences of their actions, and uncertainty refers to situations in which they cannot numerically assess such probabilities. Under Knightian uncertainty, assessments of numerical probability ultimately rest on judgments of equiprobability, failing which it is possible only to arrive at qualitative 'estimates'.

Building on the work of Keynes (1936), Bayesian decision theory also interprets probability as a measure of subjective or personal belief in an uncertain proposition or event (Runde, 1995). In contrast to Knight (1921), Bayesian decision theory identifies probabilities with betting quotients elicited from coherent betting behaviour. Bayesian decision theory is behaviouristic in orientation, based on the idea that the strength of belief is reflected in the decision-maker's propensity to take action. Under Bayesian decision theory, beliefs are measured by finding the lowest betting odds that the decision-maker would be prepared to accept on the hypothesis or event being true.

Here the decision-maker adopts the role of a Bayesian rational agent or subjective 'expected utility' maximiser (Runde, 1995). The strategist makes a choice between the various risky alternatives on the basis of two considerations: his or her subjective *values* and *beliefs*. Values are represented by a utility function, unique in origin and scale, which assigns a utility index to each of the set of possible consequences that might occur as an outcome of the decision. Beliefs are represented by a probability function that assigns a probability index to each of the possible 'states of the world' on which the outcomes of each decision are contingent.

When combined these two functions, values and beliefs, may be used to assign an expected utility index to every course of action. As with Keynesian uncertainty, Runde recognises that the Bayesian decision rule is to make the choice that maximises expected utility.

### 4.3.7 Cumulative Prospect Theory

The most influential challenge to how people manage risk and uncertainty was conducted by two Israeli psychologists, Daniel Kahneman and Amos Tversky (1974; 1979). Through the development of what they referred to as Cumulative Prospect Theory, usually referred to simply as Prospect Theory, Kahneman and Tversky took issue with Expected Utility Theory (Keynes, 1936; Knight, 1921; Quiggin, 1991; Runde, 1995).

Cumulative Prospect Theory discovered behaviour patterns that had not previously been recognised by proponents of rational decision-making (Bernstein, 1998): first, it identified that emotion can destroy the self-control that is essential to rational decision-making; second, it recognised that people are often unable to fully understand the problem they are dealing with.

Kahneman and Tversky (1979) drew a clear distinction between the processes people follow when making gains as opposed to those processes followed when incurring losses. In their paper, they describe an experiment which tested whether choices between negative outcomes are mirror images of choices between positive outcomes.

In one of their experiments, Kahneman and Tversky first asked the subjects to choose between an 80% chance of winning \$4,000 and a 20% chance of winning nothing versus a 100% chance of receiving \$3,000. Even though the risky choice has a higher mathematical expectation (\$3,200), 80% of the subjects chose the certainty of £3,000. These people were described as '*risk-averse*'.

Following this experiment Kahneman and Tversky then offered their subjects a choice between taking the risk of an 80% chance of losing \$4,000 and a 20% chance of breaking even versus a 100% chance of losing £3,000. Under these conditions 92% of the respondents opted to take the gamble, even though its mathematical expectation of a loss of £3,200 was once again larger than the certain loss of \$3,000. Based on these experiments Kahneman and Tversky were able to conclude that when choices involve losses people are '*risk-seekers*', as opposed to being '*risk-averse*' when choices involve gains (Bernstein, 1998).

When applied to a managerial situation, Kahneman and Tversky (1974) found that this asymmetrical pattern appeared consistently in a wide variety of experiments. For example they asked their respondents to consider a problem where a rare disease is breaking out in a community and is expected to kill 600 people. In order to address this problem, two different solutions are available. If Solution A is applied, 200 people will be cured; if Solution B is adopted, there is a 33% probability that everyone will be cured and a 67% probability that no one will be cured.

Based on the findings of the earlier gambling experiment, namely that most people are risk-averse in contexts that involve gambling upwards, it is assumed that rational people will prefer Solution A's certainty of saving 200 lives over the gamble set out in Solution B, which interestingly has the same mathematical expectancy but involves taking a 67% risk that everyone will die. Through this experiment Kahneman and Tversky found that 72% of the subjects chose the '*risk-averse*' option represented by Solution A.

As the next part of the experiment Kahneman and Tversky posed the identical problem very differently. If Solution C is adopted, 400 of the 600 will die, while Solution D entails a 33% probability that no one will die and a 67% probability that 600 will die. It is important to note that the first of the options is now expressed in terms of 400 deaths as opposed to 200 survivors, while Solution D offers a 33% chance that no one will die. Through this experiment Kahneman and Tversky found that 78% of the population were now '*risk-seekers*': the decision-makers just could not tolerate the prospect of the sure loss of 400 lives (Bernstein, 1998).

Based on the results of these experiments Kahneman and Tversky (1979) were able to conclude that this behaviour, although entirely understandable, was inconsistent with the assumptions of expected utility theorists or rational behaviour. The key challenge is that the process for making a decision is not the same regardless of the environment within which the problem is set. Importantly for this research Kahneman and Tversky found that people are perfectly willing to modify their response, in this case gamble, if they consider it to be an appropriate response to the problem they have been posed.

#### **4.3.8 An Organisational Theorist Perspective On Uncertainty**

As this report goes on to identify in Section 4.3.9, there is some confusion in the environmental uncertainty literature, because the debate is split into two schools of thought (Milliken, 1987). Milliken identified that the term ‘environmental uncertainty’ has been used to describe both the state of the competitive environment, and the state of mind of an individual who perceives himself or herself to be lacking critical information pertaining to the environment and is therefore uncertain. This equates to the Concise Oxford Dictionary (1999) definition identified earlier, ‘the fact or condition of not certainly knowing’. Hatch (1997) also identified the misleading nature of the term environmental uncertainty, asserting that as environments have no cognitive ability, they cannot feel uncertain, only people do.

Acceptance of the objective, sometimes referred to as archival (Boyd et al., 1993), perspective implies that it is possible to characterise environments in terms of how objectively uncertain they are (Knight, 1921; Keynes, 1936; Nash, 1998). In contrast, if one accepts that environmental uncertainty is inherently ‘in the eye of the beholder’, it ought to be investigated as a subjective, or perceptual (Huber, O’Connell, and Cummings, 1975), phenomenon.

Milliken (1987) points out that the most commonly cited definitions of environmental uncertainty interpret it as a perceptual phenomenon, but diverge when it comes to specifying its experiential nature. The first definition is aligned to the Knightian perspective identified in Section 4.3.3, the inability to assign probabilities to the likelihood of future events (Duncan, 1972; Pfeffer and Salancik, 1978). The second definition relates to a lack of information concerning cause and effect relationships (Lawrence and Lorsch, 1967; Duncan, 1972). The final definition is the view of decision theorists which recognises uncertainty as the inability to predict accurately the outcome of a decision (Duncan, 1972; Downey and Slocum, 1975).

Milliken (1987) recognised that as these definitions are essentially adaptations from theorists in other fields, primarily psychology (Garner, 1962) and economics (Knight, 1921; Keynes, 1936), they could be restatements of one view, rather than qualitatively different types of uncertainty experienced by managers as they observe and respond to the environment.

### **4.3.9 Archival And Perceptual Perspectives On Uncertainty**

The evidence from the review in the previous section has illustrated how the literature on environmental uncertainty is split into two schools of thought (Milliken, 1987). At one end of the continuum is an argument which suggests that environmental uncertainty should be measured as a perceptual phenomenon (Child, 1972; Downey and Slocum, 1975); at the opposite end is a school of thought which believes it is a characteristic of organisational environments, and should therefore be observed as an objective phenomenon (Knight, 1921; Keynes, 1936; Nash, 1998).

In order to measure organisational environments, researchers have tried to operationalise objective measures (Tosi, Aldag, and Storey, 1973). This section of the report refers to objective uncertainty as archival, as the use of the word objective can be misleading. Boyd et al. (1993) recognised that all measures entail some degree of subjectivity, for example in the creation of, or even the decision to use, secondary data. Boyd et al. identified that using archival, or objective, data to measure organisational environments can appear attractive, as it is very accessible and the opportunity for replication and comparison with other studies is apparent.

However, in order to ensure that archival data are used correctly, Boyd et al. go on to classify archival approaches to environmental measurement into three types: aggregation, recency and correspondence. Aggregation is a method used to combine data from a selection of firms to create an industry-level index – such as the volatility of sales. Recency is where indices implicitly weight data points, but more recent data are weighted to give a view more relevant to the current time frame. Correspondence is where the researcher takes care to ensure that the conceptualisation of an environmental construct, for example complexity, corresponds to the method used to measure it. Schwab (1980) recognised that a theoretically valid hypothesis might not be proved in a study, owing to the incorrect operationalisation of the independent or dependent variable.

In contrast some researchers prefer to address environmental uncertainty as a perceptual phenomenon. Thus perceptual measures, according to Boyd et al. (1993), enable theorists to depict the environment from the perspective of individuals within the organisation. They recognise two key advantages that arise from the use of perceptual measures: first, the ability to make generalisations across industries; and second, that they are more likely to reflect the current state of the environment as opposed to the long-term nature of archival measures.

Boyd et al. identified three categories of perceptual measure: generalisability, reliability or validity, and sources of variation. Boyd et al. split the generalisability categorisation into two parts: first descriptive, where findings based on a small number of cases may be relevant to a broader population; and second theoretical generalisations, where variables are seen as indicators of broader concepts, for example levels of complexity or the speed of change.

The second classification of perceptual measures identified by Boyd et al. is reliability or validity; as an example Downey, Hellriegel and Slocum (1977) cited the poor reliabilities they encountered when they compared results from the uncertainty scales developed by Lawrence and Lorsch (1967) with those from the scale developed by Duncan (1972). The final classification identified by Boyd et al. (1993) is sources of variation where perceptual measures do not typically capture variations in the source of uncertainty; for example the relative importance of technological as opposed to regulatory change may fluctuate over time.

In conclusion there are many pieces of research that have sought to measure both archival and perceptual environmental uncertainty, in order that the relationship between the two measures could be investigated or validated (Aldag and Storey, 1975; Downey et al., 1977). Tinker (1976, p.507) warned that there is a danger in adopting a single approach. For example he identified a problem should researchers adopt only a perceptual approach in that:

“the study of perceptions alone could reduce the study of organisations to merely the problem of the psychoanalysis of actors”.

#### **4.3.10 An Environmental Or Contextual Perspective On Uncertainty**

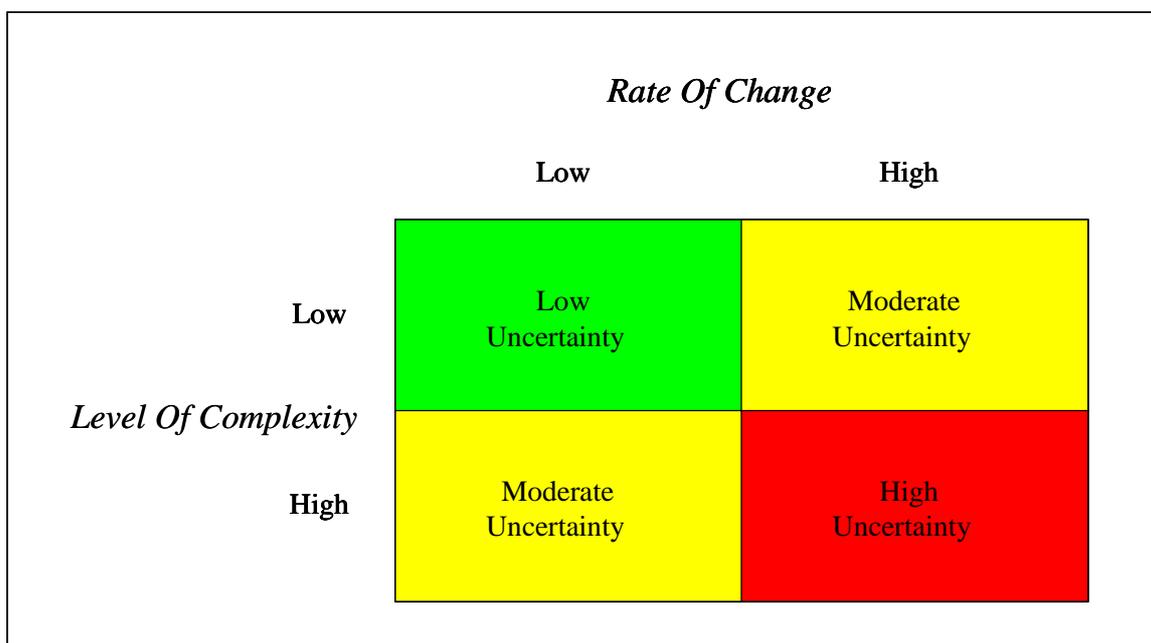
Many influential studies have attempted to isolate characteristics of the environment that cause uncertainty for organisations. As the report identified in Section 4.1.1, it is Duncan (1972) that is generally credited with initiating the study of perceived environmental uncertainty, and his conceptual dimensions are central to the research into organisational environments (Boyd and Fulk, 1996). Through the integration of work carried out by organisational theorists (Emery and Trist, 1965; Thompson, 1967) and decision theorists (Luce and Raiffa, 1957), Duncan proposed that environmental uncertainty could be described in terms of two constructs: the simple–complex dimension and the static–dynamic dimension.

Duncan (1972) found that the environment could be described as simple if: there were only a few factors in number; they were similar to one another; and they were located in only a few of the decision units he was investigating. By comparison Duncan used complex to indicate many factors, dissimilar in nature and located in the majority of the decision units under observation. Child (1972) applied Duncan's concept to the organisation as a whole, when he conceptualised environmental complexity as the heterogeneity, and range, of an organisation's activities. Emery and Trist (1965) referred to increased complexity deriving from an increase in the connectedness of the organisation. Aldrich (1979) referred to this complexity as the concentration–dispersion dimension; Starbuck (1976) referred to it as density.

Duncan's (1972) second dimension of contextual uncertainty was the static–dynamic dimension. In his study of decision-making, this dimension indicated whether the decision unit's internal and external environment, or its context (Huff, 1978), remained basically the same over time or whether it was dynamic, in a process of continual change.

Dess and Beard (1984) argued that much of the literature in the area of organisation theory and strategy has dealt with dynamism. They suggest that turnover unpredictability and the absence of any patterns are the most appropriate measures of what they refer to as the instability–stability construct. This is a slightly different perspective on the static–dynamic dimension offered by Duncan (1972), though it is substantively the same. Hatch (1997) illustrated Duncan’s conceptualisation of uncertainty in a two-by-two matrix (see Figure 6 below):

Figure 6 – Uncertainty: A Product Of The Level Of Complexity And The Rate Of Change (Hatch, 1997)



Miles, Snow and Pfeffer (1974) argued that it is important to distinguish between the rate of environmental change and the unpredictability of such change. The logic for this distinction is that change resulting from dynamism (Miles et al., 1974) or variability (Boyd and Fulk, 1996) is reduced to change that is hard to predict, because it is the unpredictability that contributes to the perception of uncertainty among organisational members, not the change itself. Pfeffer and Salancik (1978, p.67) raise this point in their definition of uncertainty:

“Uncertainty refers to the degree to which future states of the world cannot be anticipated and accurately predicted. [...] Occasionally, uncertainty has been confused with change. It is of course, quite possible to have rapid change which is predictable and, therefore, not uncertain.”

Evidently Pfeffer and Salancik were of the opinion that uncertainty could be determined by the inability of the organisation to predict the future at a given point in time. Presumably as the accuracy of the forecasts increases, uncertainty diminishes or decreases.

Probably the most influential study in the area of unpredictability was completed by Perrow (1967), who argued that the key determinants of uncertainty were the frequency of interruption to organisational routines, and the extent of the search undertaken for alternatives when disruptions occurred. Aldrich (1979) referred to this unpredictability as turbulence and Tosi et al. (1973) labelled it volatility. The organisation theory literature recognises techniques that have been used to help cope with uncertainty created by unpredictability. Such methods include boundary spanning (Sawyer, 1993); buffers (Pagell, Newman, Hanna, and Krause, 1987); and scenario planning (van der Heijden, 1996).

Lawrence and Lorsch (1967) take a slightly different view of organisational task environments and tie uncertainty in to three factors: clarity of information, reliability of causal relationships, and time span of definitive feedback in relation to outcomes. The frequency with which organisational routines are interrupted is also cited as an indicator of relative uncertainty rooted in the work of Perrow (1967).

As the literature review identified in Section 4.1.5, it is possible to break the strategic decision-making process down into three component parts: strategy context; strategy content; and strategy process. In this research it is proposed that where strategists experience uncertainty, the condition of not certainly knowing, in relation to one or a combination of these three elements of the decision process, then it can be referred to as environmental (Duncan, 1972) or contextual (Huff, 1978) uncertainty.

### **4.3.11 A Consensual Perspective On Uncertainty**

Earlier in the review this report recognised some major problems with the notion of perceived environmental uncertainty. Two of the key issues identified were individual perspectives on uncertainty (Hatch, 1997), and individual observations, attentions and perceptions (Boyd et al., 1993). Huff (1978) developed the argument further when she introduced the notion of consensual uncertainty, which she defined as a variance, or lack of consensus, between two or more observers of the same decision context. Here Huff made an important distinction in the concept of uncertainty as she diverted attention away from variance in the decision context, or setting, to variance in the interpretations being made by those who perceive the setting.

It is important to note that for this research Huff's 'decision context', or setting, has been extended to include the content of the decision and the strategy development process. Huff explains that such a measure is relative, since some difference between individuals is always to be expected. Through her work Huff postulated that the greater the divergence, the higher the degree of consensual uncertainty. Such a variance can be measured among the same individuals over time, among different individuals in the same decision context, or among different individuals in different decision contexts. Huff further postulated that uniformity in interpretation of a decision context is, in general, an aid to the decision-makers, since information gathered from experiences of others provides a consistent, interpretable picture to augment directly available evidence.

Huff's point is illustrated in Project 2 of this research where strategists at Barclays were asked to assess the relative importance of factors influencing strategy development across the Group's portfolio of businesses. Barclays Capital, which appears to exist in a setting involving a large and complex number of factors, was identified as operating in an industry in which contextual uncertainty was high. By comparison, Barclays Africa, which was found to face fewer influencing factors, was consensually uncertain than Barclays Capital, owing to a wide variance in the interpretation of the political issues faced by organisations operating in Africa. Interestingly Barclays Global Investors was deemed to be operating in the most uncertain environment, as it appears to involve a large number of key factors reported in conflicting patterns.

When assessing businesses that exist within a single organisation like Barclays, one would logically expect any variance in consensual uncertainty to be low because all the businesses are operating within the same management structure and the same industry, therefore should be experiencing similar environmental conditions – or what Huff (1978) would term ‘contextual’ conditions. However, Huff argues that uncertainty is high because consensus appears to be low, therefore the uncertainty being experienced is due to high degrees of consensual uncertainty.

Huff quoting Steiner (1969) shows that the problem can also be illustrated at the organisational level. To illustrate, during Project 2 this investigation finds that managers within the UK Retail Bank, which is recognised to be operating in a complex, fast moving setting and experiencing a high degree of dependence on its environment for resources, experienced a high degree of uncertainty. During the same project the researcher also interviewed managers at Barclays Capital, which is also recognised to be complex, fast-moving and experiencing a high degree of dependence on its environment for resources, but found that they experienced a low degree of uncertainty. This is accounted for in the data because Barclays Capital are deemed to ‘be able to cope’ as they consistently encounter such phenomena. Clearly there is a degree of variance, or a lack of consensus, among observers as to the interpretation of these two decision contexts, or settings, for the organisation.

Milliken (1987) splits the consensual uncertainty construct into three constituent parts: state uncertainty, effect uncertainty and response uncertainty. State uncertainty according to Milliken is when managers experience uncertainty about the state of the environment, or decision context (Huff, 1978). Typically such uncertainty would pertain to the probability or general nature of changes in the state of the organisational environment.

Milliken’s second type of consensual uncertainty is effect uncertainty. Managers experiencing this type of uncertainty are unable to predict the nature of the impact, or effect, on the future state of the environment and any ramifications for the organisation. To illustrate effect uncertainty, Milliken draws an analogy with a hurricane; she identifies that a general awareness that a hurricane is heading in the direction of a building does not necessarily equate to a knowing whether the building will definitely be left standing after the hurricane.

Using this analogy, state uncertainty, or contextual uncertainty (Huff, 1978), is low because individuals have attained the knowledge that the hurricane is heading towards the building. The ramifications for the building, the effect of the hurricane (Milliken, 1987), are unknown therefore consensual uncertainty is high.

Response uncertainty is the third element of Milliken's consensual uncertainty construct, and again she uses the hurricane to illustrate the point. Under these circumstances the consensual uncertainty lies either in not knowing the range of response options available, or in being unable to predict the likely consequences of each choice.

Conrath (1967) conceptualised consensual uncertainty in much the same manner as Milliken's (1987) response uncertainty. Conrath argued that perceived uncertainty involves a lack of knowledge concerning: the options available, the states of nature or outcomes likely to be connected with each option; and the value associated with each alternative-state-of-nature pair.

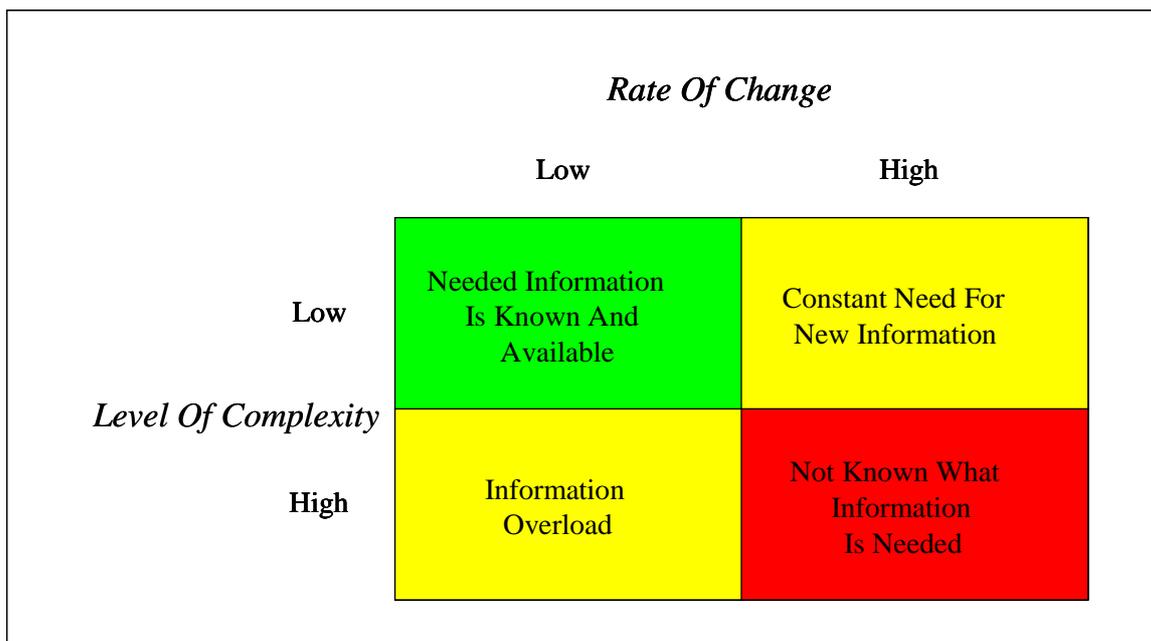
Evidently a high degree of consensual uncertainty exists where individuals or organisations have: a significant lack of consensus pertaining to the state of the environment, or decision context; an inability to predict the effect of any outcomes; and a lack of knowledge pertaining to the options available and the ramifications associated with each alternative option.

#### **4.3.12 An Information Perspective On Uncertainty**

As the report identified earlier, in modernist thinking uncertainty was considered to be a property of the environment resulting from two powerful forces: complexity, and the rate of change (Hatch, 1997). Hatch went on to identify a problem with such an environmental perspective on uncertainty because it assumed that conditions in the same context might be perceived as certain by one set of managers and uncertain by another. She recognised that the term 'environmental uncertainty' can be quite misleading because environments do not feel uncertain, people do.

Hatch's argument suggested that it is not the conditions in the environment that affect organisations so much as perceptions among strategists about how uncertain their environment is. Consequently uncertainty lies not in the environment, but in the individuals who consider the environment when they make organisational decisions. This viewpoint is associated with the information perspective in organisation theory. Hatch explains that the information perspective on uncertainty argues that managers feel uncertain when they perceive the environment to be unpredictable, and this occurs when they lack the information they feel they need to make decisions. This is illustrated in Figure 7 below. Perrow (1967) referred to this as the strategist experiencing a lack of confidence in his or her knowledge of the organisational content, the 'lack of information'.

Figure 7 – Links Between Conditions In The Perceived Environment: Uncertainty & Information (Perrow, 1967)



Under such circumstances, strategists experience information needs that are directly correlated to their perception of environmental conditions. When the environment is construed as stable, then information is readily available and the 'lack of information is low'. When the environment is complex and fast-moving, strategists have a constant need for additional information and may even experience an overwhelming amount of information. In this scenario, constantly changing circumstances mean that strategists are unable to decide which information is immediately relevant, consequently they experience high uncertainty.

### **4.3.13 Enactment Theory And The Social Constructionist Perspective**

Enactment theory puts a different interpretation on the information perspective. Weick (1979) argues that the organisational context, or environment, cannot be separated from the perceptions that strategists form of those conditions. The enactment view places both uncertainty and the environment within the mind of the organisational decision-maker. Hatch (1997, p.93) argues:

“that from this subjectivist point of view the need for information experienced by managers causes them to search for and find more information so that the higher the level of uncertainty they feel, the more complex and changing the environment will appear due to the continually expanding search for more information and the growing database that searching generates.”

This perspective maintains that it is the demands for more sophisticated information from increasing numbers of uncertain decision-makers that constructs a complex and changing environment. Subsequently strategists interpret their uncertainty as a lack of information and then attribute their feelings and experience to environmental factors: complexity and change. Enactment theory offers an interesting explanation of a radical shift towards greater complexity and change in many of the organisations that have participated in the information technology revolution. This stance also offers an explanation as to why strategists experience ever-increasing degrees of uncertainty within environments that have such high levels of accessible and available information.

Section 4.1.1 identified that the relationship between the organisation and its environment can be complex and fast moving (Duncan, 1972); therefore organisations must make sense of their environment. From a social constructionist perspective, Weick (2001, p.244) argues that strategists achieve this through a process of ‘sense-making’:

“Managers literally must wade into the ocean of events that surround the organization and actively try to make sense of them.”

Weick asserts that managers make sense of their environments through interpretation which he defined as a process of translating events, developing models for understanding, bringing out meaning, and assembling conceptual schemes among key managers. He argued that interpretation is organised into three stages: scanning (data collection); interpretation (data given meaning); and learning (action taken).

Scanning is defined as the process of monitoring the environment and providing data to strategists. Interpretation is defined as the process of translating events and developing understanding. Learning is the process of developing knowledge about action–outcome relationships between the organisation and the environment. Logically one can therefore deduce that if strategists believe any, all or a combination of the above stages to be missing, then the decision-maker experiences the fact or condition of not certainly knowing, defined in Section 4.3.1 as uncertainty. In essence the strategist is unable to ‘make sense’ of the situation.

To conclude this section, it is evident that from a social constructionist perspective, Weick recognised strategic decision-making as being a key element of an organisation’s process for making sense of its environment. It therefore plays a major part in the information and interpretation processes and consequently the process of strategy development and decision-making.

## **4.4 Literature Review: The Organisation And Its Environment**

### **4.4.1 Organisation–Environment Relations: Multiple Perspectives**

Chaffee (1985) argued that firms use strategy to deal with changing environments; therefore a basic premise when considering strategy concerns the inseparability of the organisation and its environment (Lenz, 1980; Biggadike, 1981). Chaffee went on to assert that strategic decisions are related to the environment, and are also important to the overall welfare of the organisation. This section looks at the nature of the organisation–environment relationship.

Classical and modernist management theories have typically conceptualised the organisational environment as an entity that lies outside the boundaries of the organisation (Hatch, 1997); it influences organisational outcomes by imposing constraints so that the strategic challenge lies in being able to adapt in order to survive. Hatch developed her argument to assert that the organisation faces uncertainty about what the environment demands when it experiences dependence on the multiple and various elements that comprise its environment

Symbolic-interpretive theory views the environment as a social construction (Katz and Kahn, 1966; Weick, 1979). Through his enactment theory, Weick regarded the environment as a theoretical construction, formed by beliefs among individuals about its existence, and constituted by perceptions set in motion by those beliefs. From this interpretive perspective, environments have material consequences but are primarily symbolic: their significance within the organisation derives from the interpretations they are given (Hatch, 1997). Hatch identified that, as with strategy earlier in the document, the post-modernist debate in this area is still emerging; this perspective finds problems with the distinction between the organisation and its environment, identifying a ‘boundaryless’ organisation. This leads post-modernists to create new organisational forms such as the network model and the virtual firm.

#### **4.4.2 The Organisation–Environment Relations Debate**

Classical management theory viewed organisations as closed systems, where management regarded internal operations as their sole concern (Hatch, 1997); modernist theory brought the introduction of the open-systems perspective (Katz and Kahn, 1966). Consequently interest in the impact of the environment on organisational processes increased (Javidan, 1984).

Salancik and Pfeffer (1974) argued that understanding organisational behaviour requires an examination of how the organisation relates to its environment. They defined the function of management as discretion towards more favourable environments, identifying three roles: symbolic, responsive and discretionary. The symbolic role argues that managers articulate high-level responses to the environment, which act as symbols for individuals within the organisation, very similar to Quinn's incremental mode (1980) and Johnson's cultural web (Johnson and Scholes, 1999a). In the responsive role, managers heed the constraints of the environment, sometimes referred to as opportunities and threats (Andrews, 1971). In the discretionary role, managers attempt to heed demands imposed by the environment; Andrews refers to these factors as strengths and weaknesses.

Bourgeois (1985) also identified as a central tenet in strategic management that a match between environmental conditions and organisational capabilities is critical to performance, and that it is the strategist's job to find or create this match. Bourgeois identified two themes within the literature antecedent to this field, strategic 'fit' and environmentally constrained.

Bourgeois argued that the first school of thought is aligned to the normative (or classical) view (see Section 4.1.4) which propagates that success is subject to the degree of strategic 'fit' between trends in the environment, sometimes referred to as opportunities and threats (Andrews, 1971; Johnson and Scholes, 1999b) and an organisation's distinctive competences, sometimes referred to as strengths and weaknesses (Porter, 1980; Porter and Montgomery, 1991). By definition the second school of thought, according to Bourgeois, argues that industry structure constrains the conduct of the organisation, therefore it determines the economic performance of the firm (Hannan and Freeman, 1977; Hatten, Schendel, and Cooper, 1978; Aldrich, 1979).

#### **4.4.3 Defining Context For The Organisation–Environment Relationship**

Pfeffer and Salancik (1978) recognised the importance of context in the understanding of organisational behaviour and warned that it is not sufficient to talk about strategic context or organisational environments in general terms. In order to address this, Pfeffer and Salancik found it useful to distinguish between three levels of the environment: the entire system; direct interactions; and the enacted environment.

Applying the work of Pfeffer and Salancik to this research offers a useful conceptualisation of the organisational environment within which Barclays operates. The entire system includes all interconnected individuals and organisations related to one another and to the focal organisation, Barclays. To illustrate this category, the entire system includes all the other institutions in the financial services industry, government, local communities, media, etc.

Direct interaction encompasses all the individuals and organisations with whom Barclays directly interacts and with whom it transacts. This category would include corporate and retail customers, employees, retired employees, the other main clearing banks, etc.

The final conceptualisation offered by Pfeffer and Salancik is the enacted environment which is the perspective adopted by this research into the strategic management of uncertainty. The enacted environment is the observation, attention and perception of individual actors within the system, the level of the organisation's perceptions of and representations of the environment. This viewpoint offers a more radical interpretation of the organisation–environment relationship where theorists argue that the environment cannot be separated from perceptions of the environment. From this social constructionist viewpoint, the environment for Barclays is composed of everyone who has a perception of the organisation and believes they have, or have had, a relationship with the Bank.

#### **4.4.4 Resource Dependence Theory**

Section 4.4.1 of this report identified that a basic premise when considering strategy concerned the inseparability of the firm and its environment (Lenz, 1980); therefore the nature of the relationship that exists between the organisation and its environment is central to the study of uncertainty (Duncan, 1972). As the review identified, Chaffee (1985) argued that firms use strategy to deal with changing environments; and Hatch (1997) referred to this as strategic 'fit'.

Hatch went on to recognise the modernist perspective on the strategy process, which conceptualises the organisation as a living organism. Using this metaphor, theorists have identified that just as a living organism would learn to adapt in its struggle to survive, an organisation uses strategy to survive. Resource dependence theory identifies three dimensions that can be used to study the nature of the relationship between the organisation and its environment. The first assesses the abundance of resources within the environment; the second identifies the level of dependence the organisation has on its environment for resources; and the third seeks to identify the ability of the firm to adapt to change.

A significant body of research has recognised that the abundance of resources within the competitive environment can contribute to the impact of uncertainty within organisations. The literature refers to this characteristic as the hostility–munificence dimension (Starbuck, 1976; Pfeffer and Salancik, 1978; Aldrich, 1979; Dess and Beard, 1984). Child (1972) refers to it as illiberality. In terms of specific measures, Aldrich described this dimension merely as environmental capacity; Dess and Beard develop this further, recognising that the key factor is the rate of sales growth. Starbuck argues that it is the extent to which the environment can support sustained growth. The literature appears to be predicated on the assumption that firms, like living organisms, seek out environments that permit growth and stability.

The second dimension of the research ascertains the level to which the organisation is vulnerable to its environment for resources. Emery and Trist (1965) described four types of environment, which differed according to the source and nature of the interdependence between the organisation and the environment. Emery and Trist begin with the placid–randomised environment, in which the resources required by the company are randomly distributed throughout the environment. In such an environment, the organisation survives to the extent that it can use different resources, can store a single resource or can use an abundant resource, one that it is likely to encounter frequently.

The second type of environment identified by Emery and Trist is placid–clustered. This refers to an environment in which the pattern of resources is sequentially predictable. Here interdependence between the organisation and its environment shifts in sequential probabilities, dependent on the availability of resources and the requirements of the firm. Therefore organisations survive by accumulating enough resources to survive periods of resource scarcity.

Emery and Trist’s third type of environment, disturbed–reactive, is manifestly different from the two earlier examples. Under these circumstances the distribution of resources and the probabilities of dependence are created by the behaviour of the organisations themselves; members of the same organisational class transact with the same environment, compete for resources and can transact with each other.

The final categorisation used by Emery and Trist to identify the nature of the dependence between the organisation and its environment is described as turbulent. This situation differs from the third type in that it involves the connection of sets of actors to other sets of actors; consequently any one actor is connected to the set of actors on which he is immediately dependent, and the environment itself is connected with other sets of interdependent actors.

Pfeffer and Salancik (1978) build on the four typologies offered by Emery and Trist to introduce concentration. In economics, concentration has been used to define the proportion of an industry's value-adding activities that is controlled by the largest five, ten or any number of firms. According to Pfeffer and Salancik, in organisational theory concentration is more closely associated with power and therefore uncertainty in the system; they recognise it as the firm's ability to achieve desired outcomes in its environment or social system.

By increasing concentration or reducing interconnectedness, Pfeffer and Salancik argue that the firm can reduce resource dependence and therefore any uncertainty that arises from managing a large number of separate entities. A lack of ability to co-ordinate interdependent activities can result in conflict or disagreements about the ends or goals of the social system. Evidently if there were no interdependence there would be no basis for conflict, which can arise from resource scarcity, politics or loss of control of the social system.

The third dimension that can create uncertainty in the organisational–environmental relationship is the ability of the firm to adapt to its environment, or deal with changing environments (Chaffee, 1985). This is why one of the central tenets of strategy concerns the inseparability of the organisation and its environment (Lenz, 1980; Biggadike, 1981).

Cyert and March (1963) observed that this dimension is closely linked to the first dimension, the abundance or lack of resources. They argued that if an organisation is able to recognise an environment offering growth and stability, it should be in a position to generate slack, which can provide a buffer against uncertainty. Such abundance, or munificence, can then be used to provide resources for innovation (Chakravarthy, 1982), maintain external relationships or coalitions (Hirsch, 1975), and even serve as a means for resolving conflict within the organisation–environment relationship (Bourgeois, 1981).

Some theorists recognise that uncertainty is only problematic when it involves an interdependence that is critical to the organisation (Milliken, 1987; Daft, Sormunen, and Parks, 1988; Boyd and Fulk, 1996). Daft et al. (1988) argued that unless external events are perceived as important to organisations, managers have little interest in them; Boyd and Fulk referred to this as perceived importance. Pfeffer and Salancik (1978, p.68) confirm:

“Uncertainty itself is not problematic. It is a problem for organisations only when the uncertainty involves important interactions with other environmental elements that are important for the organisation.”

To conclude, it is evident that the nature of the relationship between the organisation and its environment is central to the study of uncertainty. From a resource dependence perspective, it is apparent that this interaction has three component parts: the abundance of resources in the environment; the level of dependence the organisation has on its external surroundings; and its ability to adapt to changes in the environment.

## 4.5 Literature Review: Dealing With The Competitive Environment

### 4.5.1 Managing For Value: Understanding Value

During the introduction (see Section 2.1.5), the research recognised Barclays' commitment to putting value creation at the top of the management agenda (Barrett, 2000). This section takes a look at the meaning of the term 'value', with a view to clarifying how value creation informs the strategy development process at Barclays.

Similarly to the terms 'strategy' in Section 4.1.2 (Chaffee, 1985) and 'uncertainty' in Section 4.3.1 (Milliken, 1987), Bowman and Ambrosini (2003b) recognise some confusion surrounding various aspects of what is meant by the term 'value' and the process of value creation. As a starting point, Bowman and Ambrosini argue that the term 'value' means different things to different stakeholders. In order to clarify the subject area, they make a clear distinction between *use value* and *exchange value*, and between *value creation* and *value capture*.

To illustrate the distinctions that are being made, Bowman and Ambrosini identify five types of activity. They begin by recognising the process of value creation, which they argue can take two forms: first, it can be concerned with the capture of *exchange value* from customers, for example the interest charge on a mortgage product or credit card; second, it can be captured through the *use* of value from suppliers, for example Barclays' outsourcing service providers.

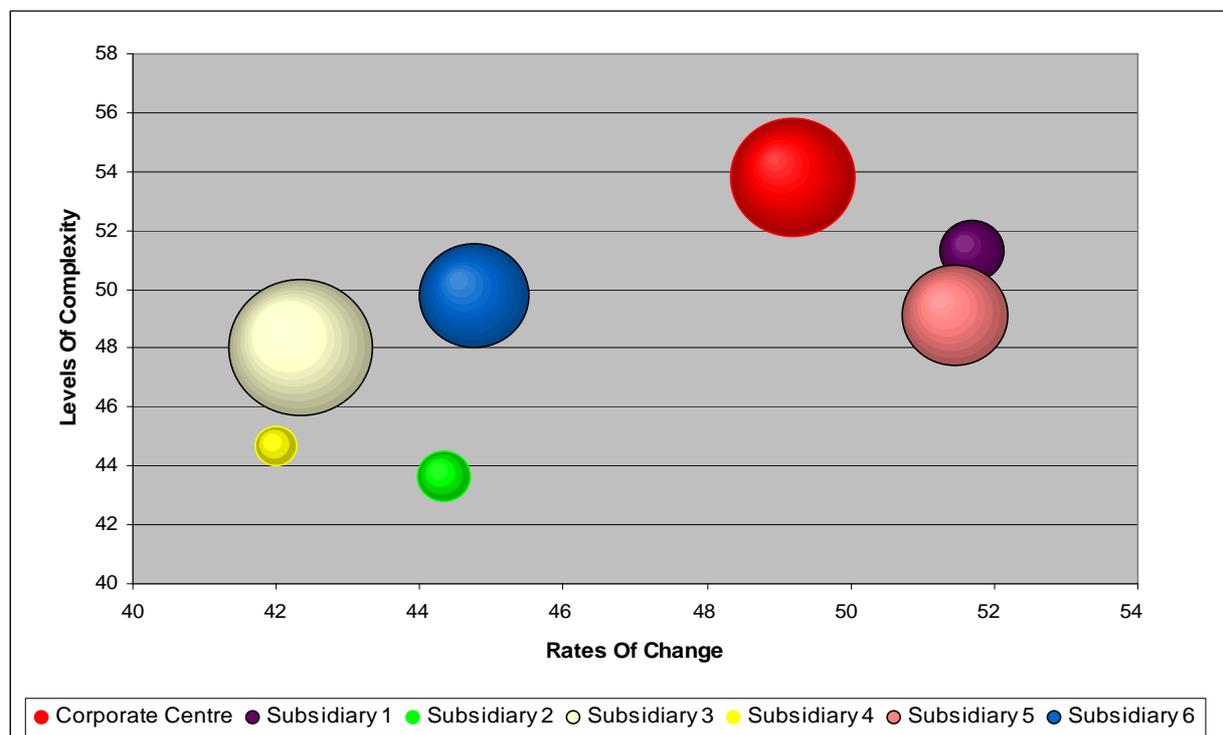
Bowman and Ambrosini then go on to identify two other types of activity: firstly, the *maintenance of the firm* – in the case of Barclays, this could take the form of the protection of business as usual or meeting the Group's legal and regulatory commitments; and secondly the *maintenance of capital stock* – in the case of Barclays, the effective management of operational and credit risk. The final category is activity that *destroys value* – in the case of Barclays this would include: any duplication of processes and functions; shortfalls in customer service and complaint handling; or even failed projects. Under these circumstances Bowman and Ambrosini argue the Bank has invested in unproductive activity that has destroyed value.

## 4.5.2 Managing For Value Across A Portfolio Of Diverse Businesses

The introductory section of this report (see Section 2.1.4) identified the range of businesses that exist within the Barclays Group. The challenge for this research is to investigate how the Group manages to deliver value across such a diverse portfolio. Clearly these firms operate in very different environments, typified by varying rates of change and levels of complexity, and therefore each should encounter a different degree of perceived environmental uncertainty (Duncan, 1972). Evidently this should have ramifications for the study of the relationship between perceived environmental uncertainty and strategy development processes (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989; Eisenhardt and Brown, 1999).

Johnson and Scholes (1993) developed a *portfolio analysis matrix* for assessing strategic capability across a portfolio of businesses. To illustrate the use of such a matrix, Figure 8 below plots six subsidiaries and the corporate centre, where the level of change can be represented on the x-axis and the level of complexity can be plotted on the y-axis. The size of the bubble can be driven by a financial measure, for example profits before tax, or value (Bowman and Ambrosini, 2003b), contributed by each area of the business in a fiscal year.

Figure 8 – Portfolio Analysis Matrix (Johnson and Scholes, 1993): Plotting Change Against Complexity



### 4.5.3 The Static–Dynamic Dimension: The Rate Of Change

Section 4.1 identified that Duncan (1972) is generally credited with initiating the study of perceived environmental uncertainty. Through his research Duncan proposed that such uncertainty could be described along two constructs: the static–dynamic dimension and the simple–complex dimension. This section looks at the static–dynamic dimension, usually referred to more simply as change, or the rate of change, which Duncan used to conceptualise how rapidly the various elements of the competitive environment change.

Tushman, Newman and Romanelli (1986) found evidence to suggest that industries experience a consistent pattern of evolution. They found that early phases of experimentation and low growth give way to more rapid growth as products gain acceptance or dominant designs emerge. As demand levels off – and declines as completely different products attract attention – then the rate of change also declines.

Through the study of hundreds of companies in several industries over time, Tushman et al. also found that within any industrial sector – in this research at Barclays, the financial services industry – there are consistent patterns in the amount of change that occurs over time. They assert that whole industries experience periods of relatively minor change, and these periods are punctuated by intervals of major disturbance, or disequilibrium. Tushman and Romanelli (1985) referred to this phenomenon as *punctuated equilibrium*. Recognising this process of transformation, Tushman and Romanelli identified *incremental* and *discontinuous* change.

By way of explanation Tushman and Romanelli defined *incremental* change as the type of change associated with those periods when an industry is in equilibrium – for example at Barclays, the programme of branch closures and the introduction of telephone distribution. By way of contrast *discontinuous* change occurs during periods of disequilibrium – at Barclays, for example, deregulation of the banks in the 1990s and the emergence of electronic banking in 2001.

Toffler (1990) looked at the nature of change and developed the concept of *future shock*. Adopting the modernist position Toffler argued that organisations of the future would need to be able to meet the challenge of greater adaptability when faced with change in the competitive environment. Toffler found *future shock* to be the product of three related trends: transience, novelty and diversity.

Starting with *transience*, sometimes referred to as impermanence (Hayes, 2002), Toffler argued that the accelerating rate of change affects people's relationships with things, places, people, organisations and ideas. Therefore as acceleration occurs, these relationships become foreshortened or telescoped in time.

Hayes (2002) explains that technological advances have increased the obsolescence of products, or *things* (Toffler, 1990), and falling manufacturing costs have changed the balance against repairing things in favour of replacement. Moving on to *places*, Hayes recognises that movement means improvement and is welcome, whereas in the past relocation has often been associated with disruption. Applying this to Barclays, it now has access to a workforce that is mobile and does not require the roots and stability of previous generations. In terms of *people*, Hayes recognises that relationships are increasingly defined in functional terms and involvement is limited because of an increase in the number, and decrease in duration, of relationships. He also found that this impermanency of relationships is reflected in eroded loyalties to one *organisation*, and the demand for innovation increases the rate at which people must form new *ideas* and forget the assumptions that previously underpinned their notions of reality.

The second major trend creating change for firms according to Toffler (1990) is the concept of *novelty*. Here Toffler makes a distinction between organisations facing an accelerating rate of change in familiar surroundings (for example at Barclays the increased demands of customers), as opposed to the rate of change in unprecedented situations (for example the emerging importance of the Bank's regulatory obligations). The final trend identified by Toffler is *diversity*, the demand for choice or movement away from standardised products or managerial processes. Toffler argues that when diversity is aggregated with transience and novelty it can have an ephemeral impact on the environment, or create future shock.

#### **4.5.4 The Simple–Complex Dimension: The Level Of Complexity**

This section of the report addresses Duncan's (1972) second construct in his conceptualisation of perceived environmental uncertainty, the simple–complex dimension, usually referred to more plainly as complexity. The earlier review (see Section 4.5.3) recognised the role of change in the organisational environment and this observation is pivotal in the role of complexity in levels of perceived environmental uncertainty and consequently its relationship with the strategy development process.

Most rational models of strategy development are predicated on the assumption that the process involves the following steps: collect the relevant information, analyse it in the most appropriate way, develop a plan based on the analysis, implement that plan and then measure the outcome (Chandler, 1962; Ansoff, 1965; Andrews, 1971). However, complexity theorists (Boulton and Allen, 2003) have taken issue with this 'conventional wisdom' on the basis that when strategists develop strategies, they should take into account not only the existing strategies of competitors, but also how each competitor will respond to the new strategy, and how all the new strategies in the market place will interact and compete.

Boulton and Allen argue that complexity theory provides a lens on the social sciences from the perspective of so-called 'modern physics' (Prigogine and Stengers, 1984). It is argued that this perspective offers an integrative theory that gives a 'scientific' validation to certain perspectives on strategy development. Boulton and Allen (2003, p.1) recognise that there are a number of 'schools' of complexity and no entirely agreed body of knowledge; however they stress its importance in studying complex systems, such as Barclays:

“Specifically, complexity theory may provide a 'scientific' rationale to explain empirically-based conclusions when the focus of interest resides in 'real', unstable and unpredictable conditions. Rather than when the 'problem under investigation' is constrained to reside in simplified or ideal conditions”.

Having recognised Barclays as a complex system it is useful to dwell, if only for a short time, on what is meant by a complex system. Boulton and Allen posit that a complex system is the most general description of a system, where a system is defined as a group of interdependent elements forming a collective entity. They also identify a theoretical problem because labelling a system as ‘complex’ places no simplifying assumptions on the attributes of a naturally-occurring system in practice (2003, p.1):

“So a complex system comprises elements of different classes, although the elements in a given class need not be regarded as absolutely identical. The elements interact and are connected by forces that are non-linear and can incorporate feedback. The forces themselves may change with time and the elements also may change individually and/or form new classes. The system notionally will have a boundary but that boundary may be permeable and may change with time. The system may not in general terms be regarded as being at, or near, equilibrium.”

Clearly through the use of this definition, Barclays, the financial services industry and the economy are all complex systems, which are themselves made up of complex systems. Consequently complex systems, like Barclays, are ‘nested’ within their environments, therefore defining their interfaces, or boundaries (Hatch, 1997), so that what the research attributes to the environment is imprecise and, as in the case of this research, may depend on the focus of the investigation itself (Boulton and Allen, 2003).

When considering strategy development processes within a complex system such as Barclays, it is important to understand how the complex system operates, or should operate, in its competitive environment, or setting. In order to do this Boulton and Allen identify the attributes and significant behaviours of complex systems: first, a lack of predictability; second, co-evolution and emergence; and finally, adaptability and diversity.

Beginning with *a lack of predictability*, complexity theorists argue that the path a complex system takes cannot, as a general rule, be known in advance. The system is highly interconnected, while also being equally heterogeneous, therefore it is not possible to understand cause and effect relationships that exist within the system – in this case Barclays – and between the complex system and its environment.

As a comfort to strategists the organisation will follow a path that is largely predictable, as it will for a significant part of the time be an extension of the past. However there will be points at which the possible future path divides – so-called points of bifurcation (Boulton and Allen, 2003). The path that the organisation takes at these critical points may be determined, or tipped (Gladwell, 2000), by a minor issue or by chance. The outcome may take the organisation into radically new territory and radical new properties may emerge; under these circumstances the system is said to have self-organised.

In terms of *co-evolution and emergence*, Boulton and Allen (2003) argue that something entirely new may emerge. It will not have been possible to reliably predict the emergence of this new entity, or novelty (Toffler, 1990). The impetus for this emergent new being may have been driven by the environment, as with electronic banking, which the Bank would interpret as an event to which it needs to react. Equally the new entity could be created through the behaviour of the complex system itself, for example the launch of a new ‘joined-up’ mortgage product such as OpenPlan. The new attributes are regarded as emergent rather than new because they have the potential to radically transform both the environment and the complex system.

The final attribute of the complex system, according to Boulton and Allen (2003), is the creation of conditions for *adaptability and diversity*. Here it is argued that for there to be effective learning, evolution and adaptability, then any natural diversity between elements in a given class must be encouraged and embraced, rather than attempts being made to limit and control such differences. In the case of Barclays, the Bank must expect these elements to learn and change, both collectively and individually. Complexity theorists argue that the system is more adaptable and flexible when its elements are strongly woven together and highly interconnected.

## **4.5.5 The Strategic Capability Of Individuals**

### **4.5.5.1 The Individual Perspective On Strategy**

In Section 4.3.9 of this paper the review recognised that managerial perception can form a key part of the strategy development process, particularly in relation to assessments of the competitive environment (Child, 1972). Clearly such an observation has ramifications for this investigation.

In order to address the strategy development process some theorists (Bowman and Ambrosini, 2000) adopt an interpretivist perspective (Blaikie, 1993) and suggest that the individual strategist's perspective on the strategy process is predicated on the individual's perceptions of the organisation (in this case Barclays), its competitive environment, and even the strategy process itself (Collier et al., 2004). Consequently strategy occurs when the decision-maker executes a process differently and therefore engages in some non-routine activity; or perpetuates past patterns of behaviour (Bowman and Ambrosini, 2000).

Weick (2001) also proposed that strategists make sense of the organisation's environment in a very individual manner based on their perception, or interpretation (Blaikie, 1993), of past learning, information, and experience. March (1994) also recognised the influence of experience and learned routines on actions, or strategies. Tsoukas (1994) identified that individuals make sense of what surrounds them in different ways, and their actions stem from applying their unique interpretations to the particular situations confronting them.

Bowman and Ambrosini (2000) quoting Tsoukas (1994, p.13) conclude that the organisation and its environment are therefore:

“subjectively constructed entities which may change once individuals' understanding and interpretations change: it is individuals within organisations that interpret whatever they think their environment consists of and act upon their interpretations.”

#### 4.5.5.2 Additional Factors: Causal Ambiguity, Ignorance And Self-Confidence

Theorists argue that the observation of the strategy development process and the competitive environment from the perspective of the individual (Bowman, 1998; Bowman and Ambrosini, 2002) introduces three additional factors into the equation: causal ambiguity, ignorance and self-confidence.

According to Bowman and Ambrosini (2002), *causal ambiguity* stems from a basic ambiguity, the possibility of having more than one possible interpretation, concerning the causal connection between actions taken by strategists and the consequences arising from such actions. Under these circumstances, causal ambiguity acts as an isolating mechanism which limits imitation by competitors, protects revenue streams, and restrains the mobility of organisational resources.

By way of contrast Bowman and Ambrosini defined *ignorance* as a factor entirely separate from causal ambiguity. Under conditions of ignorance strategists simply do not know what is happening within their organisation, either in terms of the appropriate strategic intervention or the consequences arising from such interventions. They identify that particular managers' ignorance of what is happening within their organisation is likely to have multiple implications for strategy.

The final contributory factor is *self-confidence* (Bowman, 1998). Here Bowman identifies that belief and confidence can be driven by the strategic context. For example a strategist may feel far more confident intervening if the organisation is faced with a crisis, and the shared sense of crisis enables individuals to take actions that would previously have been regarded as too high-risk.

Bowman goes on to argue that self-confidence can lie in a deep understanding of strategic detail, where the confidence to act strategically stems from successful experience of the recipe or formula. Here the strategist gains confidence in the knowledge that they have successfully implemented difficult strategies in the past, have achieved momentum and will not be deflected from the imposing the strategic vision.

#### **4.5.5.3 The Role Of Strategic Leadership: Upper Echelon Theory**

Another school of thought considers strategy as an aspect of leadership (Peters, 1988; Kakabadse and Kakabadse, 2000). Bowman and Ambrosini (2000) embrace this perspective but argue that the individual perspective should be enlarged to include any individual member of an ‘upper echelon’ grouping, in this research the Group Executive Committee at Barclays (see Section 4.6.3.4).

Hambrick and Mason (1984) also addressed strategy from the perspective of top managers, typified by the question ‘why do organisations act as they do?’. They found that organisational outcomes – strategic choices and performance levels – are partially predicted by managerial background characteristics. Therefore in order to understand the organisation’s strategy, it is appropriate to place the emphasis on the dominant coalition of the organisation – in the case of Barclays the Group Executive Committee.

Waldman, Ramirez, House and Puranam (2001) also investigated leadership and perceived environmental uncertainty but in relation to the financial profitability of the organisation. They found that leadership at the strategic level concerned the investigation of top-level managers and their impact on the strategy development process. As a starting point for their study Waldman et al. hypothesised that the relationship between leadership, or upper echelon (Bowman and Ambrosini, 2000), attributes and future performance was dependent on degrees of perceived environmental uncertainty (Duncan, 1972), as experienced by immediate subordinates to the Chief Executive Officer – in this investigation, the Group Executive Committee.

Consequently Waldman et al. (2001) were able to conclude that under conditions of perceived environmental uncertainty, upper echelon attributes – in their investigation, transactional and charismatic leadership – were key predictors of future financial performance. Through the design of this research (see Section 4.6.8), this investigation examines empirically the link between perceived environmental uncertainty experienced by the ‘upper echelon’ at Barclays, and the strategy development process applied at the business unit level (Bailey et al., 2000).

#### **4.5.5.4 Managerial Consensus**

Following the observation that managers' perceptions form the foundation on which strategic choices are based (Hambrick and Mason, 1984), then perceptions formed by managers have an influence over behaviours, actions and therefore strategy, either deliberate or intended (Mintzberg and Waters, 1985). Based on this recognition, Bowman and Ambrosini (2003a, p.214) identified:

“Therefore, whether the manager is operating at corporate headquarters, or at the apex of a strategic business unit, the manager's perceptions of the extant corporate-level strategy are likely to impact on the decisions being taken.”

Based on this observation, Bowman and Ambrosini were able to assert that perceptions of corporate strategy probably have more influence on executive behaviour than formal statements of strategic intent. Clearly, as identified in Section 4.5.5.1, these perceptions are based on individual perspectives and therefore are open to variances in interpretation. Such variances in interpretation can lead to a lack of consensus among strategists (Bourgeois, 1985) or different perspectives on uncertainty, described by Huff (1978) as consensual uncertainty (see Section 4.3.11).

A review of the literature shows that such disagreement among strategists is not unusual (Bourgeois, 1985). Furthermore, research does not give a conclusive insight into whether any such lack of consensus is dysfunctional to the performance of the organisation. Bourgeois (1980a) initially found that a high degree of consensus facilitated better performance, whereas in his later research he found that a 'lack' of consensus led to better performance (Bourgeois, 1985). West and Schwenk (1996) found that the degree of managerial consensus was not a contributory factor in terms of better performance.

Clearly this research examines the degree of perceived environmental uncertainty (Duncan, 1972) being experienced by the 'upper echelon' at Barclays, and consequent implications for the strategy development process (Bailey et al., 2000). Therefore the observation that a lack of consensus is not unusual among managers is important for this investigation.

#### 4.5.5.5 Theories Of Action: Theory-In-Use And Espoused Theory

When considering the strategic capability of individuals some theorists argue that managers develop mental maps which act as frames of reference with regard to how they act in certain situations (Argyris and Schön, 1974). Argyris and Schön posit that it is these mental maps that inform how managers design, plan, implement and review their actions and interventions. Furthermore, they assert that it is not the theories they explicitly espouse that guide managers' actions, but rather these maps. In his later work, Argyris (1978) went on to argue that few people are aware of the maps or theories they apply, and in order to make sense of this Argyris made a clear distinction between theory and action. However, Argyris and Schön (1974) propose that there are two theories of action involved: theories-in-use and espoused theory.

It is important to note that a theory of action is itself a theory; Argyris and Schön (1974, p.4) explain:

“its most general properties are properties that all theories share, and the most general criteria that apply to it – such as generality, centrality and simplicity – are criteria applied to all theories.”

The distinction made by Argyris and Schön in terms of the contrasting theories of action is between those theories that are implicit in what practitioners and managers do, and those to which the practitioner and manager refer when asked to explain their actions to others. Argyris and Schön describe the former as *theories-in-use* because they actually govern behaviour and often tend to be tacit structures. By comparison the words practitioners and managers use to convey what they do, or what they would like others to think they do, are referred to as *espoused theory*.

The observation that there can be a clear delineation between the theories-in-use and the espoused theories of managers raises interesting questions for this study into the relationship between perceived environmental uncertainty and strategy development processes across Barclays and is developed in much greater detail in both Project 2 (see Section 5) and Project 3 (see Section 6).

## 4.5.6 The Strategic Capability Of Organisations

### 4.5.6.1 The Ability To Cope

As this review recognised in Section 4.4.1, Chaffee (1985) argued that firms use strategy to deal with changing environments; so that a basic premise when considering strategy concerns the inseparability of the organisation and its environment (Lenz, 1980; Biggadike, 1981). Therefore a key issue when considering the strategic capability of an organisation must be an assessment of the ability of an organisation, in this case Barclays Bank PLC, to cope with its environment.

Adopting such a resource-based perspective (Hatch, 1997), and using the living organism as a metaphor for the organisation, Hatch identifies three dimensions that can be used to study the nature of the relationship between the organisation and its environment. The first assesses the abundance of resources within the environment; the second identifies the level of dependence the organisation has on its environment for resources; and the third seeks to identify the ability of the firm to adapt to change. These are discussed in detail in Section 4.4.4 above.

Through the application of the resource-based perspective, this research examines *the ability of each strategic business unit within the Barclays portfolio* to cope with perceived environmental uncertainty as defined by Duncan (1972) (see Section 4.3.10). Therefore, in order to examine empirically *the ability of each strategic business unit to cope with* uncertainty, change and complexity, each member of the Group Executive Committee at Barclays, or the ‘upper echelon’ (Hambrick, 2001), was asked to make subjective assessments across each dimension. The research then examines the relationship that exists, if any, between the three dimensions and any consequent implications for the strategy development process (Bailey et al., 2000).

#### 4.5.6.2 The Importance Of Being Able To Cope

From the starting point of a resource-based view (see Section 4.4.4), some theorists recognise that uncertainty is only problematic when it involves an interdependence that is critical to the organisation (Milliken, 1987; Daft et al., 1988; Boyd and Fulk, 1996). Daft et al. (1988) argued that unless external events are perceived as important to organisations, managers have little interest in them; Boyd and Fulk referred to this as perceived importance.

Through the application of the resource-based perspective, this research examines *the importance of each strategic business unit being able to cope with* perceived environmental uncertainty as defined by Duncan (1972) (see Section 4.3.10). Therefore, in order to examine empirically *the importance of each strategic business unit being able to cope with* uncertainty, change and complexity, each member of the Group Executive Committee at Barclays, or the ‘upper echelon’ (Hambrick, 2001), was asked to make subjective assessments across each dimension. The research then examines the relationship that exists, if any, between the three dimensions and any consequent implications for the strategy development process (Bailey et al., 2000).

## **4.6 Research Methodology And Research Design**

### **4.6.1 The Research Problem**

The focus point for the observation lies in the research problem, described by Strauss and Corbin (1997) as the determination of the general or substantive area or focus of the research. Strauss and Corbin suggested that the research question is the specific query to be addressed by the investigation. It sets the parameters for the research and suggests the methods for data gathering and analysis.

The first element of the research, Project 2, lies in understanding the degree of perceived environmental uncertainty that top strategists believe is faced by each strategic business unit, together with an assessment of the unit's ability to cope with uncertainty, and the importance of it being able to do so. The second element of the research lies in understanding the processes senior managers apply for developing strategies within the strategic business units at Barclays. The third element of the research examines the argument that successful organisations, like Barclays, are able to find congruence in the relationship that exists between the perceived environmental uncertainty experienced by corporate strategists and the process being applied by senior managers for making strategic decisions at the business unit level.

### **4.6.2 The Research Question**

The research problem can be expressed in the form of a question, referred to as the research question (Strauss and Corbin, 1998):

“What Are The Implications For Strategy Development Processes At The Strategic Business Unit Level When Corporate Strategists Are Experiencing Varying Degrees Of Perceived Environmental Uncertainty?”

## **4.6.3 The Unit Of Analysis**

### **4.6.3.1 Defining The Unit Of Analysis**

The data that will inform the research have been drawn from the unit of analysis, sometimes referred to as the social setting (Lofland and Lofland, 1995). Lofland and Lofland (1995, p.101) described the unit of analysis as:

“The scale, or scales, of social organisation at which the researcher is going to organise the investigation.”

Lofland and Lofland went on to offer three basic dimensions of scale, which they believed to be useful when defining the unit of analysis. These three aspects are: first the number of people involved, second the period of time on which the research will focus, and finally the physical size of the territory occupied by the setting.

Applying to the research the dimensions identified by Lofland and Lofland, there are two groups of people within the unit of analysis: first, the Barclays Group Executive Committee, who are the people responsible for developing corporate strategy at Barclays; and second, the senior management teams across the nineteen strategic business units at Barclays, who are responsible for developing business strategy (Ansoff, 1965). The period of time on which the research focused was 2003. The physical boundary of the unit of analysis is set by the group of people within the boundaries of the two decision-making groups (Hatch, 1997), which is socially constructed (Weick, 1979) by the managerial grading system.

Members of the Group Executive Committee were asked to assess on a scale of 0–100 (0 representing no uncertainty and 100 being total uncertainty) the seventeen strategic business units in terms of the degree of uncertainty they were deemed to face in their competitive environment. Following this they were asked to plot on a numeric scale the ability of the business unit to cope with uncertainty against the importance of it being able to cope (see Section 5.5.2). The senior management team within each strategic business unit were asked to complete the self-administered questionnaire developed by Bailey et al. (2000).

#### **4.6.3.2 The Structure Of The Barclays Group During 2003**

The Barclays organisation during 2003 was composed of seventeen strategic business units, four shared service units and twelve group functions. For the purposes of this research, it is important to clarify the distinctions being made between these three areas because this has ramifications for the research design. As detailed earlier in this section, this investigation is only concerned with the seventeen strategic business units.

A strategic business unit is defined as a profit-and-loss accountable unit organised around products or customer segments. The unit sets its own business strategy within the context of the Group strategic direction, while financial targets are set by the Group. A shared service unit is defined as a group function that adds value to the business by delivering a cost-effective solution for administration and advice. Typically a shared service unit provides a one-stop service for general questions and requests. Finally a group function is a core professional service support unit responsible for providing support across the group. The Group structure is set out in Table 14 below:

*Table 14 – The Structure Of The Barclays Group During 2003*

<b>Strategic Business Units</b>	<b>Shared Service Units</b>	<b>Group Functions</b>
Woolwich	Group Property Services	Barclays Solutions
UK Retail Bank	Investment Management	Communications
Caribbean	Service Provision	Corporate Secretariat
Europe	Strategic Marketing & Distribution	Finance
International Bank		Human Resources
Private Bank		Internal Audit
Premier Bank		Investor Relations
Barclays Global Investors		Legal
Business Bank		Risk
Barclays Africa		Strategy & Planning
Barclaycard Corporate		Taxation
Barclaycard International		Treasury
Barclaycard UK		
Collateralised Financing		
Global Financing		
Global Markets		
Private Equity		

### 4.6.3.3 The Seven Clusters And The Strategic Business Unit Heads During 2003

The strategic business units are logically grouped into seven clusters, each reporting into a Chief Executive who in turn reports directly into the Group Executive Committee, through its Managing Director. The structure of the seven clusters and their reporting lines are set out in Table 15 below:

*Table 15 – The Barclays Clusters And The Heads Of The Strategic Business Units During 2003*

<b>The Barclays Clusters</b>	<b>Product Or Customer Segments</b>	<b>Reporting Lines</b>
<b><u>The UK Retail Bank</u></b>		<b>Chief Executive – David Roberts</b>
The Woolwich	Mortgages, Savings, IFAs & Woolwich Branded Distribution	M.D. – Jayne Almond
UK Retail Bank	Consumer Lending, Current Accounts	M.D. – Robin Dickie
<b><u>Barclays Private Clients</u></b>		<b>Chief Executive – Bob Hunter</b>
Investment Management	Caribbean & Cayman Islands	M.D. – Ray Greenshields
Europe	France, Monaco, Iberia & Gibraltar	M.D. – Eduardo Arbizu
International Bank	Personal Offshore, Premier Offshore	M.D. – Catherine McDowell
Private Bank	Credit Products, Fiduciary Services	M.D. – Mike Pederson
Premier Bank	High Value Or Premier Clients	M.D. – Mike Rogers
<b><u>Barclays Global Investors</u></b>		<b>Chief Executive – Naguib Kheraj</b>
Barclays Global Investors	Global Investment Management	M.D. – Lindsey Tomlinson
<b><u>Business Bank</u></b>		<b>Chief Executive – Roger Davis</b>
Business Bank	Corporate Banking	M.D.s – Alastair Camp / Mike Rogers / Peter Harvey
<b><u>Barclays Africa</u></b>		<b>Chief Executive – Chris Lendrum</b>
Barclays Africa	Corporate & Merchant Banking (Africa)	M.D. – Dominic Bruynseels
<b><u>Barclaycard</u></b>		<b>Chief Executive – Gary Hoffman</b>
Barclaycard Corporate	UK Merchant Acquiring Services	M.D. – Mark Evans
Barclaycard International	International Card Issuing	M.D. – Peter Herbert
Barclaycard UK	UK Card Issuing & Lending	M.D. – Peter Crook
<b><u>Barclays Capital</u></b>		<b>Chief Executive – Bob Diamond</b>
Collateralised Financing	Futures, Securities Lending / Borrowing	M.D. – Jerry del Missier
Global Financing	Origination, Secondary Trading	M.D. – Naguib Kheraj
Global Markets	Government Bonds, Money Markets	M.D. – Jerry del Missier
Private Equity	Company Capitalisations	M.D. – Naguib Kheraj

#### 4.6.3.4 The Group Executive Committee During 2003

Membership of the Barclays Group Executive Committee during 2003 is set out in Table 16 below:

*Table 16 – Membership Of The Barclays Group Executive Committee During 2003*

<b>Group Executive Committee Member</b>	<b>Role &amp; Responsibility</b>
Sir Peter Middleton	Group Chairman, Barclays Bank PLC
Matthew Barrett	Group Chief Executive, Barclays Bank PLC
John Stewart	Deputy Group Chief Executive, Barclays Bank PLC
Bob Diamond	Chief Executive, Barclays Capital
Naguib Kheraj	Chief Executive, Barclays Global Investors
Bob Hunter	Chief Executive, Barclays Private Clients
Chris Lendrum	Chief Executive, Barclays Africa & Group Executive Director
Gary Hoffman	Chief Executive, Barclaycard
David Roberts	Chief Executive, UK Retail Bank
Roger Davis	Chief Executive, Business Bank
Gary Dibb	Group Chief Administration Officer, Barclays Bank PLC
Jeff Neiderkorn	Consultant To Group Executive Committee
Robert Nimmo	Group Risk Director, Barclays Bank PLC
John Varley	Group Finance Director, Barclays Bank PLC
David Weymouth	Chief Information Officer, Barclays Bank PLC
Peter Herbert	Group Strategy & Planning Director & Secretariat To The Group Executive Committee

#### **4.6.4 The Phenomenon Of Interest And The Research Condition**

Strauss and Corbin (1998, p.130) described the phenomenon of interest for the research as:

“Repeated patterns or happenings, events or actions / interactions that represent what people do or say, alone or together, in response to the problems and situations in which they find themselves.”

Strauss and Corbin recognised that in simple terms ‘the phenomenon of interest’ is a term that provides answers to the question ‘what is going on here?’. Consequently the phenomenon for this research is the process for developing strategy at the strategic business unit level.

The second element of the definition for the phenomenon of interest pertains to the problems and situations individuals face. Strauss and Corbin recognised this as the research condition, defined as sets of events or happenings that create the situations, issues and problems that individuals face. Evidently perceived environmental uncertainty is the research condition in this investigation. The study seeks to identify implications arising from the research condition for the phenomenon of interest, strategy development processes at the strategic business unit level.

Strauss and Corbin recognised that research conditions, in this research perceived environmental uncertainty, may have many different properties intersecting across many dimensions. They asserted that paths of influence on the phenomenon could be direct or indirect, linear or non-linear, macro or micro. Strauss and Corbin argued that, to be complete, the explanation of the research (in this case the identification of implications arising from the research condition on the phenomenon) must include all the properties of the research condition, detailing how they intersect with all aspects of the phenomenon.

## **4.6.5 The Adopted Approach**

### **4.6.5.1 Polemics: The Adopted Approach**

The research is founded on the basic premise of polemics, defined in the Concise Oxford Dictionary (1999) as ‘the art or practice of dispute or argument’. The art of polemics is demonstrated in the comprehensive review of the literature (see Sections 4.1–4.5) where a host of strong opinions and arguments are offered on a wide range of subjects resident within the research domain: perceived environmental uncertainty and strategy development process.

The purpose of the literature review is therefore twofold: first to set out the body of knowledge within which the research resides – the research domain; and second, to build propositions based on the literature which the research will go on to examine. It is important to note that because the literature review covers a subject area, or details a particular perspective, the researcher does not necessarily agree with that particular viewpoint or commend that way of thinking. Coverage in the literature review merely acknowledges a topic that is important to the research domain and is therefore worthy of review.

### **4.6.5.2 Polemics: Development Of Propositions From The Literature Review**

Through a comprehensive coverage of the literature and existing academic research, the author has gained a detailed understanding of both perceived environmental uncertainty and strategy development processes as a highly topical and fertile area for research. As the research is concerned with theory-building the researcher has developed logical corollaries from the literature to build a series of propositions for testing in the field at Barclays.

The researcher uses these literature-guided propositions to direct the assessment of theory, which is a critical step in the ongoing process of theory development (Whetten, 1989). The researcher then goes on to use the results obtained from testing these literature-guided propositions to improve current theory. The theory is built by drawing on a broad base of evidence to support proposed changes to current theoretical conceptions in the research domain: perceived environmental uncertainty and strategy development processes.

#### 4.6.5.3 The Emergent Nature Of The Research Process

During the period of the Executive Doctoral Research Programme (1999–2005) the author has allowed the research process to follow an emergent path, as opposed to imposing it in its totality at the outset of the programme. During the course of the investigation the research process has emerged in three key areas: first, a comprehensive coverage and understanding of existing literature and research in the field of perceived environmental uncertainty and strategy development processes; second, the author developing his skills as a researcher through the collection of both primary and secondary research data; and finally, the author developing a deep understanding of strategy development processes at Barclays Bank PLC by working within the organisation prior to and throughout the period of the research.

Developing the first point, through close supervision with Cranfield School of Management the *literature review has been allowed to develop* from an initial exploration into multiple perspectives on organisational theory into a comprehensive review of the existing body of evidence within the research domain: perceived environmental uncertainty and strategy development process. The core of the literature review is set out in Section 4 and underpins the propositions tested through this programme of research.

The second key area that demonstrates the emergent nature of the research process is the *personal development of the author as a researcher*. Through the completion of detailed pilots for each project the researcher allowed the research design to iterate and gradually improved his competence and capability as a researcher. Each research pilot was followed by a supervisory panel session where both the research design and data were reviewed. The results of these research pilots are set out in Sections 5.4 and 6.4, and the contribution of the supervisory panel in the personal development of the researcher is acknowledged.

The final key area of the research process that was allowed to emerge was the researcher's *understanding of strategy development processes* at Barclays. Through executive sponsorship the researcher worked closely with the Group Strategy & Planning Department throughout 2002–3. The support of the Executive Sponsor and the resources made available by other key stakeholders across the Group is acknowledged.

## **4.6.6 The Philosophical Approach To The Research**

### **4.6.6.1 Philosophy In Social Science Research**

This section of the paper addresses the philosophical perspective adopted for the research. Derived from the Greek, *philos*, meaning loving, and *sophia*, meaning wisdom, philosophy is sometimes defined as the love of wisdom. In academic disciplines, it is concerned with ‘making explicit the nature and significance of values, or beliefs, and investigating the intelligibility of concepts by means of rational argument’ (Concise Oxford Dictionary, 1999).

In social science research it is important to address philosophical issues because this reveals assumptions made by the researcher in three key areas: the nature of the phenomenon being investigated, referred to as ontology; the manner in which the researcher believes it is possible to gain knowledge of this reality, epistemology; and moral questions which address what researchers should or should not do, morality. Theorists recognise that epistemology, ontology and morality are central to all the issues that concern researchers (Williams and May, 2000).

Williams and May go on to recognise that research may be characterised as methodological investigation into a subject or problem. Therefore to ‘research’ is to seek answers that involve understanding and explanation, where the credibility of research outcomes will rest heavily on the conduct of the investigation. Consequently there should be a strong relationship between the logic, sometimes referred to as strategy (Blaikie, 1993), of enquiry and the philosophical stance being adopted by the researcher. Therefore the researcher must be able to justify the chosen research methodology and method dependent on the philosophical choices that have been made.

This section of the paper develops the philosophical paradigm for the research and details how the adopted position has informed the selection of research methodology and subsequent method.

#### **4.6.6.2 Two Basic Philosophical Concepts: Ontology And Epistemology**

Two of the most central concepts in the philosophy of science are ontology and epistemology (Blaikie, 1993). According to Blaikie, in social enquiry ontology refers to the claims or assumptions that the research makes about the nature of social reality – claims about what exists, what reality looks like, what units it comprises, and how these units interact with each other.

For this study, the researcher must consider the nature of the phenomena being investigated, strategy development processes and perceived environmental uncertainty, and adopt a philosophical stance that reflects the researcher's view and articulates what constitutes 'reality'. The researcher designed the logic and strategy for the research in a manner consistent with the ontological perspective (see Section 4.6.8).

Blaikie goes on to contend that epistemology refers to the claims or assumptions made about the ways in which it is possible to gain knowledge of reality, whatever knowledge is understood to be. Theorists create a construct with the objective, sometimes referred to as scientific, at one end of the continuum and the subjective, sometimes referred to as interpretive or constructivist, at the other. Again the researcher will design the logic and strategy for the research in a manner consistent with the epistemological perspective.

For the purposes of illustration it is possible to take the philosophical position of a positivist to introduce these two basic concepts (Blaikie, 1993). Positivism entails an ontology made up of atomistic, discrete and observable events. Therefore only that which can be observed, that which is experienced by the senses, can be regarded as real and consequently worthy of the attention of science. Human activity – in the case of this research, strategy development processes – is understood as observable behaviour taking place in observable, material circumstances. Social reality is viewed as a complex network of cause and effect relationships between events, which are depicted as an emerging patchwork of relationships between dependent and independent variables. The causes of human behaviour are regarded as being external to the individual and therefore also to the researcher.

Moving on to its epistemology, positivist knowledge is derived from sensory experience by means of experimental or comparative analysis; therefore concepts and any subsequent generalisations are shorthand summaries of particular observations (Blaikie, 1993). A correspondence, or similarity, is suggested as the factual basis for the argument between sensory experiences and the objects of those experiences, and between observation statements and theoretical statements. From this philosophical perspective, scientific laws are deemed to be identical to observable empirical regularities.

#### **4.6.6.3 Philosophical Issues When Dealing With Perceptions In Research**

This research is an investigation into strategy development processes and managerial perceptions of the competitive environment and the ability of the strategic business unit to cope with its environment. Therefore the philosophical approach must be able to address issues associated with perceptions. According to Magee (2000), the problem of perceptions has always obsessed empiricist philosophers and their legateses, because on the basis of empiricist assumptions the problem is insoluble. Magee (2000, p.115) formulates the problem as follows:

“If the world consisting of all material objects apart from my own body exists independently of whether I exist or not, and in dimensions of space and time that are also independent of me; and if my knowledge of the world derives from the fact that those objects impinge on my body’s senses in such ways as to cause effects in my brain which might be described as mental states in which the objects are represented; how can I ever know that the representations correspond to the objects, in other words that my perceptions correspond to reality? The only way we can check the accuracy of a copy is to compare it with the original, but in this case we have no independent access to the original, and therefore cannot make the comparison. We have access to the copy alone – indeed it is only from the copy that we infer the existence of the original at all. The question is made sharper by the fact that we know that there are times when our senses deceive us.”

#### **4.6.6.4 Realism: The Adopted Philosophical Perspective For The Research**

This section details how the researcher philosophised during the research. As the paper identified in Section 4.6.6.2 these philosophical positions are governed by ontology and epistemology. For this study the researcher adopts a realist ontology, which is posited in the contributions of philosophers such as Bhaskar (1978) and Harré (1986). Williams and May (2000) describe realism as the view that theoretical, or hypothetical, entities characterised by a true theory actually exist even though they cannot be directly observed. Therefore the evidence that confirms a theory also serves to confirm any theoretical, or hypothetical, entities characterised by that theory.

In realist ontology, the ultimate objects of scientific enquiry are considered to exist independently of scientists and their activity (Blaikie, 1993); therefore a clear distinction is made between the domains of the empirical, the actual and the real. Within the realist approach, the empirical is made up of experiences or events understood through observation, the actual includes events whether observed or not, and the real consists of the processes that generate events. This reflects the objective of the realist ontology, which is to explain observable phenomena with reference to these underlying structures and mechanisms.

Blaikie goes on to observe realism as the ontology of intransitive structures and mechanisms, which are distinguished from transitive concepts, theories and laws designed to describe them. Therefore, according to Blaikie, these laws are descriptions of the real essence of things that exist in nature, such essences being their power or tendency to produce effects that can be observed – in the case of this research, strategy development processes and perceived environmental uncertainty.

In realist ontology, social reality is viewed from the perspective of a socially constructed world in which either social episodes are the products of the cognitive resources that social actors bring to them (Harré, 1986); or social arrangements are the products of material but unobservable relations (Bhaskar, 1978). Consequently the aim of realist science is to explain observable phenomena with reference to underlying structures and mechanisms – in this research, the relationship between perceived environmental uncertainty and the processes adopted for developing strategy. Perceptions formed by strategists are not observed as being external to the strategy process but constitute an element of that reality; therefore the above relationship cannot be adequately described without making reference to the degrees of environmental uncertainty being perceived by strategists.

It is thus evident that realist epistemology is constructivist because it is based on the building of models of such mechanisms that, if they were to exist and act in the postulated way, would account for the phenomenon being examined (Blaikie, 1993). Blaikie goes on to explain that from this realist epistemology, models constitute hypothetical descriptions which, it is hoped, will reveal the underlying mechanisms of reality; these mechanisms of reality can only be known by constructing ideas about them.

#### **4.6.6.5 Applying The Principles Of Realist Science To The Research**

This section of the paper applies the work of Harré (1986) and Bhaskar (1978) to justify the choice of realism as the philosophical approach to the research. According to the principles of Harré (1986), the first stage in the process of realist science involves the production of critical descriptions of non-random patterns through ‘exploration’, to extend what is known by common observation (Blaikie, 1993). The purpose of this phase is to appraise critically the authenticity of what is understood or ‘thought to be known’. In this study the exploratory research was completed through a review of literature and a series of semi-structured interviews with senior managers across Barclays. The two key areas under observation in this part of the research were managerial assessments of perceived environmental uncertainty and strategy development processes.

Utilising Harré’s (1986) process of realist science the critical descriptive phase, referred to as empirical studies, is followed by theoretical studies, which are concerned with producing a rational explanation of the non-random patterns found in empirical studies. Therefore in this research, a rational explanation of increased degrees of perceived environmental uncertainty could be an increase in the rate of change or in the levels of complexity faced by managers at Barclays. The final stage of Harré’s process of realist science is to prove the theoretical findings by identifying the causal or generative mechanisms that produce the patterns – in the case of this research, the implications of a rise in the degree of perceived environmental uncertainty for strategy development processes at Barclays. Bhaskar (1978) summarised realism in much the same way as Harré; however his approach consists of five principles (Outhwaite, 1987). These are applied to this research in Table 17 below:

*Table 17 – Applying Bhaskar’s (1978) Five Principles Of Realist Science To The Research*

<b>Bhaskar’s Principle Of Realist Science</b>	<b>Applicability To The Research</b>
A distinction is made between <i>transitive</i> and <i>intransitive</i> objects of science. Transitive objects are the concepts, theories and models which are developed to understand and explain some aspects of reality; intransitive objects are the real entities and their relations that make up the natural and social worlds.	<p><b><u>Transitive Objects</u></b></p> <ul style="list-style-type: none"> <li>• Perceived Environmental Uncertainty</li> </ul> <p><b><u>Intransitive Objects</u></b></p> <ul style="list-style-type: none"> <li>• Strategy Development Processes</li> <li>• Strategy Development Forums</li> </ul>
Reality is stratified into three levels or domains: the empirical, the actual and the real. The <i>empirical</i> domain consists of the events that can be observed, the <i>actual</i> domain consists of events, whether they are observed or not, and the <i>real</i> domain consists of the structures and processes that make up reality and that produce events.	<p><b><u>Empirical Domain</u></b></p> <ul style="list-style-type: none"> <li>• Perceived Environmental Uncertainty</li> </ul> <p><b><u>Actual Domain</u></b></p> <ul style="list-style-type: none"> <li>• Strategy Development</li> </ul> <p><b><u>Real Domain</u></b></p> <ul style="list-style-type: none"> <li>• Strategy Development Processes</li> <li>• Strategy Development Forums</li> </ul>
Causal relations are regarded as powers or <i>tendencies</i> of things which interact with other tendencies such that an observable event may or may not be produced, and may or may not be observed. Social laws need not be universal; they need only represent recognised tendencies.	<p><b><u>Tendencies</u></b></p> <p>There is a <i>causal relationship</i> between the processes used for making decisions at the business unit level, and degrees of perceived environmental uncertainty among corporate strategists</p>
In the domain of the real, definitions of concepts are regarded as <i>real definitions</i> , i.e. statements about the basic nature of some entity or structure. These are neither summaries of what is observed nor stipulations that a term should be used in a particular way.	<p><b><u>Real Definitions</u></b></p> <ul style="list-style-type: none"> <li>• Perceived Environmental Uncertainty</li> <li>• Strategy Development Processes</li> </ul>
Explanatory <i>mechanisms</i> in the domain of the real are postulated and the task of research is to try to demonstrate their existence.	<p><b><u>Mechanisms</u></b></p> <p>Explaining the relationship that exists, if any, between strategy development processes at the strategic business unit level, and perceptions of the environment held by corporate strategists</p>

## **4.6.7 The Methodological Approach**

### **4.6.7.1 Realism: Informing The Choice Of Methodological Approach**

As the document identified in Section 4.6.6.2, philosophers have developed a continuum ranging from the objective to the subjective. Between these polarised philosophical positions lies a myriad of alternative positions, one of which is realism. Blaikie (1993) recognised that from a realist perspective, in order for research to be scientific it must be concerned with developing methods most appropriate to the subject matter of the research, based on realist principles.

At the same time Blaikie recognised that realism adopts the interpretive position, believing that there are fundamental differences between natural and socially occurring phenomena. Consequently, in its epistemology it does not prescribe a methodological approach.

### **4.6.7.2 Choosing The Appropriate Methodological Approach**

A useful starting point when choosing the methodological approach is to understand the difference between research methodologies and research methods. Blaikie (1993) makes the distinction by defining the research methodology as the analysis of how research should proceed, as opposed to research methods, which are the actual techniques or procedures used to gather data.

As this document identified earlier, realist science is concerned with developing methods appropriate to the particular subject matter; therefore in this investigation, the methodological approach must be appropriate to an investigation into the relationship that exists between varying degrees of perceived environmental uncertainty among corporate strategists and strategy development processes at the business unit level, within the context of Barclays Bank PLC.

### 4.6.7.3 The Methodological Approach

This section of the report moves on to introduce the research methodology for the study and begins by clarifying the classifications of research (Easterby-Smith, Thorpe, and Lowe, 1997). Easterby-Smith et al. identified three research classifications: pure, applied and action. They argued that differences in the methodological approaches are distinguished by the outcomes that are assumed to emerge, and recognised that such distinctions do not always hold together in practice.

The first classification made is *pure research*; this is intended to lead to theoretical developments, although there may be practical implications. The second classification is *applied research*, intended to lead to the solution of specific problems, usually within a client–researcher relationship. The third classification is *action research*, where the researcher joins the unit of analysis and collaborates in an approach; this is more an educational process than a research process (Easterby-Smith et al., 1997).

This investigation is intended to lead to the solution of a specific problem for Barclays. The research seeks to understand the implications of perceived environmental uncertainty on strategy development processes. Utilising the classifications offered by Easterby-Smith et al. this study is applied research, within a sponsor–researcher relationship.

The next distinction in the research methodology is the basis of theoretical grounding (Gill and Johnson, 1999). Gill and Johnson recognised that there is deductive, or *a priori*, research, which begins with abstract conceptualisation and then moves on to testing through the application of theory, subsequently creating new experiences or observations. In contrast Gill and Johnson also identified inductive, or *a posteriori*, research where learning is based on particular past experiences; through the formulation of abstract concepts, theories and generalisations that explain the past, researchers can predict the future.

Within the realist ontology, research is always deductive, or *a posteriori*, because the investigation is based on knowledge derived from experience. It is hoped that through the application of this investigation the researcher will enable Barclays to predict the future (understand the implications of perceived environmental uncertainty), based on theories that explain the past (strategy development processes). However, it is important to note that the dichotomy between induction and deduction can be somewhat confusing and it is not uncommon for research in this area to intertwine these two approaches (Eisenhardt, 1989; Hart, 1992; Hart and Banbury, 1994).

The next methodological issue to address is researcher involvement. The choice stems from the philosophical perspective: a dichotomy is created, with the researcher independent at one end of the construct and involved at the other. Positions along the continuum are determined by the extent to which it is possible for the observer to remain wholly independent of the unit of analysis. The position adopted by the researcher for this investigation is independent of the unit of analysis.

Another issue that needs to be addressed is sample size. In order to complete the data collection, the researcher interviewed fifteen members of the Barclays Group Executive Committee (see Table 16) – the researcher could not obtain access to Matthew Barrett the Chief Executive of Barclays Bank PLC. At the same time the researcher gathered 731 strategy development questionnaires from senior managers across the seventeen strategic business units. For the purposes of statistical analysis, each strategic business unit returned more than thirty questionnaires.

One more issue to resolve in the methodological approach design concerns which comes first, the theory or the data. As one would expect from a realist epistemology, the data come first and knowledge is derived from experience. Data were collected from strategists on their experience of perceived environmental uncertainty, while data were being collected on the strategy development processes applied in the business units. From the data, or experience, the researcher was able to investigate the correlations that exist, if any, in the above relationship.

As this paper identified earlier, realist epistemology is founded on the building of models that, if they were to exist and act in the postulated way, would account for the phenomena under investigation (Blaikie, 1993). Therefore the investigation is concerned with theory building as opposed to theory testing. The theory being developed is based on the idea that there should be a relationship between perceived environmental uncertainty and the processes adopted for developing strategy at the strategic business unit level.

A further issue to resolve in the research methodology is the distinction between verification and falsification. Quoting Karl Popper (1959), Easterby-Smith et al. (1997) argue that instead of looking only for confirmatory evidence, one should always look for evidence contradictory to one's hypothesis. This research formulates theories in a way that will make them most easily exposed to verification. It achieves this by incorporating questions that seek to prove and disprove that varying degrees of perceived environmental uncertainty impact on strategy development processes at Barclays.

This report has shown that the research is using various techniques and procedures for completing research which it is possible to classify into two categories: qualitative and quantitative. As with the theoretical groundings, the distinction between the two is not always clear. However it is possible to make comparisons dependent on the approach that has been adopted in collecting and analysing the data.

Easterby-Smith et al. (1997, p.71) quoted van Maanen (1983) who defined qualitative methods as:

“An array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the world.”

Using this definition, Easterby-Smith et al. (1997) argued that data collection and analysis tends to be a continuous and iterative process. Applying this technique, researchers collect data and analyse them to uncover emerging patterns or concepts that inform the investigation. As a result qualitative methods are techniques where the researcher can gain insights into people and situations when they are close to the unit of analysis. This research used qualitative research in this manner, as it observed perceptual measures of uncertainty, and perceptions among strategists of the processes used for developing strategy at Barclays.

Another feature of qualitative research is that it is suited to observations that are not limited by pre-established boundaries, so the researcher is at liberty to allow the level of detail, or even the direction of the research, to emerge as the study develops. This feature was key to the early exploratory findings in Project 2 where the researcher developed in the research field at Barclays those concepts discovered in the literature; Project 2 used the method most commonly associated with qualitative research, the interview, in a semi-structured format.

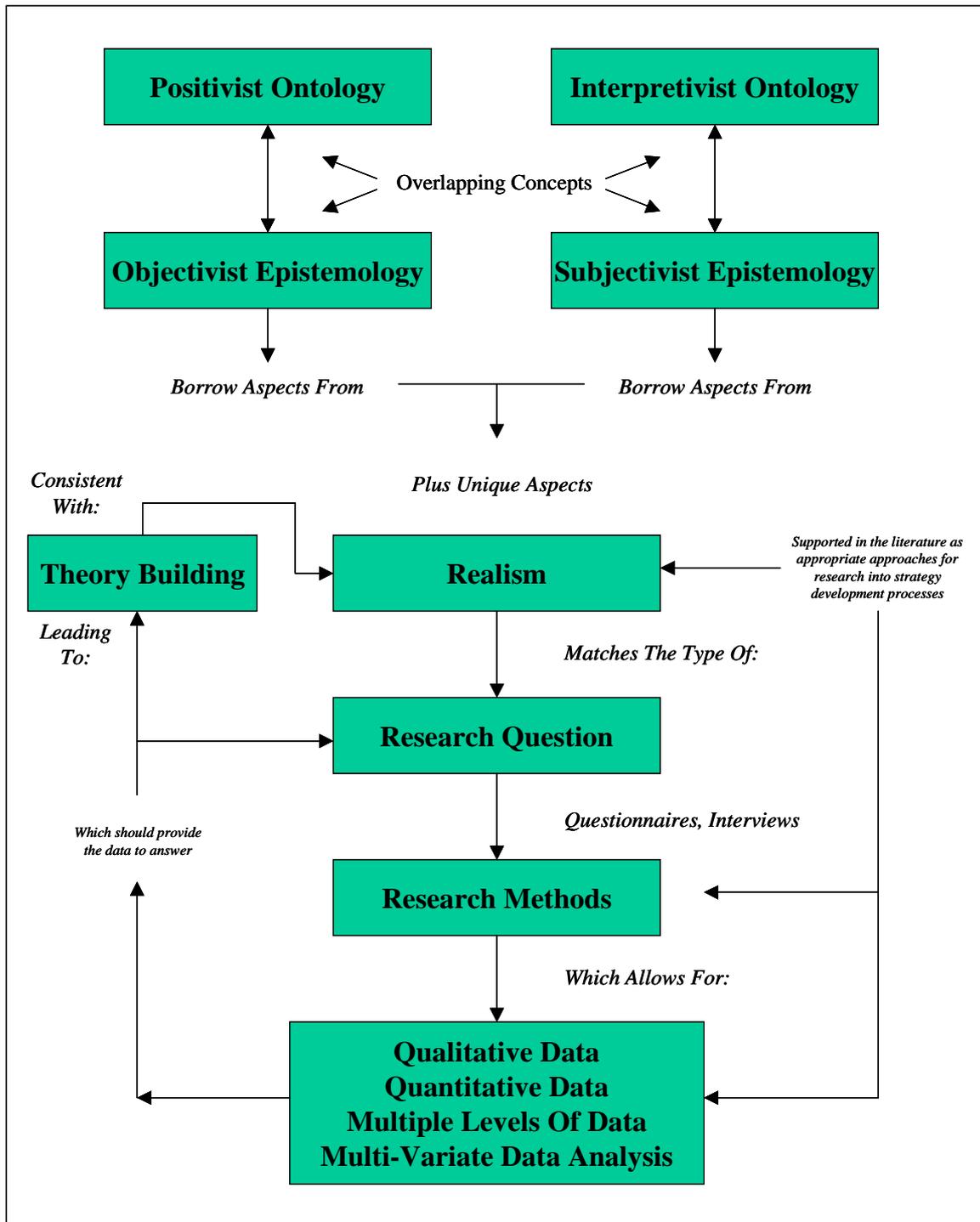
The second method identified by Easterby-Smith et al. is quantitative research. Here the process of data collection becomes distinct from the analysis. In contrast to qualitative research, quantitative research utilises formally structured techniques such as questionnaires and surveys. The structure enables the research to focus the data on the central theme, restricting deviations. Unlike qualitative research, it is unusual for quantitative research to give the interviewee the opportunity to probe deeper into separate issues, in response to particular questions. Quantitative research was used primarily in the data collection phase of Project 3, through the application of the strategy development questionnaire offered by Bailey et al. (2000).

Although this aspect of the research is labelled as quantitative, as is sometimes the case in this form of research (Bourgeois and Brodwin, 1984), it uses those quantitative measures to explain subjectivity. The method is governed by the objectives: where the need for subjectivity or meaning is low and standardisation is high, then quantitative methods are more appropriate; where the need for interpretation, inference and subjectivity is not limited then qualitative research is usually more appropriate.

#### 4.6.7.4 A Conceptual Map Of The Methodological Approach

A conceptual map of the methodological approach being adopted for the doctorate offers a useful illustration (Holt, 1998), as shown in Figure 9 below:

Figure 9 – A Conceptual Map Of The Methodological Approach To The Research



## **4.6.8 The Research Design**

### **4.6.8.1 The Logical Separation Of The Research**

The research design is described as a statement of focus of the research and the main questions to be answered (Easterby-Smith et al., 1997). As this paper identified in Section 4.6.1, the focus of the research lies in understanding the relationship between levels of perceived environmental uncertainty and strategy development processes at Barclays Bank PLC. The question that is being addressed is ‘what are the implications for strategy development processes at the strategic business unit level when corporate strategists are experiencing varying degrees of perceived environmental uncertainty?’.

In order to achieve this, the research is separated into three logical components: first, an investigation into degrees of perceived environmental uncertainty being experienced by corporate strategists; second, a study of the strategy development processes adopted at the business unit level; and finally, an analysis of the relationship that exists between the logical components above.

### **4.6.8.2 Research Methods**

Research methods are the actual techniques, or procedures, used to gather and analyse data (Blaikie, 1993). The doctorate utilised two techniques that have been applied successfully in previous strategy process research: the self-administered questionnaire (Duncan, 1972; Hickson et al., 1986; Hart and Banbury, 1994) and the semi-structured interview (Eisenhardt, 1989; Papadakis et al., 1998). Similar research in financial services has also used one, or both, of these methods (Leblebici and Salancik, 1981; Javidan, 1984).

#### **4.6.8.2.1 The Semi-Structured Interview**

The research interview has a wide variety of forms and a multiplicity of uses (Denzin and Lincoln, 1998); as a technique for collecting data it is most closely associated with qualitative research and its most common form is the individual, face-to-face verbal interchange.

Denzin and Lincoln recognised that structured interviewing refers to a situation in which an interviewer asks each respondent a series of pre-established questions with a limited set of response categories; the interview is designed with little room for variation in responses with the open-ended question infrequent. Denzin and Lincoln asserted that the interchange is very much controlled by the interviewer, who treats the questionnaire as a script but remains in a neutral role throughout. Results that are gathered are standardised as each respondent receives the same set of questions under a stimulus–response format, which should create a minimal number of errors. Evidently this form is most suited to quantitative research, although it could be applied to qualitative research uses (Denzin and Lincoln, 1998).

The approach used in this research was the semi-structured interview, which according to Denzin and Lincoln gives much greater breadth than the structured type given its qualitative nature. The unstructured interview can take many forms ranging from an in-depth configuration, sometimes referred to as an ‘ethnographic’, to participant observation. The research used some set questions, hence the use of the prefix ‘semi-’. However it attempted to understand perceptual measures of uncertainty among individuals, without imposing *a priori* categorisation that may have limited the field of enquiry.

The study is concerned with investigating the relationship between degrees of perceived environmental uncertainty and strategy development processes, therefore a semi-structured interview was used for data collection. This method is particularly suitable, because from the realist ontology the research adopts an interpretive or phenomenological approach to the research, where uncertainty is perceived through sensation and intuition. It is important to recognise that the researcher needed to address some common problems with the semi-structured interview; these ranged from the use of language, scene setting, face validity of the process and the obtaining of trust.

#### **4.6.8.2.2 The Self-Administered Questionnaire**

The self-administered questionnaire is the research method adopted by Bailey et al. (2000) in their model for identifying strategy development processes, which is covered in detail in Section 4.2.3. As a research method it is quite simply a series of questions that the respondent completes on his or her own (Bryman, 1995). An example of the questionnaire is set out in Appendix A.

The self-administered questionnaire developed by Bailey et al. (2000) is a highly structured approach to data gathering; it uses a seven-point Likert scale (Black, 1999), which is a well-proven method of data collection in this subject area (Duncan, 1972). The use of a Likert scale ensures: that each person uses the same instrument; that responses are as comparable as possible; and that questions are completed in the same order. Furthermore results are already codified and questions are standardised, which allows the researcher to identify variations in responses.

#### **4.6.8.3 The Choice Of Methods For Data Analysis**

As the report identified in Section 4.6.1, this research investigates the relationship that exists between degrees of perceived environmental uncertainty among strategists and the processes used for developing strategy at the business unit level. The study involved data collection across seventeen strategic business units, which enabled the researcher to ascertain the dimensions that are adopted to develop strategy. The research used a semi-structured interview to collect data on the degrees of perceived environmental uncertainty being experienced by the fifteen members of the Group Executive Committee.

During the semi-structured interviews respondents were asked to describe their perceptions of environmental uncertainty; these interviews were recorded and transcribed. The research data were analysed through a system of coding, defined by Strauss and Corbin (1997) as the analytic processes through which data are fractured, conceptualised, and integrated to form theory.

The researcher analysed the interview transcripts line by line, referred to as microanalysis by Strauss and Corbin, to generate initial categories and to discover relationships among concepts. For example, respondents referred to developing technology as a source of uncertainty; the researcher coded this and then placed it in a category, such as the rate of change or level of complexity. This line-by-line analysis enabled the researcher to recognise properties for perceived environmental uncertainty, and refer properties back to the theory identified in the literature.

The key contribution of the study is to investigate the relationship that exists between perceived environmental uncertainty and strategy development processes. In order to achieve this, the researcher applied multivariate data analysis. Hair, Anderson, Tatham and Black (1998, p.6) offered a definition for multivariate analysis:

“All statistical methods that simultaneously analyse multiple measurements on each individual or object under investigation.”

The key component of multivariate analysis utilised in this research is principal components analysis and factor analysis. Hair explains that *principal components analysis* is used to identify patterns in the research data, and to express the research data in such a way as to highlight any similarities or differences that exist in the data. Hair goes on to suggest the application of *factor analysis* for two primary purposes: first, to reduce the number of variables in the data; and second, to detect structure in the relationships between variables.

This research uses factor analysis to describe and explore the structure of categorical variables, in this case strategy development processes and perceived environmental uncertainty, sometimes referred to as correspondence analysis. Factor analysis is also used to confirm specific hypotheses about the factor structure for a set of variables, for example the relationship between the two independent variables (rate of change and level of complexity) in Duncan’s (1972) conceptualisation of perceived environmental uncertainty.

## **5. PROJECT 2: Perceived Environmental Uncertainty**

### **5.1 Project 2: Abstract And Overview**

#### **5.1.1 Project 2 Abstract**

Project 2 of the Executive Doctorate is the exploration of perceived environmental uncertainty across the portfolio of businesses within Barclays PLC, by collecting data from the Group Executive Committee. The purpose is twofold: first, a qualitative exploration into the factors that create perceived environmental uncertainty, enable strategic business units to cope, and determine the importance of their being able to cope; and second, a quantitative investigation into the modernist perspective of perceived environmental uncertainty, the degree (or lack) of consensus between strategists during the development of corporate strategy, and the managerial implications arising from perceived environmental uncertainty across Barclays.

There are five key qualitative findings: first, the term ‘uncertainty’ is a nebulous concept and not within the managerial lexicon at Barclays; second, there is a high level of consensus regarding the factors that create uncertainty, enable business units to cope, and determine the importance of being able to cope; third, it is not the degree of uncertainty that concerns strategists but the ability of the business unit to cope and the importance of it being able to cope; fourth, the ability to cope is invariably determined by the resilient and highly successful business model not by the actions of strategists; and finally, the importance of a business unit being able to cope is determined by the value it creates or is expected to create in the future, not by the degree of uncertainty, change or complexity experienced in its environment.

There are three key quantitative findings: first, research needs to develop a far more sophisticated conceptualisation of perceived environmental uncertainty than the one proposed by the modernist perspective; second, strategists develop individual perspectives on perceived environmental uncertainty and there is a lack of consensus as to its impact across Barclays; and finally, the Bank actively avoids the eradication of consensus from the strategy process, with part of its success based on the Group’s ability to embrace diversity and debate.

## **5.1.2 Project 2 Overview**

### **5.1.2.1 Structure Of The Executive Doctorate**

This research examines the implications of perceived environmental uncertainty on strategy development processes across Barclays PLC. There are two components to the managerial issue: perceived environmental uncertainty, and strategy development processes. Project 2 represents the exploration of perceived environmental uncertainty and is undertaken with fifteen members of the Group Executive Committee at Barclays and ten members of Group Strategy & Planning. Project 3 is an examination of implications for strategy development processes and is carried out across the senior management teams of the seventeen strategic business units in the Barclays portfolio. Project 3 was piloted in Barclays Solutions.

### **5.1.2.2 Project 2: An Exploration Into Perceived Environmental Uncertainty**

In order to explore the phenomenon of perceived environmental uncertainty, Project 2 is also divided into two components: first, a qualitative exploration of perceived environmental uncertainty; and second, a quantitative investigation of a series of propositions discovered in the literature review in Project 1 (see Sections 4.3–4.5).

Beginning with the *qualitative exploration*, Project 2 identifies the qualitative factors that: first, create perceived environmental uncertainty; second, enable a strategic business unit to cope with perceived environmental uncertainty; and finally, determine the importance of the strategic business unit being able to cope with perceived environmental uncertainty.

The *quantitative investigation* in Project 2 then goes on to examine: the relationship that exists between the rate of change and the level of complexity as independent variables in the modernist perspective of perceived environmental uncertainty; the degree (or lack) of consensus between managers concerning the degree of uncertainty being experienced by individual strategic business units; and finally, the managerial implications arising out of the relationship between perceived environmental uncertainty, the ability of the organisation to cope with perceived environmental uncertainty, and the importance of the strategic business unit being able to cope with perceived environmental uncertainty.

### **5.1.2.3 Project 2 Overview: Key Findings From The Qualitative Exploration**

The first key finding from the qualitative exploration carried out in Project 2 is that the term ‘uncertainty’ does not appear to be commonly used in the managerial lexicon at Barclays and therefore strategists on the Group Executive Committee manage the organisation without even considering an abstract concept such as perceived environmental uncertainty. The second key finding is that when strategists at Barclays are asked to consider the degree of uncertainty, the rate of change, and the level of complexity being faced across the Group, a level of managerial logic is applied. This logic dictates that it is not the level of uncertainty, change and complexity that is significant but the ability of the strategic business units to cope and the importance of the various businesses being able to cope.

The research also finds that the ability to cope with uncertainty, change and complexity is not achieved by creating a ‘match’ or strategic ‘fit’ between the organisation and its competitive environment but through the protection of a highly successful and resilient business model, banking. For more than 300 years, banking in the UK has proved a successful business model and an organisation such as Barclays cannot fail to create shareholder value in favourable economic conditions such as those experienced during 2003.

The fourth key finding is that the importance of being able to cope with perceived environmental uncertainty at Barclays is driven by the strategic objective to maximise shareholder value, that is either the current creation of value or the expectation of value creation some time in the future. The importance of being able to cope is not a function of the degree of uncertainty, the rate of change, or the level of complexity assumed to be present in the Group’s competitive environment.

Project 2 also finds that although there is a high degree of synergy between the qualitative factors that create uncertainty (for example, technology), enable business units to cope (for example, talented leaders), and make it important that businesses are able to cope (for example, value creation), nevertheless there is a high level of difference in perspectives among corporate strategists at Barclays as to how the various strategic business units are impacted by uncertainty, change, and complexity. This lack of consensus is covered in further detail in the quantitative investigation (see Section 5.1.2.4).

A sixth key finding from Project 2 is that there appears to be a substantive difference between the qualitative factors that contribute to the rate of change being experienced across the Barclays portfolio, and the qualitative factors that contribute to the level of complexity being perceived across the Group. The crucial difference is that the factors that create change are very externally focused, for example competition, regulations and customer requirements. By way of contrast, the factors that create complexity appear to be very internally focused, for example managing and developing people, internal politics, effective cross-Group integration, and the lack of high quality management information.

The seventh key finding from Project 2 is that the perceptual assessments of the degree of perceived environmental uncertainty, the ability to cope with perceived environmental uncertainty, and the importance of being able to cope fluctuate over time. Such fluctuations can be driven by events or by experience and knowledge. An example of a fluctuation in the degree of perceived environmental uncertainty could be the ‘dot-com revolution’ of 2001; examples of event-driven fluctuations in the ability to cope could be the survival of a crisis such as the large Russian debt write-offs by Barclays Capital in 1998, or the successful acquisition and merger with the Woolwich by the UK Retail Bank in the late 1990s. An example of a fluctuation over time would be where strategists claim to develop a level of ‘immunity’ to uncertainty as their career develops and they feel better able to cope with higher levels of uncertainty, or they increase their ability to cope by gaining more experience.

Finally Project 2 finds that diversity and debate is actively encouraged in the development of corporate strategy, therefore the ability to develop one’s own perspective on the competitive environment and the Group’s strategy and be able to effectively contribute to the strategy process is actively encouraged. The Group has developed forums and focus groups where corporate strategists present the Bank’s strategy and members of the organisation are invited to engage in the debate. The findings show that the Group goes to great lengths to ensure that a diverse range of individuals, irrespective of gender or ethnic background, is able to contribute to the strategy process. The research also finds that under certain circumstances, strategists deliberately create uncertainty and change, but not complexity. Uncertainty is created to ensure managers are able to think creatively and be challenged, change is created to ensure the Group is able to transform itself and continue to meet ambitious value targets.

#### **5.1.2.4 Project 2 Overview: Key Findings From The Quantitative Investigation**

The key findings from the quantitative investigation into perceived environmental uncertainty carried out in Project 2 fall into three categories: first, the investigation into the modernist perspective on perceived environmental uncertainty; second, the examination of the lack of managerial consensus, concerning degrees of uncertainty being experienced in different strategic business units; and finally, the identification of key managerial implications arising out of the quantitative investigation into perceived environmental uncertainty.

Beginning with the *investigation into the modernist perspective on perceived environmental uncertainty*, Project 2 finds that academic research needs to develop a far more sophisticated model for conceptualising perceived environmental uncertainty than the modernist notion that the degree of uncertainty is merely a product of the rate of change and the level of complexity. This research also finds that the rate of change and the level of complexity cannot be regarded as independent variables with the degree of uncertainty being measured as the dependent variable. Project 2 has uncovered a statistically significant relationship between the rate of change and the level of complexity at Barclays, leading to the conclusion that an increase in the rate of change is reflected in an increase in the level of complexity and vice versa.

Moving on to the *examination of the lack of managerial consensus or individual perspectives concerning degrees of uncertainty*, Project 2 finds that there is a high degree of variance, or lack of consensus, in the perceptual assessments made by corporate strategists at Barclays on the level of perceived environmental uncertainty being encountered across the Group, the ability to cope with such uncertainty, and the importance of the business units being able to cope. This finding suggests that corporate strategists on the same Executive Committee in the same organisation have developed very different perspectives on the competitive environments within which the various business units operate, the ability of these latter to cope, and the importance of being able to cope. This finding is evidenced in the use of nebulous terms such as ‘uncertainty’, ‘strategy’ and ‘complexity’, which appear to have very different meanings for different members of the Group Executive Committee. It is an important finding for strategists to be aware that the terms that they use in the development of strategy may not be the terms that are heard by colleagues in the same organisation.

Finally this section moves on to look at the *identification of key managerial implications arising out of the quantitative investigation*. First Project 2 finds that when strategists begin to think about the managerial implications of perceived environmental uncertainty, then a managerial logic becomes evident in their assessments, which appears to be missing in some cases when they are asked to assess uncertainty, change and complexity as abstract concepts. This is evidenced in the strong correlation between the ability to cope with uncertainty and the ability to cope with change and complexity, and the strong reciprocal relationship between the importance of being able to cope with uncertainty and the importance of being able to cope with change and complexity.

Interestingly this managerial logic extends across the section of the research concerned with the managerial implications and is evidenced by some logical and fairly predictable reciprocal relationships. Illustrations of such relationships are the strong relationship between the degree of uncertainty and the rate of change being faced, and between the ability to cope with uncertainty and the ability to cope with change. From a managerial perspective, however, the key finding here is the lack of correlation between the ability to cope and the importance of being able to cope.

This finding suggests that the Bank does not send its most talented strategists into the areas where it is deemed most important for the Group to be able to cope with uncertainty, change or complexity. The finding suggests that the Group uses other factors to determine where it sends these strategists. The results of Project 2 appear to suggest that the strategists most capable of coping with uncertainty, change and complexity are sent to the areas of the Group that create the highest shareholder value, or where the most shareholder value is at stake.

This finding also suggests that successful strategy development cannot merely be regarded as reducing levels of perceived environmental uncertainty in order to maximise the match or 'fit' (Hatch, 1997) between the organisation and its competitive environment. It would appear that strategy development in an organisation like Barclays involves effectively protecting and defending the areas of the business that create the most shareholder value, and acting as responsible stewards of a resilient and highly successful business model or 'money-printing machine'.

### **5.1.2.5 Project 2 Overview: Key Conclusions**

Based on the findings of Project 2 the research draws four key conclusions counter to the literature review set out in Project 1 (see Sections 4.1–4.5):

1. Academic research needs to develop a far more sophisticated conceptualisation of perceived environmental uncertainty than the one offered by the modernist perspective (Duncan, 1972). Project 2 concludes that the rate of change and the level of complexity cannot be regarded merely as independent variables with perceived environmental uncertainty measured as the dependent variable. The research also concludes that the effect of these two variables on perceived environmental uncertainty is not equally weighted and that the rate of change actually contributes to the level of complexity for strategic business units within the Barclays portfolio.
2. The research also challenges the modernist perspective on strategy and concludes that strategy at Barclays cannot be described simply as creating a ‘match’ (Chaffee, 1985) or a ‘fit’ (Hatch, 1997) between the Bank and its competitive environment. Strategy at Barclays is a process of identifying the areas of the Group that create shareholder value and then protecting, defending and growing them by acting as effective stewards of a resilient and highly successful business model that, in favourable economic conditions, cannot fail. There is a presumption that the resilience of the business model enables the Group to cope with the challenges presented in its competitive environment.
3. The notion of ‘consensual uncertainty’ (Huff, 1978) is entirely inappropriate for the strategy development process at Barclays because the Group consistently seeks to encourage diversity and debate in the strategy process. The research therefore concludes that strategists seek to minimise consensus, and indeed there is actually evidence that too much consensus can cause uncertainty in the process.
9. There is a high degree of variance, or lack of consensus (Bowman and Ambrosini, 2000), in the perceptual assessments of strategists as to the impact of uncertainty, change and complexity on the various business units in the Barclays portfolio (Bowman and Ambrosini, 2003a). This research concludes that the wide range of diversity, debate and multiple perspectives on the strategy development process on the Group Executive Committee and across the organisation as a whole makes an invaluable contribution to the overall and ongoing success of the Group.

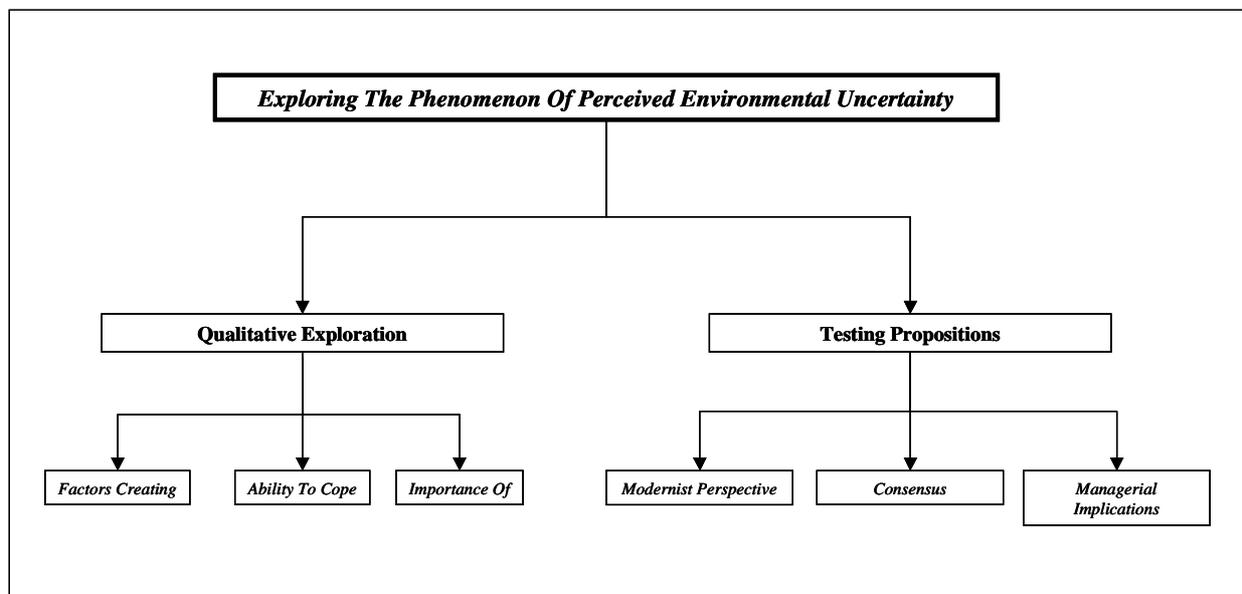
## 5.2 Introduction

### 5.2.1 Background

As outlined in the introduction earlier in this report (see Section 3.2), the managerial issue addressed in this research can be broken down into two component parts: perceived environmental uncertainty, and strategy development processes. This element of the report presents the examination of perceived environmental uncertainty, as defined by Duncan (1972), and discussed in detail in Section 4.3.10.

In order to examine the phenomenon of perceived environmental uncertainty, this part of the research is also divided into two component parts: first, a qualitative exploration of the factors that create perceived environmental uncertainty, the ability to cope with such uncertainty and the importance of being able to cope; and second, the investigation of a series of propositions discovered in the literature review. The structure of Project 2 is set out in Figure 10 below:

Figure 10 – Breaking Project 2 Down Into Its Component Parts



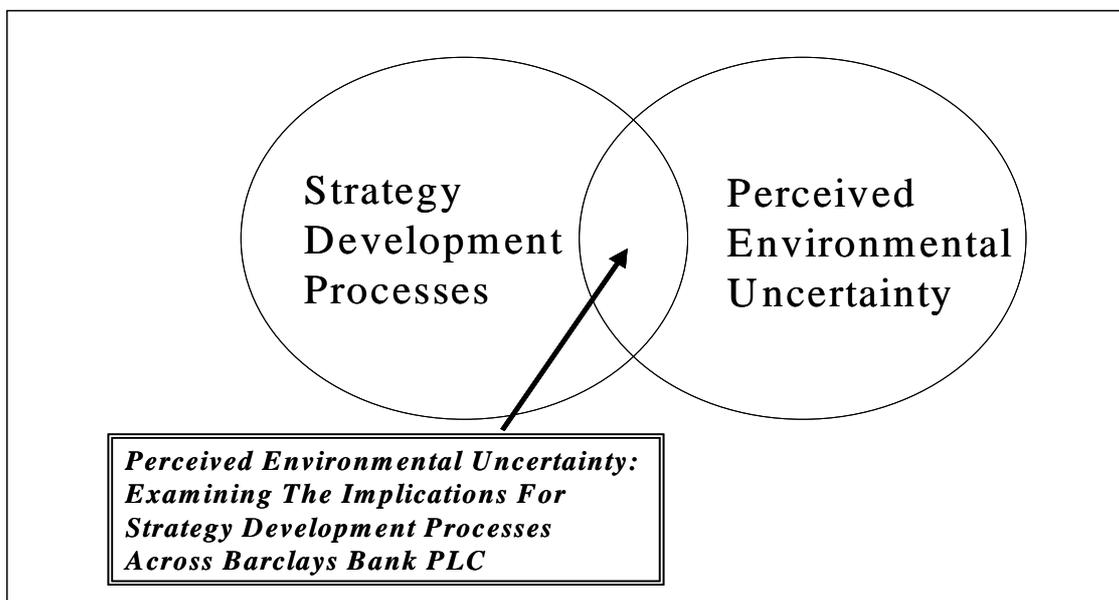
## 5.2.2 Rationale For Project 2

This investigation is concerned with examining the relationship between perceived environmental uncertainty and strategy development processes across Barclays Bank PLC, therefore the rationale for Project 2 lies in developing a detailed understanding of perceived environmental uncertainty.

In order to achieve the objectives of the research, Project 2 begins with an exploratory investigation into the factors that create perceived environmental uncertainty for strategists at Barclays. Strategists are then asked to assess the ability of each strategic business unit to cope with perceived environmental uncertainty – being a product of change and complexity (Duncan, 1972) – and the importance of each strategic business unit being able to cope with perceived environmental uncertainty.

Therefore the rationale for Project 2 (see Section 5.2.1) lies in the researcher obtaining a detailed understanding of the phenomenon described by Duncan as perceived environmental uncertainty. This understanding is critical in order to examine any implications that perceived environmental uncertainty may have for strategy development processes across the portfolio of businesses owned by Barclays Bank PLC (see Figure 11 below):

*Figure 11 – Examining The Implications Of Perceived Environmental Uncertainty For Strategy Development*



## **5.3 Theoretical Overview: Synthesis Of The Literature Review**

### **5.3.1 The Linking Of Theoretical Concepts**

As detailed in Section 3.2.1, the Executive Doctorate creates a link between two theoretical concepts: strategy development processes at the strategic business unit level; and degrees of perceived environmental uncertainty evaluated by strategists on the Group Executive Committee at Barclays Bank PLC (see Figure 11 above).

Based on the literature review (see Section 4.3–4.5), Project 2 links theoretical concepts together at two levels. Initially Project 2 identifies the qualitative factors that: first, create perceived environmental uncertainty; second, enable a strategic business unit to cope with perceived environmental uncertainty; and finally, determine the importance of the strategic business unit being able to cope with perceived environmental uncertainty.

Project 2 of the Executive Doctorate then goes on to examine: the relationship that exists between change and complexity as independent variables in the modernist perspective of perceived environmental uncertainty (Duncan, 1972; Hatch, 1997); the degree (or lack) of consensus between managers during strategy development (Huff, 1978; Bowman and Ambrosini, 2003a); and finally, the relationship between perceived environmental uncertainty, the ability of the organisation to cope with perceived environmental uncertainty (Chaffee, 1985), and the importance of the strategic business unit being able to cope with such uncertainty (Daft et al., 1988).

### **5.3.2 Summarising Key Theoretical Arguments Informing Project 2**

Through a comprehensive review of the literature (see Section 4.3–5), this part of the report summarises key theoretical arguments that inform Project 2. The first is that there is a high degree of inconsistency and confusion in both the literature and academic research about how an uncertainty construct should be defined and applied (Chaffee, 1985; Milliken, 1987).

The second theoretical argument recognises that from an organisational theorist perspective, the term ‘environmental uncertainty’ should be used to describe the state of mind of an individual, as opposed to the state of the competitive environment, as environments have no cognitive ability, so cannot feel uncertain (Hatch, 1997). The next theoretical argument is that perceived environmental uncertainty should be described in terms of two constructs: the static–dynamic dimension and the simple–complex dimension. Therefore the independent variables using this conceptualisation of uncertainty are the rate of change and the level of complexity (Duncan, 1972; Hatch, 1997).

Project 2 goes on to examine the theoretical argument that strategists adopt an individual perspective on the organisation and its environment, therefore it is not uncommon for managers to disagree about strategy (Bowman and Ambrosini, 2003a) or about the degree of perceived environmental uncertainty being faced by the organisation (Huff, 1978).

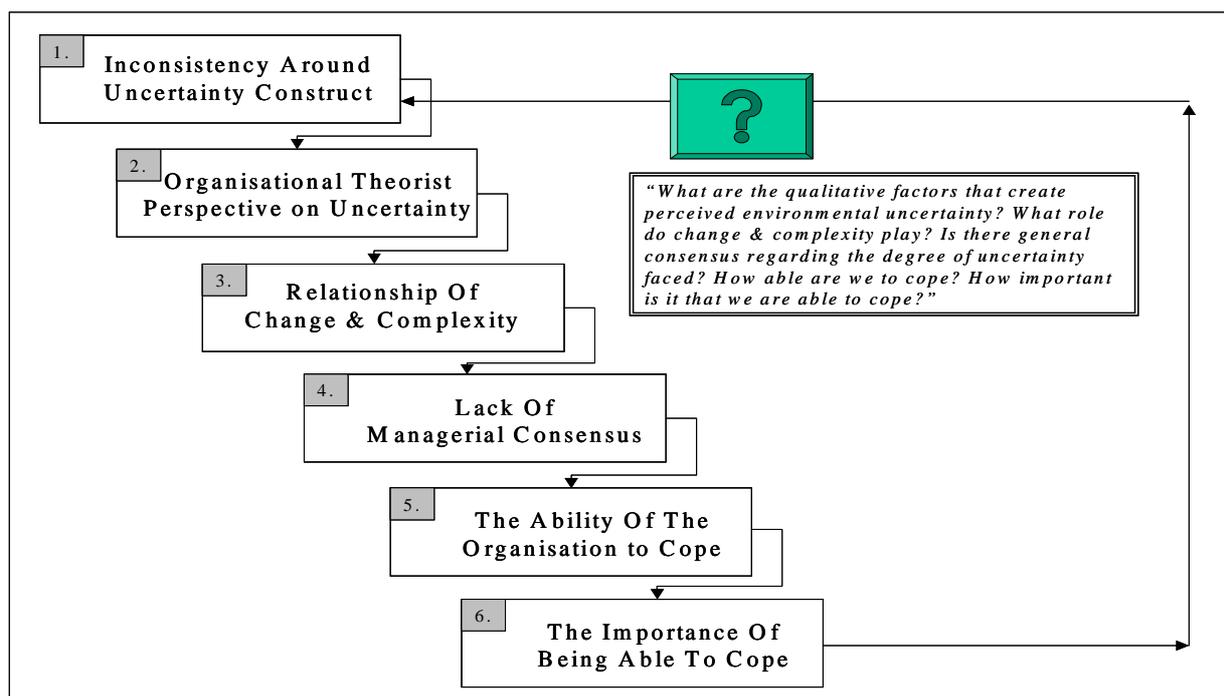
Project 2 then goes on to investigate whether the critical managerial factor in the conceptualisation of perceived environmental uncertainty is the organisation’s ability to cope, or whether the critical factor is the subjective assessment of degrees of such uncertainty (Hatch, 1997). Finally this element of the research examines the notion that managers only deal with an issue, such as perceived environmental uncertainty, when they perceive it to be important (Daft et al., 1988). Consequently Project 2 examines whether there is a relationship between the degrees of perceived environmental uncertainty faced, the ability of the organisation to cope with such uncertainty, and the importance of it being able to cope.

### 5.3.3 Linking Theoretical Arguments To Frame The Research Question

Based on the theoretical arguments set out in Section 5.3.1, it is possible to link them together to show how the research question for Project 2 (see Figure 12 below) is framed by the literature:

1. What are the qualitative factors that: create perceived environmental uncertainty; enable organisations across Barclays to cope with such uncertainty; and make it important that strategic business units across Barclays are able to cope?
2. What is the nature of the relationship between change and complexity within the modernist perspective of perceived environmental uncertainty offered by Duncan (1972) and conceptualised by Hatch (1997), set out in Section 4.3.10?
3. Have strategists at Barclays developed individual perspectives on the organisation and its environment that have ramifications for strategy (Bowman and Ambrosini, 2003a), and does this create a lack of consensus (Huff, 1978) among managers?
4. What is the nature of the relationship between perceived environmental uncertainty, the ability of the organisation to cope with such uncertainty, and the importance of the organisation being able to cope?

Figure 12 – Linking Theoretical Arguments To Frame The Research Question For Project 2



## **5.4 The Research Pilot**

### **5.4.1 The Development Of The Pilot For Project 2**

#### **5.4.1.1 The Structure Of The Pilot**

The pilot for Project 2 was split into two parts: first, a series of sixteen exploratory interviews with senior managers across Barclays Bank PLC; and second, a presentation to the Group Strategy & Planning Department leading to nine semi-structured ‘follow-up’ interviews.

#### **5.4.1.2 Project 2 Pilot – Phase 1: The Series Of Exploratory Interviews**

The first element of the pilot for Project 2 involved a series of unstructured exploratory interviews with sixteen senior managers selected from among the researcher’s immediate colleagues at Barclays. Adopting a very ‘open-ended’ (Easterby-Smith et al., 1997) approach to the interviews, the researcher asked each respondent to talk through an experience of strategy development where they had experienced uncertainty.

As a starting point to the conversation the researcher explained that uncertainty was being defined as ‘the condition of not certainly knowing’ (Concise Oxford Dictionary, 1999). As the conversation developed the researcher asked the respondent to consider the role of change and complexity in their experience of uncertainty and expand on how these two factors contributed to their ‘condition of not certainly knowing’.

Using the format of an exploratory interview (Gill and Johnson, 1999), the interaction was relatively informal and typically lasted forty-five minutes. Each interview was recorded. The researcher subsequently transcribed the interviews, creating categories for uncertainty, change and complexity. Through the transcriptions the researcher developed a further category of factors that create uncertainty, change and complexity. After seven interviews the researcher introduced a further category detailing factors that enable the organisation to cope with uncertainty, change and complexity.

### 5.4.1.3 Project 2 Pilot – The Development Of Categorical Or Qualitative Variables

The categorical or qualitative variables were developed through a four-stage process (Strauss and Corbin, 1998): first, the recognition of the phenomenon of interest; second, the identification of concepts – both theoretical and practical; third, the formal development of the qualitative categories; and finally, the population of the categories with the research data.

The first stage of this process was *the recognition of the phenomena of interest* for Project 2. Here the researcher used the literature review in Project 1 to distinguish the phenomenon of interest, in this case perceived environmental uncertainty. Through an exhaustive review of the literature (see Section 4.3–4.5), the researcher covered the subject of uncertainty from its roots in economic science through to its adoption in decision theory and latterly in organisational behaviour. The purpose of Project 2 is to explore the notion of perceived environmental uncertainty with a view to identifying its relationship with strategy development processes in Project 3.

The second stage of this process was *the identification of concepts*. Here the researcher used the literature review to identify the theoretical concepts that act as the building blocks of perceived environmental uncertainty – in the case of Project 2: the degree of uncertainty; the rate of change; and the level of complexity. Through a development of the literature review, the series of exploratory interviews completed as the pilot for Project 2, and the researcher's detailed knowledge of practice having worked full-time in Barclays for the period of the research, two further managerial concepts were developed: the ability to cope with perceived environmental uncertainty and the importance of being able to cope with such uncertainty. The research was carried out within the context of a further managerial concept, the maximisation of shareholder value.

The next stage was *the formal development of the qualitative categories*. During this phase the qualitative categories were built from: the detailed understanding of the literature, the results of the pilot and the in-depth knowledge of practice across Barclays. The data on the maximisation of shareholder value across Barclays were gathered from the published accounts for the tax year ending on the 31<sup>st</sup> December 2003.

The five qualitative categories that were built for Project 2 are set out below in Table 18. Following the pilot, four additional categories were added to allow a deeper investigation into the ability to cope with perceived environmental uncertainty, and the importance of coping with such uncertainty. These additional categories are highlighted in red in Table 18 below:

*Table 18 – Project 2 Pilot: Developing The Qualitative Categories*

Category	The Qualitative Categories
1.	Qualitative factors that create the degree of uncertainty in the competitive environment for strategic business units across the Barclays portfolio.
2.	Qualitative factors that contribute to the rate of change in the competitive environment for strategic business units across the Barclays portfolio.
3.	Qualitative factors that contribute to the level of complexity in the competitive environment for strategic business units across the Barclays portfolio.
4.	Qualitative factors that enable strategic business units across the Barclays portfolio to cope with the degree of uncertainty.
5.	Qualitative factors that enable strategic business units across the Barclays portfolio to cope with the rate of change.
6.	Qualitative factors that enable strategic business units across the Barclays portfolio to cope with the level of complexity.
7.	Qualitative factors that make it important for strategic business units across the Barclays portfolio to be able to cope with the degree of uncertainty.
8.	Qualitative factors that make it important for strategic business units across the Barclays portfolio to be able to cope with the rate of change.
9.	Qualitative factors that make it important for strategic business units across the Barclays portfolio to be able to cope with the level of complexity.

The final stage of the process was *the population of the categories with the research data*. Here the transcripts of the interviews were microanalysed and the words or phrases used by individual respondents were coded (Strauss and Corbin, 1998), for example technology, competition and customer requirements. The data were then labelled and placed into their appropriate category. An example of the coding completed on a part of a transcript (see Section 5.5.2.1) is illustrated below:

“We can no longer rely [*change*] on high levels of inertia [*ability to cope*] among our client base and continue to ignore [*not coping*] the increasing demands [*customers*] of more sophisticated [*complexity*] customers [*customers*]. If we are to continue to meet ambitious performance targets [*continue to cope*] we must find ways [*be able to cope*] of delighting our customers [*customers*] in ways that the financial services industry has failed to do [*not coping*] in the past [*importance of being able to cope*].”

#### **5.4.1.4 Project 2 Pilot – Phase 2: The Engagement Of Group Strategy & Planning**

The second phase of the pilot for Project 2 adopted a very different approach. Here the researcher was invited to present his research objectives to the Barclays Group Strategy & Planning Director, Peter Herbert. During that interview the Group Strategy & Planning Director made the observation that a fundamental element in his conceptualisation of perceived environmental uncertainty was the ability to cope with uncertainty, change and complexity together with the importance attached to being able to cope with these three phenomena. Consequently, these categories were inserted into the research design.

As a result of this presentation, the researcher was invited to attend the Leadership Team Meeting of the Group Strategy Development Directors. The team comprised nine Group Strategy Development Directors of whom seven held responsibility for the strategy development process in each of the seven clusters (see Section 4.6.3.3), and the other two were responsible for the strategy development process in the shared-service units, which are outside the scope of this research.

In preparation for the meeting, the researcher developed a matrix where each respondent was asked a series of five questions (see Table 19 below):

*Table 19 – Project 2 Pilot: The Questions For The Group Strategy & Planning Leadership Team To Consider*

<b>No.</b>	<b>The Pilot Research Questions For Project 2</b>
<b>1.</b>	On a scale of 1–100 (1 representing no uncertainty and 100 representing total uncertainty) please give an assessment of the degree of uncertainty faced by each of the strategic business units.
<b>2.</b>	On a scale of 1–10 (1 representing no change and 10 representing a high rate of change) please give an assessment of the rate of change faced by each of the strategic business units.
<b>3.</b>	On a scale of 1–10 (1 representing no complexity and 10 representing a high level of complexity) please give an assessment of the level of complexity faced by each of the strategic business units.
<b>4.</b>	On a scale of 1–10 (1 representing no ability to cope and 10 representing a total ability to cope) please give an assessment of the ability of each strategic business unit to cope with uncertainty.
<b>5.</b>	On a scale of 1–10 (1 representing no importance to being able to cope and 10 representing the total importance of being able to cope) please give an assessment of the importance of each strategic business unit being able to cope with uncertainty.

The researcher gave a ten-minute presentation on the research objectives and then asked each respondent to complete the matrix.

In order to assist the respondents, the researcher gave a definition of uncertainty, again aligned to the dictionary definition, ‘the condition of not certainly knowing’ (Concise Oxford Dictionary, 1999); and offered examples of an organisation facing a considerable rate of change, and an organisation facing a high level of complexity.

The researcher offered Butterworth-Heinemann in the UK publishing industry as an example of a firm facing a considerable rate of change, following the establishment of the CD-ROM in the market, the introduction of electronic delivery and the emergence of new low-cost service providers such as Amazon.com. In order to illustrate high levels of complexity, the researcher offered the National Health Service as an illustrative example owing to: its complicated funding model; the highly interconnected nature of health service delivery; the politically sensitive nature of the health industry itself; and the myriad of stakeholders it is designed to serve.

Completion of the matrix was followed up by a one-to-one semi-structured interview during which the respondent would be given the opportunity to discuss the results. One week prior to the interview, each interviewee was furnished with a copy of their own results alongside the mean response for each question, for discussion at the interview.

Again, each ‘follow-up’ semi-structured interview was recorded, transcribed and coded (see Section 4.6.8.3). The respondents were asked to expand their results in the following areas:

1. What qualitative criteria did you apply when you made your assessment of the: degrees of uncertainty, rates of change, and levels of complexity?
2. What factors make some strategic business units more able to cope with uncertainty than others?
3. From a managerial perspective what factors make it important that some strategic business units are more able to cope with uncertainty than others?

#### **5.4.1.5 Project 2 Pilot – Statistical Method**

Principal components analysis is a statistical approach used to examine the interrelationships between a series of variables and to explain such variables in terms of their common underlying dimensions, or factors (Hair et al., 1998). The primary objective of this type of statistical analysis is to condense the information contained in a number of original variables (for example, perceived environmental uncertainty) into a set of smaller variates (for example, change and complexity), incurring the minimum loss of information.

Through principal components analysis, the researcher can build an empirical estimate of the ‘structure’ of the variables, or factors (Hair et al., 1998), being examined. Consequently, the outcome of the process is to produce summated scales and tables for examination. An illustration of such a summated scale is set out in Section 5.4.2.2.3 (see Table 25).

#### **5.4.1.6 Project 2 Pilot – Multiple Regression Analysis**

In this research, multiple regression analysis is used to account for, or predict (Hair et al., 1998), the variance in an interval dependent. Therefore, multiple regression analysis is used to establish whether a set of independent variables (for example, the rate of change and the level of complexity) explains a proportion of the variance in the dependent variable (for example, the degree of uncertainty).

It is important that the proportion of variance in the dependent variable is identified at a significant level, usually referred to as the significance test of  $R^2$ . Multiple regression analysis can then be used to establish the relative predictive importance of the independent variables. The researcher can then go on to test the significance of differences between two or more regression results (again see Table 20) to determine the impact of adding a further independent variable. The researcher can then go on to calculate  $R^2$  itself, that is, the percentage of variance in the dependent variable (the degree of uncertainty), which is explained collectively by all of the independent variables – in the case of Project 2, the rate of change and the level of complexity.

Hair et al. identify that multiple regression analysis shares all the common assumptions of correlation: the linearity of relationships; the same level of relationship throughout the range of the independent variable; interval or near-interval data; and data where the range is not truncated. Therefore, it is extremely important that the model being tested – in this case, perceived environmental uncertainty – is correctly specified. Evidently, the omission of important causal variables (for example confusion over the term ‘rate of change’ as opposed to Duncan’s (1972) ‘speed of change’) can have a significant impact on the calculation of the beta weights and therefore the interpretation of the importance of the independent variables.

#### **5.4.1.7 Project 2 Pilot – Variables, Dependent Variables & Independent Variables**

In research, a variable is any measured characteristic or attribute that differs depending on the subject (Hair et al., 1998). In order to illustrate variables, the Project 2 Pilot is examining the perceptual assessments of ten members of Group Strategy & Planning on nineteen strategic business units. In this example, it is the perceptual assessments that are described as the variable, rather than the number of respondents or the number of strategic business units.

Variables can be described as either quantitative or qualitative (sometimes referred to as categorical variables – see Section 5.4.1.3). Quantitative variables are measured on an ordinal, interval or ratio scale; by comparison, qualitative variables are measured on a nominal scale. To illustrate the point, when the Group Executive Committee Members were asked to identify the factors that create the greatest degree of uncertainty for strategic business units, then the variable was qualitative. If they were asked to measure the value created by a business unit during 2003, then the variable would be quantitative.

During Project 2, an exploration has been undertaken into perceived environment uncertainty and the relationship between its component parts. During the investigation, some variables (for example the rate of change and the level of complexity) have been manipulated. On the other hand, the degree of uncertainty has been measured from the subjects. In this example the first set of variables are called ‘independent variables’, the latter is called the ‘dependent variable’.

## **5.4.2 The Pilot Findings: Perceived Environmental Uncertainty**

### **5.4.2.1 Project 2 Pilot Findings – Phase 1: The Series Of Exploratory Interviews**

#### **5.4.2.1.1 The Four Key Findings**

There are four key findings from the series of exploratory interviews forming Phase 1 of the pilot for Project 2:

1. The concept of perceived environmental uncertainty is a very complex and nebulous area for research. In order to illustrate this point, the data from the interviews show that respondents clearly adopted very different models for conceptualising: the degree of perceived environmental uncertainty; the rate of change in the competitive environment; and the level of complexity being faced by the various strategic business units within the Barclays Group. Consequently the concept of uncertainty needed to be framed more effectively for the respondent in the research question.
2. Respondents develop a set of qualitative factors that underpin their assessments of the degree of uncertainty, the rate of change and the level of complexity being faced by the portfolio of businesses within the Barclays Group. It is apparent from the pilot that there is a high degree of synergy between the factors that create uncertainty, change and complexity.
3. The relationship between the rate of change and the level of complexity, as contributory factors to the degree of perceived environmental uncertainty experienced by strategists (Duncan, 1972), is far more sophisticated than that represented by Hatch (1997) in her conceptualisation of Duncan's (1972) model (see Section 4.3.10).
4. The key issue for strategists at Barclays is not the degree of perceived environmental uncertainty being faced by the strategic business units, irrespective of whether it is a function of the rate of change or the level of complexity. The key issue for strategists at Barclays is whether the strategic business units are able to cope with such uncertainty and the importance of their being able to cope. Again there is a high degree of synergy in the data between the factors that enable strategic business units to cope with perceived environmental uncertainty and the importance of their being able to cope with such uncertainty.

## **5.4.2.2 Project 2 Pilot Findings – Phase 2: The Use Of Group Strategy & Planning**

### **5.4.2.2.1 The Three Key Findings**

There are three key findings from the research pilot data collected through the engagement of the Group Strategy & Planning Department at Barclays:

1. When asked to make assessments of the degree of uncertainty faced by the strategic business units, their ability to cope, and the importance of their being able to cope there was a high level of variation, or lack of consensus, in the data. Again extremely consistent with Phase 1, the Phase 2 research pilot data showed evidence of strategists adopting individual perspectives on the competitive environment and the relative capabilities of the businesses within the Barclays portfolio.
2. Consistent with the exploratory interviews in Phase 1 of the pilot, the data from Phase 2 showed that the relationship between the rate of change and the level of complexity as contributory factors to the degree of perceived environmental uncertainty experienced by strategists (Duncan, 1972) is far more sophisticated than that represented by Hatch (1997) in her conceptualisation of Duncan's (1972) model (see Section 4.3.10).
3. There are three key relationships in the conceptualisation of perceived environmental uncertainty: first, the relationship between the degree of perceived environmental uncertainty and the ability of the strategic business unit to cope (this did not prove significant from the pilot); second, the relationship between the level of perceived environmental uncertainty and the importance of the strategic business unit being able to cope (the pilot proved this to be a statistically significant relationship); and finally, the relationship between the ability of the strategic business unit being able to cope with uncertainty and the importance of it being able to cope (this was not confirmed from the results of the pilot for Project 2).

#### 5.4.2.2 Identifying Individual Perspectives Or The Lack Of Managerial Consensus

As this report identified in the previous section, the first finding from the research pilot was that managers develop very individual perspectives on the environment. To illustrate this point, the assessment of the uncertainty faced by one of the Barclays strategic business units, the UK Retail Bank, ranged from 15 to 75 on the scale of 1–100 (see Table 20 below). By the same token the assessment of the uncertainty faced by another of the business units, the Business Bank, ranged from 35 through to 85 on the same scale.

This lack of managerial consensus is also evident in the standard deviations, again set out in Table 20 below. Here the standard deviation for the UK Retail Bank (17.920) and the Business Bank (17.865) exemplified a lack of managerial consensus pertaining to the degree of uncertainty being faced. When the standard deviation was compared to the mean standard deviation, the UK Retail Bank had a standard deviation that was 128.40% of the mean and the Business Bank standard deviation was 128.01% of the mean. By way of comparison, the assessment of the Private Bank ranged from 45 through to 60 on a scale of 1–100, with a standard deviation that was 41.37% of the mean standard deviation. This indicates a higher degree of managerial consensus regarding the degree of uncertainty faced by the Private Bank.

*Table 20 – Project 2 Pilot: The Degree Of Uncertainty Faced By The Various Strategic Business Units*

Strategic Business Unit	Mean	Rank	SD	SD Rank	SD (% Mean)	% Mean SD	Max	Min
Woolwich	43.30	19	17.639	16	40.74	126.39	68	10
UK Retail Bank	49.00	17	17.920	19	36.57	128.40	75	15
Caribbean	57.10	11	12.635	7	22.13	90.54	75	40
Europe	56.50	12	12.030	5	21.29	86.20	80	40
International Bank	50.50	15=	9.265	2	18.35	66.39	60	30
Private Bank	55.00	13	5.774	1	10.50	41.37	60	45
Premier Bank	47.50	18	15.679	12	33.01	112.35	70	20
Barclays Global Investors	61.50	8	12.921	8	21.01	92.58	80	40
Barclaysb2b.com	78.00	2	17.670	17	22.65	126.61	100	40
Business Bank	59.50	10	17.865	18	30.03	128.01	85	35
Barclays Africa	69.50	4	16.575	13	23.85	118.77	90	40
Barclaycard Corporate	50.50	15=	16.907	15	33.48	121.14	75	30
Barclaycard International	61.00	9	13.703	9	22.46	98.19	75	35
Barclaycard UK	53.50	14	16.675	14	31.17	119.48	85	30
Barclaycard New Ventures	81.82	1	14.543	10	17.77	104.21	100	50
Collateralised Financing	63.00	7	9.487	3	15.06	67.98	80	50
Global Financing	67.00	5	15.129	11	22.58	108.41	90	40
Global Markets	70.50	3	12.349	6	17.52	88.49	85	50
Private Equity	65.50	6	10.395	4	15.87	74.49	80	50

These individual perspectives, or the lack of managerial consensus, regarding the competitive environment are also reflected in the assessments for the rate of change being faced by the various strategic business units (see Table 21 below). Here the UK Retail Bank had a range of 2 through to 9 on a scale of 1–10, the Woolwich had a range of 2 through to 8 and Global Financing had a range of 4 to 10 on the same scale.

By way of comparison, although Barclaycard New Ventures was deemed to face the highest rate of change with a mean score of 8.8 on a scale of 1–10, the degree of consensus was also highest with the lowest standard deviation of 0.978. Interestingly Barclaysb2b.com was also deemed to face the highest rate of change with a mean score of 8.8 on a scale of 1–10, but had a standard deviation that was 122.64% of the mean indicating a lack of managerial consensus. Comparison of the standard deviation to the mean standard deviation also illustrates a lack of consensus pertaining to the rate of change faced by the UK Retail Bank (159.65%), the Woolwich (153.06%) and Europe (121.19%).

*Table 21 – Project 2 Pilot: The Rate Of Change Faced By The Various Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	4.70	18	2.623	18	48.15	153.06	8	2
<b>UK Retail Bank</b>	5.30	11=	2.359	19	44.52	159.56	9	2
<b>Caribbean</b>	4.40	19	1.430	10	32.50	96.70	6	2
<b>Europe</b>	5.90	9=	1.792	16	30.37	121.19	8	4
<b>International Bank</b>	4.90	17	1.524	12	31.10	103.06	8	3
<b>Private Bank</b>	5.20	14=	1.317	8	25.32	89.04	7	3
<b>Premier Bank</b>	5.30	11=	1.567	14	29.57	105.97	8	3
<b>Barclays Global Investors</b>	6.10	6=	1.287	7	21.09	87.02	9	5
<b>Barclaysb2b.com</b>	8.80	1=	1.814	17	20.61	122.64	10	4
<b>Business Bank</b>	5.30	11=	1.703	15	32.13	115.17	8	3
<b>Barclays Africa</b>	5.20	14=	1.135	4	21.83	76.78	7	3
<b>Barclaycard Corporate</b>	5.00	16	1.054	2	21.08	71.29	6	3
<b>Barclaycard International</b>	6.10	6=	1.101	3	18.04	74.42	8	4
<b>Barclaycard UK</b>	5.90	9=	1.524	11	25.83	103.06	8	4
<b>Barclaycard New Ventures</b>	8.80	1=	0.978	1	11.11	66.11	10	7
<b>Collateralised Financing</b>	7.00	3=	1.333	9	19.05	90.17	9	4
<b>Global Financing</b>	7.00	3=	1.563	13	22.34	105.73	10	4
<b>Global Markets</b>	7.00	3=	1.155	5	16.50	78.09	8	4
<b>Private Equity</b>	6.10	6=	1.197	6	19.63	80.97	8	4

The assessments for the levels of complexity faced by the various strategic business units within the Barclays Group also illustrate a lack of managerial consensus in the interpretation of the competitive environment (see Table 22 below). The data for Barclaysb2b.com ranged from 2 through to 10 on a scale of 1–10, a pattern also reflected in the data for the Business Bank, which ranged from 3 through to 10 on the same scale. There was also a wide range in the responses obtained for: the Woolwich (2–8), UK Retail Bank (4–10), Barclays Global Investors (3–9), Barclays Africa (3–9) and Barclaycard UK (3–9).

Comparison of the standard deviations to the mean standard deviation also supports the evidence for the lack of managerial consensus when considering the levels of complexity faced by the various strategic business units. Barclaysb2b.com deviated furthest from the mean standard deviation at 154.51%. This deviation was also reflected by: the Woolwich (135.55%), the Business Bank (127.26%), and Barclays Global Investors (123.61%).

Interestingly the strategic business units that were deemed to face the most complexity, Barclaycard New Ventures (7.0) and Global Financing (6.8), also experienced a considerable range of responses, with both having a range from 5 through to 9 on a scale of 1–10.

*Table 22 – Project 2 Pilot: The Level Of Complexity Faced By The Various Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	4.30	19	2.312	18	53.76	135.55	8	2
<b>UK Retail Bank</b>	6.50	3=	1.716	11	26.40	100.61	10	4
<b>Caribbean</b>	4.70	16	1.337	4	28.46	78.42	6	3
<b>Europe</b>	6.00	8=	1.563	7	26.06	91.67	8	3
<b>International Bank</b>	5.10	15	1.663	10	32.61	97.53	8	3
<b>Private Bank</b>	5.90	10	1.595	8	27.04	93.53	8	3
<b>Premier Bank</b>	6.20	7	1.751	12	28.25	102.68	8	3
<b>Barclays Global Investors</b>	6.00	8=	2.108	16	35.14	123.61	9	3
<b>Barclaysb2b.com</b>	6.50	3=	2.635	19	40.54	154.51	10	2
<b>Business Bank</b>	5.40	12=	2.171	17	40.19	127.26	10	3
<b>Barclays Africa</b>	4.60	17	1.776	15	38.62	104.16	9	3
<b>Barclaycard Corporate</b>	4.56	18	1.257	1	27.57	73.71	7	3
<b>Barclaycard International</b>	5.40	12=	1.647	9	30.49	96.54	8	3
<b>Barclaycard UK</b>	5.30	14	1.767	13=	33.34	103.60	9	3
<b>Barclaycard New Ventures</b>	7.00	1	1.333	3	19.05	78.18	9	5
<b>Collateralised Financing</b>	6.30	6	1.767	13=	28.05	103.60	8	3
<b>Global Financing</b>	6.80	2	1.398	6	20.56	81.99	9	5
<b>Global Markets</b>	6.50	3=	1.269	2	19.53	74.42	8	5
<b>Private Equity</b>	5.70	11	1.337	5	23.46	78.42	8	4

The next question in the pilot moved the focus of attention from the evaluation of the competitive environment to an assessment of the ability of the strategic business units to cope with uncertainty (see Table 23 below). Consistent with the earlier evidence these results also illustrated a lack of consensus among strategists at Barclays. The largest ranges in the responses were for: the UK Retail Bank (2–10), Barclaysb2b.com (2–9), the Woolwich (1–7), and the Private Bank (2–8). Again this evidence is supported through a comparison of the standard deviation with the mean standard deviation. Using this measure the UK Retail Bank had a standard deviation that stood at 153.93% of the mean standard deviation, Barclaysb2b.com a standard deviation at 164.43% of the mean and the Woolwich a standard deviation at 137.21% of the mean.

Interestingly the four strategic business units within the Barclays Capital cluster (see Section 4.6.3.3), Collateralised Financing, Global Financing, Global Markets, and Private Equity, were ranked the highest in terms of their ability to cope with uncertainty. The assessments of these four businesses displayed the smallest range (6–9), which indicates there was a greater degree of consensus regarding the ability of these organisations to cope with uncertainty.

*Table 23 – Project 2 Pilot: The Ability Of The Various Strategic Business Units To Cope With Uncertainty*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	4.70	14=	1.889	17	40.18	137.21	7	1
<b>UK Retail Bank</b>	5.40	12=	2.119	18	39.24	153.93	10	2
<b>Caribbean</b>	5.40	12=	0.966	2=	17.89	70.19	7	4
<b>Europe</b>	4.40	17=	1.265	10	28.75	91.90	7	3
<b>International Bank</b>	6.30	11	1.829	16	29.03	132.86	9	4
<b>Private Bank</b>	4.40	17=	1.776	15	40.37	129.06	8	2
<b>Premier Bank</b>	4.70	14=	1.418	12	30.17	103.03	7	2
<b>Barclays Global Investors</b>	7.10	5	1.449	13	20.41	105.28	9	4
<b>Barclaysb2b.com</b>	4.70	14=	2.263	19	48.15	164.43	9	2
<b>Business Bank</b>	6.90	6=	1.287	11	18.65	93.48	9	5
<b>Barclays Africa</b>	6.70	8=	1.494	14	22.30	108.57	9	4
<b>Barclaycard Corporate</b>	6.90	6=	1.197	8	17.35	86.98	9	5
<b>Barclaycard International</b>	6.40	10	0.966	2=	15.10	70.19	8	5
<b>Barclaycard UK</b>	6.70	8=	1.252	9	18.68	90.94	9	5
<b>Barclaycard New Ventures</b>	3.00	19	0.816	1	27.22	59.32	5	2
<b>Collateralised Financing</b>	7.30	3=	1.059	5=	14.51	76.96	9	6
<b>Global Financing</b>	7.30	3=	1.059	5=	14.51	76.96	9	6
<b>Global Markets</b>	7.40	2	1.075	7	14.53	78.10	9	6
<b>Private Equity</b>	7.50	1	0.972	4	12.96	70.61	9	6

The final element of this part of the research pilot examines the importance of each strategic business unit being able to cope with uncertainty. In line with the earlier analysis, the data were again highly dispersed with business units obtaining a wide range of responses (see Table 24 below). Again the point is illustrated strongly with Barclaysb2b.com having a range of 1 through to 10, on a scale of 1–10, the Woolwich having a range of 2 to 8, and both Barclays Global Investors and Barclays Africa having a range of 3 through to 9 on the same scale.

Also in line with the earlier analysis (that of the ability of the strategic business units to cope with uncertainty), the four strategic business units within the Barclays Capital cluster (see Section 4.6.3.3), Collateralised Financing, Global Financing, Global Markets, and Private Equity, were also ranked very highly in terms of the importance of their being able to cope with uncertainty. The business units with the smallest ranges were: Global Financing, 7–9; Global Markets, 7–9; and Barclaycard International, 6–8; followed by Collateralised Financing, 6–9; and Barclaycard Corporate, 4–7. These results indicate there is a greater degree of consensus regarding the importance of these organisations being able to cope with uncertainty.

*Table 24 – Project 2 Pilot: The Importance Of The Various Strategic Business Units Being Able To Cope*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	4.90	19	1.687	11	35.14	108.76	8	2
<b>UK Retail Bank</b>	5.50	14	1.900	14	34.55	122.55	10	3
<b>Caribbean</b>	5.20	17	1.317	7	25.32	84.90	7	3
<b>Europe</b>	6.00	11	1.700	12	28.33	109.61	8	3
<b>International Bank</b>	4.90	18	1.524	10	31.10	98.27	7	2
<b>Private Bank</b>	5.30	16	1.947	15	36.73	125.53	8	3
<b>Premier Bank</b>	5.90	12=	1.792	13	30.37	115.56	8	3
<b>Barclays Global Investors</b>	6.40	9=	1.955	16=	30.55	126.08	9	3
<b>Barclaysb2b.com</b>	6.80	7	3.084	19	45.35	198.88	10	1
<b>Business Bank</b>	6.40	9=	1.955	16=	30.55	126.08	9	4
<b>Barclays Africa</b>	5.90	12=	2.183	18	37.00	140.80	9	3
<b>Barclaycard Corporate</b>	5.40	15	1.075	5	19.91	69.32	7	4
<b>Barclaycard International</b>	7.00	6	0.816	3	11.66	52.66	8	6
<b>Barclaycard UK</b>	6.70	8	1.337	8	19.96	86.25	9	5
<b>Barclaycard New Ventures</b>	7.69	4	1.186	6	15.43	76.51	10	5
<b>Collateralised Financing</b>	7.70	3	1.059	4	13.76	68.32	9	6
<b>Global Financing</b>	7.80	2	0.789	2	10.11	50.87	9	7
<b>Global Markets</b>	7.90	1	0.738	1	9.34	47.58	9	7
<b>Private Equity</b>	7.30	5	1.418	9	19.43	91.45	9	5

### 5.4.2.2.3 The Relationship Between The Rate Of Change And The Level Of Complexity

The literature review recognised (see Section 4.1.1) that Duncan (1972) is generally credited with initiating the study of perceived environmental uncertainty. In his conceptualisation of this phenomenon, Duncan proposed that perceived environmental uncertainty could be described in terms of two constructs: the simple–complex dimension and the static–dynamic dimension. Duncan argued that when both of these factors are present then the degree of perceived environmental uncertainty being experienced by strategists rises.

Hatch (1997) developed Duncan’s conceptualisation into a two-by-two matrix (see Figure 13 below) and suggested that the rate of change and the level of complexity could be regarded as independent variables with perceived environmental uncertainty as the dependent variable. Through her conceptualisation of Duncan’s work, Hatch argued that when the strategist deems both the rate of change and the level of complexity to be high then they experience high degrees of perceived environmental uncertainty.

Figure 13 – Uncertainty: A Product Of The Level Of Complexity And The Rate Of Change (Hatch, 1997)

		<i>Rate Of Change</i>	
		Low	High
<i>Level Of Complexity</i>	Low	Low Uncertainty	Moderate Uncertainty
	High	Moderate Uncertainty	High Uncertainty

This section of the research uses the pilot data to investigate four key relationships in the conceptualisation of perceived environmental uncertainty offered by Duncan (1972) and Hatch (1997): first, the relationship between the combined rate of change and level of complexity as contributory factors in the creation of perceived environmental uncertainty; second, the relationship between the degree of uncertainty and the rate of change; third, the relationship between the degree of uncertainty and the level of complexity; and finally, the relationship between the rate of change and the level of complexity.

The first element of the pilot looks at the relationship between the degree of uncertainty ( $Y_1$ ) and the two independent variables offered by Duncan (1972): the rate of change ( $X_1$ ), and the level of complexity ( $X_2$ ). As the report identified earlier (see Section 5.4.1.5–6), multiple regression analysis is the statistical technique being applied to examine the relationship between the single dependent variable and the independent variables. Its basic formulation is (Hair et al., 1998):

$$\begin{array}{ccccccccccc} Y_1 & = & X_1 & + & X_2 & + & \dots\dots & + & X_n \\ \text{(metric)} & & & & & & & & \text{(metric)} \end{array}$$

Applying the mean of the scores given by the ten respondents to produce a value for every variable for each of the nineteen strategic business units, the resulting regression equation<sup>16</sup> is:

$$\begin{array}{ccccccc} Y_1 & = & 26.86 & + & 8.38 (X_1) & + & -2.99 (X_2) \\ t \text{ values} & & (2.75) & & (5.07) & & (-1.18) \\ R^2 = 0.72 & & & & (1\% \text{ significance with } n=19) & & \\ \text{Standard Error Of Estimate} = 5.77 & & & & & & F = 20.76 \end{array}$$

<sup>16</sup> All two-variable regression equations are calculated in this form and the F-test is used to test overall significance, though only the  $R^2$  is quoted in most cases.

It is evident from the pilot that where uncertainty exists then 72% of such uncertainty is accounted for by the combined rate of change and level of complexity faced (see Table 25 below). This would seem to substantiate the assertion made by Duncan (1972) that perceived environmental uncertainty is in fact a product of the rate of change and the level of complexity faced. However, the results of the pilot for Project 2 conclude that it is the rate of change that is the dominant force (or stronger relationship) in the production of perceived environmental uncertainty, rather than the level of complexity.

*Table 25 – Project 2 Pilot: Multiple Regression Statistics: Perceived Environmental Uncertainty*

<b>Test</b>	<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable(s)</b>	<b>R-Squared (R<sup>2</sup>)</b>	<b>Significance</b>
<b>1.</b>	Uncertainty	Rate Of Change & Level Of Complexity	0.722	<1%
<b>2.</b>	Uncertainty	Rate Of Change	0.698	<1%
<b>3.</b>	Uncertainty	Level Of Complexity	0.275	<5%
<b>4.</b>	Rate Of Change	Level Of Complexity	0.563	<1%

The next element of the pilot looks at the relationship between uncertainty and the rate of change being faced by the various strategic business units. Interestingly the findings show that 70% of the uncertainty that exists is associated with the rate of change (see also Table 25 above). When the investigation moves on to look at the relationship between uncertainty and the level of complexity, the findings show that only 27% of uncertainty is accounted for by the level of complexity. As stated in Table 25, this relationship is significant at the 5% level.

Finally, the pilot looked at the relationship between the rate of change and the level of complexity. Here, the analysis showed 56% of the level of complexity being associated with the rate of change. It is important to note that the pilot only consisted of 10 responses, where 9 had change as the more important variable, represented by a higher t-value, and one had complexity as more significant. The pilot has therefore identified the rate of change and level of complexity as being closely associated phenomena ( $R^2=0.563$ ). Again this observation is set out in more detail in Table 25 above.

#### 5.4.2.2.4 Ability To Cope With Uncertainty And The Importance Of Being Able To Cope

The literature review recognised the strategic capability of organisations (see Section 4.5.6) and that when faced with uncertainty this capability manifests itself in the ability to cope with uncertainty (see Section 4.5.6.1) and the importance of the business unit being able to cope with such uncertainty (see Section 4.5.6.2). Based on the literature review, the final component of the research pilot looks at the relationship between these independent variables and any impact on the dependent variable, uncertainty. This section also looks at the relationship between the ability to cope with uncertainty and the importance of being able to cope.

Table 26 – Project 2 Pilot: Regression: The Ability To Cope And The Importance Of Being Able To Cope

Test	1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	R-Squared (r <sup>2</sup> )	r <sup>2</sup> (%)
1.	Uncertainty	Ability To Cope With Uncertainty	0.00009	0.01%
2.	Uncertainty	The Importance Of Being Able To Cope	0.545	54.51%
3.	Ability To Cope	The Importance Of Being Able To Cope	0.101	10.09%

The mean responses obtained through the pilot study indicate that there was no significant relationship between the degree of perceived environmental uncertainty and the perceived ability to cope with such uncertainty (see Table 26 above) – a finding that would seem to contradict aspects of resource dependence theory on perceived environmental uncertainty (Milliken, 1987), see Section 4.5.6.2.

Not unexpectedly, the pilot suggests there is significant correlation between managerial perceptions of the degree of uncertainty faced by the strategic business units and the importance of their being able to cope. This finding is consistent with the notion of ‘perceived importance’ (Boyd and Fulk, 1996) also identified in the literature review (see Section 4.4.4).

The third regression equation identified through the pilot study is consistent with the other two: there appears to be no significant relationship between managerial perceptions on the ability of the various strategic business units to cope and the importance of the various strategic business units being able to cope. Clearly, the absence of such a relationship could have potentially serious implications for managers. This relationship is examined in greater detail later in Project 2 (see Section 5.6.4).

### **5.4.3 The Pilot Test Conclusions**

There are five key conclusions drawn from the Project 2 research pilot:

1. The concept of perceived environmental uncertainty is a highly topical and relevant area for research at Barclays. It is also a multi-faceted and complicated concept. In order to deal with the difficulties associated with researching such a multi-faceted concept, several improvements were made to the research design, based on the Project 2 Pilot – these enhancements are set out in detail in Section 5.4.4.
2. There is a high degree of synergy among strategists at Barclays regarding the qualitative factors that contribute towards: the degree of uncertainty, the rate of change, and the level of complexity for strategic business units within Barclays.
3. The relationship between the rate of change and the level of complexity as contributory factors in the degree of perceived environmental uncertainty experienced by strategists (Duncan, 1972) is far more sophisticated than that represented by Hatch (1997) in her conceptualisation of Duncan's (1972) model (see Section 4.3.10). It is evident that the rate of change and the level of complexity cannot be regarded merely as independent variables with perceived environmental uncertainty as the dependent variable. The research pilot concludes that the effect of these two variables on perceived environmental uncertainty is not equally weighted and that the rate of change actually contributes to the level of complexity for strategic business units within the Barclays portfolio.
4. Strategists develop very different conceptual models of perceived environmental uncertainty, which manifest themselves in a lack of managerial consensus in the subjective assessments of the competitive environment. However, there is a high degree of synergy between the factors that create the degree of uncertainty (the rate of change and the level of complexity) for strategic business units within Barclays.
5. In terms of the managerial implications, the pilot concluded that there is also a lack of managerial consensus pertaining to the assessment of the ability of the strategic business unit to cope with uncertainty, and the importance of the unit being able to cope. Also there is a high degree of synergy between the factors that enable a business unit to cope with uncertainty, and the importance of the unit being able to cope.

#### **5.4.4 Enhancements To The Research Design Based On Project 2 Pilot Test**

Based on the pilot for Project 2 the researcher introduced three key enhancements to the research design:

1. The formal presentation of the research objectives to the Group Executive Committee prior to the completion of the research matrix was dropped from the research design, owing to onerous demands on the Group Executive Committee Agenda. Instead, respondents were asked to complete the research matrix (see Appendix B) prior to the semi-structured interview, and it was therefore issued ten days in advance.
2. The research matrix was extended from five questions to nine. The first two additional questions asked the respondents to give subjective assessments of the ability of the strategic business units to cope with change, and of their ability to cope with complexity. The second two additional questions asked the respondents to give subjective assessments of the importance of the strategic business units being able to cope with change and the importance of their being able to cope with complexity. The full research matrix is presented in Appendix B.
3. The questions were altered in two ways: first, the construct for uncertainty was amended to offer a scale of 0–100, thereby giving respondents the opportunity to award a score of 0 for no uncertainty or 100 for total certainty; second, the scale for each question was extended to 0–100 (some had previously been 0–10) to ensure a more sensitive and uniform data set.

## 5.5 Qualitative Exploration: Perceived Environmental Uncertainty

### 5.5.1 Introduction

The qualitative exploration of perceived environment uncertainty with the Group Executive Committee represents a key component of Project 2 (see Table 27 below). Ten working days prior to the scheduled meeting, each member was issued with the research matrix (see Appendix B). At the semi-structured interview, the researcher began by giving a presentation of the research objectives and respondents were then taken through the research matrix and asked to set out the qualitative criteria used when making their subjective assessments.

The first set of questions investigated the competitive environment within which the strategic business unit operates, asking respondents to consider the degree of uncertainty, rate of change and level of complexity currently being faced. The next three questions moved the focus of attention away from the competitive environment to the capability of the organisation – here respondents were asked to consider the ability of each business unit to cope with uncertainty, change and complexity. The final three questions assessed the importance to the Group of each business unit being able to cope with uncertainty, change and complexity

*Table 27 – Membership Of The Barclays Group Executive Committee During 2003*

<b>Group Executive Committee Member</b>	<b>Role &amp; Responsibility</b>
Sir Peter Middleton	Group Chairman, Barclays Bank PLC
Matthew Barrett	Group Chief Executive, Barclays Bank PLC
John Stewart	Deputy Group Chief Executive, Barclays Bank PLC
Bob Diamond	Chief Executive, Barclays Capital
Naguib Kheraj	Chief Executive, Barclays Global Investors
Bob Hunter	Chief Executive, Barclays Private Clients
Chris Lendrum	Chief Executive, Barclays Africa & Group Executive Director
Gary Hoffman	Chief Executive, Barclaycard
David Roberts	Chief Executive, UK Retail Bank
Roger Davis	Chief Executive, Business Bank
Gary Dibb	Group Chief Administration Officer, Barclays Bank PLC
Jeff Neiderkorn	Consultant To Group Executive Committee
Robert Nimmo	Group Risk Director, Barclays Bank PLC
John Varley	Group Finance Director, Barclays Bank PLC
David Weymouth	Chief Information Officer, Barclays Bank PLC
Peter Herbert	Group Strategy & Planning Director & Secretariat To The Group Executive Committee

## **5.5.2 Exploring Perceptions Of The Competitive Environment**

### **5.5.2.1 Degrees Of Perceived Environmental Uncertainty Across Barclays PLC**

The first question investigates the degrees of uncertainty within the competitive environments of the various strategic business units. The respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing no uncertainty and 100 representing total uncertainty), please give an assessment of the degree of uncertainty currently faced by each strategic business unit.”

The exploratory interviews discovered four key findings from this area of research: first, that some strategists at Barclays do not interpret the world within which the strategic business unit operates as ‘uncertain’; second, that the increasing demands of more sophisticated customers increases the degree of uncertainty for some business units; third, that degrees of uncertainty change for business units over time; and finally that the degree of uncertainty experienced by strategists is impacted by the nature of the business model utilised by the particular strategic business unit.

Beginning with the first observation, there is evidence in the data that some strategists at Barclays do not interpret the competitive environment as being ‘uncertain’ or representing a problem to be addressed. The results showed that the term ‘uncertainty’ has negative connotations at Barclays and is therefore at variance with how strategists prefer to make sense of the competitive environment. This preference to observe the competitive environment from a positive perspective is explained by Naguib Kheraj,<sup>17</sup> Chairman, Barclays Global Investors:

“I do not think it is useful to consider the competitive environment as inherently ‘certain’ or ‘uncertain’. I tend to view the marketplace as offering our various strategic business units a whole range of exciting opportunities and interesting challenges.”

<sup>17</sup> Group Executive Committee Interview With Naguib Kheraj, Wednesday 9<sup>th</sup> July 2003

The second common theme that creates uncertainty for strategists at Barclays is the ever-increasing demands of customers. Many of the strategists recognise the increasing propensity of customers to leave the Barclays Group as a very real cause of uncertainty. Jeff Neiderkorn,<sup>18</sup> Consultant to the Group Executive Committee, explains:

“We can no longer rely on high levels of inertia among our client base and continue to ignore the increasing demands of more sophisticated customers. If we are to continue to meet ambitious performance targets we must find ways of delighting our customers in ways that the financial services industry has failed to do in the past.”

The next key observation from the study of degrees of uncertainty is that these perceptions fluctuate over time for both the Barclays Group and the strategic business units as events in their competitive environments unfold. Chris Lendrum,<sup>19</sup> Group Executive Director, explains:

“During my thirty five years at Barclays it is my experience that levels of uncertainty fluctuate over time. The record losses made by the Group in 1992, de-regulation in the mid 1990s and the ‘dot-com’ revolution of 2001 would all be good examples of events that caused levels of uncertainty to rise across the Barclays Group.”

The final observation is that degrees of uncertainty faced by a business unit can be determined by the nature of the business model. John Varley,<sup>20</sup> Group Finance Director, explains:

“The nature of the business model determines the level of uncertainty faced by particular business units. Where we have a well-proven business model operating in a traditional marketplace, for example the Woolwich, then uncertainty is typically quite low. When a business unit is operating a fee-based business model in a complicated and volatile marketplace, for example Barclays Capital or Barclays Global Investors, then one would expect levels of uncertainty to be considerably higher.”

<sup>18</sup> Group Executive Committee Interview With Jeff Neiderkorn, Wednesday 18<sup>th</sup> June 2003

<sup>19</sup> Group Executive Committee Interview With Chris Lendrum, Wednesday 6<sup>th</sup> August 2003

<sup>20</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

### **5.5.2.2 Rates Of Change Across The Barclays Portfolio**

The second question also investigates the competitive environment, but this time focusing on the rate of change experienced by the various strategic business units. In order to study the rate of change, respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing no change and 100 representing a very high rate of change), please give an assessment of the rate of change currently faced by each strategic business unit.”

This element of the exploration uncovered five qualitative factors that create differing rates of change for strategic business units within the Barclays Group: first, the level of competition that exists in the different market places – particularly new entrants; second, the emergence of new technologies; third, the speed with which Barclays is forced to respond to change; fourth, the demands on the various business units to deliver successful outcomes; and finally, customers demanding price leadership and the City insisting on stringent cost management which is creating cost pressures across the UK retail banking and financial services industry.

Starting with the first factor, there is a common theme in the data that increased competition boosts the rate of change in the competitive environments within which the various strategic business units operate. Again Chris Lendrum,<sup>21</sup> Group Executive Director, explains:

“The emergence of new entrants setting new high standards of customer service from a relatively low cost base, for example Direct Line, First Direct and Egg, was the catalyst for considerable change in retail banking over the last ten years.”

These new entrants have also been able to successfully exploit new technologies for distributing financial services that also increased the rate of change in the competitive environment. Direct Line and First Direct successfully pioneered telephone delivery during the 1990s and in 2000 Egg and Smile.co.uk were able to create an advantage for themselves by successfully adopting electronic distribution and establishing themselves in the market place.

<sup>21</sup> Group Executive Committee Interview With Chris Lendrum, Wednesday 6<sup>th</sup> August 2003

The third qualitative factor that creates an increase in the perceived rate of change for strategic business units within the Barclays Group is the demand for more effective responses to strategic change. Gary Hoffman,<sup>22</sup> Chief Executive, Barclaycard, illustrates the point:

“The market place demands that we are able to respond increasingly quickly and more efficiently with new products, new services and new delivery mechanisms. The problem we have at Barclays is that we have to turn round our supertanker in the same time it takes our competitors to turn around their speedboats.”

The fourth qualitative factor that increases the rate of change for strategic business units within the Group is the Executive Committee’s desire for top quartile performance in the sector (see Section 2.1.7). In order to achieve this level of performance, considerable strategic investment has been made across the portfolio of business units, each of which is now being targeted for realisable benefits. The data suggest that this demand for higher performance or continuous transformation of the business model increases the rate of change across Barclays.

The final qualitative factor that causes the rate of change to increase across the portfolio of strategic business units is the emergence of cost pressures and the impact of these pressures across the Group. Jeff Neiderkorn,<sup>23</sup> Consultant to Group Executive Committee, identifies that changes to the Group’s legal and regulatory obligations have created cost pressures:

“There are two key regulatory developments that have emanated from the Monopolies and Mergers Commission over the last two years that will radically change the way we operate in both the Business Bank and the three business units within the Barclaycard Cluster. The review of bank charges in corporate banking has effectively presented the whole industry with annual bills of up to £150m each; by the same token the introduction of new fee structures on interchange charges will cause real profit and loss challenges for the credit card industry. These challenges force strategic business units to make strategic choices or re-set priorities which invariably creates change.”

<sup>22</sup> Group Executive Committee Interview With Gary Hoffman, Wednesday 19<sup>th</sup> March 2003

<sup>23</sup> Group Executive Committee Interview With Jeff Neiderkorn, Wednesday 18<sup>th</sup> June 2003

### **5.5.2.3 Levels Of Complexity Across The Barclays Portfolio**

The third question also investigates the competitive environment but here the focus of attention is on the levels of complexity being experienced by the various strategic business units. In order to study this aspect of the competitive environment, respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing no complexity and 100 representing very high levels of complexity), please give an assessment of the level of complexity currently faced by each strategic business unit.”

This element of the exploration uncovered seven qualitative factors that create different levels of complexity for the various strategic business units within the Barclays Group: first, the sheer scale required of a strategic business unit to serve the market; second, the geographical dispersion of the market served by the various business units; third, the number and nature of key stakeholder relationships the business unit has to satisfy; fourth, the level of legal and regulatory obligations that exist within a particular industry; fifth, the maturity of the industry within which the business unit operates; sixth, the level of information required to operate effectively within a particular industry; and finally, the increasing expectations of multiple customer – multiple product relationships across the Barclays Group.

The first qualitative factor uncovered in the exploration is the scale of the business unit required to serve its market. Gary Dibb,<sup>24</sup> the Group Chief Administration Officer, explains:

“In order for a business unit like the UK Retail Bank to effectively serve its market it must have a complex distribution network: 1,500 branches, 12 call centres and an internet offering. To service this network it employs nearly 25,000 people. The simple logistics of this operation and the number of people within the unit increases the complexity the organisation faces. By comparison Barclays Global Investors is able to serve its market out of two sites with a team of less than 600 employees.”

<sup>24</sup> Group Executive Committee Interview With Gary Dibb, Thursday 19<sup>th</sup> June 2003

The second qualitative factor that creates different levels of complexity for the strategic business units across Barclays is the geographical dispersion of the strategic business unit itself. Again Gary Dibb,<sup>25</sup> the Group Chief Administration Officer, explains:

“Clearly when a strategic business unit is able to operate from a single site like Barclaycard UK in Northampton, then it is simpler to manage, as communications, decision-making and performance are so much easier to manage. When the unit is dispersed across a country (for example, the Retail Bank in the UK), a continent (like Barclays Africa), or even the globe (for example, Barclays Global Investors), then the whole business is so much more complex.”

The third qualitative factor that creates different levels of complexity is the number and nature of key stakeholders the business unit has to serve. Jeff Neiderkorn,<sup>26</sup> Consultant to the Group Executive Committee, uses the UK Retail Bank to illustrate his point:

“In the UK politicians comment on how the Retail Bank distributes its products and services. Should we decide to close down part of the branch network as we did in 2001 then it becomes a sensitive political issue. I can’t think of any other firm in the private sector where distribution is an issue for politicians.”

The next qualitative factor that creates different levels of complexity for the portfolio of strategic business units within the Barclays Group is the emergence of onerous legal and regulatory obligations. Bob Hunter,<sup>27</sup> Chief Executive, Barclays Private Clients, explains:

“Due to the way we create value at Barclays Private Clients, meeting onerous legal and regulatory obligations creates a level of complexity in our competitive environment that we are just not used to. Interpreting these requirements and understanding what they mean for our business will continue to increase the level of complexity we face.”

<sup>25</sup> Group Executive Committee Interview With Gary Dibb, Thursday 19<sup>th</sup> June 2003

<sup>26</sup> Group Executive Committee Interview With Jeff Neiderkorn, Wednesday 18<sup>th</sup> June 2003

<sup>27</sup> Group Executive Committee Interview With Bob Hunter, Thursday 12<sup>th</sup> June 2003

The fifth qualitative factor that creates different levels of complexity is the maturity of the industry the business unit serves. Chris Lendrum,<sup>28</sup> Group Executive Director, explains:

“Where a strategic business unit is operating in a mature market that is well understood, for example the Woolwich in the UK mortgage market, then the level of complexity experienced is quite low as our expertise is high. Where we are moving into less mature or emerging markets, like Barclaycard International’s current organic growth into Ireland, Iberia and Australasia, then our expertise and experience is low – consequently the level of complexity experienced by the business unit is much higher.”

The sixth qualitative factor that creates different levels of complexity for businesses across the Barclays Group is the level of information required to operate effectively within a particular industry. It was clear from the data that the information requirements of both Barclays Capital and Barclays Global Investors were very high and therefore more complex. By comparison the information required to manage other business such as Barclaycard, Europe and Barclays Africa were much lower and therefore represent a lower level of complexity.

The final qualitative factor that creates different levels of complexity for business units across the Barclays Group is the increasing expectations of multiple customer – multiple product relationships. John Varley,<sup>29</sup> Group Finance Director, explains:

“At Barclays we have some very complex customer relationships as it is not unusual for a single individual to be a customer of the Business Bank, the Premier Bank, the Woolwich, Barclaycard and Barclays Stockbrokers. Where customers hold multiple products they expect a truly ‘joined-up’ customer proposition, and some value to them for loyalty and multiple product relationships. Such high expectations can create real complexity for our businesses as they try to respond in a ‘joined-up’ fashion. By comparison relationships with the International Bank, Europe, Barclays Capital and Barclays Global Investors tend to be ‘solus’ and therefore much simpler to service.”

<sup>28</sup> Group Executive Committee Interview With Chris Lendrum, Wednesday 6<sup>th</sup> August 2003

<sup>29</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

### **5.5.3 Assessing The Ability Of Each Strategic Business Unit To Cope**

#### **5.5.3.1 The Ability Of Each Strategic Business Unit To Cope With Uncertainty**

This section of the investigation moves the focus of attention away from the competitive environment, to the ability of the business unit to cope with its competitive environment. As a starting point respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing no ability to cope with uncertainty and 100 representing a complete ability to cope with uncertainty), please give an assessment of the ability of each strategic business unit to cope with uncertainty.”

This element of the exploration into perceived environmental uncertainty discovered three key qualitative factors that differentiate between the ability of a strategic business unit to cope with uncertainty: first, the resilience of the business model itself; second, a dominant position in the market and the financial ‘muscle’ associated with holding such a position; and finally, the experience of having been through a period of high uncertainty in the past.

The first qualitative factor that differentiates a strategic business unit in its ability to cope with uncertainty is the resilience of the business model itself. Section 2.1.5 sets out how Barclays managed to meet its targets for the creation of shareholder value through 2003. There is evidence in the research data that the Barclays business model is so resilient that, under favourable economic conditions, it cannot fail to create shareholder value.

To illustrate this point, during 2003 Barclaycard was buying money at 4.79% and selling it at 16.9%, therefore value creation was a matter of simply growing or protecting market share and managing costs. During the same period, the UK Retail Bank were also selling funds at 9.7%; the Business Bank enjoyed large corporate credit balances on non-interest paying current accounts; and the Woolwich had a large element of its mortgage stock on highly profitable standard variable rates. The data show that the Barclays business model could be described as a ‘money-printing machine’, therefore the challenge for strategists lies not in how able they are to cope with uncertainty but how they can act as responsible stewards of a resilient business model.

The second qualitative factor that differentiates perceptions of a strategic business unit's ability to cope with uncertainty is its dominant market position and the financial 'muscle' associated with such a position. Therefore businesses that dominate their markets (for example the Business Bank, Barclaycard, Barclays Stockbrokers and Barclays Capital) are perceived as more able to cope with uncertainty. Gary Hoffman,<sup>30</sup> Chief Executive Barclaycard, explains:

“Our position as market leaders enables us to have significant influence over our market place and this increases our ability to cope with uncertainty. If we take the strategic decision to develop our processing capability we buy a credit card processor – for example our acquisition of Providian in 2002. If we need to promote our brand we sign up to a large sponsorship deal – for example our agreement with the F.A. Premier League in 2001. And if we need to grow our business organically we have the financial resources to expand across Europe and further afield if we wish. Strategically being the biggest and the best gives us the ability not only to cope with uncertainty more effectively but to create higher levels of uncertainty for our competitors.”

The final qualitative factor that differentiates perceptions of a strategic business unit in its ability to cope with uncertainty is the perceived strength of the business unit's brand. Chris Lendrum,<sup>31</sup> Group Executive Director, explains:

“At Barclays we have a wonderful brand which is closely associated with everything you would want in a large financial institution: security, stability, safety, integrity and compliance. As you can imagine our brand stretches across a whole myriad of businesses serving a wide range of customer needs. Being under the 'umbrella' of such a powerful brand gives all our strategic business units a greater ability to cope with uncertainty. Moreover, when one of our business units has a powerful 'brand within a brand' (for example Barclaycard, Barclays Global Investors and Barclays Capital), then I believe they are uniquely well placed to cope with uncertainty today and in the future.”

<sup>30</sup> Group Executive Committee Interview With Gary Hoffman, Wednesday 19<sup>th</sup> March 2003

<sup>31</sup> Group Executive Committee Interview With Chris Lendrum, Wednesday 6<sup>th</sup> August 2003

### **5.5.3.2 The Ability Of Each Strategic Business Unit To Cope With Change**

This section of the investigation also assesses the ability of the various strategic business units to cope with the competitive environment but this time the ability of the business unit to cope with change. Here respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing no ability to cope with change and 100 representing a complete ability to cope with change), please give an assessment of the ability of each strategic business unit to cope with change.”

This element of the exploration into perceived environmental uncertainty discovered four key qualitative factors that differentiate a strategic business unit in its ability to cope with change: first, the agility or speed of response the strategic business unit is able to achieve; second, the flexibility of the organisation; third, the quality of the business unit’s people; and finally, the ability of the organisation to reward its people for coping with change.

The first qualitative factor that differentiates a strategic business unit in its ability to cope with change is the agility of the strategic business unit. The research data define agility as speed of response or more simply ‘getting things done around the organisation’. The research data identify three key components to ‘strategic agility’: first, the development and reinforcement of a culture for change within certain areas of Barclays, sometimes referred to as ‘change as usual’; second, the systematic breaking down of any resistance to change; and finally, the ability to respond effectively to crises. John Varley,<sup>32</sup> Group Finance Director, explains:

“Across Barclays we have developed an incredible strategic agility that enables us to respond quickly and efficiently to the challenges of our various markets. Over the last 15 years we have systematically broken down many of the barriers to change. Through the development of a ‘culture for change’ some of our businesses (for example, Barclaycard, the Business Bank and Barclays Capital), are role models in their ability to respond effectively to both strategic opportunities and threats.”

<sup>32</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

The second qualitative factor that differentiates a strategic business unit in its ability to cope with change is the flexibility of the unit itself. The research distinguishes between flexibility and agility, as flexibility is concerned not merely with the ability to adapt to changing circumstances quickly but also with the ability to bend without breaking. The research shows that the businesses that developed flexibility in their core systems, core processes and working practices are more able to cope with change than those that have not. Therefore units such as Barclays Capital and Barclays Global Investors that have developed flexible information systems, flexible processes and flexible working practices have much more ability to cope with change than the UK Retail Bank, the Private Bank and the Woolwich.

The third qualitative factor that differentiates a business unit in its ability to cope with change is the quality of its people. This category also breaks down into three: first, the ability of the business unit's people to work effectively in teams; second, the experience of having delivered large-scale change in the past or having 'been down this road before'; and finally, the desire of the business unit's people to 'do a good job' and the desire of the organisation to succeed.

The final qualitative factor that differentiates a business unit in its ability to cope with change is its facility to reward its people for successful implementation and benefits realisation. There is evidence in the research data that some business units within the Barclays Group (for example, the UK Retail Bank and the Woolwich) are governed by remuneration and grade structures, and that these structures can limit the way the organisation rewards the extraordinary effort and expertise associated with delivering large-scale strategic change. By comparison, other areas of the Barclays (for example, Barclays Global Investors and Barclays Capital) are not limited by remuneration structures and can recognise extraordinary performance through the payment of attractive bonuses and other incentives. Naguib Kheraj,<sup>33</sup> Chairman, Barclays Global Investors, explains the significance of rewarding people:

“It is imperative that all our strategic business units are given the freedom to reward their people for the successful delivery of change and the realisation of benefits”.

<sup>33</sup> Group Executive Committee Interview With Naguib Kheraj, Wednesday 9<sup>th</sup> July 2003

### **5.5.3.3 The Ability Of Each Strategic Business Unit To Cope With Complexity**

The final question in this section of the investigation asked the respondents to make assessments on the ability of the various strategic business units to cope with complexity. For this part of the research, respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing no ability to cope with complexity and 100 representing a complete ability to cope with complexity), please give an assessment of the ability of each strategic business unit to cope with complexity.”

This element of the exploration discovered five key qualitative factors that differentiate a business unit in terms of its ability to cope with complexity: first, its ability to recruit top talent into the senior management team; second, the pan-Group experience of the senior team; third, its willingness to trust other business units to deliver and communicate effectively; fourth, its ability to forge good relationships with key stakeholders; and finally, its ability to manage internal competition and conflict while eradicating dysfunctional internal politics.

Taking these factors in turn, the first qualitative factor that differentiates a business unit in its ability to cope with complexity is its ability to recruit top talent. The research suggests there is considerable variance in the ability of the various businesses to recruit talent, owing to four key differentiators: first, reward; second, an intellectually stimulating role; third, career prospects; and finally, job location. John Stewart,<sup>34</sup> Deputy Group Chief Executive, explains:

“Some of our strategic business units find it much easier to attract top talent into their senior management teams than others. Take Barclays Capital for an example; as an investment bank based in Canary Wharf in London, it offers intellectually demanding roles with highly competitive remuneration packages and great career prospects. If you compare the career prospects at Barclays Capital with those in Barclays Africa, our European operations or the Woolwich then you will see that it is not always possible to distribute our top senior management talent evenly across our portfolio of businesses.”

<sup>34</sup> Group Executive Committee Interview With John Stewart, Wednesday 7<sup>th</sup> May 2003

The second qualitative factor that differentiates a strategic business unit in its ability to cope with complexity is the capability and experience of its senior management team. Beginning with capability, Gary Dibb,<sup>35</sup> the Group Chief Administration Officer, explains:

“In order to cope with the complexity of its marketplace Barclays Global Investors employs more than 90 PhDs. This gives the organisation an incredible amount of ‘intellectual horsepower’ and a clear competitive advantage through its ability to deal with complexity. Interestingly the demands facing other areas of the Group bring different leadership challenges – like effective change management at Barclays Private Clients, and customer service leadership in the UK Retail Bank. Consequently different skill sets are represented in different senior teams across the Barclays Group.”

Robert Nimmo,<sup>36</sup> Group Risk Director, identifies the pan-Group experience of the senior management team as the crucial factor in the business unit’s ability to cope with complexity:

“If we are going to offer a truly ‘joined-up’ customer proposition through a core UK Bank, it is important that the top teams in our various strategic business units have the experience of working across the Group. The capability of business units to think strategically across the organisation will be critical to its ability to cope with the complexity that ‘joining up’ from a customer perspective will bring.”

The third qualitative factor that differentiates a business unit in its ability to cope with complexity is its ability to trust other businesses to deliver and be effective in its own communications. Jeff Neiderkorn,<sup>37</sup> Consultant to the Group Executive Committee, explains:

“There are two important dynamics at play when business units are coping with complexity across the portfolio: firstly, the left hand must know what the right hand is doing; and secondly, the left hand must not try to control the right hand.”

<sup>35</sup> Group Executive Committee Interview With Gary Dibb, Thursday 19<sup>th</sup> June 2003

<sup>36</sup> Group Executive Committee Interview With Robert Nimmo, Thursday 19<sup>th</sup> June 2003

<sup>37</sup> Group Executive Committee Interview With Jeff Neiderkorn, Wednesday 18<sup>th</sup> June 2003

The fourth qualitative factor that differentiates a business unit in its ability to cope with complexity is its capacity to forge and maintain excellent working relationships with key stakeholders. David Roberts,<sup>38</sup> Chief Executive, the UK Retail Bank, highlights the importance of key relationships:

“One of the key causes of increased complexity for myself, my senior team and I guess the financial services industry as a whole is the continuous stream of new and emerging legal and regulatory obligations. One of the key ways in which we can manage this new level of complexity is by forging excellent working relationships with key stakeholders like the regulators and government itself. Such relationships give us a platform upon which we can ‘comply or explain’ rather than merely being forced to comply to timescales that are not strategically expedient for us.”

The final qualitative factor that differentiates a business unit in its ability to cope with complexity is the organisation’s skill at managing internal competition and conflict effectively, while eradicating dysfunctional internal politics. Jeff Neiderkorn,<sup>39</sup> Consultant to the Group Executive Committee, explains the importance of this attribute to the organisation:

“One of the most impressive achievements made by Matt Barrett as Chief Executive at Barclays has been his ability to bring together his Group Executive Committee to work together as a team. We now have a high-performing team leading a high-performing organisation towards a single goal of value maximisation.

Matt saw an opportunity to break down some of the barriers that lead to in-house competition, conflict and value-destroying internal politics. The next challenge will be to ensure that the business units are also able to act together as a team, because those most effective at ‘joining up’, sharing knowledge and offering a truly world-class customer proposition will be those most able to cope with the complexity created by the needs of ever-more demanding and increasingly sophisticated customers.”

<sup>38</sup> Group Executive Committee Interview With David Roberts, Thursday 26<sup>th</sup> June 2003

<sup>39</sup> Group Executive Committee Interview With Jeff Neiderkorn, Wednesday 18<sup>th</sup> June 2003

## **5.5.4 Assessing The Importance Of Being Able To Cope**

### **5.5.4.1 The Importance Of Being Able To Cope With Uncertainty**

This section asked respondents to make assessments as to the importance of the various business units being able to cope with the degree of uncertainty in their competitive environments. Here, respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing nil importance of being able to cope with uncertainty and 100 representing maximum importance), please give an assessment of how important it is for each strategic business unit to cope with uncertainty.”

This element of the exploration discovered four key qualitative criteria that differentiate the various strategic business units in terms of the importance of their being able to cope with uncertainty: first, the long-term pressure across the Group to continue increasing shareholder value; second, regulations continuing to break down barriers that have previously blocked entry into Barclays’ core markets; third, the emergence of international competition; and finally, a fall in the levels of inertia and loyalty that exist among the customer base.

Taking these factors in turn, the first qualitative factor that differentiates the business units in terms of the importance of their being able to cope with uncertainty is the level of value each one creates and the likelihood of it being able to sustain and improve its value contribution to the Group over the long term. John Varley,<sup>40</sup> Group Finance Director, explains:

“All our strategic business units are not equally important; they are either central to how we create value at present – ‘jam today’ – or they will be central to how we create value at some time in the future – ‘jam tomorrow’. Therefore the key factor that drives strategic importance is the level of value contribution forecasted by each of the business units. Clearly it is important that the business units that make the most value contribution are the ones most able to cope with uncertainty.”

<sup>40</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

The second qualitative factor that differentiates the business units in terms of the importance of their being able to cope with uncertainty is the emergence of new regulations, which are breaking down barriers that have previously protected some of the Group's core markets.

David Roberts,<sup>41</sup> Chief Executive, the UK Retail Bank, recognises that:

“A number of our businesses have to some extent been protected from competition in the past. To compete with the UK Retail Bank you need a distribution network of 1,500 branches; to compete with the Business Bank and Barclays Stockbrokers you need market share to create the necessary economies of scale. However, some of our businesses (for example, Barclaycard, the Private Bank and the International Bank) now face regulatory changes that make entry into their markets far easier for competitors, and it is imperative that they learn to cope with this new uncertainty.”

The third factor that differentiates businesses in terms of the importance of their being able to cope with uncertainty is the emergence of international competition. Again, in the past some businesses have been protected by barriers to entry where others, for example Barclaycard, are facing a new degree of uncertainty. Gary Hoffman,<sup>42</sup> Chief Executive, Barclaycard, explains:

“The arrival of capital-rich American mono-lines creates a real threat to Barclaycard's market share and it is important we are able to cope with the uncertainty that brings.”

The final factor that differentiates the importance of a business being able to cope with uncertainty is inertia and a decline in the level of customer loyalty. John Stewart,<sup>43</sup> Deputy Group Chief Executive, explains:

“Businesses like the UK Retail Bank, the Woolwich and the Business Bank can no longer rely on customer loyalty and inertia to protect them against poor service. It is important that they are able to cope with the uncertainty this brings.”

<sup>41</sup> Group Executive Committee Interview With David Roberts, Thursday 26<sup>th</sup> June 2003

<sup>42</sup> Group Executive Committee Interview With Gary Hoffman, Wednesday 19<sup>th</sup> March 2003

<sup>43</sup> Group Executive Committee Interview With John Stewart, Wednesday 7<sup>th</sup> May 2003

#### **5.5.4.2 The Importance Of Being Able To Cope With Change**

The second question in this section asked the respondents to make assessments as to the criteria that differentiate the various strategic business units in terms of the importance of their being able to cope with the rate of change in their competitive environments. For this section of the research, respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing nil importance of being able to cope with change and 100 representing maximum importance), please give an assessment of how important it is for each strategic business unit to be able to cope with change.”

This element of the exploration discovered three key qualitative criteria that differentiate the various strategic business units in terms of the importance of their being able to cope with change: first, centrality of the business unit to the Group strategy; second, the degree to which they will be relied on to deliver benefits derived from implementing the Group strategy; and finally, the ability of the business unit to build its change capability in a way that embeds flexibility in its infrastructure in order to facilitate effective change management in the future.

The first qualitative criterion that makes it more important for some strategic business units to be able to cope with change than others is their centrality to the Group strategy. John Varley,<sup>44</sup> Group Finance Director, explains:

“During 2003 we made a commitment to build a UK Bank which offers a world-class proposition that is truly ‘joined-up’ from the perspective of the customer. This Bank will include the UK Retail Bank, the Woolwich, the Premier Bank, the Business Bank, Barclaycard and elements of Barclays Private Clients. These businesses are therefore central to our strategy and it is therefore more important that they are capable of coping with significant rates of change. Where a business is less central to the strategy, for example the Private Bank, the International Bank and Barclays Africa, then the importance of them being able to cope with change is diminished.”

<sup>44</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

The second qualitative factor that makes it more important for some strategic business units to be able to cope with change than others is the degree to which they will be relied on to deliver the benefits derived from implementing the Group strategy. Peter Herbert,<sup>45</sup> Group Strategy & Planning Director, explains:

“In terms of their contribution to the successful delivery of the Group strategy the business units’ ability to cope with change assumes differing importance. There are business units like Barclaycard that will be involved in delivering strategic capability through the development of shared infrastructure, data warehouses and the manufacture of world-class products. There will be other businesses like the UK Retail Bank, the Woolwich and the Premier Bank responsible for the distribution of products and the servicing of customers. However, some businesses will be involved in both the building of strategic capability and the delivery of the strategy, for example the Business Bank and Barclays Private Clients. Clearly it is important strategically that these businesses are most able to cope with strategic change.”

The final qualitative factor that makes it more important for some strategic business units to cope with change is that, for some businesses, strategic change will become an ongoing occurrence. It is therefore important that those business units build their strategic change capabilities in a way that embeds flexibility into their organisation and facilitates change management well into the future. John Varley,<sup>46</sup> Group Finance Director, explains:

“For many of our strategic business unit the demands of strategic change are here to stay – it is therefore important that businesses like the UK Retail Bank, the Woolwich, Barclays Private Clients and the Business Bank build flexibility into their organisational designs. Such flexibility and adaptability will ensure that they can cope with change today and give them the capability and capacity to cope with the demands of strategic transformation well into the future.”

<sup>45</sup> Group Executive Committee Interview With Peter Herbert, Thursday 20<sup>th</sup> November 2003

<sup>46</sup> Group Executive Committee Interview With John Varley, Thursday 13<sup>th</sup> November 2003

### **5.5.4.3 The Importance Of Being Able To Cope With Complexity**

The final question in this section asked respondents to make assessments as to the relative importance of the various strategic business units being able to cope with complexity in their competitive environment. For this component of the research, respondents were asked the following question (see Appendix B):

“On a scale of 0 to 100 (0 representing nil importance of being able to cope with complexity and 100 representing maximum importance), please give an assessment of how important it is for each strategic business unit to be able to cope with complexity.”

This element of the exploration discovered four qualitative criteria that differentiate the various strategic business units in terms of the importance of their being able to cope with complexity: first, the relative complexity of the business model; second, globalisation; third, emerging distribution channels; and finally, onerous legal and regulatory obligations.

The first qualitative factor that makes it more important for some strategic business units to be able to cope with complexity than others is the level of complexity inherent within their business model. David Roberts,<sup>47</sup> Chief Executive, the UK Retail Bank, explains:

“There is a wide range of complexity across the portfolio. There are some quite simple businesses like the Woolwich and Barclays Africa, while others are really quite complex like Barclays Global Investors and Barclays Capital. The key differentiator in terms of the importance of each business coping with complexity is its ability to understand the complexity of its business model – in essence, how it creates and destroys value. Clearly it is more important for some businesses to be able to cope with complexity than others because some businesses face far more complexity than others.”

<sup>47</sup> Group Executive Committee Interview With David Roberts, Thursday 26<sup>th</sup> June 2003

The second qualitative factor that makes it more important for some strategic business units to be able to cope with complexity than others is globalisation and making Barclays a global financial services provider. Sir Peter Middleton,<sup>48</sup> Group Chairman, explains:

“As business units like Barclays Private Clients become truly international organisations, they will have to learn to cope with levels of complexity they have not encountered before – for example, international merger and acquisition programmes. It is therefore more important that businesses like Barclays Private Clients are able to cope with this ‘international complexity’ than those who continue to concentrate their activities in the UK, for example Barclays Stockbrokers and the Woolwich.”

The third qualitative factor that makes it more important for some strategic business units to be able to cope with complexity than others is the emergence of new distribution channels. John Stewart,<sup>49</sup> Deputy Group Chief Executive, explains:

“The dot-com revolution brought distribution to the top of the strategic agenda. The next key issue will be how we distribute financial services ‘on-demand’, which will mean distributing through non-traditional routes, for example joint ventures and strategic alliances. Consequently it is more important that ‘customer-facing’ businesses like the UK Retail Bank are able to cope with complex distribution issues.”

The final qualitative factor that makes it more important for some strategic business units to be able to cope with complexity than others is the impact of onerous legal and regulatory requirements. Robert Nimmo,<sup>50</sup> Group Risk Director, explains:

“Regulation, regulation, regulation – it is more important that some business units like Barclays Private Clients are able to cope with the complexity of regulation because they encounter much more of it than, say, for example Barclays Capital.”

<sup>48</sup> Group Executive Committee Interview With Sir Peter Middleton, Wednesday 31<sup>st</sup> March 2004

<sup>49</sup> Group Executive Committee Interview With John Stewart, Wednesday 7<sup>th</sup> May 2003

<sup>50</sup> Group Executive Committee Interview With Robert Nimmo, Thursday 19<sup>th</sup> June 2003

## **5.5.5 General Observations From The Qualitative Exploration**

### **5.5.5.1 Uncovering Four General Observations**

Through the series of semi-structured interviews in Project 2, the qualitative exploration uncovered four interesting general observations: first, that there are basic differences in the factors that contribute to the rate of change and those which create the level of complexity; second, that perceptions of uncertainty differ among individuals and fluctuate over time; third that diversity and debate is actively encouraged and invited among the Group Executive Committee; and finally, that individuals deliberately create or actively seek uncertainty.

This section sets out these observations in detail. For the purposes of confidentiality direct references are presented anonymously.

#### **5.5.5.2 Differences In The Factors That Create Change And Complexity**

The first observation is that when strategists on the Group Executive Committee set out the qualitative factors that create change, then there is a focus on external issues such as competition, technology, and interest rates. However, when the corporate strategists are asked to describe the qualitative factors that create complexity, there is a clear focus on internal issues such as integration, delivery of change programmes and obtaining strategic investment budget. One of the members of the Group Executive Committee<sup>51</sup> explains:

“When we as a senior team consider our strategic response to the rate of change, the agenda tends to be dominated by external issues, for example customers or interest rates – and let me tell you we have a great track record in being able to cope with such strategic issues. However, when it comes to levels of complexity we have a history of ‘doing things to ourselves’. As you can imagine Barclays becomes a pretty complex organisation when the left hand does not know what the right hand is doing. Be assured that the level of complexity really goes through the roof, and the fun and games really start, when the left hand tries to control the right hand.”

<sup>51</sup> Group Executive Committee Interview, Summer 2003

### **5.5.5.3 Differences In Perspectives Across The Group Executive Committee**

The qualitative exploration in Project 2 uncovered very different perspectives on the experience of uncertainty on the Group Executive Committee. One of the members of the Group Executive Committee<sup>52</sup> explains:

“Developing strategy at Barclays is not uncertain and certainly not complex; we have a terrific business model, a wonderful brand, great people and the most sophisticated management information. Our people are so good that we on Group Executive Committee could probably go to sleep for a year and still make £3 billion.”

Another member of the Group Executive Committee<sup>53</sup> takes a very different view:

“Leading Barclays is uncertain and complex but it’s the rate of change that keeps me awake at night and gets me jumping out of bed in the morning.”

### **5.5.5.4 Perceptions Fluctuating Over Time**

The qualitative exploration in Project 2 uncovered evidence of perceptions on uncertainty fluctuating over time. One of the members of the Group Executive Committee<sup>54</sup> explains:

“My experience of uncertainty is that it fluctuates over time. I remember having sleepless nights in the 1980s about whether or not we should buy the Trustees Savings Bank. During the 1990s the break up of BZW and the purchase of the Woolwich created great uncertainty. With the advent of the new millennium we worried about the dot.com revolution or whether to buy the Bradford & Bingley. Our current sources of uncertainty are our regulation obligations, competition, and whether or not we will acquire or be acquired. Yes, I think it is safe to say that the degree of uncertainty we have experienced on Group Executive Committee over the years has fluctuated greatly over time.”

<sup>52</sup> Group Executive Committee Interview, Summer 2003

<sup>53</sup> Group Executive Committee Interview, Spring 2003

<sup>54</sup> Group Executive Committee Interview, Summer 2003

#### **5.5.5.5 Diversity & Debate Actively Encouraged On Group Executive Committee**

The qualitative exploration in Project 2 also discovered that the Group Executive Committee deliberately avoid high levels of managerial consensus; diversity and debate, referred to in the literature as ‘consensual uncertainty’ (Huff, 1978) (see Section 4.3.11), are actively encouraged. One of the members of the Group Executive Committee<sup>55</sup> highlights the importance of diversity and debate in the strategy development process:

“Under Matt Barrett’s leadership we have built a Group Executive Committee made up of very different personalities and backgrounds, and over the last five years Matt has worked very hard to build an environment of trust, empathy, commitment and teamwork. We don’t feel ‘*consensually uncertain*’ if one of our colleagues interprets the competitive environment differently or proposes a different strategic course. Personally, I enjoy having my views and assumptions challenged by highly experienced and knowledgeable colleagues – invariably it informs and develops my own strategic thinking. A diversity of views expressed within a mature debate is the sign of a high-performing team and this is a very important aspect of the strategy development process at Barclays.”

#### **5.5.5.6 Evidence Of Members Deliberately Creating Or Seeking Uncertainty**

Finally the study discovered the Group Executive Committee sometimes deliberately create uncertainty at Barclays. One of the members of the Group Executive Committee<sup>56</sup> explains:

“At Barclays we have great people who thrive on ambitious challenges and opportunities, and it never ceases to amaze me how our people respond so positively to uncertainty, complexity and change. As strategists it is our responsibility to ensure that the Group is faced with the apposite degree of uncertainty in order to leverage the greatest value from our resources. Consequently there are times when it is appropriate to deliberately create, or actively seek, uncertainty, change and complexity.”

<sup>55</sup> Group Executive Committee Interview, Spring 2003

<sup>56</sup> Group Executive Committee Interview, Summer 2003

## **5.6 Quantitative Exploration: Perceived Environmental Uncertainty**

### **5.6.1 A Statement Of Propositions**

This section of the document details the quantitative exploration into the concept of perceived environmental uncertainty through the semi-structured interviews with the Group Executive Committee. Section 4.6.5.2 explains how the researcher has developed logical corollaries from the literature to build a series of propositions for testing in the field at Barclays. The researcher used these literature-guided propositions to direct the assessment of theory, with a view to using the results to improve current theory.

The three literature-guided propositions that are tested in this section are:

1. The role of managerial consensus, or the lack of such consensus, in the assessments strategists make of the competitive environment, their perceptions of the ability of the organisation to cope, and their evaluation of the importance of the organisation being able to cope, sometimes referred to as the individual perspective on corporate strategy (see Section 4.5.5.1).
2. The relationship between the rate of change and the level of complexity as independent variables in the modernist conceptualisation of perceived environmental uncertainty (see Section 4.3.10).
3. The relationship between those elements of perceived environmental uncertainty that have managerial implications. The research examines the relationship that exists between the degree of perceived environmental uncertainty, the rate of change and the level of complexity with the organisation's ability to cope with these three phenomena (see Section 4.5.6.1) and the importance of the organisation being able to cope with these three phenomena (see Section 4.5.6.2).

It is important to note that the sample consisted of fifteen members of the Group Executive Committee making nine assessments on the seventeen strategic business units within the Barclays Group (see Section 4.6.3.3).

## 5.6.2 The Role Of Managerial Consensus

### 5.6.2.1 Investigating The Level Of Managerial Consensus

This section investigates the level of consensus across the Group Executive Committee regarding the degree of uncertainty faced by the various business units (see Table 28 below). Observation of the standard deviations identifies a high level of disagreement as to the degree of uncertainty faced by Barclays Global Investors (21.349), the Business Bank (19.254), and the Premier Bank (18.342). This dispersion is also evident in the ranges: Barclays Global Investors, 75 (10–85); Business Bank, 65 (10–75); and the Premier Bank, 65 (10–75). By comparison, the lowest standard deviations were for the Woolwich (15.271) and Barclaycard Corporate (15.453).

Global Markets ranked the highest in terms of the uncertainty they face, with a mean score of 62.0, with Private Equity ranked second with a mean of 58.6. Interestingly, Global Markets had a range of 70 (20–90), and Private Equity a range of 50 (30–80) – another illustration of the low level of managerial consensus. Barclays Global Investors and the Business Bank both had a range of 75 (10–85). The UK Retail Bank and Private Equity had the lowest range of scores (20–70, and 30–80), but even this represents a range of 50 on a construct of 0–100.

*Table 28 – The Degree Of Uncertainty Faced By The Various Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	44.73	15	15.271	1	34.14	89.75	70	15
<b>UK Retail Bank</b>	46.40	13	15.838	7	34.13	93.08	70	20
<b>Caribbean</b>	46.67	11=	15.774	5	33.80	92.70	75	20
<b>Europe</b>	55.67	5	15.453	3	27.76	90.82	90	30
<b>International Bank</b>	46.67	11=	18.190	14	39.19	107.49	80	20
<b>Private Bank</b>	51.73	6	16.607	9	32.10	97.60	75	20
<b>Premier Bank</b>	46.00	14	18.342	15	39.87	107.80	75	10
<b>Barclays Global Investors</b>	50.07	8	21.349	17	42.64	125.47	85	10
<b>Business Bank</b>	42.00	16	19.254	16	45.84	113.16	85	10
<b>Barclays Africa</b>	49.00	9	15.721	4	32.08	92.39	75	15
<b>Barclaycard Corporate</b>	37.67	17	15.453	2	41.03	90.82	70	10
<b>Barclaycard International</b>	58.33	3	15.774	6	27.04	92.70	80	25
<b>Barclaycard UK</b>	48.40	10	16.513	8	34.12	97.05	70	10
<b>Collateralised Financing</b>	50.38	7	17.775	13	35.28	104.46	80	20
<b>Global Financing</b>	55.77	4	17.097	10	30.66	100.48	80	20
<b>Global Markets</b>	62.00	1	17.595	12	28.38	103.40	90	20
<b>Private Equity</b>	58.57	2	17.158	11	29.29	100.84	80	30

The next part of the research observes the level of managerial consensus regarding the rate of change faced by the various strategic business units (see Table 29 below). Again observation of the standard deviation identifies a low level of consensus regarding the Caribbean (26.163), Barclays Global Investors (20.517), and Barclays Africa (19.982). This dispersion is also evident in the range of responses: the Caribbean 90 (10–100), Global Markets 75 (15–90), Barclays Global Investors 65 (15–80), and Barclays Africa 65 (15–80). At the other end of the scale, the lowest standard deviations identified are for the Private Bank (13.076) and Barclaycard Corporate (14.100).

*Table 29 – The Rate Of Change Faced By The Various Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	44.40	12	18.871	11	42.50	105.43	80	20
<b>UK Retail Bank</b>	54.00	4=	19.475	13	36.07	108.81	80	20
<b>Caribbean</b>	48.33	8	26.163	17	54.13	146.17	100	10
<b>Europe</b>	53.00	6	16.669	7	31.45	93.13	80	30
<b>International Bank</b>	47.67	9	16.021	4	33.61	89.51	75	20
<b>Private Bank</b>	55.40	3	13.076	1	23.60	73.05	75	25
<b>Premier Bank</b>	54.00	4=	17.849	10	33.05	99.72	80	25
<b>Barclays Global Investors</b>	44.33	13	20.517	16	46.28	114.63	80	15
<b>Business Bank</b>	42.33	14	16.352	5	38.63	91.35	70	20
<b>Barclays Africa</b>	42.00	15	19.982	15	47.58	111.64	80	15
<b>Barclaycard Corporate</b>	41.67	16	14.100	2	33.84	78.77	65	10
<b>Barclaycard International</b>	56.67	1	16.655	6	29.39	93.05	80	20
<b>Barclaycard UK</b>	56.00	2	16.818	8	30.03	93.96	90	30
<b>Collateralised Financing</b>	44.62	11	17.265	9	38.70	96.46	70	15
<b>Global Financing</b>	46.54	10	15.513	3	33.33	86.67	70	15
<b>Global Markets</b>	50.77	7	19.165	12	37.75	107.07	90	15
<b>Private Equity</b>	37.14	17	19.795	14	53.29	110.59	70	10

Observation of the mean scores shows Barclaycard International (56.7) and Barclaycard UK (56.0) faced the highest rates of change in their competitive environments. Interestingly Barclaycard Corporate (41.7), who operate in a very similar competitive environment, were deemed to have faced one of the lowest rates of change. The lack of managerial consensus within a single cluster is also apparent as Barclaycard International (20–80) and Barclaycard UK (30–90) both had a range of 60, and Barclaycard Corporate (10–65) a range of 55. The highest level of consensus was observed at Europe (30–80), the Private Bank (25–75) and the Business Bank (20–70); again, however this represented half of the 0–100 scale offered to respondents.

The study now moves on to observe the managerial consensus that existed at the Group Executive Committee regarding the level of complexity faced by the various business units (see Table 29 below). Again observation of the standard deviation identifies a high level of managerial disagreement regarding the level of complexity faced by Barclays Africa (23.335), the Caribbean (22.652) and Private Equity (21.738). The level of dispersion in the data is also evident in the range of responses: the Caribbean 80 (10–90), the Woolwich 70 (10–80), Barclays Africa 70 (10–80), Collateralised Financing 70 (10–80), and Private Equity 70 (10–80). At the opposite end of the scale, the lowest standard deviations were identified at the Premier Bank (12.714), Barclaycard International (12.790) and the Business Bank (14.368).

*Table 29 – The Level Of Complexity Faced By The Various Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	41.33	17	20.307	14	49.13	114.96	80	10
<b>UK Retail Bank</b>	66.33	1	19.130	13	28.84	108.30	90	40
<b>Caribbean</b>	48.33	8	22.652	16	46.87	128.24	90	10
<b>Europe</b>	57.00	2	16.669	7	29.24	94.37	80	30
<b>International Bank</b>	47.73	10	18.763	11	39.31	106.22	80	20
<b>Private Bank</b>	47.67	11	16.132	6	33.84	91.33	70	20
<b>Premier Bank</b>	55.73	3	12.714	1	22.81	71.97	80	40
<b>Barclays Global Investors</b>	43.67	15	18.270	10	41.84	103.43	70	10
<b>Business Bank</b>	48.00	9	14.368	3	29.93	81.34	70	20
<b>Barclays Africa</b>	44.67	14	23.335	17	52.24	132.10	80	10
<b>Barclaycard Corporate</b>	42.00	16	14.856	4	35.37	84.11	60	20
<b>Barclaycard International</b>	53.00	5	12.790	2	24.13	72.40	70	20
<b>Barclaycard UK</b>	52.33	6	17.512	9	33.46	99.14	80	20
<b>Collateralised Financing</b>	46.54	12	19.081	12	41.00	108.02	80	10
<b>Global Financing</b>	54.62	4	15.064	5	27.58	85.28	80	30
<b>Global Markets</b>	52.31	7	16.909	8	32.33	95.72	80	20
<b>Private Equity</b>	45.71	13	21.738	15	47.55	123.06	80	10

From this observation the UK Retail Bank was deemed to rank the highest in terms of the complexity it faced with a mean score of 66.3, Europe were ranked second with a mean score of 57.0. However one observer gave the UK Retail Bank a score of 40 giving them a range of 50, and one observer gave Europe a score of 30 giving them a range of 50 – more evidence of the low level of managerial consensus. The lowest range (40) was identified at Barclaycard Corporate (20–60) and the Premier Bank (40–80). Interestingly the Caribbean had a range of 80 with scores ranging from 10 through to 90 – further evidence of the lack of managerial consensus at Group Executive Committee.

The research now moves on to observe the level of managerial consensus that existed at the Group Executive Committee regarding the ability of the various strategic business units to cope with uncertainty (see Table 31 below). Observation of the standard deviations again identifies a high level of disagreement. This lack of consensus is most apparent through the standard deviations for the UK Retail Bank (21.751), Barclays Africa (21.531) and Barclaycard International (18.879). This dispersion is also evident in the range of responses: UK Retail Bank 70 (20–90), Barclays Global Investors 70 (20–90), and Barclaycard International 65 (20–85). At the opposite end of the scale, the lowest standard deviations identified were for the Private Bank (11.211), Global Financing (11.254) and Collateralised Financing (12.514).

*Table 31 – The Ability Of The Various Strategic Business Units To Cope With Uncertainty*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	44.67	17	15.864	8	35.52	99.12	70	25
<b>UK Retail Bank</b>	51.33	14	21.751	17	42.37	135.90	90	20
<b>Caribbean</b>	50.33	15	16.633	12	33.05	103.93	80	25
<b>Europe</b>	46.67	16	16.439	11	35.23	102.71	75	20
<b>International Bank</b>	58.67	9	18.074	13	30.81	112.93	80	20
<b>Private Bank</b>	57.40	12	11.211	1	19.53	70.05	70	30
<b>Premier Bank</b>	53.00	13	15.446	7	29.14	96.51	75	25
<b>Barclays Global Investors</b>	67.00	8	18.400	14	27.46	114.97	90	20
<b>Business Bank</b>	71.00	5	14.541	6	20.48	90.85	90	40
<b>Barclays Africa</b>	58.00	10=	21.531	16	37.12	134.53	90	30
<b>Barclaycard Corporate</b>	67.40	7	14.242	5	21.13	88.99	85	40
<b>Barclaycard International</b>	58.00	10=	18.879	15	32.55	117.96	85	20
<b>Barclaycard UK</b>	69.64	6	15.976	9	22.94	99.82	90	30
<b>Collateralised Financing</b>	74.23	3	12.514	3	16.86	78.19	90	50
<b>Global Financing</b>	74.62	1=	11.254	2	15.08	70.32	90	60
<b>Global Markets</b>	74.62	1=	13.019	4	17.45	81.35	90	50
<b>Private Equity</b>	71.43	4	16.304	10	22.83	101.87	90	40

Global Financing and Global Markets ranked the highest in terms of their ability to cope with uncertainty with a mean score of 74.62; their fellow business units in the Barclays Capital cluster, Collateralised Financing and Private Equity, were third and fourth respectively. There were also some relatively low ranges in the responses: Global Financing (30), Global Markets (40), Collateralised Financing (40), and the Private Bank (40) – this suggests a higher level of consensus regarding the ability of these business units to cope with uncertainty.

It is now possible to move on to observe the level of managerial consensus that existed at the Group Executive Committee regarding the ability of the various strategic business units to cope with change (see Table 32 below). Observation of the standard deviations again identifies a high level of disagreement, or a lack of managerial consensus. This is most apparent through the results for: Barclays Africa (21.996), Barclaycard International (20.569), and the UK Retail Bank (19.242). Again such dispersion is also evident in the range of responses: Barclays Africa 65 (25–90), Barclaycard International 65 (20–85), and the UK Retail Bank 70 (20–90). At the opposite end of the scale, the lowest standard deviations were identified for the Private Bank (12.081), Global Financing (12.415) and the Business Bank (12.892).

*Table 32 – The Ability Of The Various Strategic Business Units To Cope With Change*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	48.40	16	14.681	7	30.33	92.68	70	20
<b>UK Retail Bank</b>	51.67	13	19.242	15	37.24	121.47	90	20
<b>Caribbean</b>	51.33	14=	17.975	12=	35.02	113.48	80	20
<b>Europe</b>	46.33	17	14.695	8	31.72	92.77	75	20
<b>International Bank</b>	53.73	11	15.229	10	28.34	96.14	80	20
<b>Private Bank</b>	52.33	12	12.081	1	23.08	76.27	70	30
<b>Premier Bank</b>	51.33	14=	17.975	12=	35.02	113.48	80	20
<b>Barclays Global Investors</b>	66.53	6	18.446	14	27.72	116.45	90	30
<b>Business Bank</b>	72.07	4	12.892	3	17.89	81.39	90	40
<b>Barclays Africa</b>	59.67	9	21.996	17	36.86	138.86	90	25
<b>Barclaycard Corporate</b>	66.40	7	13.814	5	20.80	87.21	90	40
<b>Barclaycard International</b>	55.33	10	20.569	16	37.17	129.85	85	20
<b>Barclaycard UK</b>	72.33	3	13.870	6	19.18	87.56	90	50
<b>Collateralised Financing</b>	71.15	5	13.114	4	18.43	82.79	90	50
<b>Global Financing</b>	73.85	1	12.415	2	16.81	78.37	90	50
<b>Global Markets</b>	72.69	2	14.954	9	20.57	94.41	100	50
<b>Private Equity</b>	65.71	8	15.336	11	23.34	96.82	90	40

Interestingly Global Financing (73.85) and Global Markets (72.69) also ranked the highest in terms of their ability to cope with change. Barclaycard UK was ranked third across the portfolio in this capability with a mean score of 72.33. Again there were some relatively low ranges in the responses: Barclaycard UK (40), Collateralised Financing (40), Global Financing (40), and the Private Bank (40) – this suggests a higher level of consensus regarding the ability of these business units to cope with change.

The research now moves on to examine the level of managerial consensus that existed at the Group Executive Committee regarding the ability of the various strategic business units to cope with complexity (see Table 33 below). Observation of the standard deviations again identifies a high level of disagreement, or a lack of managerial consensus. Similarly to the last section the most disagreement was for Barclaycard International (20.166), the UK Retail Bank (18.803), and Barclays Africa (18.344). Again this dispersion is evident in the range of responses for these three business units: Barclaycard International 65 (20–85), the UK Retail Bank 60 (20–80), and Barclays Africa 55 (35–90). The Caribbean and Barclays Global Investors had the largest range (70), each with responses ranging from 20 through to 90. Again the Private Bank (11.979) was at opposite end of the scale, accompanied this time by Barclaycard UK (12.421) and Global Markets (12.796).

*Table 33 – The Ability Of The Various Strategic Business Units To Cope With Complexity*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	40.67	17	16.994	12	41.79	108.95	65	10
<b>UK Retail Bank</b>	50.00	15	18.803	16	37.61	120.55	80	20
<b>Caribbean</b>	51.33	14	17.369	13	33.83	111.35	90	20
<b>Europe</b>	49.33	16	14.500	7	29.39	92.95	75	20
<b>International Bank</b>	56.00	12	16.497	11	29.46	105.76	80	20
<b>Private Bank</b>	57.73	10	11.979	1	20.75	76.79	75	30
<b>Premier Bank</b>	53.33	13	13.048	4	24.46	83.64	80	30
<b>Barclays Global Investors</b>	75.67	5	17.512	14	23.14	112.26	90	20
<b>Business Bank</b>	71.73	7	13.941	6	19.43	89.37	90	40
<b>Barclays Africa</b>	60.07	9	18.344	15	30.54	117.60	90	35
<b>Barclaycard Corporate</b>	67.33	8	14.984	8	22.25	96.06	85	40
<b>Barclaycard International</b>	57.67	11	20.166	17	34.97	129.28	85	20
<b>Barclaycard UK</b>	74.00	6	12.421	2	17.67	79.63	90	50
<b>Collateralised Financing</b>	77.00	4	16.266	9	21.12	104.28	100	40
<b>Global Financing</b>	78.08	3	16.425	10	21.04	105.30	100	40
<b>Global Markets</b>	79.23	2	12.796	3	16.15	82.03	100	50
<b>Private Equity</b>	79.36	1	13.135	5	16.55	84.20	100	50

Again the strategic business units within the Barclays Capital cluster dominated the highest ranks in terms of the ability of strategic business units to cope, this time with complexity, with: Private Equity 79.36 (first), Global Markets 79.23 (second), Global Financing 78.08 (third), and Collateralised Financing 77.00 (fourth). Again there were some significant ranges in the responses: the lowest ranges were Barclaycard UK 50–90 (40), Barclaycard Corporate 40–85 (45), and the Private Bank 30–75 (45).

The next element examines the level of managerial consensus at the Group Executive Committee regarding the importance of the various strategic business units being able to cope with uncertainty (see Table 34 below). Again the standard deviations illustrate a high level of disagreement, or a lack of managerial consensus in the data. The most disagreement surrounded Private Equity (26.774), the UK Retail Bank (25.598), and the International Bank (24.088). Again this dispersion is evident in the range of responses for these three business units: Private Equity 80 (10–90), the UK Retail Bank 80 (20–100), and the International Bank 70 (20–90). Again the Caribbean had the largest range (85) with responses ranging from 0 through to 85. This time Global Financing (13.301) was at the opposite end of the scale accompanied by Barclaycard International (13.947), Barclaycard UK (17.715) and the Woolwich (17.809).

*Table 34 – The Importance Of The Various Strategic Business Units Being Able To Cope With Uncertainty*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	48.00	13	17.809	4	37.10	85.86	80	20
<b>UK Retail Bank</b>	71.33	5	25.598	16	35.88	123.41	100	20
<b>Caribbean</b>	37.67	17	23.135	13	61.42	111.54	85	0
<b>Europe</b>	55.33	9	22.398	10	40.48	107.99	90	20
<b>International Bank</b>	54.67	10	24.088	15	44.06	116.14	90	20
<b>Private Bank</b>	44.67	14=	20.914	8	46.82	100.83	75	20
<b>Premier Bank</b>	61.00	8	23.006	12	37.72	110.92	100	20
<b>Barclays Global Investors</b>	53.67	11	21.833	9	40.68	105.26	80	20
<b>Business Bank</b>	73.00	2	22.662	11	31.04	109.26	100	20
<b>Barclays Africa</b>	40.33	16	23.335	14	57.86	112.51	80	10
<b>Barclaycard Corporate</b>	44.67	14=	18.942	7	42.41	91.33	75	20
<b>Barclaycard International</b>	65.33	6	13.947	2	21.35	67.24	90	40
<b>Barclaycard UK</b>	74.33	1	17.715	3	23.83	85.41	100	30
<b>Collateralised Financing</b>	62.31	7	18.479	5	29.66	89.09	90	30
<b>Global Financing</b>	71.92	3=	13.301	1	18.49	64.13	90	40
<b>Global Markets</b>	71.92	3=	18.664	6	25.95	89.99	100	20
<b>Private Equity</b>	52.86	12	26.774	17	50.65	129.09	90	10

Barclaycard UK (74.33) and the Business Bank (73.00) ranked the highest in terms of the importance of their ability to cope with uncertainty. There were also some high ranges in the responses: Caribbean (85), followed by five business units with a range of 80: the UK Retail Bank, the Premier Bank, the Business Bank, Global Markets, and Private Equity – this also indicates a lower level of consensus regarding the importance of these business units' ability to cope with uncertainty.

The next part of the research moves on to examine the level of managerial consensus at the Group Executive Committee regarding the importance of the various strategic business units being able to cope with change (see Table 35 below). Again the standard deviations illustrate a high level of disagreement, or a lack of managerial consensus, in the data. The most disagreement surrounded the UK Retail Bank (23.197), the Caribbean (23.053), and Barclays Africa (21.833). Again this dispersion was evident in the range of responses for these three businesses: the UK Retail Bank 70 (30–100), the Caribbean 80 (5–85), and Barclays Africa 70 (10–80). Outside these three businesses, the International Bank 80 (20–100) had the largest range of responses. Again Global Financing (11.774) was at the opposite end of the scale, accompanied by Global Markets (12.558), Barclays Global Investors (14.936) and Barclaycard Corporate (16.235).

*Table 35 – The Importance Of The Various Strategic Business Units Being Able To Cope With Change*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	54.00	13	18.048	8	33.42	98.60	80	30
<b>UK Retail Bank</b>	76.67	2	23.197	17	30.26	126.73	100	30
<b>Caribbean</b>	43.00	17	23.053	16	53.61	125.94	85	5
<b>Europe</b>	59.07	11	18.942	11	32.07	103.48	90	20
<b>International Bank</b>	64.40	8	21.037	13	32.67	114.93	100	20
<b>Private Bank</b>	55.67	12	18.886	10	33.93	103.18	80	20
<b>Premier Bank</b>	70.33	5	16.847	6	23.95	92.04	100	40
<b>Barclays Global Investors</b>	60.33	9	14.936	3	24.76	81.60	80	30
<b>Business Bank</b>	75.67	3	21.286	14	28.13	116.29	100	30
<b>Barclays Africa</b>	45.33	16	21.833	15	48.16	119.28	80	10
<b>Barclaycard Corporate</b>	48.00	15	16.235	4	33.82	88.70	75	20
<b>Barclaycard International</b>	70.00	7	18.516	9	26.45	101.16	90	30
<b>Barclaycard UK</b>	80.67	1	16.783	5	20.81	91.69	100	40
<b>Collateralised Financing</b>	59.23	10	19.351	12	32.67	105.72	85	20
<b>Global Financing</b>	70.08	6	11.774	1	16.80	64.33	90	50
<b>Global Markets</b>	71.15	4	12.558	2	17.65	68.61	90	50
<b>Private Equity</b>	51.79	14	17.889	7	34.54	97.73	80	20

Interestingly, Barclaycard UK (75.67), the UK Retail Bank (76.67) and the Business Bank (75.67) ranked the highest in terms of the importance of their ability to cope with change. In this data there was a series of relatively high ranges in the responses, with Caribbean and the International Bank both having a range of 80, and four business units with a range of 70: UK Retail Bank, Europe, the Business Bank, and Barclays Africa – this also suggests a lower level of consensus regarding the importance of these business units’ ability to cope with change.

This final part of this section examines the level of managerial consensus at the Group Executive Committee regarding the importance of the various business units being able to cope with complexity (see Table 36 below). Again the standard deviations illustrate a high level of disagreement, or a lack of managerial consensus, in the data. The most disagreement surrounded: the International Bank (22.350), Barclays Global Investors (22.345), and the UK Retail Bank (22.023). Again this dispersion was evident in the range of responses for these three units: the Barclays Global Investors 75 (10–85), the International Bank 70 (20–90), and the UK Retail Bank 70 (30–100). Again Global Financing (13.708) was at the other end of the scale, accompanied by Global Markets (14.639) and Barclaycard Corporate (15.407).

*Table 36 – The Importance Of The Various Strategic Business Units Being Able To Cope With Complexity*

<b>Strategic Business Unit</b>	<b>Mean</b>	<b>Mean Rank</b>	<b>SD</b>	<b>SD Rank</b>	<b>SD (% Mean)</b>	<b>% Mean SD</b>	<b>Max</b>	<b>Min</b>
<b>Woolwich</b>	45.67	16	18.980	6	41.56	97.89	75	10
<b>UK Retail Bank</b>	73.00	4	22.023	15	30.17	113.58	100	30
<b>Caribbean</b>	43.33	17	19.791	9	45.67	102.07	70	10
<b>Europe</b>	55.33	12	21.420	13	38.71	110.47	90	10
<b>International Bank</b>	62.33	10	22.350	17	35.86	115.27	90	20
<b>Private Bank</b>	54.33	13	21.118	12	38.87	108.91	90	10
<b>Premier Bank</b>	66.00	8	19.198	7	29.09	99.02	100	30
<b>Barclays Global Investors</b>	62.00	11	22.345	16	36.04	115.24	85	10
<b>Business Bank</b>	72.00	5	20.160	10	28.00	103.98	100	30
<b>Barclays Africa</b>	48.33	15	21.685	14	44.87	111.84	90	10
<b>Barclaycard Corporate</b>	50.33	14	15.407	3	30.61	79.46	80	30
<b>Barclaycard International</b>	67.67	7	19.445	8	28.74	100.29	90	10
<b>Barclaycard UK</b>	75.00	3	18.516	5	24.69	95.50	100	30
<b>Collateralised Financing</b>	68.46	6	18.066	4	26.39	93.17	90	40
<b>Global Financing</b>	77.69	2	13.708	1	17.64	70.70	100	40
<b>Global Markets</b>	80.00	1	14.639	2	18.30	75.50	100	40
<b>Private Equity</b>	62.50	9	20.767	11	33.23	107.10	90	30

From the observation Global Markets (80.00), Global Financing (77.69) and Barclaycard UK (75.00) ranked the highest in terms of the importance of their ability to cope with complexity. Again there was a series of relatively high ranges in the responses: Europe (80), the Private Bank (80), Barclays Africa (80), and Barclaycard International (80) – this also indicates a lower level of consensus regarding the importance of these business units’ ability to cope with complexity. The lowest range of responses, signifying the highest level of consensus, relating to the importance of the business units being able to cope with complexity, was evident at Barclaycard Corporate (50) and Collateralised Financing (50), on a scale of 0–100.

### 5.6.2.2 Summarising The Level Of Managerial Consensus

A summary table of the responses (see Table 37 below) shows the degree of consensus in the responses made by members of the Group Executive Committee to each of the nine questions:

*Table 37 – Summarising The Level Of Managerial Consensus*

Questions	Mean Standard Deviation	Consensus Rank
<b>Identifying Perceived Levels Of:</b>		
Uncertainty	17.0	4
Change	17.9	6
Complexity	17.7	5
<b>Ability To Cope With:</b>		
The Degree Of Uncertainty	16.0	3
The Rate Of Change	15.8	2
The Level Of Complexity	15.6	1
<b>Importance Of Being Able To Cope With:</b>		
The Degree Of Uncertainty	20.7	9
The Rate Of Change	18.3	7
The Level Of Complexity	19.4	8

This analysis shows that the lack of managerial consensus not only affects perceptions of the degree of uncertainty, change and complexity in the competitive environment but also assessments of the ability of the various strategic business units to cope and evaluations of the importance of the business units being able to cope.

Interestingly the responses can be categorised into three groups with the responses for the importance of being able to cope with uncertainty, change and complexity showing the highest mean standard deviations, or the lowest level of managerial consensus. The questions relating to assessments of the levels of uncertainty, change and complexity have the next highest mean standard deviations, or the next lowest level of managerial consensus. Finally the questions relating to assessments of the ability to cope with uncertainty, change and complexity have the lowest mean standard deviations, or the highest level of managerial consensus. This observation is further developed later in the document (see Section 5.8.1.2, Table 75).

The next part of this investigation analyses the mean standard deviations assigned to the assessments of the degree of uncertainty, rate of change and level of complexity being faced by the various strategic business units. A mean standard deviation is produced from the mean standard deviations to identify the dispersion in the data for this section of the research. The various strategic business units are then ranked according to their overall mean standard deviation; the business unit with the highest mean standard deviation (or highest dispersion) is the one deemed to be subject to the lowest level of managerial consensus (see Table 38 below):

*Table 38 – Summarising Managerial Consensus: Assessing The Levels Of Perceived Environmental Uncertainty*

<b>Strategic Business Unit</b>	<b>Uncertainty</b>	<b>Change</b>	<b>Complexity</b>	<b>Mean SD</b>	<b>Rank</b>
<b>Caribbean</b>	15.774	26.163	22.652	<b>21.530</b>	<b>1</b>
<b>Barclays Global Investors</b>	21.349	20.517	18.270	<b>20.045</b>	<b>2</b>
<b>Barclays Africa</b>	15.721	19.982	23.335	<b>19.679</b>	<b>3</b>
<b>Private Equity</b>	17.158	19.795	21.738	<b>19.564</b>	<b>4</b>
<b>Woolwich</b>	15.271	18.871	20.307	<b>18.150</b>	<b>5</b>
<b>UK Retail Bank</b>	15.838	19.475	19.130	<b>18.148</b>	<b>6</b>
<b>Collateralised Financing</b>	17.775	17.265	19.081	<b>18.040</b>	<b>7</b>
<b>Global Markets</b>	17.595	19.165	16.909	<b>17.890</b>	<b>8</b>
<b>International Bank</b>	18.19	16.021	18.763	<b>17.658</b>	<b>9</b>
<b>Barclaycard UK</b>	16.513	16.818	17.512	<b>16.948</b>	<b>10</b>
<b>Business Bank</b>	19.254	16.352	14.368	<b>16.658</b>	<b>11</b>
<b>Premier Bank</b>	18.342	17.849	12.714	<b>16.302</b>	<b>12</b>
<b>Europe</b>	15.453	16.669	16.669	<b>16.264</b>	<b>13</b>
<b>Global Financing</b>	17.097	15.513	15.064	<b>15.891</b>	<b>14</b>
<b>Private Bank</b>	16.607	13.076	16.132	<b>15.272</b>	<b>15</b>
<b>Barclaycard International</b>	15.774	16.655	12.790	<b>15.073</b>	<b>16</b>
<b>Barclaycard Corporate</b>	15.453	14.100	14.856	<b>14.803</b>	<b>17</b>

When ranked in terms of their overall mean standard deviations, it is possible to identify the lowest level of consensus for: Caribbean (21.530), Barclays Global Investors (20.045), Barclays Africa (19.679) and Private Equity (19.564). It is important to note that the scale of assessment was 0–100 therefore such mean standard deviations show significant dispersion in the data and a considerable lack of managerial consensus. At the opposite end of the scale, there is most consensus regarding Barclaycard International (15.073) and Barclaycard Corporate (14.803); however a mean standard deviation of approximately 15 also shows significant dispersion. The overall Group mean standard deviation is 17.524, which represents a significant lack of managerial consensus regarding the assessments of degrees of uncertainty, change and complexity across the entire portfolio of businesses within the Barclays Group.

Using the same discipline, it is possible to analyse the mean standard deviations assigned to the assessments for the ability of the various strategic business units to cope with: the degree of uncertainty, the rate of change and the level of complexity in their competitive environments. The results are set out in Table 39 below:

*Table 39 – Summarising Managerial Consensus: Assessing The Ability To Cope*

<b>Strategic Business Unit</b>	<b>Uncertainty</b>	<b>Change</b>	<b>Complexity</b>	<b>Mean SD</b>	<b>Rank</b>
<b>Barclays Africa</b>	21.531	21.996	18.344	<b>20.624</b>	<b>1</b>
<b>UK Retail Bank</b>	21.751	19.242	18.803	<b>19.932</b>	<b>2</b>
<b>Barclaycard International</b>	18.879	20.569	20.166	<b>19.871</b>	<b>3</b>
<b>Barclays Global Investors</b>	18.400	18.446	17.512	<b>18.119</b>	<b>4</b>
<b>Caribbean</b>	16.633	17.975	17.369	<b>17.326</b>	<b>5</b>
<b>International Bank</b>	18.074	15.229	16.497	<b>16.600</b>	<b>6</b>
<b>Woolwich</b>	15.864	14.681	16.994	<b>15.846</b>	<b>7</b>
<b>Premier Bank</b>	15.446	17.975	13.048	<b>15.490</b>	<b>8</b>
<b>Europe</b>	16.439	14.695	14.500	<b>15.211</b>	<b>9</b>
<b>Private Equity</b>	16.304	15.336	13.135	<b>14.925</b>	<b>10</b>
<b>Barclaycard Corporate</b>	14.242	13.814	14.984	<b>14.347</b>	<b>11</b>
<b>Barclaycard UK</b>	15.976	13.870	12.421	<b>14.089</b>	<b>12</b>
<b>Collateralised Financing</b>	12.514	13.114	16.266	<b>13.965</b>	<b>13</b>
<b>Business Bank</b>	14.541	12.892	13.941	<b>13.791</b>	<b>14</b>
<b>Global Markets</b>	13.019	14.954	12.796	<b>13.590</b>	<b>15</b>
<b>Global Financing</b>	11.254	12.415	16.425	<b>13.365</b>	<b>16</b>
<b>Private Bank</b>	11.211	12.081	11.979	<b>11.757</b>	<b>17</b>

When ranked in terms of their overall mean standard deviations, it is possible to identify the lowest level of consensus for: Barclays Africa (20.624), the UK Retail Bank (19.932), Barclaycard International (19.871) and Barclays Global Investors (18.119). Similarly to the earlier analysis, it is again important to remember that the scale of assessment was 0–100, therefore such mean standard deviations again show significant dispersion in the data and a considerable lack of managerial consensus.

At the opposite end of the scale, there is most managerial consensus regarding: the Private Bank (11.757), Global Financing (13.365) and Global Markets (13.590); however mean standard deviations of this size again show significant dispersion. The overall Group mean standard deviation is 15.815, which represents a significant lack of managerial consensus regarding the assessments of the ability of the various strategic business units within the Barclays Group to cope with uncertainty, change and complexity.

The study now goes on to use the same discipline again, this time to analyse the mean standard deviations assigned to the evaluations of the importance of the various strategic business units being able to cope with: the degree of uncertainty, the rate of change and the level of complexity in their competitive environments. The results are set out in Table 40 below:

*Table 40 – Summarising Managerial Consensus: Evaluating The Importance Of Being Able To Cope*

<b>Strategic Business Unit</b>	<b>Uncertainty</b>	<b>Change</b>	<b>Complexity</b>	<b>Mean SD</b>	<b>Rank</b>
<b>UK Retail Bank</b>	25.598	23.197	22.023	<b>23.606</b>	<b>1</b>
<b>International Bank</b>	24.088	21.037	22.35	<b>22.492</b>	<b>2</b>
<b>Barclays Africa</b>	23.335	21.833	21.685	<b>22.284</b>	<b>3</b>
<b>Caribbean</b>	23.135	23.053	19.791	<b>21.993</b>	<b>4</b>
<b>Private Equity</b>	26.774	17.889	20.767	<b>21.810</b>	<b>5</b>
<b>Business Bank</b>	22.662	21.286	20.16	<b>21.369</b>	<b>6</b>
<b>Europe</b>	22.398	18.942	21.42	<b>20.920</b>	<b>7</b>
<b>Private Bank</b>	20.914	18.886	21.118	<b>20.306</b>	<b>8</b>
<b>Barclays Global Investors</b>	21.833	14.936	22.345	<b>19.705</b>	<b>9</b>
<b>Premier Bank</b>	23.006	16.847	19.198	<b>19.684</b>	<b>10</b>
<b>Collateralised Financing</b>	18.479	19.351	18.066	<b>18.632</b>	<b>11</b>
<b>Woolwich</b>	17.809	18.048	18.98	<b>18.279</b>	<b>12</b>
<b>Barclaycard UK</b>	17.715	16.783	18.516	<b>17.671</b>	<b>13</b>
<b>Barclaycard International</b>	13.947	18.516	19.445	<b>17.303</b>	<b>14</b>
<b>Barclaycard Corporate</b>	18.942	16.235	15.407	<b>16.861</b>	<b>15</b>
<b>Global Markets</b>	18.664	12.558	14.639	<b>15.287</b>	<b>16</b>
<b>Global Financing</b>	13.301	11.774	13.708	<b>12.928</b>	<b>17</b>

When ranked in this way it is possible to identify the lowest level of consensus for: the UK Retail Bank (23.606), the International Bank (22.492), Barclays Africa (22.284) and Caribbean (21.993). Once more it is important to remember that the scale of assessment was 0–100, therefore such mean standard deviations show significant dispersion in the data and a considerable lack of managerial consensus.

At the opposite end of the scale, there is most managerial consensus regarding Global Financing (12.928), Global Markets (15.287), and Barclaycard Corporate (16.861); however mean standard deviations of this range also show significant dispersion in the data. The overall Group mean standard deviation is 19.478, which represents a significant lack of consensus regarding the evaluations of the importance of the various strategic business units within the Barclays Group being able to cope with uncertainty, change and complexity.

The next piece of analysis looks at the relative rankings that have been assigned to the various strategic business units. The purpose is to identify whether the lack of managerial consensus relates to certain business units in the Group or whether there is a general lack of consensus across the entire portfolio. Here the strategic business units have been ranked according to their mean standard deviations across all nine questions. The results are set out in Table 41 below:

*Table 41 – Summarising Managerial Consensus: Comparing The Rankings Of The Strategic Business Units*

<b>Strategic Business Unit</b>	<b>Levels Of</b>			<b>Ability To Cope</b>			<b>Importance Of</b>		
	<b>Unc</b>	<b>Cha</b>	<b>Com</b>	<b>Unc</b>	<b>Cha</b>	<b>Com</b>	<b>Unc</b>	<b>Cha</b>	<b>Com</b>
<b>Woolwich</b>	17	7	4	10	11	6	14	10	12
<b>UK Retail Bank</b>	11	5	5	1	3	2	2	1	3
<b>Caribbean</b>	12=	1	2	6	5=	5	5	2	9
<b>Europe</b>	15=	11	11	7	10	11	8	7	5
<b>International Bank</b>	4	14	7	5	8	7	3	5	1
<b>Private Bank</b>	9	17	12	17	17	17	10	8	6
<b>Premier Bank</b>	3	8	17	11	5=	14	6	12	11
<b>Barclays Global Investors</b>	1	2	8	4	4	4	9	15	2
<b>Business Bank</b>	2	13	15	12	15	12	7	4	8
<b>Barclays Africa</b>	14	3	1	2	1	3	4	3	4
<b>Barclaycard Corporate</b>	15=	16	14	13	13	10	11	14	15
<b>Barclaycard International</b>	12=	12	16	3	2	1	16	9	10
<b>Barclaycard UK</b>	10	10	9	9	12	16	15	13	13
<b>Collateralised Financing</b>	5	9	6	15	14	9	13	6	14
<b>Global Financing</b>	8	15	13	16	16	8	17	17	17
<b>Global Markets</b>	6	6	10	14	9	15	12	16	16
<b>Private Equity</b>	7	4	3	8	7	13	1	11	7

The analysis shows that there is some consensus regarding the assessments obtained for the UK Retail Bank, the Caribbean, Barclays Africa and Barclays Global Investors which are all frequently within the top five rankings when it comes to making assessments for the degrees of perceived environmental uncertainty, their ability to cope, and the importance of their being able to cope with such uncertainty. Equally consistent, but at the opposite end of the scale, Global Financing and Barclaycard Corporate are frequently outside the top ten and are not ever within the top five. Barclaycard International produces interesting results with the highest lack of consensus in its ability to cope with complexity and the second lowest lack of consensus in the importance of it being able to deal with uncertainty.

When considering the lack of managerial consensus it is useful to rank the strategic business units in order of the dispersion in the data. This ranking is represented in Table 42 below:

*Table 42 – Summarising Managerial Consensus: Comparing The Mean Rankings Of The Business Units*

Strategic Business Unit	Mean Ranking	Consensus Rank
<b>UK Retail Bank</b>	3.67	<b>1</b>
<b>Barclays Africa</b>	3.89	<b>2</b>
<b>Caribbean</b>	5.22	<b>3</b>
<b>Barclays Global Investors</b>	5.44	<b>4</b>
<b>International Bank</b>	6.00	<b>5</b>
<b>Private Equity</b>	6.78	<b>6</b>
<b>Barclaycard International</b>	9.00	<b>7</b>
<b>Europe</b>	9.44	<b>8</b>
<b>Premier Bank</b>	9.67	<b>9</b>
<b>Business Bank</b>	9.78	<b>10</b>
<b>Collateralised Financing</b>	10.11	<b>11</b>
<b>Woolwich</b>	10.11	<b>11</b>
<b>Barclaycard UK</b>	10.56	<b>13</b>
<b>Private Bank</b>	11.22	<b>14</b>
<b>Global Markets</b>	11.56	<b>15</b>
<b>Barclaycard Corporate</b>	13.44	<b>16</b>
<b>Global Financing</b>	14.11	<b>17</b>

One of the explanations for the apparent lack of consensus on the degree of perceived environmental uncertainty could relate to how respondents respond to a scale of 0–100. In order to illustrate this, Table 43 below ranks the fifteen respondents in terms of the average score they awarded for each of the nine questions.

*Table 43 – Summarising Managerial Consensus: Comparing The Mean Scores Given By The Respondents*

Respondent	Levels Of	Ability	Importance	Mean Score	Rank
<b>B</b>	59.706	71.275	71.765	67.582	<b>1</b>
<b>I</b>	57.059	70.980	67.843	65.294	<b>2</b>
<b>L</b>	60.784	54.118	68.824	61.242	<b>3</b>
<b>J</b>	43.590	65.107	70.385	59.694	<b>4</b>
<b>N</b>	29.706	74.412	74.412	59.510	<b>5</b>
<b>F</b>	55.490	56.863	65.294	59.216	<b>6</b>
<b>C</b>	52.143	62.857	62.143	59.048	<b>7</b>
<b>D</b>	56.667	51.961	67.059	58.562	<b>8</b>
<b>A</b>	46.667	67.647	56.471	56.928	<b>9</b>
<b>K</b>	45.882	65.980	58.431	56.765	<b>10</b>
<b>H</b>	40.000	72.157	54.706	55.621	<b>11</b>
<b>O</b>	50.686	56.157	54.569	53.804	<b>12</b>
<b>E</b>	48.235	54.902	54.314	52.484	<b>13</b>
<b>G</b>	49.706	51.569	44.902	48.725	<b>14</b>
<b>M</b>	42.157	48.235	40.784	43.725	<b>15</b>

Table 43 shows that Respondent B (67.582), Respondent I (65.294) and Respondent L (61.242) tended towards the higher end of the 0–100 scale when making their perceptual assessments. By comparison Respondent G (48.725) and Respondent M (43.725) displayed a propensity for the lower end of the 0–100 scale when making their perceptual assessments.

The lack of managerial consensus is also apparent when the perceptual assessments are observed relative to the rankings of their peers on the Group Executive Committee. Here the assessments made by Respondent B and Respondent I are consistently in the top six of the rankings for each question. This analysis is set out in Table 44 below.

*Table 44 – Summarising Managerial Consensus: Comparing The Rankings Of The Mean Responses*

Respondents	Levels Of			Ability To Cope			Importance Of Coping		
	Unc	Cha	Com	Unc	Cha	Com	Unc	Cha	Com
<b>B</b>	1	4	2	4	3	3	3	4	1
<b>I</b>	4	3	3	3	2	5=	2	6	6
<b>L</b>	7	1	1	13	15	8	5=	2	5
<b>J</b>	13	12	10	7	8	4	4	3	3
<b>N</b>	15	15	14	2	1	1=	1	1	2
<b>F</b>	5	5	5	10	9	10	5=	7	7
<b>C</b>	8	7	4	8	7	9	8	9	9
<b>D</b>	3	2	7	14	13	12	7	5	4
<b>A</b>	9	13	8	5	6	5=	10	12	10
<b>K</b>	12	6	13	6	4	7	13	8	8
<b>H</b>	14	14	9	1	5	1=	9	13	12
<b>O</b>	2	9	12	9	11	11	11	11	11
<b>E</b>	6	10	11	11	10	13	12	10	14
<b>G</b>	10	8	6	12	12	15	15	14	13
<b>M</b>	11	11	15	15	14	14	14	15	15

By way of comparison, the assessments made by Respondents E, G and M were constantly at the lower end of the 0–100 scale with very few of their rankings being in the top ten.

Interestingly Respondents F and C gravitated around the centre of the scale, where all of their scores were ranked between 6 and 10. Respondent N showed a propensity to deal at both extremes of the scale with responses that were either in the top two of the rankings or the bottom four. It is therefore clear that there is a considerable lack of consensus regarding perceived environmental uncertainty across the Group Executive Committee. However, it is important to note that this could be compounded by the way in which the respondents have interpreted the 0–100 scale. As a check, the data was standardised. Through this analysis it was found that the raw data were so closely correlated that standardisation was unnecessary.

## 5.6.3 Challenging The Modernist Perspective

### 5.6.3.1 The Relationship Between Uncertainty, Change And Complexity

This section of the research tests, this time through the responses of the Group Executive Committee, the conceptualisation of perceived environmental uncertainty given by the modernist perspective (Duncan, 1972), where the phenomenon is described in terms of two constructs: the simple–complex dimension and the static–dynamic dimension. Through the application of this conceptualisation, the independent variables are the rate of change and the level of complexity. In Hatch’s (1997) conceptualisation of perceived environmental uncertainty, she proposes that the impact of these two independent variables is equally weighted, Hatch’s conceptualisation of perceived environmental uncertainty is set out in detail in Section 5.4.2.2.3., illustrated in Figure 13.

*Table 45 – Examining The Relationship Between Uncertainty, Change And Complexity*

	Uncertainty		Change		Complexity	
	r	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)
Uncertainty	1		–	–	–	–
Change	<b>0.437</b>	<b>19.10</b>	1		–	–
Complexity	0.175	3.07	<b>0.435</b>	<b>18.92</b>	1	

Note: Table 45 is based on the analysis of all data (248 observations)

In contrast to the analysis carried out during the pilot study, the mean scores of the perceptual assessments made by members of the Group Executive Committee as to the degree of uncertainty, the rate of change and the level of complexity faced by the business units reveal no significant relationships between these variables.

To maximise the possibility of identifying such relationships, individual responses were included in a pool of data, yielding 248 observations (not all responses were completed). The coefficients derived from the pooled data are set out above in Table 45. The results that are significantly different from zero are indicated in bold.

The results show that only 19.10% of perceived environmental uncertainty is associated with the perceived rate of change. Interestingly the results also suggest that there is no statistically significant relationship between the level of complexity perceived by members of the Group Executive Committee and the degree of environmental uncertainty they observe. The relationship between the rate of change and the level of complexity (see Table 45 above) is discussed in detail in Section 5.6.3.4.

The data in Table 46 below display R-squared values for an equation where the assessment for uncertainty is determined by a linear combination of the assessments for change and complexity. R-squared, sometimes referred to as the coefficient of determination, shows the proportion of the variation of the dependent variable (in this case uncertainty) that can be explained by the regression equation – or in simpler terms, the explained variation in the dependent variable (again uncertainty) divided by the total variance.

*Table 46 – Examining The Relationship Between Uncertainty, Change And Complexity*

<b>Respondent</b>	<b>R-squared (R<sup>2</sup>)</b>	<b>R-squared (R<sup>2</sup>) As %</b>	<b>Significant Values</b>
<b>1.</b>	0.173	17.3%	Not Significant
<b>2.</b>	0.300	30.0%	Not Significant
<b>3.</b>	0.395	39.5%	Not Significant
<b>4.</b>	0.083	8.3%	Not Significant
<b>5.</b>	0.589	58.9%	<1%
<b>6.</b>	0.613	61.3%	<1%
<b>7.</b>	0.419	41.9%	<5%
<b>8.</b>	0.619	61.9%	<1%
<b>9.</b>	0.197	19.7%	Not Significant
<b>10.</b>	0.146	14.6%	Not Significant
<b>11.</b>	0.154	15.4%	Not Significant
<b>12.</b>	0.409	40.9%	<5%
<b>13.</b>	0.699	69.9%	<1%
<b>14.</b>	0.419	41.9%	<2%
<b>15.</b>	0.114	11.4%	Not Significant
<b>AVERAGES</b>	<b>0.071</b>	<b>7.1%</b>	<b>Not Significant</b>
<b>ALL DATA</b>	<b>0.192</b>	<b>19.2%</b>	<b>&lt;1%</b>

Clearly the coefficient of determination set out in Table 46 offers only limited support to the modernist perspective on perceived environmental uncertainty (Duncan, 1972) because for eight of the fifteen members of the Group Executive Committee, the equation provided no significant results. This was also the case when the averages were used as the basis for comparison.

Interestingly only seven of the responses were significant at the 5% level (see Table 46 above), one of which was significant at the 2% level and four of which were significant at the 1% level. Consequently there are only four responses where the results show more than 99% certainty that perceived environmental uncertainty is influenced by the combination of the rate of change and the level of complexity.

### 5.6.3.2 The Relationship Between Uncertainty And Change

This section looks at the relationship between perceived environmental uncertainty and the rate of change in the competitive environment. Again the R-squared combination (set out in Table 45 above) shows the proportion of the variance in perceived environmental uncertainty that is explained by the rate of change. As identified in the previous section, the results show that only 19.20% of perceived environmental uncertainty is accounted for by the rate of change taking place in the competitive environment.

Again it is possible to analyse whether the observed relationship between perceived environmental uncertainty and the rate of change occurred purely by chance. Through observation of the statistical significance, the results show that nine of the fifteen members of the Group Executive Committee provided no significant results (see Table 47 below). This was also the case when the averages were used as the basis for comparison. Interestingly only six of the responses were significant at the 5% level, one of which was significant at the 2% level and five of which were significant at the 1% level. Consequently there are only five responses where the results show there is less than 1% probability, or 99% certainty, that perceived environmental uncertainty is a product of the rate of change in the competitive environment.

*Table 47 – Examining The Relationship Between Uncertainty And Change*

<b>Respondent</b>	<b>r-squared (r<sup>2</sup>)</b>	<b>r-squared (r<sup>2</sup>) As %</b>	<b>Significant Values</b>
<b>1.</b>	0.106	10.6%	Not Significant
<b>2.</b>	0.063	6.3%	Not Significant
<b>3.</b>	0.366	36.6%	<2%
<b>4.</b>	0.049	4.9%	Not Significant
<b>5.</b>	0.436	43.6%	<1%
<b>6.</b>	0.611	61.1%	<1%
<b>7.</b>	0.004	0.4%	Not Significant
<b>8.</b>	0.544	54.4%	<1%
<b>9.</b>	0.184	18.4%	Not Significant
<b>10.</b>	0.015	1.5%	Not Significant
<b>11.</b>	0.002	0.2%	Not Significant
<b>12.</b>	0.168	16.8%	Not Significant
<b>13.</b>	0.521	52.1%	<1%
<b>14.</b>	0.416	41.6%	<1%
<b>15.</b>	0.018	1.8%	Not Significant
<b>AVERAGES</b>	<b>0.048</b>	<b>4.8%</b>	<b>Not Significant</b>
<b>ALL DATA</b>	<b>0.192</b>	<b>19.2%</b>	<b>&lt;1%</b>

### 5.6.3.3 The Relationship Between Uncertainty And Complexity

This section looks at the relationship between perceived environmental uncertainty and the level of complexity in the competitive environment. Again the R-squared combination (set out in Table 45 above) shows the proportion of the variance in perceived environmental uncertainty that is explained by the level of complexity. As identified in Section 5.6.3.1, the results show that only 3.07% of perceived environmental uncertainty is accounted for by the level of complexity experienced in the competitive environment. The relationship between these two variables is therefore deemed not to be statistically significant.

Again it is possible to analyse whether the results showing the absence of a statistically significant relationship between uncertainty and the level of complexity occurred purely by chance. Through observation of the statistical significance, the results show that ten of the fifteen members of the Group Executive Committee provided no significant results (see Table 48 below). This was also the case when the averages were used as the basis for comparison. Interestingly only five of the responses were significant at the 5% level, three of which were significant at the 1% level. Consequently there are only three responses where the results show there is less than 1% probability, or 99% certainty, that uncertainty is a product of the level of complexity being experienced by strategists in the competitive environment.

*Table 48 – Examining The Relationship Between Uncertainty And Complexity*

<b>Respondent</b>	<b>r-squared (r<sup>2</sup>)</b>	<b>r-squared (r<sup>2</sup>) As %</b>	<b>Significant Values</b>
<b>1.</b>	0.019	1.9%	Not Significant
<b>2.</b>	0.240	24.0%	<5%
<b>3.</b>	0.001	0.1%	Not Significant
<b>4.</b>	0.029	2.9%	Not Significant
<b>5.</b>	0.572	57.2%	<1%
<b>6.</b>	0.253	25.3%	<5%
<b>7.</b>	0.391	39.1%	<1%
<b>8.</b>	0.049	4.9%	Not Significant
<b>9.</b>	0.178	17.8%	Not Significant
<b>10.</b>	0.096	9.6%	Not Significant
<b>11.</b>	0.119	11.9%	Not Significant
<b>12.</b>	0.388	38.8%	<1%
<b>13.</b>	0.189	18.9%	Not Significant
<b>14.</b>	0.136	13.6%	Not Significant
<b>15.</b>	0.110	11.0%	Not Significant
<b>AVERAGES</b>	<b>0.068</b>	<b>6.8%</b>	<b>Not Significant</b>
<b>ALL DATA</b>	<b>0.031</b>	<b>3.1%</b>	<b>Not Significant</b>

### 5.6.3.4 The Relationship Between Change And Complexity

This section investigates the relationship between the rate of change and the level of complexity in the competitive environment. Through the observation of the collinearity r-squared (set out in Table 49 below), the results show that there is a statistically significant relationship (0.666) between the rate of change in the competitive environment and the level of complexity. Therefore the results suggest that any variance in the rate of change experienced by strategists on the Group Executive Committee at Barclays is reflected in the level of complexity they encounter.

*Table 49 – Examining The Relationship Between Change And Complexity*

<b>Respondent</b>	<b>r-squared (r<sup>2</sup>)</b>	<b>r-squared (r<sup>2</sup>) As %</b>	<b>Significant Values</b>
<b>1.</b>	0.173	17.3%	Not Significant
<b>2.</b>	0.300	30.0%	<5%
<b>3.</b>	0.395	39.5%	Not Significant
<b>4.</b>	0.083	8.3%	Not Significant
<b>5.</b>	0.589	58.9%	<1%
<b>6.</b>	0.613	61.3%	<2%
<b>7.</b>	0.419	41.9%	Not Significant
<b>8.</b>	0.619	61.9%	Not Significant
<b>9.</b>	0.197	19.7%	<1%
<b>10.</b>	0.146	14.6%	<1%
<b>11.</b>	0.154	15.4%	<5%
<b>12.</b>	0.409	40.9%	Not Significant
<b>13.</b>	0.699	69.9%	Not Significant
<b>14.</b>	0.419	41.9%	<2%
<b>15.</b>	0.114	11.4%	<5%
<b>AVERAGES</b>	<b>0.071</b>	<b>7.1%</b>	<b>&lt;1%</b>
<b>ALL DATA</b>	<b>0.192</b>	<b>19.2%</b>	<b>&lt;5%</b>

Taken together, these results show that the rate of change in the competitive environment is a much stronger independent variable than the level of complexity. Although this finding is consistent with the qualitative exploration of perceived environmental uncertainty (see Section 5.5), it challenges the modernist conceptualisation of perceived environmental uncertainty presented in the literature review (see Section 4.3–5). To illustrate this point, the findings show that the relationship between uncertainty versus change and complexity is 0.192 (see Table 49 above), the relationship between uncertainty and change is also 0.192 (see Table 47), and the relationship between uncertainty and complexity is 0.031 (see Table 48).

## 5.6.4 Investigating The Managerial Implications

### 5.6.4.1 Managerial Implications: The Ability To Cope

This section of the research looks at the relationship between the ability of the various strategic business units within the Barclays Group to cope with perceived environmental uncertainty, change and complexity and the perceived levels of these three variables. The qualitative exploration (see Section 5.5) and the literature review (see Section 4.3–4.5) found that there should be a relationship between the ability to cope and the level of perceived environmental uncertainty.

*Table 50 – Examining The Relationship Between Perceived Environmental Uncertainty And The Ability To Cope*

	Levels Of					
	Uncertainty		Change		Complexity	
	r	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)	R	r <sup>2</sup> (%)
<b>Ability To Cope With Uncertainty</b>	-0.110	1.21%	-0.178	3.17%	-0.067	0.45%
<b>Ability To Cope With Change</b>	-0.137	1.88%	-0.173	2.99%	-0.143	2.04%
<b>Ability To Cope With Complexity</b>	-0.108	1.17%	-0.162	2.62%	-0.055	0.30%

Note: Table 50 is based on the analysis of all data (248 observations)

From a managerial perspective one would logically expect that in a successful organisation like Barclays Bank PLC, with a proven capacity to create value (see Section 2.1.5), there would be congruence in the relationship between, on the one hand, the degree of uncertainty, the rate of change and the level of complexity being experienced, and on the other hand, the ability of the various strategic business units to cope with these three phenomena.

Interestingly the results from the research derived from the pooled data (see Table 50 above) show no statistical relationship between the ability of the various strategic business units to cope with the degree of uncertainty, the rate of change and the level of complexity in their competitive environment; or in the level of uncertainty, change and complexity being experienced. This finding is significant because it indicates that strategists do not create a link between the level of perceived environmental uncertainty being experienced and the ability to cope, but rather a relationship between other factors, for example the ability to cope and the level of value created; or the degree of perceived environmental uncertainty being experienced and a qualitative factor such as the quality of the senior management team (see Section 5.5).

Moving on, this section examines the relationship between the ability of the various strategic business units within the Barclays Group to cope with perceived environmental uncertainty, change and complexity. The r-squared values (see Table 51 below) show the proportion of variance in the ability of the strategic business units to cope with the degree of uncertainty, the rate of change and the level of complexity being experienced by strategists. The results show that the interrelationships between the ability of the business units to cope with the degree of perceived environmental uncertainty, the rate of change and the level of complexity are all statistically significant.

*Table 51 – Examining The Managerial Implications: The Ability Of The Strategic Business Units To Cope*

	Ability Of The Strategic Business Unit To Cope With					
	Uncertainty		Change		Complexity	
	r	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)	R	r <sup>2</sup> (%)
<b>Ability To Cope With Uncertainty</b>	1		–	–	–	–
<b>Ability To Cope With Change</b>	<b>0.834</b>	<b>69.56%</b>	1		–	–
<b>Ability To Cope With Complexity</b>	<b>0.703</b>	<b>49.42%</b>	<b>0.714</b>	<b>50.97%</b>	1	

Note: Table 51 is based on the analysis of all data (248 observations)

Beginning with the relationship between the ability to cope with perceived environmental uncertainty and the ability to cope with change, this research found that 69.56% of the variance in the ability to cope with perceived environmental uncertainty is related to the business unit’s ability to cope with change. In simpler terms, the results show that where the strategic business unit is deemed more able to cope with the degree of perceived environmental uncertainty in its competitive environment, then the Group Executive Committee perception of its ability to cope with change also increases and vice versa.

This result fits the findings of the qualitative exploration (see Section 5.5) where strategists logically conclude that when they have seen a strategic business unit cope during a period of environmental uncertainty that is perceived to be high, then their perception of the ability of the strategic business unit to cope with change increases – the logical opposite being that when strategists have not witnessed a strategic business unit being forced to cope with increased levels of perceived environmental uncertainty then their perception of the strategic business unit’s ability to cope with change does not increase.

Moving on to the relationship between the ability to cope with complexity and the ability to cope with perceived environmental uncertainty, a similar pattern emerges. The research found that 49.4% of the variance in the ability to cope with complexity is related to the ability to cope with perceived environmental uncertainty. In simpler terms the results show that where the ability of the strategic business unit to cope with perceived environmental uncertainty increases, the Group Executive Committee's perception of the ability of the strategic business unit to cope with complexity also increases.

Again this result fits the findings of the qualitative exploration (see Section 5.5), where strategists logically concluded that when they have seen a strategic business unit cope during a period where environmental uncertainty is perceived to be high, then their perception of the ability of the strategic business unit to cope with complexity is also high – the logical opposite being that when strategists have not witnessed a strategic business unit being forced to cope with increased levels of perceived environmental uncertainty then their perception of the strategic business unit's ability to cope with complexity does not increase.

The final element of this section of the report examines the relationship between the ability of the various strategic business units within the Barclays Group to cope with change and their ability to cope with complexity. The research finds that 50.97% of the variance in the ability to cope with complexity is related to the ability to cope with change. In simpler terms, the results show that where the ability of the strategic business unit to cope with change increases, the Group Executive Committee also perceives an increase in the ability of the strategic business unit to cope with complexity.

Again this result fits the findings of the qualitative exploration (see Section 5.5), where strategists logically concluded that when they have seen a strategic business unit cope during a period where the rate of change is perceived to be high, then their perception of the ability of the strategic business unit to cope with complexity is also perceived to be high – the logical opposite being that when strategists have not witnessed a strategic business unit being forced to cope with increased levels of change, then their perception of the strategic business unit's ability to cope with complexity does not increase.

Again it is possible to analyse whether the results showing a statistically significant relationship between the ability of the business units to cope with perceived environmental uncertainty and their ability to cope with change and complexity occurred purely by chance. Through observation of the statistical significance of the equation with two independent variables, the results show that fourteen of the fifteen members of the Group Executive Committee provided statistically significant results (see Table 52 below). This was also the case when the averages were used as the basis for comparison.

Interestingly all of the fourteen responses were significant at the 3.5% level, and thirteen of these responses were significant at the 1% level. Consequently there is only one response where the results show there is less than 1% probability, or 99% certainty, that the ability to cope with perceived environmental uncertainty is moderated by the ability of the various strategic business units to cope with change and complexity. Again these findings are consistent with the results of the qualitative exploration into perceived environmental uncertainty, set out in Section 5.5.

*Table 52 – The Relationship Between The Ability To Cope With Uncertainty Versus Change And Complexity*

<b>Respondent</b>	<b>R<sup>2</sup> Combination</b>	<b>R-squared (R<sup>2</sup>) As %</b>	<b>Significant Values</b>
<b>1.</b>	0.227	22.7%	Not Significant
<b>2.</b>	1.000	100.0%	*
<b>3.</b>	1.000	100.0%	*
<b>4.</b>	0.798	79.8%	<1%
<b>5.</b>	0.832	83.2%	<1%
<b>6.</b>	0.895	89.5%	<1%
<b>7.</b>	0.371	37.1%	<3.50%
<b>8.</b>	0.742	74.2%	<1%
<b>9.</b>	0.879	87.9%	<1%
<b>10.</b>	0.143	14.3%	<1%
<b>11.</b>	0.825	82.5%	<1%
<b>12.</b>	0.893	89.3%	<1%
<b>13.</b>	0.847	84.7%	<1%
<b>14.</b>	0.989	98.9%	<1%
<b>15.</b>	0.679	67.9%	<1%
<b>AVERAGES</b>	<b>0.948</b>	<b>94.8%</b>	<b>&lt;1%</b>
<b>ALL DATA</b>	<b>0.720</b>	<b>72.0%</b>	<b>&lt;1%</b>

\* These respondents gave identical scores for the uncertainty and change variables

Finally it is possible to analyse whether the results show a statistically significant relationship between the ability of the business units to cope with change and their ability to cope with complexity. Through observation of the collinearity r-squared (see Table 53 below), the results show that there is a statistically significant relationship (0.942) between the ability of the various strategic business units to cope with change and their ability to cope with complexity. These findings are consistent with the results of the qualitative exploration into perceived environmental uncertainty, set out in Section 5.5.

*Table 53 – Examining The Relationship Between The Ability To Cope With Change And With Complexity*

<b>Respondent</b>	<b>Collinearity r<sup>2</sup> (r<sup>2</sup>)</b>	<b>Collinearity r<sup>2</sup> (r<sup>2</sup>%)</b>	<b>Significant Values</b>
<b>1.</b>	0.612	61.2%	<1%
<b>2.</b>	0.887	88.7%	<1%
<b>3.</b>	0.476	47.6%	<1%
<b>4.</b>	0.591	59.1%	<1%
<b>5.</b>	0.750	75.0%	<1%
<b>6.</b>	0.314	31.4%	<5%
<b>7.</b>	0.169	16.9%	Not Significant
<b>8.</b>	0.490	49.0%	<1%
<b>9.</b>	0.933	93.3%	<1%
<b>10.</b>	0.792	79.2%	<1%
<b>11.</b>	0.353	35.3%	<2%
<b>12.</b>	0.602	60.2%	<1%
<b>13.</b>	0.564	56.4%	<1%
<b>14.</b>	0.741	74.1%	<1%
<b>15.</b>	0.005	0.5%	Not Significant
<b>AVERAGES</b>	<b>0.942</b>	<b>94.2%</b>	<b>&lt;1%</b>
<b>ALL DATA</b>	<b>0.714</b>	<b>71.4%</b>	<b>&lt;1%</b>

Similarly to the relationship between the rate of change and the level of complexity as contributory factors in the creation of increased levels of perceived environmental uncertainty (see Section 5.6.3.4), the ability to cope with change is identified as being the much stronger independent variable than the ability to cope with complexity.

To illustrate this point, the findings show that the relationship between the ability to cope with uncertainty versus the ability to cope with change and complexity is 0.714 (see Table 53 above); the relationship between the ability to cope with uncertainty versus the ability to cope with change is 0.696; and the relationship between the ability to cope with uncertainty and the ability to cope with complexity is 0.494. The r-squared between the two independent variables, the ability to cope with change versus the ability to cope with complexity, is 0.509.

### 5.6.4.2 Managerial Implications: The Importance Of Being Able To Cope

This section of the research examines the relationship between the importance of the various strategic business units within the Barclays Group being able to cope with perceived environmental uncertainty, the rate of change and the level of complexity and the perceived levels of these three variables. The qualitative exploration (see Section 5.5) and the literature review (see Section 4.3–4.5) found that there should be a relationship between the importance of being able to cope and the levels of perceived environmental uncertainty (see Table 54 below).

*Table 54 – The Relationship Between Levels Of Uncertainty And The Importance Of Being Able To Cope*

	Levels Of					
	Uncertainty		Change		Complexity	
	r	R <sup>2</sup> (%)	r	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)
<b>Importance Of Coping With Uncertainty</b>	0.130	1.69%	0.128	1.64%	<b>0.335</b>	<b>11.22%</b>
<b>Importance Of Coping With Change</b>	0.119	1.42%	<b>0.293</b>	<b>8.58%</b>	<b>0.334</b>	<b>11.16%</b>
<b>Importance Of Coping With Complexity</b>	0.109	1.19%	0.174	3.03%	<b>0.415</b>	<b>17.22%</b>

Note: Table 54 is based on the analysis of all data (248 observations)

From a managerial perspective again one would logically expect that in a successful organisation such as Barclays, with a proven track record in the creation of value (see Section 2.1.5), there would be congruence in the relationship between: the degree of uncertainty, the rate of change and the level of complexity being experienced; and the importance of the various strategic business units being able to cope with these three phenomena. Or in managerial terms, when there is an increase in the perceived levels of uncertainty, change or complexity, then the importance of the various strategic business units being able to cope should also increase.

Analysis of the responses of individual members of the Group Executive Committee shows that some members do perceive a match between the levels of uncertainty and the importance of coping in individual business units. Some members created a close match, particularly with respect to the level of complexity and the importance of being able to cope with complexity, but these respondents remained in the minority.

The results illustrating the correlations from the individual members of the Group Executive Committee are illustrated in Table 55 below. As in the earlier section on managerial implications (see Section 5.6.2.2), such variation could be a consequence of the way in which the individual respondents interpreted the 0–100 scale.

*Table 55 – Levels Of Uncertainty Versus The Importance Of Coping: Correlations From Individual Responses*

Number Of Coefficients (r)	Not Significant	Significant At:	
		5%	1%
<b>Degree Of Uncertainty</b>	11	2	2
<b>Rate Of Change</b>	10	3	2
<b>Level Of Complexity</b>	9	0	6

Interestingly, as Table 54 shows, the results from the research show no statistical relationship between the importance of the strategic business units being able to cope with: the degree of uncertainty, the rate of change and the level of complexity in their competitive environment; and the degree of uncertainty being experienced. This finding is significant because it indicates that strategists do not create a link between the level of perceived environmental uncertainty being experienced and the importance of being able to cope; rather the link is made between other factors, for example the importance of the business unit being able to cope and the value it creates, or even its centrality to the core proposition or the Group strategy (see Section 5.5).

Moving on the research now examines the relationship between the importance of the strategic business units being able to cope with: the degree of uncertainty, the rate of change and the level of complexity in their competitive environment; and the rate of change being experienced. Interestingly the results show no statistical relationship between, on the one hand, the importance of the strategic business units being able to cope with the degree of uncertainty or the level of complexity, and on the other hand, the rate of change in its competitive environment (see Table 54 above).

However, the results do identify a statistically significant relationship (0.293) between the importance of the business unit being able to cope with change and the rate of change being experienced in its competitive environment. Again this observation is significant as it identifies that when change is a factor of the competitive environment, then it is important that the various strategic business units within the Barclays Group are able to cope. This finding fits with the results of the qualitative exploration into perceived environmental uncertainty (see Section 5.5).

Finally this section looks at the relationship between the importance of the strategic business units being able to cope with: the degree of uncertainty, the rate of change and the level of complexity in their competitive environment; and the level of complexity being experienced. Here the findings are very interesting because the results show a statistically significant relationship between: first, the importance of being able to cope with uncertainty and the level of complexity being experienced (0.335); second, the importance of being able to cope with change and the level of complexity being experienced (0.334); and finally the importance of being able to cope with complexity and the level of complexity being experienced (0.415)

Consequently the findings show that where there is any variance in the level of complexity in the competitive environment, strategists believe this variance is reflected in the importance of the strategic business unit being able to cope with uncertainty, change and complexity. This finding is consistent with the findings of the qualitative exploration into perceived environmental uncertainty (see Section 5.5) and the literature review (see Section 4.3–4.5).

Developing the research further, this section examines the relationship between the importance of the various business units within the Group being able to cope with perceived environmental uncertainty, with change and with complexity. The correlations (again derived from the pooled data) show that the relationships between the importance of the various business units being able to cope with perceived environmental uncertainty, the rate of change and the level of complexity are all statistically significant.

Beginning with the relationship between the importance of being able to cope with perceived environmental uncertainty and the importance of being able to cope with change, this research finds that 61.94% of the variance in the importance of coping with change is accounted for by the importance of coping with perceived environmental uncertainty. In simpler terms the results show that where it is deemed more important that the strategic business unit is able to cope with the degree of uncertainty in its competitive environment, then the Group Executive Committee also believes that it is important that the business unit is able to cope with change.

*Table 56 – Examining The Managerial Implications: The Importance Of Being Able To Cope*

	<b>The Importance Of Being Able To Cope With</b>					
	<b>Uncertainty</b>		<b>Change</b>		<b>Complexity</b>	
	<b>r</b>	<b>R<sup>2</sup> (%)</b>	<b>r</b>	<b>r<sup>2</sup> (%)</b>	<b>R</b>	<b>r<sup>2</sup> (%)</b>
<b>Importance Of Coping With Uncertainty</b>	1	-	-	-	-	-
<b>Importance Of Coping With Change</b>	<b>0.787</b>	<b>61.94%</b>	1	-	-	-
<b>Importance Of Coping With Complexity</b>	<b>0.722</b>	<b>52.13%</b>	<b>0.788</b>	<b>62.09%</b>	1	-

Note: Table 56 is based on the analysis of all data (248 observations)

This result fits the findings of the qualitative exploration (see Section 5.5) where strategists logically concluded that when it is important that a strategic business unit is able to cope during a period of high perceived environmental uncertainty, then their expectation is that it is more important that the strategic business unit is able to cope with change – the logical opposite being that when strategists believe it is increasingly important that a strategic business unit is able to cope with perceived environmental uncertainty then it is *less* important that they are able to cope with change, a conclusion that would also be inconsistent with both the qualitative exploration (see Section 5.5) and the literature review (see Section 4.3–4.5).

Moving on to the relationship between the importance of being able to cope with complexity and the importance of being able to cope with perceived environmental uncertainty, a similar pattern emerges. The research found that 52.13% of the variance in the importance of coping with complexity is accounted for by the importance of coping with perceived environmental uncertainty. In managerial terms, the results show that where it is deemed important that the business unit is able to cope with complexity, the Group Executive Committee perceives that it is important that the business unit is able to cope with perceived environmental uncertainty.

Again this result fits the findings of the qualitative exploration (see Section 5.5), where strategists logically concluded that when it is important that a strategic business unit is able to cope during a period of high perceived environmental uncertainty, then their expectation is that it is more important that the strategic business unit is able to cope with complexity – the logical opposite being that when strategists believe it is increasingly important that a strategic business unit is able to cope with perceived environmental uncertainty then it is *less* important that they are able to cope with complexity, a conclusion that would also be inconsistent with both the qualitative exploration (see Section 5.5) and the literature review (see Section 4.3–4.5).

The next element of this section of the report examines the relationship between the importance of the various strategic business units within the Barclays Group being able to cope with change and the importance of the business units being able to cope with complexity. The research finds that 62.09% of the variance in the importance of being able to cope with complexity is associated with the importance of the business units being able to cope with change.

In managerial terms the results show that where it is deemed important that the strategic business unit is able to cope with change, the Group Executive Committee believes that it is important that the strategic business unit is able to cope with complexity. The logical opposite of this finding would be that when strategists believe it is increasingly important a strategic business unit is able to cope with change then it is *less* important that they are able to cope with complexity. Again if this was a conclusion drawn from the research, it would be inconsistent with both the qualitative exploration (see Section 5.5) and the literature review (see Section 4.3–4.5).

Again it is possible to analyse through multiple regression analysis whether the results showing a statistically significant relationship between the importance of the business units being able to cope with perceived environmental uncertainty and the importance of their being able to cope with change and complexity occurred purely by chance.

Through observation of the statistical significance, the results show that eleven of the fifteen members of the Group Executive Committee provided statistically significant results (see Table 57 below); this was also the case when the averages were used as the basis for comparison.

One of the responses gave results significant at the 2% level, and ten at the 1% level; in one case the R-squared was 100% and one respondent gave identical scores for all three variables. Consequently there are only three responses out of fifteen where the results show there is less than 99% certainty that the importance of being able to cope with perceived environmental uncertainty is determined by the importance of the various strategic business units being able to cope with change and complexity. Again these findings are consistent with the results of the qualitative exploration into perceived environmental uncertainty, set out in Section 5.5.

*Table 57 – Importance Of Coping With Uncertainty Versus Importance Of Coping With Change And Complexity*

<b>Respondent</b>	<b>R<sup>2</sup> Combination</b>	<b>R-squared (R<sup>2</sup>) As %</b>	<b>Significant Values</b>
<b>1.</b>	Identical Values Given For All Three Variables		
<b>2.</b>	1.000	100.0%	*
<b>3.</b>	0.608	60.8%	<1%
<b>4.</b>	0.732	73.2%	<1%
<b>5.</b>	0.859	85.9%	<1%
<b>6.</b>	0.903	90.3%	<1%
<b>7.</b>	0.095	9.5%	Not Significant
<b>8.</b>	0.532	53.2%	<1%
<b>9.</b>	0.752	75.2%	<1%
<b>10.</b>	0.604	60.4%	<1%
<b>11.</b>	0.423	42.3%	<2%
<b>12.</b>	0.054	5.4%	Not Significant
<b>13.</b>	0.895	89.5%	<1%
<b>14.</b>	0.928	92.8%	<1%
<b>15.</b>	0.845	84.5%	<1%
<b>AVERAGES</b>	<b>0.953</b>	<b>95.3%</b>	<b>&lt;1%</b>
<b>ALL DATA</b>	<b>0.647</b>	<b>64.7%</b>	<b>&lt;1%</b>

\* This respondent gave identical scores for the change and complexity variables

Finally it is possible to analyse whether the results show a statistically significant relationship between the importance of the business units being able to cope with change and the importance of their being able to cope with complexity. Through observation of the collinearity r-squared (see Table 58 below), the results show a statistically significant relationship (0.766) between the importance of the various business units being able to cope with change and the importance of their being able to cope with complexity. These findings are consistent with the results of the qualitative exploration, set out in Section 5.5.

*Table 58 – The Relationship Between The Importance Of Being Able To Cope With Change And Complexity*

<b>Respondent</b>	<b>Collinearity r<sup>2</sup> (r<sup>2</sup>)</b>	<b>Collinearity r<sup>2</sup> (r<sup>2</sup>%)</b>	<b>Significant Values</b>
<b>1.</b>	Identical Values Given For All Three Variables		Not Significant
<b>2.</b>	0.588	58.8%	<1%
<b>3.</b>	0.714	71.4%	<1%
<b>4.</b>	0.924	92.4%	<1%
<b>5.</b>	0.743	74.3%	<1%
<b>6.</b>	0.889	88.9%	<1%
<b>7.</b>	0.792	79.2%	<1%
<b>8.</b>	0.540	54.0%	<1%
<b>9.</b>	0.493	49.3%	<1%
<b>10.</b>	0.719	71.9%	<1%
<b>11.</b>	0.523	52.3%	<1%
<b>12.</b>	0.516	51.6%	<1%
<b>13.</b>	0.799	79.9%	<1%
<b>14.</b>	0.897	89.7%	<1%
<b>15.</b>	0.549	54.9%	<1%
<b>AVERAGES</b>	<b>0.766</b>	<b>76.6%</b>	<b>&lt;1%</b>
<b>ALL DATA</b>	<b>0.621</b>	<b>62.1%</b>	<b>&lt;1%</b>

Again in this relationship the importance of being able to cope with change is identified as being a much stronger independent variable than the importance of being able to cope with complexity. To illustrate this point, the findings show the relationship (r-squared) between the importance of being able to cope with uncertainty versus the importance of being able to cope with change and complexity is 0.621 (see Table 58 above); the relationship between the importance of being able to cope with uncertainty versus the importance of being able to cope with change alone is 0.620 (see Table 56 above); and the relationship between the importance of being able to cope with uncertainty versus the importance of being able to cope with complexity is 0.521 (also Table 56). The r-squared between the two independent variables, the importance of being able to cope with change versus the importance of being able to cope with complexity, is 0.620 (also Table 54).

### 5.6.4.3 Managerial Implications: The Ability To Cope And Its Importance

This section of the research examines the relationship between, on the one hand, the ability of the various strategic business units within the Barclays Group to cope with the degree of uncertainty, the rate of change and the level of complexity; and on the other hand, the importance of the business units being able to cope with uncertainty, change and complexity. The qualitative exploration (see Section 5.5) and the literature review (see Section 4.3–4.5) found that there should be a relationship between the ability of the business units to cope with perceived environmental uncertainty and the importance of their being able to cope.

*Table 59 – Examining The Relationship Between The Ability To Cope And Its Importance*

	Ability To Cope With					
	Uncertainty		Change		Complexity	
	r	R <sup>2</sup> (%)	r	r <sup>2</sup> (%)	R	r <sup>2</sup> (%)
<b>Importance Of Coping With Uncertainty</b>	<b>0.263</b>	<b>6.92%</b>	<b>0.261</b>	<b>6.81%</b>	<b>0.239</b>	<b>5.71%</b>
<b>Importance Of Coping With Change</b>	0.143	2.04%	0.179	3.20%	0.158	2.50
<b>Importance Of Coping With Complexity</b>	<b>0.251</b>	<b>6.30%</b>	<b>0.253</b>	<b>6.40%</b>	<b>0.344</b>	<b>11.83%</b>

Note: Table 59 is based on the analysis of all data (248 observations)

From a managerial perspective, again one would logically expect that in a successful organisation such as Barclays, with a proven track record in the creation of value, there would be congruence in the relationship between, on the one hand, the ability of the business units to cope with the degree of uncertainty, the rate of change and the level of complexity being experienced; and on the other hand, the importance of the business units being able to cope with these three phenomena. Or in managerial terms, when it is important that the business units are able to cope with uncertainty, change or complexity, then the units are able to cope.

Beginning with the importance of coping with uncertainty, the results show a statistically significant (but weak) relationship between this, and the ability to cope with uncertainty and complexity (see Table 59 above). The research finds that 6.92% of the variance in the ability to cope with uncertainty is associated with the importance of being able to cope with uncertainty. By the same measure 6.81% of the variance in the ability to cope with change is associated with the importance of being able to cope with uncertainty; and 5.71% of the variance in the ability to cope with complexity is associated with the importance of being able to cope with uncertainty.

This finding indicates that strategists create a link between the importance of the business units being able to cope and their ability to cope with uncertainty, change and complexity. The findings show that where there is variance in the importance of the being able to cope then such variance is reflected to a significant degree in the ability of the various business units to cope, however, this degree is very small. For example, the  $r^2$  between the importance of coping with uncertainty and the ability to do so implies that 93.1% of the variance in the importance of being able to cope is not associated with the ability to cope.

The research now moves on to examine the relationship between the importance of business units being able to cope with change and their ability to cope with: the degree of uncertainty, the rate of change and the level of complexity in their competitive environments. Interestingly the results show no statistical relationship between the importance of the business units being able to cope with change and their ability to cope with uncertainty, change and complexity (see Table 59 above). Again this is significant as the qualitative exploration (see Section 5.5) suggests there should be a relationship between the importance of coping with change and the ability of the business units to cope with uncertainty, change and complexity.

The research then moves on to examine the relationship between the importance of being able to cope with complexity, and the ability of the strategic business units to cope with uncertainty, change, and complexity. Here the results show a statistically significant (but again weak) relationship with the ability to cope with uncertainty, change and complexity (see Table 59 above). The research finds that 6.30% of the variance in the importance of being able to cope with complexity is reflected in the ability to cope with uncertainty. By the same measure 6.40% of the variance in the ability to cope with change is associated with the importance of being able to cope with complexity; and 11.83% of the variance in the ability to cope with complexity is accounted for by the importance of being able to cope with complexity.

This finding is significant because it indicates that strategists create a link between the importance of being able to cope with complexity and the ability of the business units to cope with uncertainty, change and complexity. Therefore the findings show that where there is any variance in the importance of the business units being able to cope with complexity, then such variance is reflected in their ability to cope with uncertainty, change and complexity.

## 5.7 Summary Of Key Research Findings

### 5.7.1 Key Findings: Qualitative Exploration

#### 5.7.1.1 General Key Findings

The general key findings from the exploration into perceived environmental uncertainty across the Barclays portfolio of strategic business units are set out in Table 60 below:

*Table 60 – Qualitative Exploration: General Key Findings*

Ref:	General Key Findings
1.	Strategists at Barclays tend to avoid using terms such as ‘uncertainty’ owing to their negative connotations.
2.	Levels of perceived environmental uncertainty vary over time.
3.	There is a high degree of synergy between the factors that create uncertainty, change and complexity.
4.	There is a low degree of consensus regarding specific levels of uncertainty, change and complexity.
5.	Strategists at Barclays accept a degree of uncertainty as the ‘norm’ in the UK financial services industry.
6.	As strategists gain more experience and knowledge they become more ‘immune’ to uncertainty, change and complexity.
7.	As strategists become more senior at Barclays they develop a higher ‘tolerance’ of degrees of uncertainty, rates of change and levels of complexity.
8.	Factors that contribute to the rate of change are generally externally focused whereas factors that contribute to the level of complexity tend to be internally focused.

#### 5.7.1.2 Factors That Increase The Degree Of Uncertainty Across Barclays

The key findings from the exploration into the factors that increase the perceived degree of uncertainty in the competitive environment across the Barclays portfolio of strategic business units are set out in Table 61 below:

*Table 61 – Key Factors That Increase The Perceived Degree Of Uncertainty*

Ref:	Key Factors
1.	The increased demands of a higher number of customers and not knowing how customers will behave.
2.	The recruitment and servicing of more sophisticated and knowledgeable customers.
3.	Much lower levels of inertia within the customer base and the emergence of proactive ‘switchers’ in the customer base, e.g. fixed-rate mortgage customers.
4.	Development of new or immature business models, e.g. Barclaycard New Ventures in 2001.
5.	New entrants in the market place operating from lower cost bases, reducing prices and therefore challenging profit margins.
6.	Lack of stability in the domestic or international economic environment, e.g. increased interest rates and the threat of a fall in house prices.
7.	Lack of stability in the domestic or international political environment, e.g. the war in Iraq, the Middle East Peace Process, and the US Presidential Elections.

### 5.7.1.3 Factors That Increase The Rate Of Change Across Barclays

The key findings from the exploration into the factors that increase the perceived rate of change in the competitive environment across the Barclays portfolio are set out in Table 62 below:

*Table 62 –Key Factors That Increase The Perceived Rate Of Change*

Ref:	Key Factors
1.	Escalating levels of supply in an over-supplied market, leading to increasing competition in the market place, and competing at higher new levels of customer service standards.
2.	Development and adoption of new technologies, e.g. in Customer Relationship Management.
3.	The emergence of new delivery channels, e.g. telephone and electronic delivery or mobile branches.
4.	The demands from the market place to respond quickly to customer requirements through the successful delivery of change initiatives, e.g. new product development or channel management.
5.	The increased demands from key stakeholders for successful outcomes from change initiatives or business transformation programmes.
6.	The emergence of cost pressures within the retail financial services industry.
7.	Increased consolidation in the UK retail financial service industry, creating merger and acquisition activity.
8.	Increased globalisation in the retail financial services industry creating international merger and acquisition activity particularly in Europe.
9.	Increased legal and regulatory obligations creating large change initiatives, e.g. International Accounting Standards, Basel II, Sarbanes Oxley, European Savings Directive.
10.	The need to introduce Equality and Diversity into the business units' processes of recruitment, personnel management, reward and retention.

### 5.7.1.4 Factors That Increase The Level Of Complexity Across Barclays

The key findings from the exploration into the factors that increase the perceived level of complexity in the competitive environment across the Barclays portfolio are set out in Table 63 below:

*Table 63 – Key Factors That Increase The Perceived Level Of Complexity*

Ref:	Key Factors
1.	The sheer size of the strategic business unit required to serve the market place, e.g. the Retail Bank in the UK with 1,500 branches and 25,000 employees.
2.	The global geographical dispersion of the various strategic business units within the Barclays Group.
3.	The number and nature of the key stakeholders that the various strategic business units have to serve.
4.	The level of legal and regulatory obligations that exist within particular industries.
5.	The lack of maturity of the market place within which the business unit operates, e.g. Barclaycard International.
6.	The level of information required to operate effectively within a particular industry, e.g. Barclays Capital and Barclays Global Investors.
7.	The increasing expectations of multiple customer – multiple product relationships across the Group.
8.	The need to recruit, manage, reward and retain talented individuals within the senior management teams of the various strategic business units across the Barclays Group.

### **5.7.1.5 Factors That Enable Strategic Business Units To Cope With Uncertainty**

The key findings from the exploration into the factors that enable strategic business units within the Barclays portfolio to cope with uncertainty are set out in Table 64 below:

*Table 64 – Key Factors That Enable Strategic Business Units To Cope With Uncertainty*

Ref:	Key Factors
1.	The resilience of the business model itself, described in the data as efficient and effective stewardship of the ‘money-printing machine’.
2.	The dominant position of the strategic business unit in its particular position, e.g. Barclaycard UK, and the financial ‘muscle’ associated with holding such a position.
3.	The experience of having been through a period of high uncertainty in the past, e.g. Barclays Capital in 1999.
4.	The strength and breadth of the Barclays brand, described in the data as ‘brand muscle’.

### **5.7.1.6 Factors That Enable Strategic Business Units To Cope With Change**

The key findings from the exploration into the factors that enable strategic business units within the Barclays portfolio to cope with change are set out in Table 65 below:

*Table 65 – Key Factors That Enable Strategic Business Units To Cope With Change*

Ref:	Key Factors
1.	The strategic agility, or the speed of response, the strategic business unit is able to achieve.
2.	The strategic flexibility of the strategic business unit, e.g. Barclays Capital.
3.	The quality of the people within the strategic business unit, e.g. Barclays Global Investors.
4.	The ability of the organisation to recognise and reward its people for coping with change.

### **5.7.1.7 Factors That Enable Strategic Business Units To Cope With Complexity**

The key findings from the exploration into the factors that enable strategic business units within the Barclays portfolio to cope with complexity are set out in Table 66 below:

*Table 66 – Key Factors That Enable Strategic Business Units To Cope With Complexity*

Ref:	Key Factors
1.	The ability of the strategic business unit to recruit top talent into the senior management team.
2.	The pan-Group experience of the senior management team, e.g. the Business Bank.
3.	The willingness of the strategic business unit to trust other areas of the Group to deliver value and communicate effectively.
4.	The ability of the strategic business unit to forge good working relationships with key stakeholders, e.g. the City, Government and the various regulatory bodies.
5.	The ability to manage internal competition and conflict, eradicating dysfunctional internal politics.

### **5.7.1.8 Factors Driving The Importance Of Being Able To Cope: Uncertainty**

The key factors that make it important for strategic business units within the Barclays portfolio to be able to cope with uncertainty are set out in Table 67 below:

*Table 67 – Key Factors That Make It Important Business Units Are Able To Cope With Uncertainty*

Ref:	Key Factors
1.	The long-term pressure across the Group to continually maximise long-term shareholder value.
2.	Regulation continuing to break down the barriers that have previously blocked entry into Barclays' core markets.
3.	The emergence of lean, international competition, e.g. American mono-lines in the credit card industry.
4.	A continuing decline in the levels of inertia and loyalty that exist among the customer base.

### **5.7.1.9 Factors Driving The Importance Of Being Able To Cope: Change**

The key factors that make it important for strategic business units within the Barclays portfolio to be able to cope with change are set out in Table 68 below:

*Table 68 – Key Factors That Make It Important Business Units Are Able To Cope With Change*

Ref:	Key Factors
1.	The 'centrality' of the strategic business unit to the Group Strategy.
2.	The degree to which they will be relied on to deliver the benefits derived from implementation of the Group Strategy.
3.	The ability of the strategic business unit to build its change capability in a way that embeds flexibility into its infrastructure to facilitate effective change management in the future.

### **5.7.1.10 Factors Driving The Importance Of Being Able To Cope: Complexity**

The key factors that make it important for strategic business units within the Barclays portfolio to be able to cope with complexity are set out in Table 69 below:

*Table 69 – Key Factors That Make It Important Business Units Are Able To Cope With Complexity*

Ref:	Key Factors
1.	Some strategic business units within the Barclays Group operate in complex systems and it is important that the business unit is able to cope with such complexity in order to defend and grow the core business.
2.	The strategic aim of the Barclays Group is to become a world-class, global, financial services provider, which introduces complexity and increases the importance of being able to cope with such complexity.
3.	Emerging distribution channels will continue to create complexity for all the strategic business units.
4.	Onerous legal and regulatory obligations will continue to create complexity across the Barclays Group.

## 5.7.2 Key Findings: Quantitative Exploration

### 5.7.2.1 Examining The Role Of Managerial Consensus

In the Statement of Propositions (see Section 5.6.1), Project 2 of the research set out to establish the role of managerial consensus (or the lack of such consensus) in the strategy development process across Barclays. The literature review (see Section 4.5.5.) referred to the lack of managerial consensus as the individual perspective on corporate strategy.

The results of Project 2 illustrate the range of responses given by the Group Executive Committee on: the levels of uncertainty, change and complexity in the competitive environment; the ability of the various strategic business units to cope with uncertainty, change and complexity; and the importance of the strategic business units within the Barclays portfolio being able to cope with these three phenomena. With a mean range of 59.47 on a scale of 0–100, the results (see Table 70 below) show the wide range of responses, or the lack of managerial consensus, that exists at the Group Executive Committee on how perceived environmental uncertainty impacts the various business units within the Barclays Group.

*Table 70 – Identifying The Range Of Responses Across The Barclays Portfolio*

Strategic Business Unit	Levels Of			Ability To Cope			Importance Of Coping		
	Unc	Cha	Com	Unc	Cha	Com	Unc	Cha	Com
Woolwich	55	60	70	45	50	55	60	50	65
UK Retail Bank	50	60	50	70	70	60	80	70	70
Caribbean	55	90	80	55	60	70	85	80	60
Europe	60	50	50	55	55	55	70	70	80
International Bank	60	55	60	60	60	60	70	80	70
Private Bank	55	50	50	40	40	45	55	60	80
Premier Bank	65	55	40	50	60	50	80	60	70
Barclays Global Investors	75	65	60	70	60	70	60	50	75
Business Bank	75	50	50	50	50	50	80	70	70
Barclays Africa	60	65	70	60	65	55	70	70	80
Barclaycard Corporate	60	55	40	45	50	45	55	55	50
Barclaycard International	55	60	50	65	65	65	50	60	80
Barclaycard UK	60	60	60	60	40	40	70	60	70
Collateralised Financing	60	55	70	40	40	60	60	65	50
Global Financing	60	55	50	30	40	60	50	40	60
Global Markets	70	75	60	40	50	50	80	40	60
Private Equity	50	60	70	50	50	50	80	60	60
<b>MEAN RANGE</b>	<b>60.29</b>	<b>60.00</b>	<b>57.65</b>	<b>52.06</b>	<b>53.24</b>	<b>55.29</b>	<b>67.94</b>	<b>61.18</b>	<b>67.65</b>
<b>RANKING OF RANGE</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>2</b>

Developing this type of analysis, it is possible to rank the standard deviations for the degree of uncertainty, the rate of change, and the level of complexity. This analysis is set out below in Table 71. The strategic business units are ordered in terms of their mean ranking across each of these dimensions.

Through this analysis, it is clear that Barclays Global Investors (3.67), Private Equity (4.67) and the Caribbean (5.00) are the subject of the greatest lack of managerial consensus when considering the degree of uncertainty, change and complexity in their competitive environments.

*Table 71 – Concluding Managerial Consensus: Assessing The Levels Of Perceived Environmental Uncertainty*

<b>Strategic Business Unit</b>	<b>Unc</b>	<b>Rank</b>	<b>Cha</b>	<b>Rank</b>	<b>Com</b>	<b>Rank</b>	<b>Mean Rank</b>
<b>Barclays Global Investors</b>	21.349	1	20.517	2	18.27	8	<b>3.67</b>
<b>Private Equity</b>	17.158	7	19.795	4	21.738	3	<b>4.67</b>
<b>Caribbean</b>	15.774	12=	26.163	1	22.652	2	<b>5.00</b>
<b>Barclays Africa</b>	15.721	14	19.982	3	23.335	1	<b>6.00</b>
<b>Collateralised Financing</b>	17.775	5	17.265	9	19.081	6	<b>6.67</b>
<b>UK Retail Bank</b>	15.838	11	19.475	5	19.13	5	<b>7.00</b>
<b>Global Markets</b>	17.595	6	19.165	6	16.909	10	<b>7.33</b>
<b>International Bank</b>	18.19	4	16.021	14	18.763	7	<b>8.33</b>
<b>Woolwich</b>	15.271	17	18.871	7	20.307	4	<b>9.33</b>
<b>Premier Bank</b>	18.342	3	17.849	8	12.714	17	<b>9.33</b>
<b>Barclaycard UK</b>	16.513	10	16.818	10	17.512	9	<b>9.67</b>
<b>Business Bank</b>	19.254	2	16.352	13	14.368	15	<b>10.00</b>
<b>Global Financing</b>	17.097	8	15.513	15	15.064	13	<b>12.00</b>
<b>Europe</b>	15.453	15=	16.669	11	16.669	11	<b>12.33</b>
<b>Private Bank</b>	16.607	9	13.076	17	16.132	12	<b>12.67</b>
<b>Barclaycard International</b>	15.774	12=	16.655	12	12.79	16	<b>13.33</b>
<b>Barclaycard Corporate</b>	15.453	15=	14.100	16	14.856	14	<b>15.00</b>

By way of contrast, the lowest standard deviations (or the highest managerial consensus) are evident in the mean rankings for Barclaycard Corporate (15.00) and Barclaycard International (13.33). Interestingly the rankings for Barclaycard UK (10, 10, 9) were consistently grouped around the centre of the rankings. Both Barclays Africa (14, 3, 1) and the Premier Bank (3, 8, 17) had evidence of extreme standard deviations (and therefore extreme mean rankings) across the three dimensions. This would also suggest a significant lack of managerial consensus regarding these two strategic business units.

Moving on, it is also possible to rank the standard deviations for the perceptual assessments of the ability of the various strategic business units to cope with the degree of uncertainty, the rate of change, and the level of complexity. This analysis is set out below in Table 72. The strategic business units have again been ordered in terms of their mean ranking across each of these dimensions.

Through this examination of the data, it is apparent that Barclays Africa, the UK Retail Bank and Barclaycard International (with mean rankings of 2.00) are the subject of the greatest lack of managerial consensus when considering their ability to cope with the degree of uncertainty, change and complexity in their competitive environments.

*Table 72 – Concluding Managerial Consensus: Assessing The Ability To Cope*

<b>Strategic Business Unit</b>	<b>Unc</b>	<b>Rank</b>	<b>Cha</b>	<b>Rank</b>	<b>Com</b>	<b>Rank</b>	<b>Mean Rank</b>
<b>Barclays Africa</b>	21.531	2	21.996	1	18.344	3	<b>2.00</b>
<b>UK Retail Bank</b>	21.751	1	19.242	3	18.803	2	<b>2.00</b>
<b>Barclaycard International</b>	18.879	3	20.569	2	20.166	1	<b>2.00</b>
<b>Barclays Global Investors</b>	18.4	4	18.446	4	17.512	4	<b>4.00</b>
<b>Caribbean</b>	16.633	6	17.975	5=	17.369	5	<b>5.33</b>
<b>International Bank</b>	18.074	5	15.229	8	16.497	7	<b>6.67</b>
<b>Woolwich</b>	15.864	10	14.681	11	16.994	6	<b>9.00</b>
<b>Europe</b>	16.439	7	14.695	10	14.5	11	<b>9.33</b>
<b>Private Equity</b>	16.304	8	15.336	7	13.135	13	<b>9.33</b>
<b>Premier Bank</b>	15.446	11	17.975	5=	13.048	14	<b>10.00</b>
<b>Barclaycard Corporate</b>	14.242	13	13.814	13	14.984	10	<b>12.00</b>
<b>Barclaycard UK</b>	15.976	9	13.87	12	12.421	16	<b>12.33</b>
<b>Collateralised Financing</b>	12.514	15	13.114	14	16.266	9	<b>12.67</b>
<b>Global Markets</b>	13.019	14	14.954	9	12.796	15	<b>12.67</b>
<b>Business Bank</b>	14.541	12	12.892	15	13.941	12	<b>13.00</b>
<b>Global Financing</b>	11.254	16	12.415	16	16.425	8	<b>13.33</b>
<b>Private Bank</b>	11.211	17	12.081	17	11.979	17	<b>17.00</b>

The lowest standard deviation (or the highest managerial consensus) is evident in the mean ranking for the Private Bank (17.00) as it had the highest consensus across every dimension. In this section Barclaycard Corporate (13, 13, 10) were consistently grouped around the centre of the rankings. Interestingly there was little evidence of extreme standard deviations (and therefore extreme mean rankings) across the three dimensions. This would also suggest a higher level of managerial consensus regarding the ability of the various strategic business units to cope with uncertainty, change and complexity.

The final part of this section ranks the standard deviations for the subjective evaluations of the importance of the various strategic business units being able to cope with the degree of uncertainty, the rate of change, and the level of complexity. This analysis is set out below in Table 73. Once again the strategic business units have been ordered in terms of their mean ranking across each of these dimensions.

Through a close examination of the data, again Barclays Africa (3.67) and the UK Retail Bank (2.00) have a high mean ranking, this time accompanied by the International Bank (3.00). This evidence indicates that these business units are subject to the greatest lack of managerial consensus when considering the importance of their being able to cope with uncertainty, change and complexity.

*Table 73 – Concluding Managerial Consensus: Evaluating The Importance Of Being Able To Cope*

<b>Strategic Business Unit</b>	<b>Unc</b>	<b>Rank</b>	<b>Cha</b>	<b>Rank</b>	<b>Com</b>	<b>Rank</b>	<b>Mean Rank</b>
<b>UK Retail Bank</b>	25.598	2	23.197	1	22.023	3	<b>2.00</b>
<b>International Bank</b>	24.088	3	21.037	5	22.350	1	<b>3.00</b>
<b>Barclays Africa</b>	23.335	4	21.833	3	21.685	4	<b>3.67</b>
<b>Caribbean</b>	23.135	5	23.053	2	19.791	9	<b>5.33</b>
<b>Private Equity</b>	26.774	1	17.889	11	20.767	7	<b>6.33</b>
<b>Business Bank</b>	22.662	7	21.286	4	20.160	8	<b>6.33</b>
<b>Europe</b>	22.398	8	18.942	7	21.420	5	<b>6.67</b>
<b>Private Bank</b>	20.914	10	18.886	8	21.118	6	<b>8.00</b>
<b>Barclays Global Investors</b>	21.833	9	14.936	15	22.345	2	<b>8.67</b>
<b>Premier Bank</b>	23.006	6	16.847	12	19.198	11	<b>9.67</b>
<b>Collateralised Financing</b>	18.479	13	19.351	6	18.066	14	<b>11.00</b>
<b>Woolwich</b>	17.809	14	18.048	10	18.980	12	<b>12.00</b>
<b>Barclaycard UK</b>	17.715	15	16.783	13	18.516	13	<b>13.67</b>
<b>Barclaycard International</b>	13.947	16	18.516	9	19.445	10	<b>11.67</b>
<b>Barclaycard Corporate</b>	18.942	11	16.235	14	15.407	15	<b>13.33</b>
<b>Global Markets</b>	18.664	12	12.558	16	14.639	16	<b>14.67</b>
<b>Global Financing</b>	13.301	17	11.774	17	13.708	17	<b>17.00</b>

The lowest standard deviation (or the highest managerial consensus) is evident in the mean ranking for Global Financing (17.00) as it had the highest consensus across every dimension. In this section the Woolwich (14, 10, 12) were consistently clustered around the centre. Again there was little evidence of extreme standard deviations across the three dimensions, suggesting a higher level of managerial consensus regarding the importance of the various strategic business units being able to cope with uncertainty, change and complexity.

### 5.7.2.2 Challenging The Modernist Perspective

The Statement of Propositions (see Section 5.6.1) also sets out the objective of Project 2 to investigate the modernist perspective on perceived environmental uncertainty. Covered in detail in the earlier literature review (see Section 4.3–4.5), the modernist perspective conceptualises perceived environmental uncertainty as the *dependent* variable, with two *independent* variables: the rate of change and the level of complexity.

The findings of Project 2 (see Table 74 below) are at variance with the modernist perspective because they show that the rate of change is a far stronger variable than the level of complexity in the creation of perceived environmental uncertainty across Barclays.

*Table 74 – Examining The Relationship Between Uncertainty, Change And Complexity*

	Uncertainty		Change		Complexity	
	r	r <sup>2</sup> (%)	R	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)
Uncertainty	1		–	–	–	–
Change	<b>0.437</b>	<b>19.10</b>	1		–	–
Complexity	0.175	3.07	<b>0.435</b>	<b>18.92</b>	1	

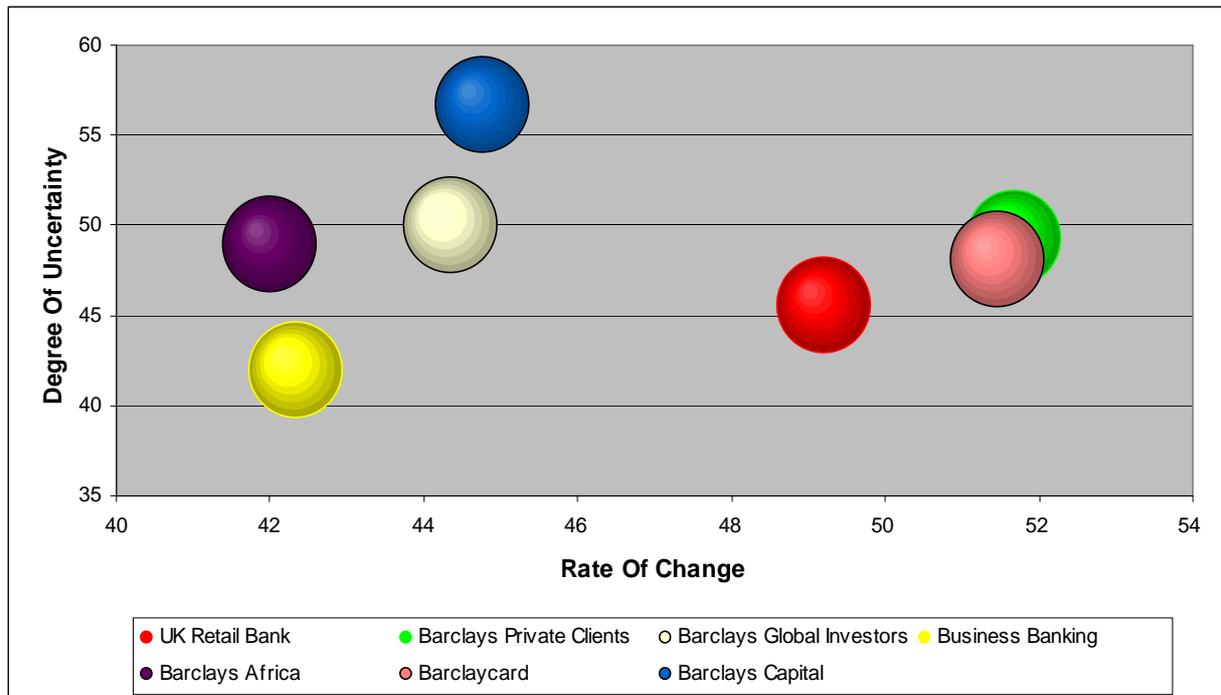
The results also show that the rate of change and level of complexity cannot be regarded simply as independent variables because there is a statistically significant relationship (0.435) between the two variables. Therefore the findings of Project 2 show that the rate of change in the competitive environment increases the level of complexity experienced by strategists at Barclays. This means that the rate of change and the level of complexity cannot be conceptualised as independent variables as proposed by the modernist perspective on perceived environmental uncertainty.

The evidence collected through Project 2 also finds that the role of the senior management team is a pivotal factor in the degree of uncertainty faced by organisations. The modernist perspective on perceived environmental uncertainty is predicated on the assumption that all variables in the competitive environment can be reduced to the rate of change and the level of complexity. The evidence suggests that the role of the senior management team, for example leadership, internal politics and stakeholder management, cannot be reduced simply to the rate of change and the level of complexity as postulated through the modernist perspective.

A useful way of analysing the modernist perspective on perceived environmental uncertainty is to examine the relationship between: a) the degree of uncertainty and the rate of change; b) the degree of uncertainty and the level of complexity; and c) the rate of change and the level of complexity.

Beginning with the relationship between the degree of uncertainty and the rate of change, it is possible to organise the seventeen business units within the Barclays Group in their seven clusters (see Section 4.6.3.3) and plot the assessments for the degree of uncertainty (y-axis) against the assessments for the rate of change (x-axis), as illustrated in Figure 14 below:

Figure 14 – The Relationship Between The Degree Of Uncertainty And The Rate Of Change

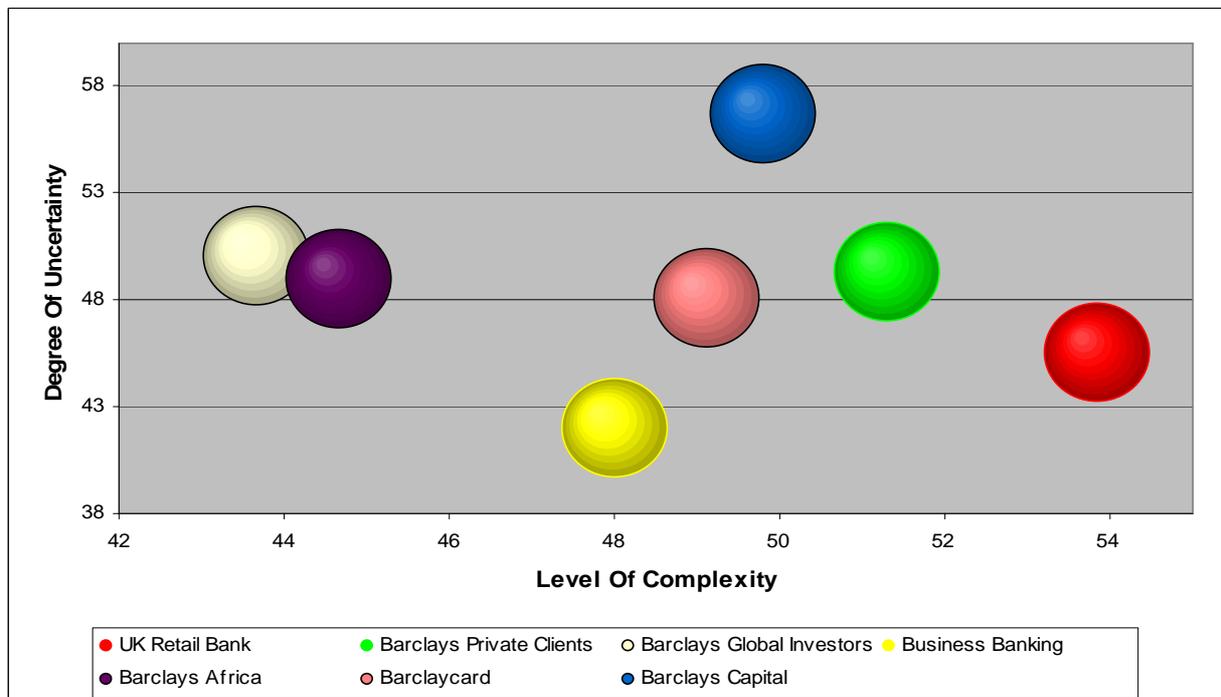


If one accepts the modernist perspective on perceived environmental uncertainty then one would expect to find that when the degree of uncertainty is found to be high, then the rate of change would also be high, and vice versa. Through the illustration in Figure 14 above, it is clear that this is not the case for Barclays Capital, which obtained a relatively high assessment for uncertainty (56.68) and a relatively low score for change (44.77). A similar pattern was found with the assessments for Barclays Global Investors (50.07:44.33) and Barclays Africa (49.00:42.00).

However, the modernist perspective on perceived environmental uncertainty was supported in the assessments made for the Business Bank, which obtained a relatively low assessment for uncertainty (45.57) and a relatively low score for change (49.20). Interestingly a similar (but weaker) pattern was found in the assessments for: the UK Retail Bank (45.57:49.20), Barclaycard (48.13:51.44) and Barclays Private Clients (49.35:51.65).

Moving on to the relationship between the degree of uncertainty and the level of complexity, it is possible to organise the seventeen business units into their seven clusters and plot the assessments for uncertainty against the assessments for complexity (see Figure 15 below):

Figure 15 – The Relationship Between The Degree Of Uncertainty And The Level Of Complexity

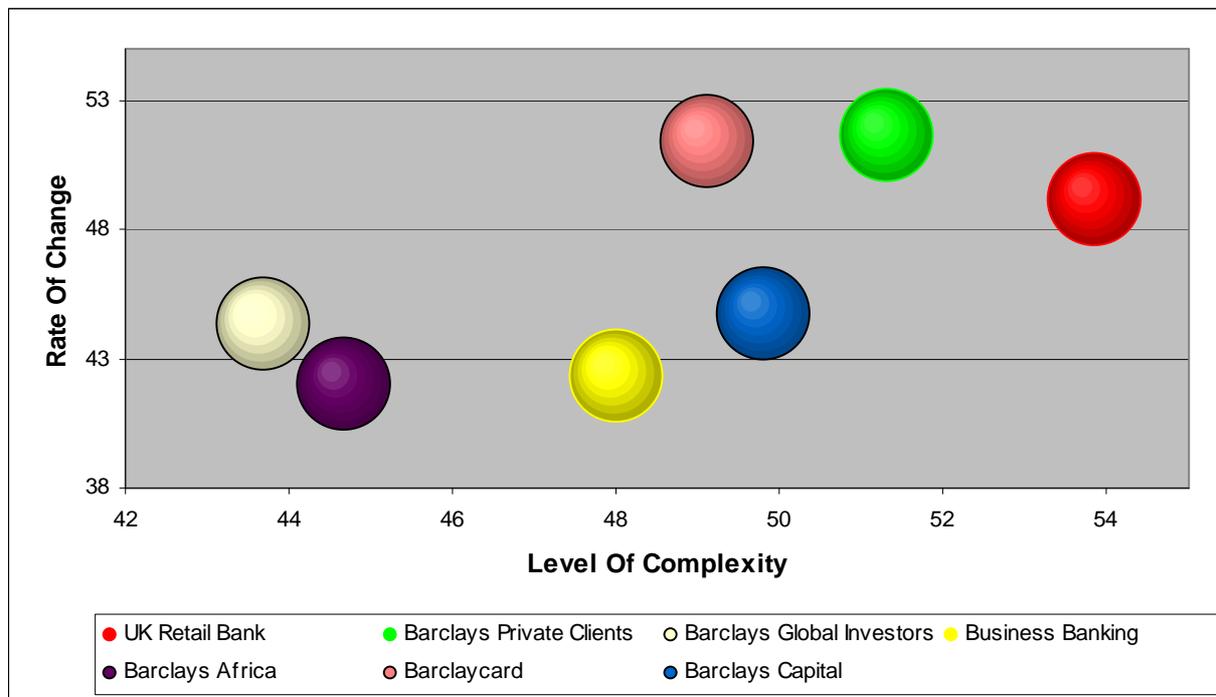


Again if one accepts the modernist perspective, one would expect to find that when the degree of uncertainty is high, then the level of complexity would also be high, and vice versa. The illustration in Figure 15 shows clearly that this is not the case for Barclays Global Investors, which obtained a relatively high assessment for uncertainty (50.07) and a relatively low score for change (43.67). A similar pattern is found through the assessments for Barclays Africa (49.00:44.76) and Barclays Capital (56.68:49.79). The modernist perspective is also refuted in the assessments for the UK Retail Bank, which obtained a relatively low assessment for uncertainty (45.57) and the highest score for change (53.83).

Once again there is support for the modernist perspective in the assessments made for the Business Bank, which obtained a relatively low assessment for uncertainty (42.00) and a relatively low score for change (48.00). A similar (but weaker) relationship is found in the assessments for Barclaycard (48.13:49.11) and Barclays Private Clients (49.35:51.29).

The final relationship to examine is that between the rate of change and the level of complexity. Again, it is possible to identify the seven clusters and plot the assessments for change against those made for complexity (see Figure 16 below):

Figure 16 – The Relationship Between The Rate Of Change And The Level Of Complexity



Under the modernist perspective on perceived environmental uncertainty, one would expect no relationship between the rate of change and the level of complexity, as they are conceptualised as independent variables. Figure 16 shows that this is clearly not the case for the UK Retail Bank, Barclays Private Clients and Barclaycard, which obtained a relatively high assessment for change and complexity. A similar pattern is found through the assessments for Barclays Global Investors and Barclays Africa, which received relatively low assessments for both complexity and change. A similar (but weaker) relationship is found in the assessments for the Business Bank and Barclays Capital.

### 5.7.2.3 Investigating The Managerial Implications

#### 5.7.2.3.1 Identifying The Key Relationships From A Managerial Perspective

One of the key objectives of the Executive Doctorate is to ascertain the managerial implications arising from the investigation into perceived environmental uncertainty. In order to achieve this, the research examines the relationship between a) the degree of perceived environmental uncertainty, the rate of change and the level of complexity and the organisation’s ability to cope with these three phenomena (see Section 4.5.6.1); b) the degree of perceived environmental uncertainty, the rate of change and the level of complexity and the importance of the various strategic business units being able to cope with these three phenomena; and c) the organisation’s ability to cope with uncertainty, change and complexity and the importance of it being able to cope with these three phenomena (see Section 4.5.6.2).

Through the investigation into the managerial implications of perceived environmental uncertainty, the correlation co-efficients derived from the pooled responses of board members are set out in Table 75 below:

*Table 75 – Conclusions: Identifying The Key Relationships*

	<i>Levels Of</i>			<i>Ability To Cope</i>			<i>Importance Of</i>		
	<i>Unc</i>	<i>Cha</i>	<i>Com</i>	<i>Unc</i>	<i>Cha</i>	<i>Com</i>	<i>Unc</i>	<i>Cha</i>	<i>Com</i>
<b>Degree Of Uncertainty</b>	1								
<b>Rate Of Change</b>	<b>0.437</b>	1							
<b>Level Of Complexity</b>	0.175	<b>0.435</b>	1						
<b>Ability To Cope With The Degree Of Uncertainty</b>	-0.110	-0.178	-0.067	1					
<b>Ability To Cope With The Rate Of Change</b>	-0.137	-0.173	-0.143	<b>0.834</b>	1				
<b>Ability To Cope With The Level Of Complexity</b>	-0.108	-0.162	-0.055	<b>0.703</b>	<b>0.714</b>	1			
<b>Importance Of Coping With The Degree Of Uncertainty</b>	0.130	0.128	<b>0.335</b>	<b>0.263</b>	<b>0.261</b>	<b>0.239</b>	1		
<b>Importance Of Coping With The Rate Of Change</b>	0.119	<b>0.293</b>	<b>0.334</b>	0.143	0.179	0.158	<b>0.787</b>	1	
<b>Importance Of Coping With The Level Of Complexity</b>	0.109	0.174	<b>0.415</b>	<b>0.251</b>	<b>0.253</b>	<b>0.344</b>	<b>0.722</b>	<b>0.788</b>	1

This document identified earlier that the overriding strategic objective across Barclays is the maximisation of stakeholder value (see Section 2.1.5). This section looks at the concept of perceived environmental uncertainty, the ability to cope with perceived environmental uncertainty, and the importance of being able to cope with such uncertainty, within the context of the maximisation of stakeholder value.

The literature review (see Section 4.5.6) identified that perceived environmental uncertainty is only significant from a managerial perspective if the organisation is not able to cope. Within the context of value creation, the inability to cope with perceived environmental uncertainty assumes a much greater degree of importance at Barclays if it acts as a barrier to the creation of shareholder value.

Consequently, from a managerial perspective there are twelve key relationships investigated in this element of the research. These relationships, together with details of the first and second variables, are set out in detail in Table 76 below:

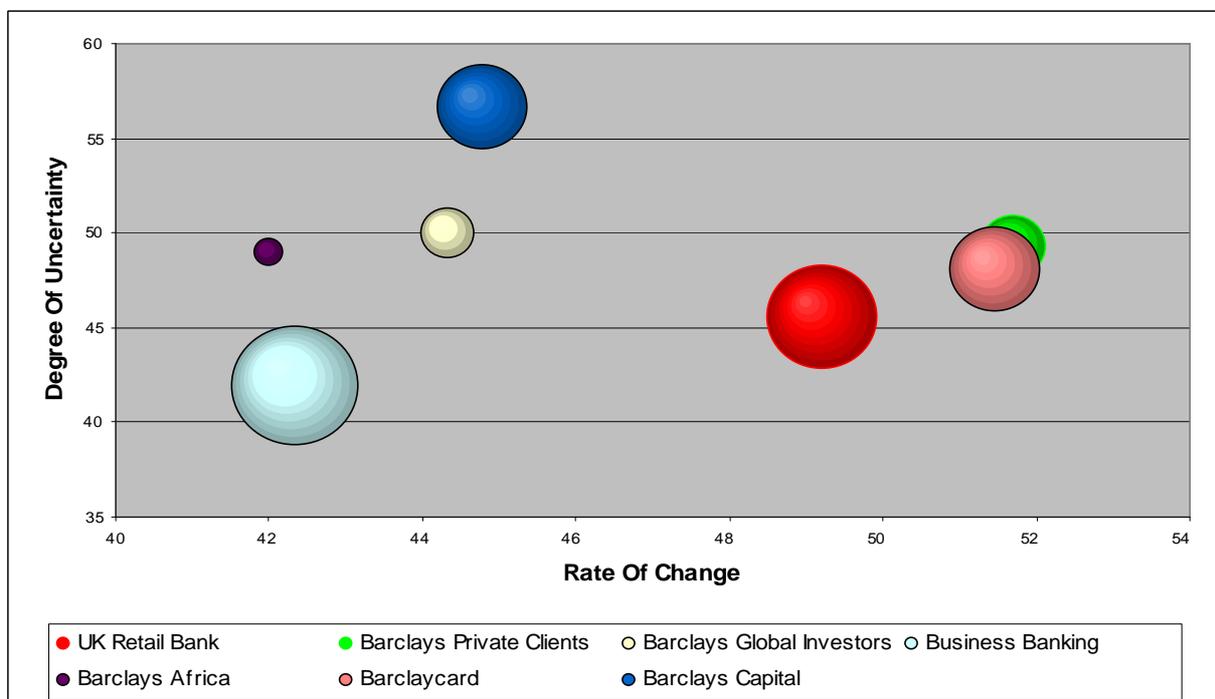
*Table 76 – Conclusions: Setting Out The Twelve Key Relationships*

<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable</b>	<b>r</b>	<b>r<sup>2</sup> (%)</b>
Degree Of Uncertainty	Rate Of Change	<b>0.437</b>	<b>19.10%</b>
Degree Of Uncertainty	Level Of Complexity	0.175	3.07%
Rate Of Change	Level Of Complexity	<b>0.435</b>	<b>18.92%</b>
Degree Of Uncertainty	Ability To Cope With Uncertainty	-0.110	1.21%
Rate Of Change	Ability To Cope With Change	-0.173	2.99%
Level Of Complexity	Ability To Cope With Complexity	-0.055	0.30%
Degree Of Uncertainty	Importance Of Coping With Uncertainty	0.130	1.69%
Rate Of Change	Importance Of Coping With Change	<b>0.293</b>	<b>8.58%</b>
Level Of Complexity	Importance Of Coping With Complexity	<b>0.415</b>	<b>17.22%</b>
Ability To Cope With Uncertainty	Importance Of Coping With Uncertainty	<b>0.263</b>	<b>6.92%</b>
Ability To Cope With Change	Importance Of Coping With Change	0.179	3.20%
Ability To Cope With Complexity	Importance Of Coping With Complexity	<b>0.344</b>	<b>11.83%</b>

### 5.7.2.3.2 The Degree Of Uncertainty, Change And Complexity

This stage of the analysis looks at the three elements within the modernist perspective on perceived environmental uncertainty – the degree of uncertainty, the rate of change, and the level of complexity – within the context of the key strategic objective at Barclays, namely the maximisation of shareholder value. Here the seventeen business units have been arranged within their clusters (see Section 4.6.3.3) and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 17 below):

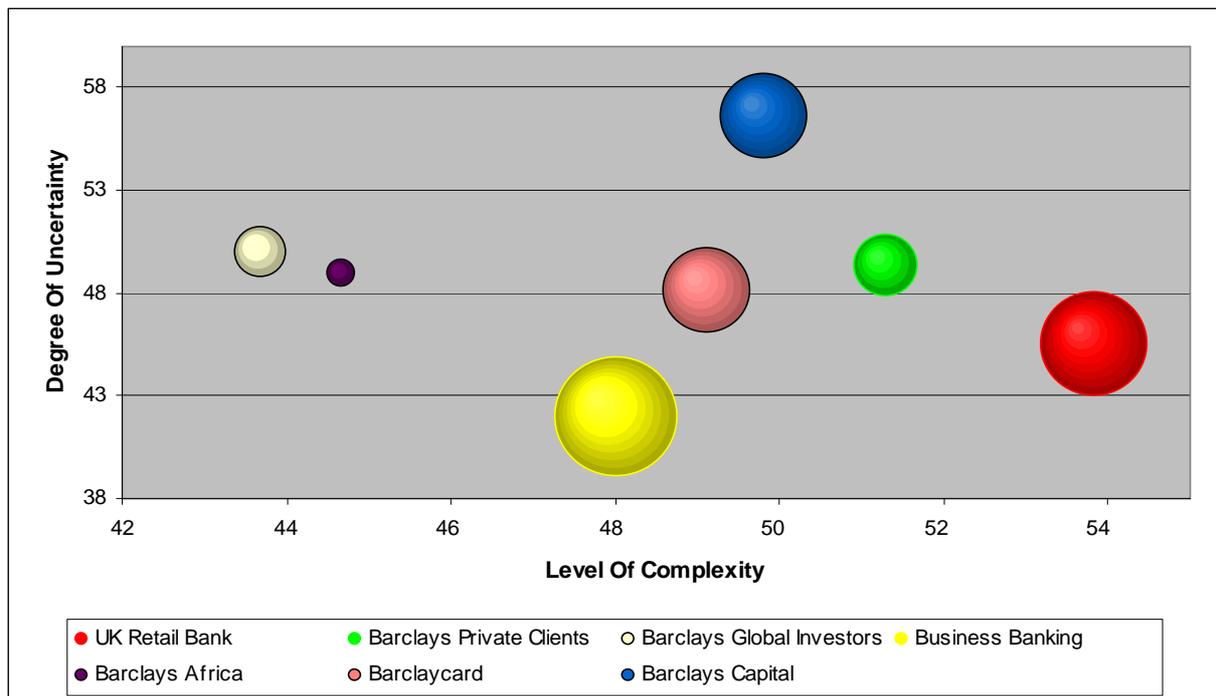
Figure 17 – The Relationship Between The Degree Of Uncertainty And The Rate Of Change



From a managerial perspective, one would hope that the clusters making the most contribution to the Group, or creating the most value, in 2003 the Business Bank (£623m) and the UK Retail Bank (£460m), are not experiencing the greatest uncertainty or change. Through this analysis, it appears that the next two largest creators of value, Barclays Capital (£320m) and Barclaycard (£319m), are deemed to be facing a higher rate of change. The lowest creators of value, Barclays Private Clients (£163m), Barclays Global Investors (£112m) and Barclays Africa (£36m), are placed around the middle of the uncertainty scale. Barclays Private Clients is deemed to be facing the highest rate of change (51.68), which may not necessarily be a problem as it may reflect a level of strategic change necessary to address its value contribution relative to its performance in 2002 (£328m), a fall of 49.70% (see Table 128).

The next piece of this section develops this analysis further to look at the relationship between the degree of uncertainty and the level of complexity being experienced by the seven clusters within the Barclays Group. Once again the seven clusters have been plotted on a graph, with the size of the bubble representing the level of economic profit (or value created) during 2003 (see Figure 18 below):

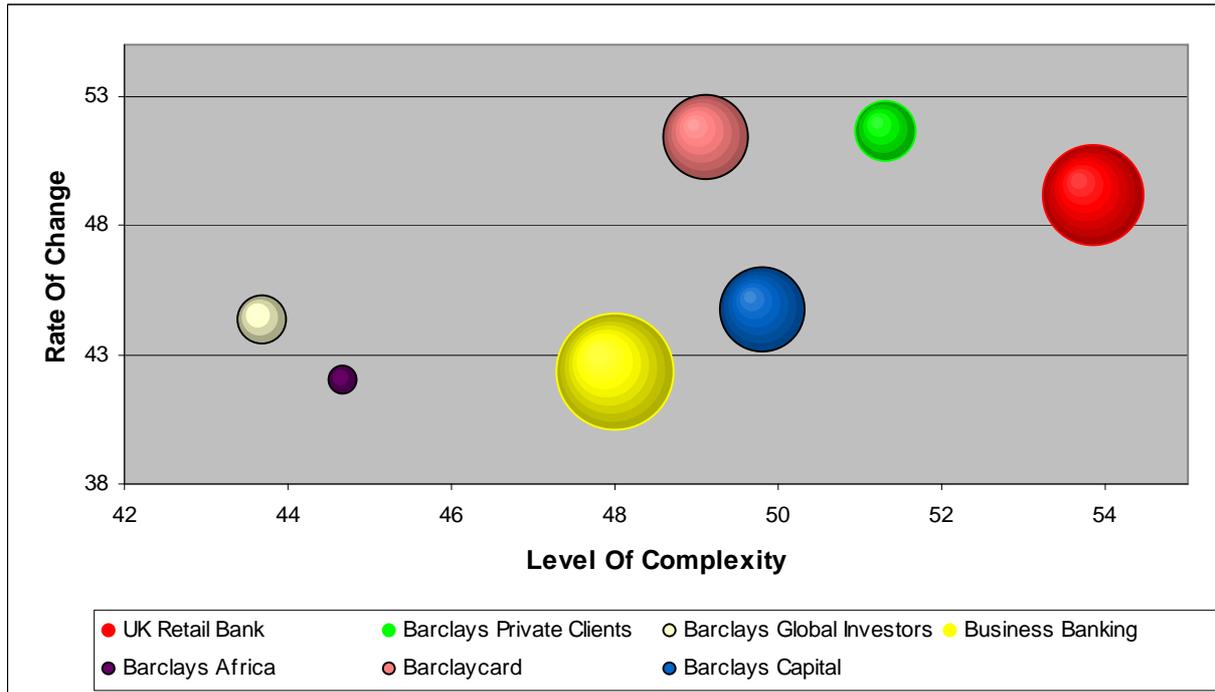
Figure 18 – The Relationship Between The Degree Of Uncertainty And The Level Of Complexity



Once more from a managerial perspective, one would hope that the clusters making the most contribution to the Group, or creating the most value, again the Business Bank (£623m) and the UK Retail Bank (£460m), are not experiencing the greatest uncertainty or complexity. However, it appears from this analysis that the UK Retail Bank (£460m) are facing a relatively high level of complexity, as are Barclays Capital (£320m) who are another large creator of value. This evidence needs to be reviewed in the light of the qualitative exploration (see Section 5.5.5.2), which acknowledges that the industry within which Barclays Capital operates is by nature relatively complex. However, the level of complexity faced by the UK Retail Bank could create a strategic issue for the Group. By way of contrast, an encouraging sign for Barclays is that the largest creator of value, the Business Bank (£623m), is not facing a relatively high level of complexity (48.00).

The final element of this section examines the relationship between the rate of change and the level of complexity being experienced by the seven clusters within the Barclays Group. Once more the seven clusters have been plotted on a graph, with the size of the bubble representing the level of economic profit (or value created) during 2003 (see Figure 19 below):

Figure 19 – The Relationship Between The Rate Of Change And The Level Of Complexity



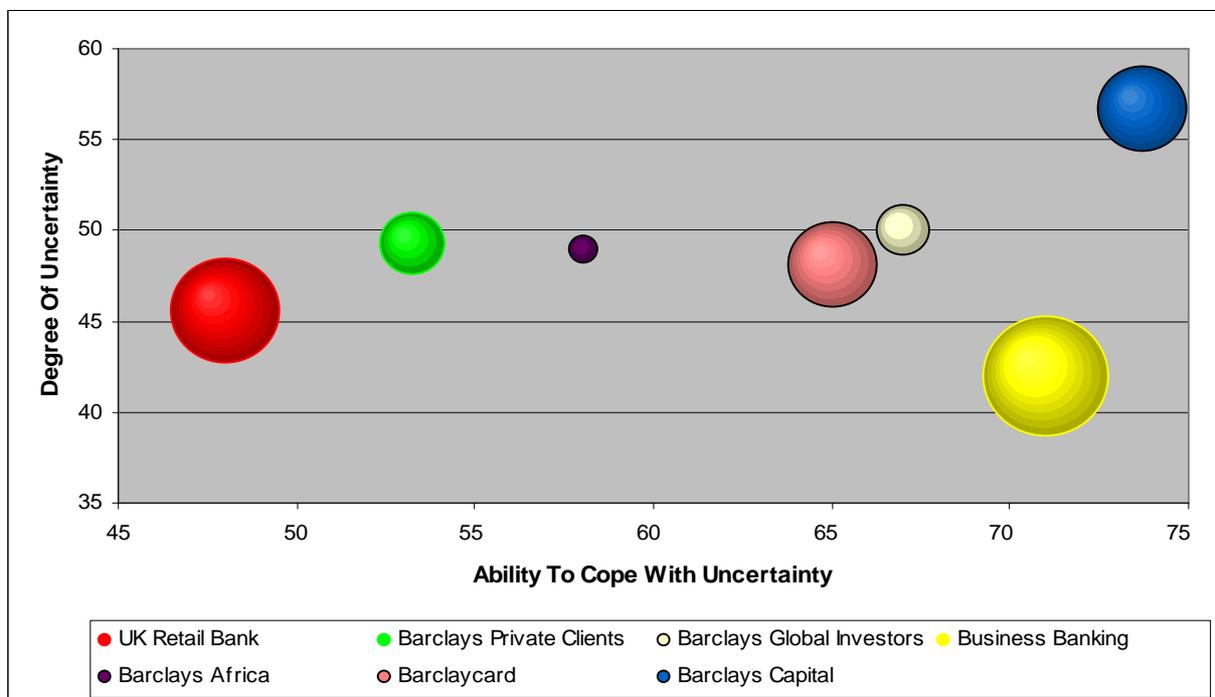
Once more from a managerial perspective, one would hope that the clusters making the most contribution to the Group, or creating the most value, the Business Bank (£623m) and the UK Retail Bank (£460m), are not experiencing the highest rate of change or greatest level of complexity. However, it appears from this analysis that the UK Retail Bank (£460m) are facing a relatively high rate of change and a relatively high level of complexity. Once again the position of the UK Retail Bank across these two dimensions could be a strategic issue for the Group.

The poor performance of Barclays Private Clients during 2003 (-49.70%) may be explained by the relatively high rate of change (51.68) and high level of complexity (51.29) it faces. Once again an encouraging sign for the Group is that the largest creator of value, the Business Bank (£623m), is not facing a relatively high level of change (42.33) or complexity (48.00).

### 5.7.2.3.3 The Degree Of Perceived Environmental Uncertainty And The Ability To Cope

This section of the analysis looks at the relationship between the degree of uncertainty the organisation is deemed to be facing, and its ability cope. Once more this analysis is undertaken within the context of the key strategic objective at Barclays – the maximisation of shareholder value. Here the seventeen strategic business units have been arranged within their clusters (see Section 4.6.3.3) and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit (or value created) during 2003 (see Figure 20 below):

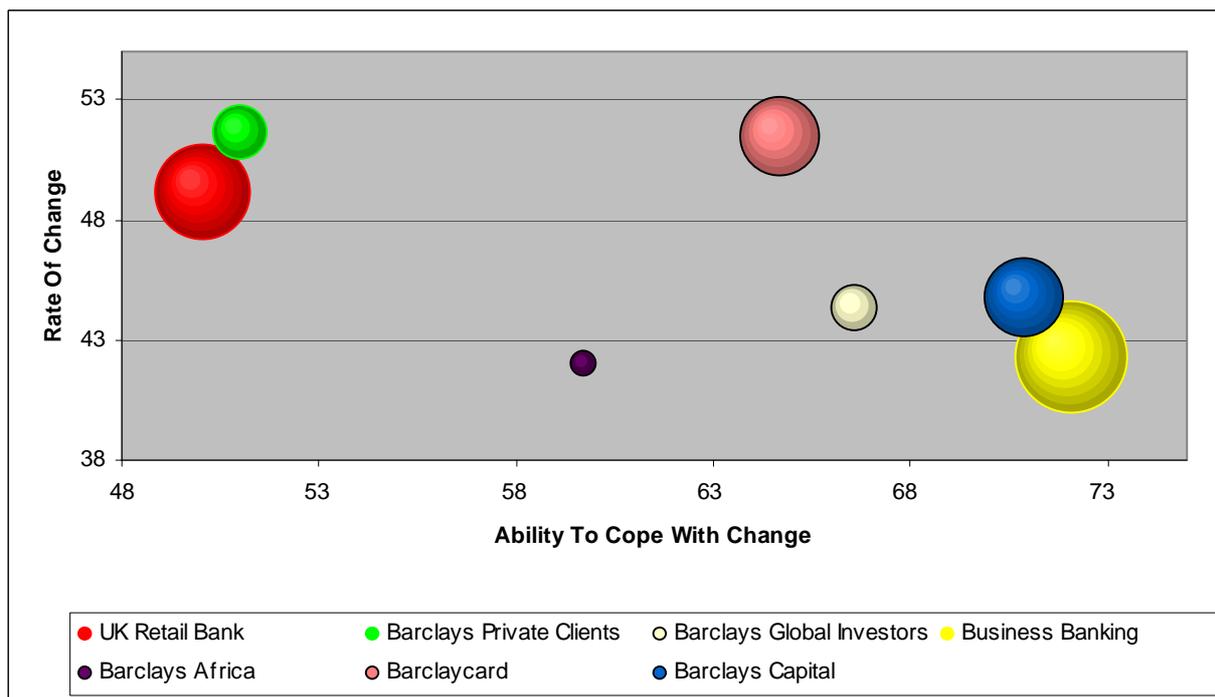
Figure 20 – The Relationship Between The Degree Of Uncertainty And The Ability To Cope With Uncertainty



From a managerial perspective, one would hope that the clusters facing the most uncertainty are the ones most able to cope. Within the context of value creation one would also hope that the clusters making the most contribution to the Group, or creating the most value, are most able to cope. The results from this analysis are very encouraging, as Barclays Capital is deemed to be facing the greatest degree of uncertainty (56.68) but is also the cluster deemed most able to cope (73.72). the Business Bank, the largest creator of value (£623m), is deemed to face the smallest degree of uncertainty (42.00) but is also deemed highly able to cope (71.00). Similarly, the UK Retail Bank is deemed to be the least able to cope (45.57) but also encouragingly faces a relatively small degree of uncertainty (48.00).

This next part of the analysis looks at the relationship between the rate of change the organisation is deemed to be facing, and its ability cope with change, within the context of the maximisation of shareholder value. Again the strategic business units are arranged within their clusters and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit (or value created) during 2003 (see Figure 21 below).

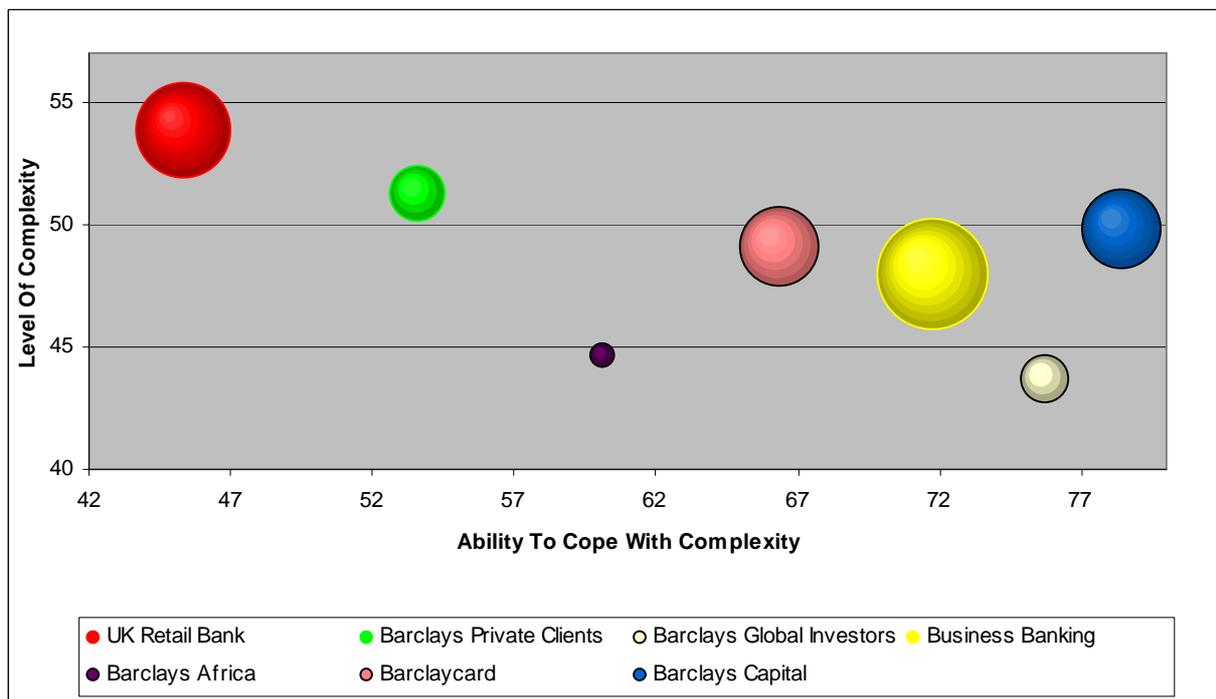
*Figure 21 – The Relationship Between The Rate Of Change And The Ability To Cope With Change*



From a managerial perspective, one would hope that the clusters facing the highest rate of change are the ones most able to cope with change. Strategically one would also hope that the clusters making the most contribution to the Group, or creating the most value, are the most able to cope. Again the results from this analysis are very encouraging as two of the largest creators of value, Barclays Capital and the Business Bank, are deemed to be facing very low rates of change but are assessed as being the most able to cope. Similarly Barclaycard, another large creator of value (£319m), is deemed to face a high degree of change (51.44) but is also considered as highly able to cope (64.69). From a managerial perspective, the position of the UK Retail Bank (£460m) and Barclays Private Clients (£163m) could be a cause for concern. The assessments show the UK Retail Bank (49.20) and Barclays Private Clients (51.68) to be facing the most change but, with assessments of 50.03 and 51.01 respectively, these clusters are also considered to be the least able to cope with change.

The final part of this section looks at the relationship between the level of complexity the organisation is deemed to face, and its ability cope with complexity, again within the context of the maximisation of shareholder value. Again the strategic business units are displayed within their clusters and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 22 below):

Figure 22 – The Relationship Between The Level Of Complexity And The Ability To Cope With Complexity

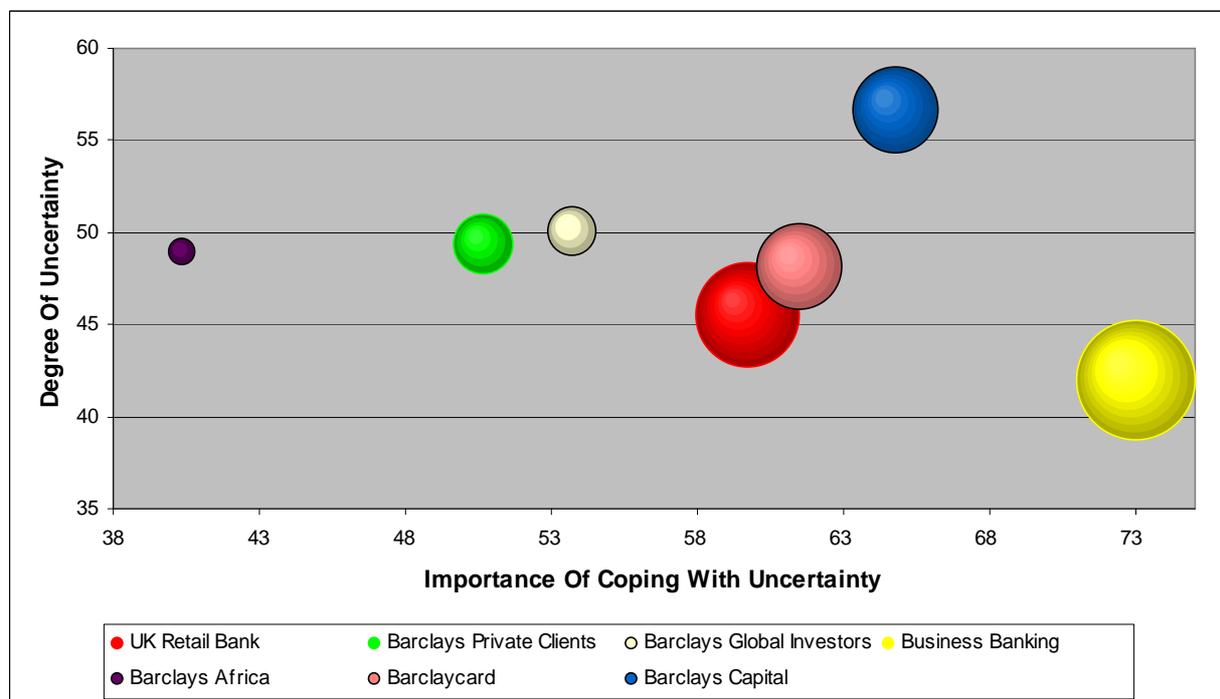


Strategists would hope that the clusters facing the highest level of complexity are the ones most able to cope. Furthermore, the strategic expectation would be that the clusters creating the most shareholder value for the Group are the ones most able to cope with complexity. Here the results are less encouraging as the UK Retail Bank, a large creator of value (£460m), is considered to be facing the highest level of complexity (53.83) and is deemed to be the least able to cope with such complexity (45.33). Barclays Private Clients (51.29:53.55) is also in a similar position. On a more positive note, three of the largest creators of value, Barclays Capital (£320m), the Business Bank (£623m) and Barclaycard (£319m), are deemed to be facing a moderate level of complexity but are considered as being the most able to cope. Barclays Global Investors appear to be strategically very well placed, deemed to be facing the lowest level of complexity (43.67) and also being considered highly able to cope (75.67).

### 5.7.2.3.4 The Degree Of Uncertainty And The Importance Of Being Able To Cope

This next component of the analysis also adopts a managerial perspective by examining the relationship between: the degree of uncertainty faced by a cluster; the level of value created (or economic profit produced) by the cluster; and the importance of the cluster being able to cope with uncertainty. Once again the seventeen strategic business units have been arranged in clusters (see Section 4.6.3.3) and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 23 below):

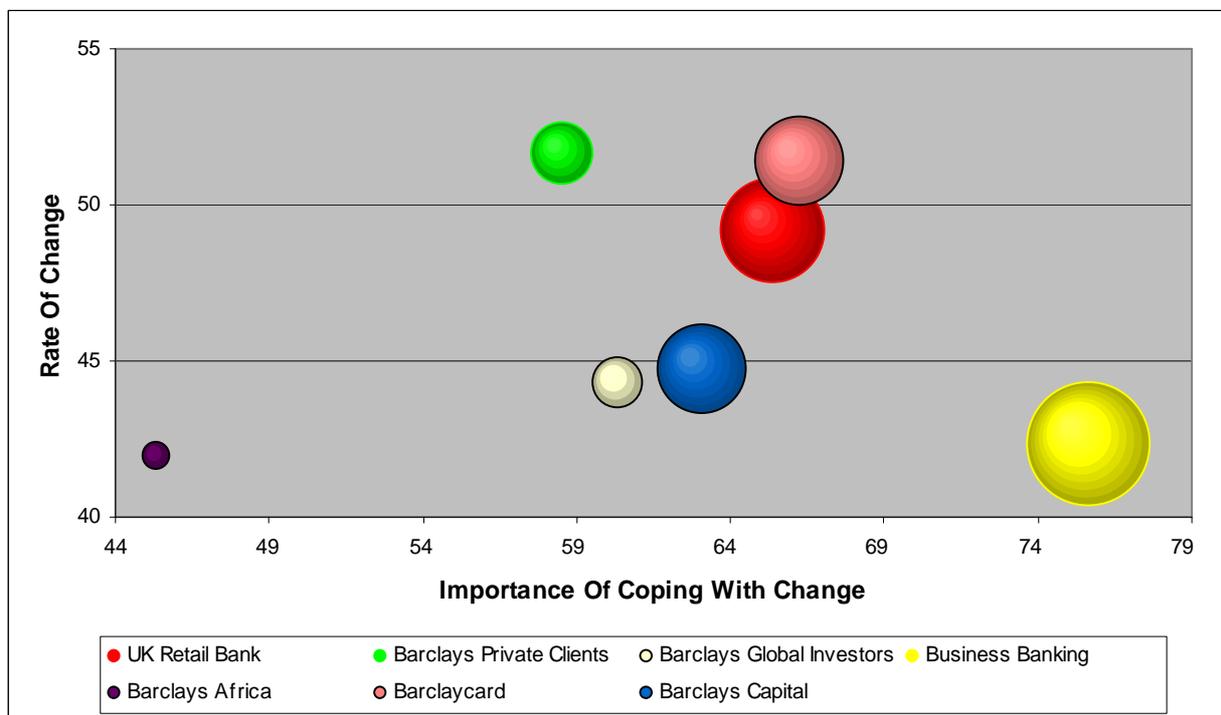
Figure 23 – The Degree Of Uncertainty And The Importance Of Being Able To Cope With Uncertainty



The results from this analysis are very interesting, as it would appear that the importance of coping with uncertainty is driven by the level of economic profits (or value) created during 2003. To illustrate this point, the results show that respondents consider it is most important that the Business Bank (£623m), Barclays Capital (£320m), Barclaycard (£319m) and the UK Retail Bank (£460m) – the four largest creators of shareholder value – are able to cope with uncertainty. This raises an interesting point for management and academic research, as one would logically assume from the uncertainty literature (see Section 4.5) that it is the degree of uncertainty faced by organisations that drives the importance of the business being able to cope.

This next element of the analysis follows a similar logic to the previous observation by examining the relationship between: the rate of change faced by a cluster; the level of value created (or economic profit produced) by the cluster; and the importance of the cluster being able to cope with change. Once again the seventeen strategic business units have been arranged in clusters and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 24 below):

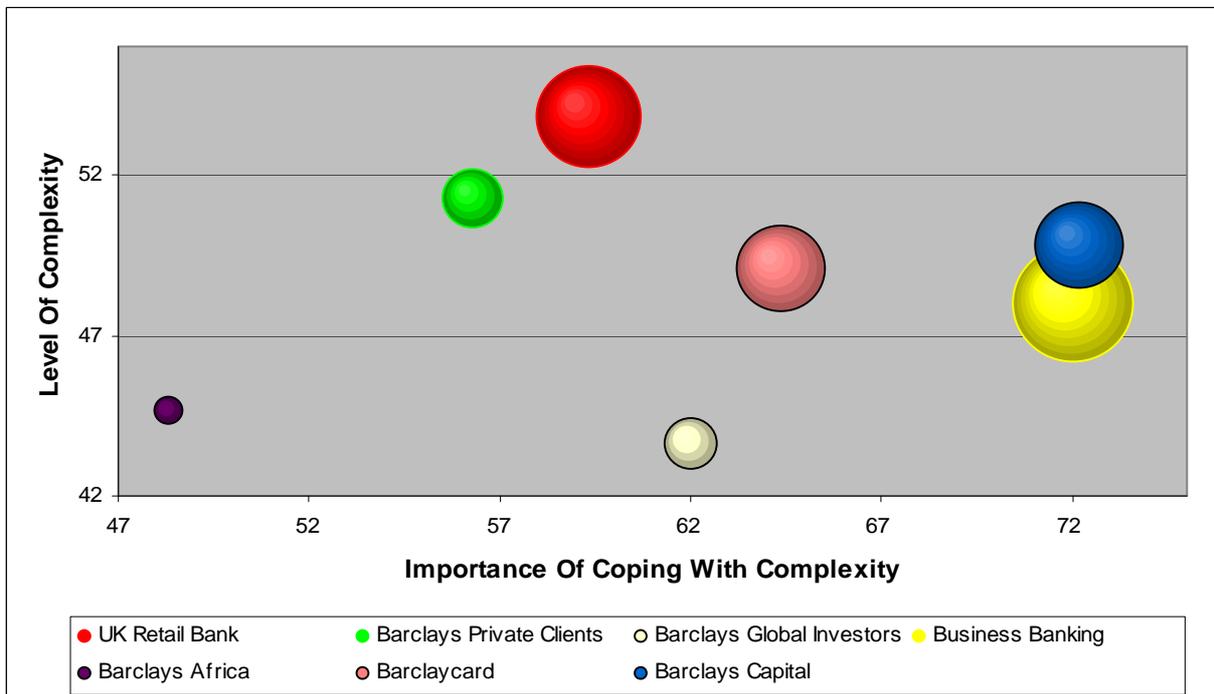
Figure 24 – The Rate Of Change And The Importance Of Being Able To Cope With Change



The results from this analysis follow a similar pattern to the importance of coping with uncertainty, as again it would appear that the importance of coping with change is also driven by the level of economic profit, or value created, for the Group. To illustrate this point, the results show that respondents again consider it is most important that the four largest creators of shareholder value are able to cope with change. By the same token, Barclays Africa (£36m) the lowest creator of value, is at the opposite end of the scale. Furthermore, this observation raises an interesting point for management and academic research, as one would logically assume from the literature (see Section 4.5) that it is the degree of change faced by organisations that drives the importance of the business being able to cope with change.

Developing this line of analysis further, this next component of the report examines the relationship between: the level of complexity faced by a cluster; the level of value created (or economic profit produced) by the cluster; and the importance of the cluster being able to cope with complexity. Once again the seventeen strategic business units have been arranged in clusters and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit (or value created) during 2003 (see Figure 25 below):

Figure 25 – The Level Of Complexity And The Importance Of Being Able To Cope With Complexity

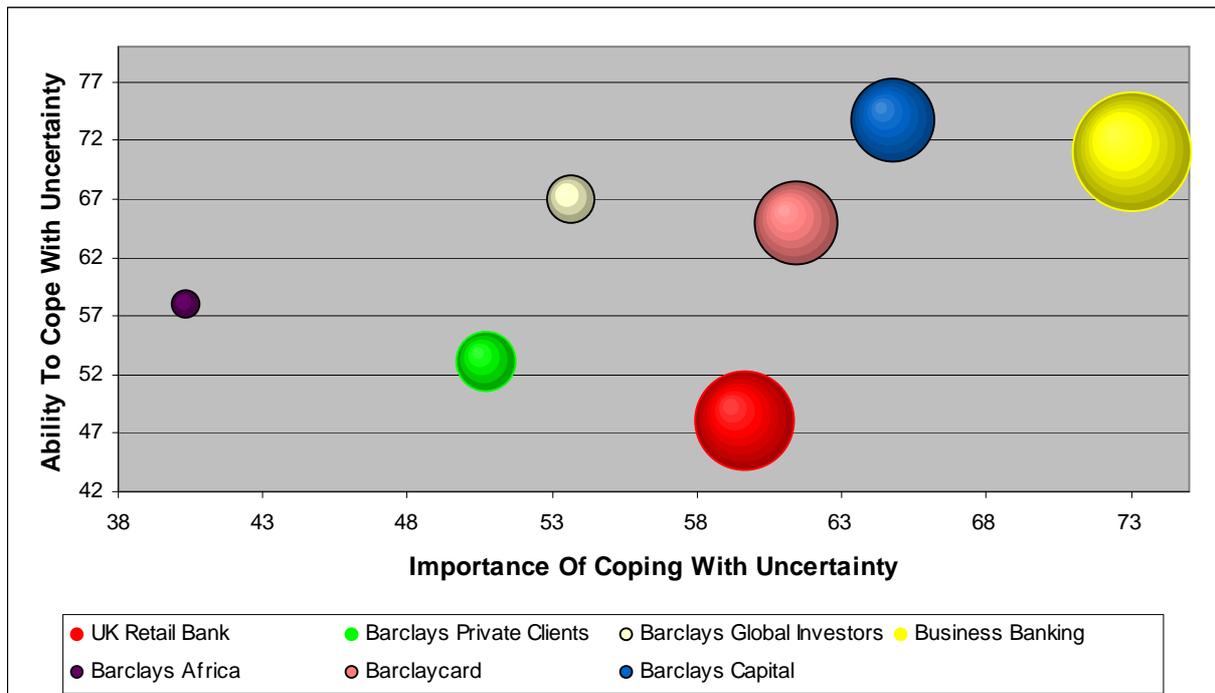


The results follow a similar pattern to the earlier analyses, as it also appears that the importance of coping with complexity is driven by the economic profit created for the Group. To illustrate this point, the results show that respondents again consider it is highly important that the four largest creators of shareholder value are able to cope with complexity. Barclays Global Investors (62.00) also scores highly on this dimension, probably as a consequence of the level of complexity identified in its business model, and explained in more detail in the qualitative exploration (see Section 5.4.3.3). Barclays Africa – the lowest creator of shareholder value – is once again at the bottom end of the scale. Again this observation raises interesting points for management and academic research, as one would logically assume from the literature (see Section 4.5) that it is the level of complexity faced by organisations that drives the importance of the business being able to cope with complexity.

### 5.7.2.3.5 The Ability To Cope And The Importance Of Being Able To Cope

This component of the analysis also adopts a managerial perspective by examining the relationship between: the ability of the cluster to cope with uncertainty; the level of value created (or economic profit produced) by the cluster; and the importance of the cluster being able to cope with uncertainty. From a strategic perspective, one would expect it to be a matter of concern if it is deemed that a cluster is low in its ability to cope with uncertainty, yet important that they are able to cope, particularly if there is a high level of shareholder value at stake. Once again the clusters are plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 26 below):

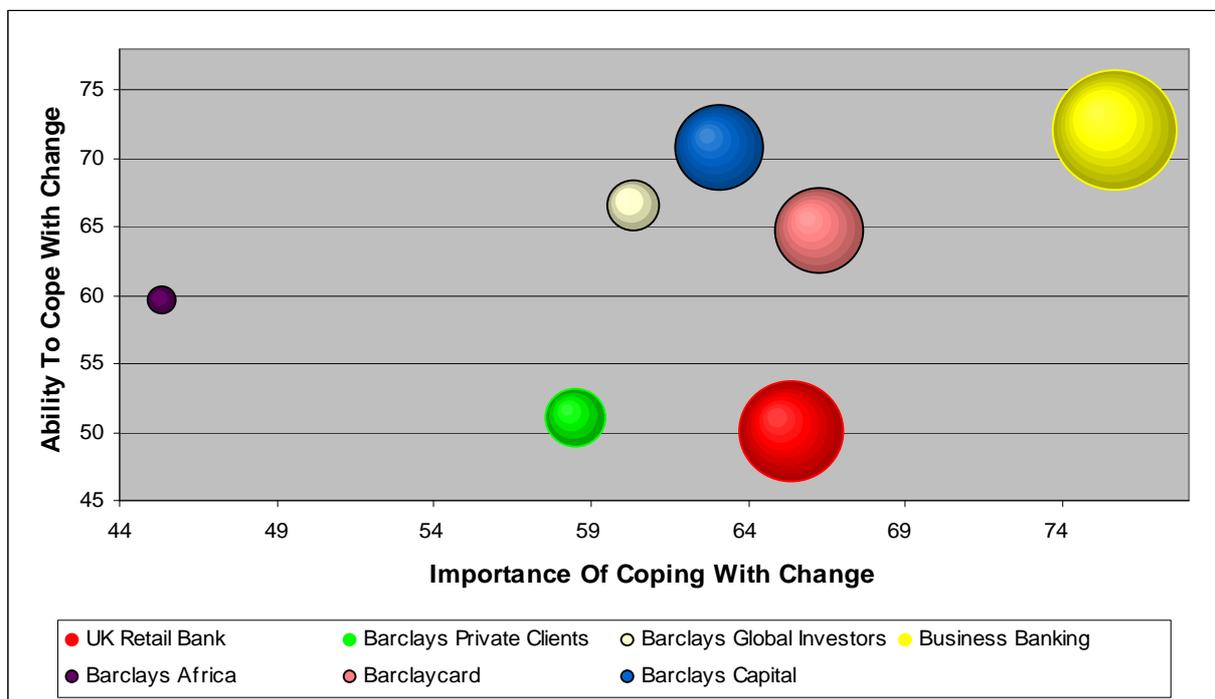
Figure 26 – The Ability To Cope With Uncertainty & The Importance Of Being Able To Cope With Uncertainty



These results are encouraging for Barclays as it would appear that three of the largest creators of value, the Business Bank (£623m), Barclays Capital (£320m), and Barclaycard (£319m), are well placed in their ability to cope with uncertainty and the importance of their being able to cope. By the same token, Barclays Global Investors, Barclays Private Clients and Barclays Africa are also well placed, relative to the level of value at stake. The managerial issue would appear to be at the UK Retail Bank, who create a large amount of shareholder value (£460m), but are considered the lowest in terms of their ability to cope with uncertainty (48.00), despite the fact that the ability to cope is deemed to be important (59.67).

This next element of the analysis follows a similar logic to the previous observation by examining the relationship between: the ability of the cluster to cope with change; the level of value created (or economic profit produced) by the cluster; and the importance of the cluster being able to cope with change. Once again the seventeen strategic business units have been arranged into their clusters and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 27 below):

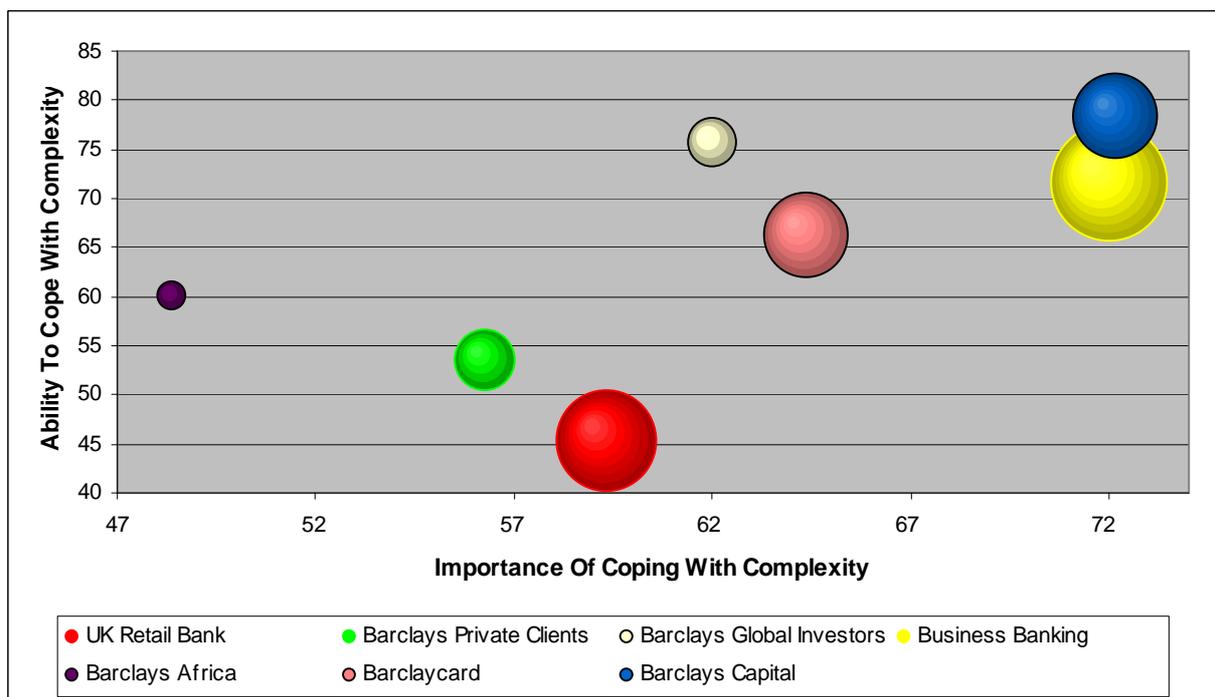
*Figure 27 – The Ability To Cope With Change And The Importance Of Being Able To Cope With Change*



These results are very similar to the earlier analysis and are again encouraging for Barclays as it would appear that three of the largest creators of value, the Business Bank (£623m), Barclays Capital (£320m), and Barclaycard (£319m), are well placed in their ability to cope with change and the importance of their being able to cope with change. By the same token, Barclays Global Investors and Barclays Africa are also well placed, relative to the level of shareholder value at stake. Again the managerial issue would appear to be at the UK Retail Bank, who create a large amount of value (£460m), but are considered lowest in terms of their ability to cope with change (50.03), despite the fact that their ability to cope with change is deemed important (65.33). The problems in the economic profit performance during 2003 at Barclays Private Clients (-49.70%) may be reflected in the Group Executive Committee’s lack of confidence in their ability to cope with change (51.01).

The final element of this section of the report examines the relationship between: the ability of the cluster to cope with complexity; the level of value created (or economic profit produced) by the cluster; and the importance of the cluster being able to cope with complexity. Once again the seventeen strategic business units have been arranged in clusters and plotted as bubbles on a graph, with the size of the bubble representing the level of economic profit during 2003 (see Figure 28 below):

Figure 28 – The Ability To Cope With Complexity And The Importance Of Being Able To Cope With Complexity



Once again these results are very similar to the earlier analysis and on the whole are again encouraging for Barclays as it would appear that three of the largest creators of value, the Business Bank (£623m), Barclays Capital (£320m), and Barclaycard (£319m), are again well placed in their ability to cope with complexity and the importance of their being able to cope with complexity. By the same token, Barclays Global Investors and Barclays Africa are also well placed, relative to the level of shareholder value at stake. Again the managerial issue would appear to be at the UK Retail Bank, who create a large amount of value (£460m), but are considered the lowest in terms of their ability to cope with complexity (45.33), despite the fact that their ability to cope with complexity is deemed to be important (59.33). Again the poor performance of Barclays Private Clients (-49.70%) may be reflected in the respondents' lack of confidence in their ability to cope with complexity (53.55).

### **5.7.3 Serendipitous Findings**

Through the research undertaken during Project 2, the study identified a series of serendipitous findings, some of which could provide the starting point for other areas of research. These serendipitous findings are set out below:

1. There is evidence in the data that historically Barclays has recognised and rewarded strategists who have proved most able at coping with change whereas those who specialise in complexity, for example in-house solicitors, tax specialists and accountants, have not been recognised in the same way.
2. Evidence in the data suggests that the successful strategists of the future will be those who have the ability to cope with a high level of complexity in the competitive environment whereas recent history has recognised and rewarded strategists that are able to cope with a high rate of change.
3. Strategists on the Group Executive Committee at Barclays are very rational in the way they conceptualise uncertainty, change and complexity although the data suggest they are less rational and therefore more intuitive in the processes they use to cope with these three phenomena.
4. Strategists on the Group Executive Committee at Barclays feel they are required to deliberately adopt rational processes for coping with uncertainty, change and complexity although they freely admit to not being compelled to adopt such rational processes in their personal and private lives.
5. The importance of being able to cope with the rate of change and the level of complexity fluctuates as strategists progress through their careers at Barclays. Evidence suggests that middle managers at the strategic business unit level have a greater need to be able to cope with change whereas corporate strategists at the Group Executive Committee level have a greater need to be able to cope with complexity.
6. When asked to attribute their individual career success to their ability to cope with the degree of uncertainty, the rate of change or the level of complexity experienced, the strategists believed their success was a product of their ability to cope with uncertainty and complexity. However they believed that colleagues would probably take a different view and put more emphasis on their ability to cope with change.

## 5.8 Conclusions And Comparisons With The Literature Review

### 5.8.1 The Qualitative Exploration

#### 5.8.1.1 Identifying The Qualitative Factors

Project 2 of the Executive Doctorate explored the qualitative factors that create the degree of perceived environmental uncertainty, the rate of change and the level of complexity experienced by strategic business units across the Barclays Group (see Section 5.5). This section draws conclusions based on the findings of Project 2 (see Section 5.7.1) and makes comparisons with the literature review (see Section 4.3–4.5).

Beginning with the degree of perceived environmental uncertainty, the analysis carried out during Project revealed no significant differences in the mean levels of perceptual assessments made by the Group Executive Committee on the degree of uncertainty; rate of change; and level of complexity across the Barclays Group (see Section 5.6.3). This conclusion is at variance with the modernist perspective in the literature. This research concludes that strategists tend to dismiss the term ‘uncertainty’ altogether, as they feel it is not a helpful way of conceptualising the environment during the strategy process, and is not even within the managerial lexicon of some of the most senior strategists at Barclays. The research concludes that the use of the term ‘uncertainty’ is not entirely appropriate at Barclays where strategists prefer to use terms such as ‘challenges’ and ‘opportunities’ for meeting the demands of the competitive environment.

Moving on to the rate of change, the research concludes that there is a high degree of synergy between the qualitative factors that create change in the competitive environment across Barclays and those uncovered in the literature review. To illustrate such synergies, the qualitative factors uncovered at Barclays include the role of competition, technology, customers and regulation as key contributory factors to the rate of change at Barclays. These factors are well covered in the literature. An interesting conclusion at Barclays is that when strategists describe qualitative factors that create *change*, there is a heavy emphasis on factors that are external to either the Barclays Group or the strategic business unit under investigation.

A similar conclusion is made with the exploration into the qualitative factors that create the level of complexity in the competitive environment across Barclays. Here again there is a high degree of synergy with the factors uncovered in the literature review. Such synergies include the size of the organisation, the integration of products and services, the delivery of long-term value, managing people, and legacy IT systems and distribution networks. As contributory factors in the level of complexity, these issues are well covered in the literature. An interesting conclusion at Barclays is that when strategists describe qualitative factors that create *complexity*, there is a heavy emphasis on factors that are internal to either the Barclays Group or the strategic business unit under investigation.

The next part of the exploration looked at the qualitative factors that give the various strategic business units the ability to cope with the degree of uncertainty, the rate of change and the level of complexity in their competitive environments. Here again there is a high level of synergy with the conclusions of the literature review. The key qualitative factors that enable a strategic business unit to cope are: a resilient business model, market dominance, strategic agility, strategic flexibility, talented people in the senior management team, and good working relationships with key stakeholders.

The final element of the exploration looked at qualitative factors that make it important that the various business units within the Barclays Group are able to cope with the degree of uncertainty, the rate of change and the level of complexity in their competitive environments. Interestingly, again there is a high level of synergy with the conclusions of the literature review. The key qualitative factors that drive the importance of being able to cope are: the creation of shareholder value, new entrants to the marketplace, the ‘centrality’ of the business unit to the Group Strategy, the importance of defending and growing the core business, and the strategic goal for each business unit to be a world-class financial services provider.

To summarise, although there was some variance in the emphasis attached to the various qualitative factors that a) create uncertainty, change and complexity, b) enable a business unit to cope with uncertainty, change and complexity, and c) make it important that business units are able to cope with these three phenomena, the conclusions of Project 2 and the literature review in this area are substantively the same.

### 5.8.1.2 Examining The Subjective Assessments

Although the findings of Project 2 show a high degree of consistency among the strategists on the Group Executive Committee regarding the qualitative factors that a) create uncertainty, change and complexity, b) enable a business unit to cope with uncertainty, change and complexity, and c) make it important that business units are able to cope with these three phenomena, through its findings (see Table 77 below) the research concludes that there is a considerable lack of consensus regarding how the various strategic business units are impacted by uncertainty, change and complexity and, most importantly, the managerial implications of such impact.

*Table 77 – Identifying The Lack Of Managerial Consensus Across The Group Executive Committee*

<b>Barclays Portfolio</b>	<b>Levels Of</b>			<b>Ability To Cope</b>			<b>Importance Of Coping</b>		
	<b>Unc</b>	<b>Cha</b>	<b>Com</b>	<b>Unc</b>	<b>Cha</b>	<b>Com</b>	<b>Unc</b>	<b>Cha</b>	<b>Com</b>
<b>MEAN RANGE</b>	<b>60.29</b>	<b>60.00</b>	<b>57.65</b>	<b>52.06</b>	<b>53.24</b>	<b>55.29</b>	<b>67.94</b>	<b>61.18</b>	<b>67.65</b>
<b>RANKING OF RANGE</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>2</b>

Through observation of the rankings of the ranges, it is interesting to recognise that the range of rankings can be categorised into three groupings: first, the levels (of uncertainty, change and complexity); second, the ability to cope; and finally, the importance of coping. With a mean range for responses of 53.53, the findings show there to be the highest degree of consensus regarding the ability of the various business units to cope; followed by the level of uncertainty, change and complexity being experienced, which had a mean of 59.31; and the lowest degree of consensus, or highest mean range (65.59), was found in the range of responses for the importance of being able to cope.

It is therefore safe to conclude that there is a high degree of variance in the subjective assessments made by strategists on the Group Executive relating to: the degree of uncertainty, rate of change and level of complexity being faced by the various business units; the ability of the various business units to cope with uncertainty, change and complexity; and finally, the importance attached to the ability of the various strategic business units to cope with these three phenomena. This conclusion is consistent with the individual perspectives on corporate strategy identified in the literature review (see Section 4.5.5.).

## **5.8.2 The Quantitative Exploration**

### **5.8.2.1 Examining The Role Of Managerial Consensus**

This section of the conclusions looks at the role of managerial consensus, or in the case of Project 2 the lack of consensus, evident in the findings (see Sections 5.7.2.1 and 5.8.1.2). The literature review presented two perspectives on the role of consensus in corporate strategy: the modernist perspective (see Section 4.3.10), and the individual perspective (see Section 4.5.5).

From a modernist perspective the organisation is viewed through the metaphor of a machine (see Section 4.1.4); therefore any lack of managerial consensus can only be dysfunctional to organisational effectiveness. Consequently the role of the strategist is to minimise any lack of consensus, and facilitate a single or co-ordinated response to the competitive environment as a basis for obtaining a ‘match’ between the organisation and the environment within which it operates. Through the individual perspective, strategists make sense of the organisation’s environment in a very individual manner, based on their perception or interpretation of past learning, information and experience. Therefore strategists on the Group Executive Committee make sense of the competitive environments within which the various strategic business units operate and their actions stem from their unique interpretations.

The research from Project 2 concludes that the Group Executive Committee adopt the individual perspective on corporate strategy. The findings show a lack of managerial consensus, with evidence that a diversity of views on the strategy process is encouraged and invited and therefore considered a ‘healthy’ part of the strategy process, not dysfunctional. The research data and interview process uncovered a wide range of personalities and backgrounds on the Group Executive Committee, with evidence of a deliberate intention to avoid creating a senior executive team of like-minded individuals.

This research concludes that any lack of consensus or disagreement among strategists at Barclays is not unusual or dysfunctional to the performance of the organisation – quite the reverse. The diversity of views and maturity of the debate gives the organisation self-confidence and the ability to observe the strategy development process and the competitive environment from the perspective of both the organisation and the individual.

### 5.8.2.2 Challenging The Modernist Perspective

Based on the findings set out in Table 75 (see Section 5.7.2.3.1), this section concludes that the modernist perspective on perceived environmental uncertainty is not an appropriate conceptualisation for Barclays. Presented in the literature review (see Section 4.3.10), the modernist perspective proposes that perceived environmental uncertainty can be described in terms of two constructs: the simple–complex dimension and the static–dynamic dimension.

This conceptualisation postulates therefore that perceived environmental uncertainty is the *dependent* variable, with rate of change and level of complexity as the *independent* variables. In developing this perspective, Hatch (1997) proposed that the two independent variables were equally weighted in their contribution to perceived environmental uncertainty.

*Table 78 – Examining The Relationship Between Uncertainty, Change And Complexity*

	Uncertainty		Change		Complexity	
	r	r <sup>2</sup> (%)	R	r <sup>2</sup> (%)	r	r <sup>2</sup> (%)
Uncertainty	1		–	–	–	–
Change	<b>0.437</b>	<b>19.10</b>	1		–	–
Complexity	0.175	3.07	<b>0.435</b>	<b>18.92</b>	1	

Project 2 concludes that the rate of change and the level of complexity are not independent variables (see Table 78 above), as there is a statistically significant relationship between the rate of change and the level of complexity (0.435), which suggests that change creates complexity at Barclays. Allied to this observation, Project 2 concludes that the rate of change is a far stronger variable (0.437) than the level of complexity (0.175) in the creation of perceived environmental uncertainty at Barclays. Project 2 therefore concludes that research must develop a far more sophisticated understanding of the relationship between the rate of change and the level of complexity as contributory factors of perceived environmental uncertainty than that proposed through the modernist perspective.

In line with the literature review (see Section 4.5.6), Project 2 concludes that the degree of uncertainty, the rate of change and the level of complexity are not the key issues for top management at Barclays; rather, the key issues are the importance of the business units being able to cope with these three phenomena, and their ability to cope.

### **5.8.2.3 Investigating The Managerial Implications**

#### **5.8.2.3.1 Levels Of Perceived Environmental Uncertainty, Change And Complexity**

Through its exploration into perceived environmental uncertainty, Project 2 has been able to discern statistically significant relationships that have managerial implications for strategists at Barclays. As the analysis showed in Section 5.6, some of these relationships are strong while others are evidently quite weak – the varying strengths of these relationships are set out in detail in Tables 75 and 76 (see Section 5.7.2.3.1). This section of the report draws conclusions from a managerial perspective on the key relationships that exist when considering the varying implications for managers associated with the level of uncertainty, change and complexity.

##### ***5.8.2.3.1.1 Degree Of Uncertainty And Rate Of Change***

The research discovered a reciprocal relationship between the degree of uncertainty and the rate of change ( $r = 0.437$ ). This suggests that any increase in the rate of change experienced by strategists is significantly reflected in a similar rise in the uncertainty being experienced. Clearly, this observation has implications for strategists who may want to be more proactive in how they manage uncertainty when they are implementing change, thereby causing the rate of change to rise. Such interventions could take the form, for example, of clearer communications to people in the business unit or to customers who may be impacted by change.

##### ***5.8.2.3.1.2 Rate Of Change And Level Of Complexity***

The research also discovered a reciprocal relationship between the rate of change and the level of complexity ( $r = 0.435$ ). This observation suggests that any variance in the rate of change experienced by strategists is also reflected in their perceptions of the degree of uncertainty faced by the business. Under these circumstances managers may need to be aware that when they initiate strategic change programmes, for example merger and acquisitions, then people may need more support in managing through the complexity associated with large change. This support may take the form of additional resources, for example consultants or ensuring that large change teams have the appropriate level of experience and expertise to manage both the change programme itself, and the complexity associated with such change.

#### ***5.8.2.3.1.3 Rate Of Change And Importance Of Being Able To Cope With Change***

The investigation in Project 2 also discovered a relationship between the rate of change and the importance of being able to cope with change ( $r = 0.293$ ). It is recognised, however, that the strength of this relationship is a much weaker relationship comparative to the two relationships identified earlier in this section. The weakness of this relationship is interesting from the perspective of a manager because logic would dictate that where there is any variance in the rate of change, such variance is reflected in the importance of the business unit being able to cope with change. Or couched in simpler terms, logic would suggest that when a strategic business unit is faced with an increase in the rate of change in its competitive environment, then it becomes increasingly important that it is able to cope with such change.

The weakness of this relationship could be explained through the observation that although the rate of change continues to rise across Barclays through, for example, technological advance, then the importance of being able to cope with such change does not grow at the same rate because of the resilience of the business model, which continues to create value irrespective of any increase in the rate of change within its competitive environment.

#### ***5.8.2.3.1.4 Level Of Complexity And Importance Of Being Able To Cope With Uncertainty***

The next observation also raises interesting managerial implications. Here the research identifies a reciprocal (but again weak) relationship between the level of complexity being faced by a strategic business unit and the importance of the business being able to cope with uncertainty ( $r = 0.335$ ). As a consequence of this relationship, any variance in the level of complexity being faced is reflected in the importance of being able to cope with uncertainty.

Managerial logic suggests that this relationship should be stronger because as the level of complexity rises, then the importance of being able to cope with uncertainty should also rise. The issue here is that individuals may have adopted different conceptualisations, or models, of ‘uncertainty’ and ‘complexity’. Therefore, although logic suggests life should be more tenable as a consequence of a reduction in the level of complexity, this is not reflected in the importance of coping with uncertainty because managers are describing a very different concept to ‘levels of complexity’ when they make reference to ‘uncertainty’.

#### ***5.8.2.3.1.5 Level Of Complexity And Importance Of Being Able To Cope With Change***

This research then goes on to identify a reciprocal, but again relatively weak, relationship between the level of complexity being faced by a business unit and the importance of being able to cope with change ( $r = 0.334$ ). This part of the study recognises that any variance in the level of complexity is reflected in the importance of being able to cope with change.

Here the managerial implications follow the predictable logic that as the level of complexity in the environment increases, it becomes more important that the business unit is able to cope with change. The managerial logic here is that as the competitive environment increases in complexity, then the organisation needs to adapt in order to survive and it is therefore imperative that the business is able to cope with change. It is interesting that the relationship is so weak, as managerial logic would suggest that the relationship between the level of complexity and the importance of being able to cope with change would be much stronger.

#### ***5.8.2.3.1.6 Level Of Complexity And Importance Of Being Able To Cope With Complexity***

The final relationship examined in this section of the report is the one between the level of complexity and the importance of being able to cope with complexity. Here the research identified a reciprocal relationship ( $r = 0.415$ ). Consequently, this relationship follows a predictable managerial logic that any variance in the level of complexity being experienced in the competitive environment is reflected in the importance of the strategic business unit being able to cope with complexity.

Once more the identification of such a weak relationship defies a degree of managerial logic, as one would expect the relationship between the level of complexity and the importance of coping with complexity to be strong. From a managerial perspective, an increase in the level of complexity should logically result in the importance of being able to cope also rising as the environment becomes more interconnected and therefore less predictable. To illustrate this point, such an increase in the level of interconnectedness would increase complexity by making processes such as strategic decision-making far more difficult to manage, as it becomes more and more difficult to anticipate cause-and-effect relationships.

### **5.8.2.3.2 Ability To Cope With Uncertainty, Change And Complexity**

The literature review (see Section 4.5.6.1) recognised that the key managerial issue associated with perceived environmental uncertainty is not necessarily the degree of uncertainty, change and complexity being experienced by the organisation, but the ability of the business unit to cope with these three phenomena. This section of the report draws conclusions from a managerial perspective on the key relationships that exist when considering the ability of the business units within the Barclays portfolio to cope with uncertainty, change and complexity. Again these relationships vary in strength and the specific measurements are set out in detail in Tables 75 and 76 (see Section 5.7.2.3.1).

#### ***5.8.2.3.2.1 Ability To Cope With Uncertainty And Ability To Cope With Change***

The first observation is that there is a relatively strong reciprocal relationship between the ability of a strategic business unit to cope with uncertainty and its ability to cope with change ( $r = 0.834$ ). Consequently, any variance in the ability to cope with uncertainty is reflected in the business's ability to cope with change. Presented in simpler managerial terms, the results show that when a member of the Group Executive Committee deems a business unit to be able to cope with uncertainty, they also deemed the business unit to be able to cope with change.

From a managerial perspective, this conclusion is entirely logical because the capabilities that enable the business units to cope with uncertainty, for example a resilient business model and a dominant market position (see Section 5.5.3.1), also enable the business units to cope with change. Consequently, if an organisation increases its ability to cope with uncertainty, as a manager one would logically expect an improvement in the ability of the strategic business unit to cope with change.

#### ***5.8.2.3.2.2 Ability To Cope With Uncertainty And Ability To Cope With Complexity***

Following the same logic as the earlier section the research identified a strong reciprocal relationship between the ability of the organisation to cope with uncertainty and its ability to cope with complexity ( $r = 0.703$ ). Consequently, any variance in the organisation's ability to cope with uncertainty is reflected in its ability to cope with complexity.

This observation can also be presented in simpler managerial terms, because the results show that when a member of the Group Executive Committee deems a business unit to be able to cope with uncertainty, they also deemed the business unit to be well placed to cope with complexity. From a managerial perspective, this conclusion is also entirely logical because the capabilities that enable the business units to cope with uncertainty, for example the experience of having successfully encountered uncertainty in the past (see Section 5.5.3.1), is very similar to some of the factors that enable a business unit to cope with complexity, for example the pan-Group experience of the senior management team (see Section 5.5.3.3). As a result, if an organisation increases its ability to cope with uncertainty, a manager would logically expect an improvement in the ability of the strategic business unit to cope with complexity.

#### ***5.8.2.3.2.3 Ability To Cope With Uncertainty And Importance Of Coping With Uncertainty***

The research now moves on to identify a reciprocal (but far weaker) relationship between the ability of the strategic business unit to cope with uncertainty and the importance of its being able to cope with uncertainty ( $r = 0.263$ ). Therefore, any variance in the ability to cope with uncertainty is mirrored in the importance of coping with uncertainty. Presented in simpler terms, when a respondent believed a business unit to be able to cope with uncertainty they also believed it was important that the business unit was able to cope with uncertainty.

From the perspective of a manager, this result is again entirely logical because one would expect that for an organisation to build a specific capability such as the ability to cope effectively with uncertainty, then building this capability would be strategically important. The weakness of the relationship between the ability to cope with uncertainty and the importance of being able to cope with uncertainty is a little surprising, as managerial logic would suggest a much stronger association.

The weakness of this association may be explained in the cause and effect relationship. To illustrate this point, respondents may have taken the view that the benefits of an attribute that enables the business to cope effectively with uncertainty, for example a dominant market position (see Section 5.5.3.1), could also reduce the importance of the business unit having to cope with uncertainty because the organisation has a dominant market position.

#### ***5.8.2.3.2.4 Ability To Cope With Uncertainty And Importance Of Coping With Complexity***

The next relationship investigated in this section of the research is the relationship between the ability to cope with uncertainty and the importance of coping with complexity. Through its investigations, the research identified a correlation ( $r = 0.251$ ) between these two phenomena. Here the study draws a rather interesting conclusion, namely that any variance in the ability to cope with uncertainty is reflected in the importance of coping with complexity. Or in simpler terms, when a respondent felt a business unit was able to cope with uncertainty, they also believed it important that the business unit was able to cope with complexity.

The logical corollary in this relationship is again relatively straightforward: first, in order for a business unit to be deemed able to cope with uncertainty, it must be able to cope with complexity (see Section 5.8.2.3.2.2); second, if the business unit has built the capability to cope with complexity, the managerial logic would follow that it is strategically important that the business is able to cope. To illustrate the managerial logic, in order for a business unit to be deemed able to cope with uncertainty, it must be able to cope with complexity; it achieves this by recruiting top talent into its senior management team and forging good working relationships with key stakeholders (see Section 5.5.3.3). If the business unit makes these types of investments in order to cope with complexity, then from a ‘value-based’ perspective one would envisage that it is important that the business unit is able to cope with complexity.

#### ***5.8.2.3.2.5 Ability To Cope With Change And Ability To Cope With Complexity***

The research now moves on to investigate the relationship between the ability to cope with change and the ability to cope with complexity, and concludes that there is a strong reciprocal relationship between these two phenomena ( $r = 0.714$ ). In simple managerial terms, when a member of the Group Executive Committee believed a strategic business unit was able to cope with change they also believed it to be able to cope with complexity. Similarly to the conclusions regarding the ability to cope with uncertainty and the ability to cope with complexity (see Section 5.8.2.3.2.2), this relationship is also underpinned by a strong managerial logic because of the similarity between the attributes that make a business unit able to cope with change and those that make it able to cope with complexity.

In order to illustrate this point, the qualitative exploration (see Section 5.5.3.2) found that strategic agility, flexibility and highly talented people make a strategic business unit able to cope with change. Evidently such attributes – together with experience, highly effective working relationships with stakeholders, and world-class communications – also make a business unit highly capable of coping with high levels of complexity (see Section 5.5.3.3).

#### ***5.8.2.3.2.6 Ability To Cope With Change And Importance Of Coping With Uncertainty***

The research now moves on to identify a reciprocal relationship ( $r = 0.261$ ) between the ability of a strategic business to cope with change and the importance of its being able to cope with uncertainty. Presented in managerial terms the logical corollary is again quite straightforward, that is, when respondents believe a business unit to be able to cope with change they also believe it is important for that particular business unit to be able to cope with uncertainty, and vice versa.

To illustrate this relationship, it is useful to start with the conditions that make it important for a strategic business unit to be able to cope with uncertainty. The qualitative exploration (see Section 5.5.4.1) identified these conditions as: the pressure to create long-term value; regulations breaking down barriers to entry; the emergence of international competition; and the reduction of inertia among the customer base. Clearly when these factors are present in the competitive environment, they act as catalysts for strategic change. Evidently within a fast moving competitive environment it is important that strategic business units have strategic agility, flexibility and highly talented people, the attributes that enable business units to be able to cope with change (see Section 5.5.3.2).

#### ***5.8.2.3.2.7 Ability To Cope With Change And Importance Of Coping With Complexity***

The research also concludes that there is a reciprocal relationship between the ability of a business unit to cope with change and the importance of its being able to cope with complexity ( $r = 0.253$ ). Therefore any variance in the ability to cope with change is reflected in the importance of being able to cope with complexity, or vice versa. In managerial terms, when it is important to cope with complexity the business is deemed able to cope with change.

Again it is useful to examine the factors that make it important for a strategic business unit to cope with complexity: first, the complexity of the business model; second, globalisation within the financial services industry; and finally, onerous legal and regulatory obligations (see Section 5.5.4.3). As in the previous section, when these factors are present in the competitive environment they also act as catalysts for strategic change. Clearly in order to cope with these competitive issues, it is once again important that strategic business units have strategic agility, flexibility and highly talented people, the attributes that enable business units to be able to cope with change (see Section 5.5.3.2).

#### ***5.8.2.3.2.8 Ability To Cope With Change And Importance Of Coping With Change***

The research now moves on to conclude that there is a reciprocal (but weak) relationship between the ability of a strategic business to cope with change and the importance of its being able to cope with change ( $r = 0.179$ ). Therefore, any variance in the importance of coping with change is reflected in the ability to cope with change. Or in simple managerial terms, when a respondent believes a strategic business unit is able to cope with change they also believe it is important that the business unit is able to cope with change.

This relationship follows the same sound managerial logic as the conclusions drawn between the ability of a business unit to cope with uncertainty and the importance of it coping with uncertainty (see Section 5.8.2.3.2.3). Here the research concludes that where the business unit has made the investment in building its ability to cope with change by developing strategic agility, building flexibility and recruiting talented people (see Section 5.5.3.2), then within the context of a ‘value-based’ approach to management it is important that the business builds this capability and is therefore able to cope with change.

#### ***5.8.2.3.2.9 Ability To Cope With Complexity And Importance Of Coping With Uncertainty***

This section of the research concludes that there is also a relatively weak relationship between the ability of strategic business units to cope with complexity and the importance of their being able to cope with uncertainty ( $r = 0.239$ ). In this relationship, any variance in the ability to cope with complexity is mirrored only weakly in the importance of being able to cope with uncertainty.

The explanation of the weakness in this relationship from a managerial perspective probably lies in the very ‘external’ nature of the factors that make it important that business units are able to cope with uncertainty, and the very ‘internal’ nature of the attributes that enable a business to cope with complexity. In order to illustrate this point, the qualitative exploration (see Section 5.5.3.3) discovered that factors such as the ability to recruit top talent, the pan-Group experience of the senior team, and effective cross-Group communications enabled business units to cope effectively with complexity. By comparison, the importance of coping with uncertainty was driven by forces outside of the organisation, for example, regulation breaking down barriers to entry and changes in customer behaviour (see Section 5.5.4.1).

#### ***5.8.2.3.2.10 Ability To Cope With Complexity And Importance Of Coping With Complexity***

The final relationship examined in this section concludes that there is an association between the ability of a business unit to cope with complexity and the importance of its being able to cope with such complexity ( $r = 0.344$ ). Therefore, when respondents deemed a strategic business unit to be able to cope with complexity then they also believed it to be important that the business unit was able to cope with such complexity, and vice versa.

As in the earlier study of the relationship between the ability to cope with uncertainty and the importance of being able to cope with uncertainty (see Section 5.8.2.3.2.3), this result is again entirely logical from a managerial perspective because one would expect that for an organisation to build a specific capability such as the ability to cope effectively with complexity, then building this capability would be strategically important. The weakness in this relationship is somewhat surprising, as logic would suggest a much stronger association.

The weakness of this association may again be explained in the experiential nature of being able to cope with complexity. To illustrate this point, respondents may have taken the view that when a business unit has proved itself able to cope with complexity in the past, by recruiting top talent, working across the Group effectively, building high levels of trust and communicating effectively (see Section 5.5.3.3), then this may reduce the perceived importance of the business having to cope with complexity going forward, because the organisation has proved its ability to cope in the past.

### **5.8.2.3.3 Importance Of Being Able To Cope With Uncertainty, Change And Complexity**

This section looks at the importance of the various strategic business units in the Barclays portfolio being able to cope with the degree of perceived environmental uncertainty, the rate of change and the level of complexity. The detailed findings are set out in Table 75 (see Section 5.7.2.3.1). Through its findings, Project 2 concludes that there are three statistically significant relationships when considering the importance of being able to cope: first, the importance of being able to cope with uncertainty and the importance of being able to cope with change; second, the importance of being able to cope with uncertainty and the importance of being able to cope with complexity; and finally, the importance of being able to cope with change and the importance of being able to cope with complexity.

#### ***5.8.2.3.3.1 Importance Of Being Able To Cope With Uncertainty And Change***

This report concludes that there is a reciprocal relationship between the importance of the business unit being able to cope with uncertainty and the importance of its being able to cope with change ( $r = 0.787$ ). Consequently, any variance in the importance of being able to cope with uncertainty is reflected in the importance of being able to cope with change. Or in simple managerial terms, when a respondent deemed it important that a strategic business unit was able to cope with uncertainty, they also believed it to be important that the business unit was able to cope with change.

From a managerial perspective this conclusion is entirely logical, owing primarily to the close association between the qualitative factors that make it important to cope with uncertainty (see Section 5.5.4.1) and the qualitative factors that make it important to cope with change (see Section 5.5.4.2). To illustrate this point, the key factor that drives the importance of being able to cope with uncertainty is the pressure to create long-term value for shareholders, and the two key factors that drive the importance of being able to cope with change are: the centrality to the Group strategy; and the degree to which the business unit will be relied on to deliver benefits. This report therefore concludes that the high degree of synergy between these qualitative factors accounts for the strong reciprocal relationship between the importance of coping with uncertainty and the importance of coping with change.

#### ***5.8.2.3.3.2 Importance Of Being Able To Cope With Uncertainty And Complexity***

This report now moves on to conclude that there is also a strong reciprocal relationship between the importance of the business unit being able to cope with uncertainty and the importance of its being able to cope with complexity ( $r = 0.722$ ). Therefore, once again any variance in the importance of being able to cope with uncertainty is reflected in the importance of being able to cope with complexity. Or in simple managerial terms, when a respondent deemed it important that a strategic business unit was able to cope with uncertainty they also believed it to be important that the business was able to cope with complexity.

This conclusion is entirely logical from a managerial perspective, and the explanation for the strong relationship can again be found in the close association between the qualitative factors that make it important to cope with uncertainty (see Section 5.5.4.1) and the qualitative factors that make it important to cope with complexity (see Section 5.5.4.3). To illustrate this point, the role of regulation is a key factor in driving both the importance of being able to cope with uncertainty and the importance of being able to cope with complexity.

#### ***5.8.2.3.3.3 Importance Of Being Able To Cope With Change And Complexity***

This final part of this section concludes that there is also a strong reciprocal relationship between the importance of the business unit being able to cope with change and the importance of its being able to cope with complexity ( $r = 0.788$ ). Therefore, when a respondent deemed it important that a strategic business unit was able to cope with change, they also believed it to be important that the business was able to cope with complexity.

This report concludes that this close relationship is entirely logical from a managerial perspective, and is accounted for by the close association between the rate of change and the level of complexity in the conceptualisation of perceived environmental uncertainty (see Table 78). Although not as strong as suggested by the modernist perspective (see Section 5.8.2.2), the relationship does account for this close association, as this report concludes that respondents believe the rate of change contributes to the level of complexity across Barclays, and this conclusion has ramifications when considering the importance of business units being able to cope with these two phenomena.

### 5.8.2.3.4 Managerial Implications: Key Conclusion

Reflection on the regression results uncovers a rather significant conclusion from a managerial perspective. As identified in Section 5.6.3.1 (see Table 46), while the regression results from the pooled data ( $R^2 = 0.192$ ) between the degree of uncertainty versus the rate of change and the level of complexity (also in Table 79 below), appear to confirm (albeit weakly) the modernist conceptualisation of perceived environmental uncertainty, this may be challenged by the strong correlation between complexity and change. The incremental influence of complexity alone is barely significant.

*Table 79 – Multiple Regression Statistics: Key Observations From Research Conclusions*

<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable(s)</b>	<b>R Squared (R<sup>2</sup>)</b>	<b>Significance</b>
Degree Of Uncertainty	Rate Of Change & Level Of Complexity	0.192	<1%
Ability To Cope With Uncertainty	Ability To Cope With Change & Ability To Cope With Complexity	0.720	<1%
Importance Of Coping With Uncertainty	Importance Of Coping With Change & Importance Of Coping With Complexity	0.647	<1%

However, the report also concludes that the strong regression result from the pooled responses ( $R^2 = 0.720$ ) between the ability to cope with uncertainty versus the ability to cope with change and the ability to cope with complexity (see Table 79 above), coupled with the equally strong regression result ( $R^2$  all data = 0.647) between the importance of coping with uncertainty versus the importance of coping with change and the importance of coping with complexity, gives indirect support to the modernist conceptualisation of perceived environmental uncertainty.

These results lead to two conclusions that have very interesting implications from a managerial perspective: first, the emergence of managerial logic within the responses as the respondents go through the data collection process; and second, the relationship between the ability to cope with perceived environmental uncertainty and the importance of being able to cope with such uncertainty.

Beginning with the first conclusion it is clear from the data that *managerial logic becomes evident in the results as the respondents make their responses*. To illustrate this, during the first stage of the data collection the respondent is asked to consider the level of perceived environmental uncertainty. This outcome is achieved by assessing the degree of uncertainty, the rate of change, and the level of complexity. Here it appears that respondents are dealing with these three phenomena as abstract or theoretical concepts; this is evidenced through the relationship between the degree of uncertainty versus the rate of change and the level of complexity ( $R^2 = 0.192$ ). This conclusion offers a clear challenge to the modernist perspective that perceived environmental uncertainty is a product of the rate of change and the level of complexity because the rate of change appears to contribute to the level of complexity (see Section 5.6.3.1).

During the next stage of the data collection, respondents move on to consider *the relationship between the ability to cope with perceived environmental uncertainty and the importance of being able to cope with such uncertainty*. These results show that when considering the managerial implications of perceived environmental uncertainty, a level of managerial logic becomes evident in the results. This logic is evident in the strong regression results regarding the ability to cope and the importance of coping with perceived environmental uncertainty (see Table 79 above). This conclusion shows support for the modernist perspective on perceived environmental uncertainty, where the degree of uncertainty is conceptualised as a product of the rate of change and the level of complexity.

The managerial implication from these observations is that strategists at Barclays do not appear to create a match between the ability of a business unit to cope with perceived environmental uncertainty and the importance of its being able to cope. Or in simpler terms, the Bank does not appear to send its most able strategists to the business units where it is most important that they are able to cope. It appears that other factors such as the level of value at stake; opportunities for career development; and job location, reward and recognition also influence where the Bank places its most able strategists. Clearly this conclusion has ramifications for the modernist literature, which is predicated on the assumption that an organisation sends its most able strategists into the most difficult environments, where it is most important that the business unit is able to cope.

## **6. PROJECT 3: Strategy Development Processes**

### **6.1 Project 3: Abstract And Overview**

#### **6.1.1 Project 3 Abstract**

Project 3 is the investigation of strategy development processes across Barclays, and the examination of the relationship between these processes and the assessments of perceived environmental uncertainty collected during Project 2. The purpose of Project 3 is fourfold: first, to identify strategy development processes across the Barclays Group; second, to analyse these processes against existing academic research; third, to investigate the relationship between these processes and perceived environmental uncertainty; and finally, to consider the managerial implications arising from such a relationship.

There are two key methodological findings: first, the research instrument built by Bailey (2000), further enhanced by Bailey et al. (2000) is an effective instrument for discerning strategy development processes at Barclays (i.e. it produces results consistent with previous research); and second, important modifications have been made to the strategy process questionnaire (Bailey, 2000; Bailey et al., 2000) through its application across Barclays.

There are four key empirical findings: first, the strategy development process at Barclays is characterised by the incremental and planning approach; second, the results are consistent with the literature review and existing academic research, third, there are significant differences in the use of strategy development processes across Barclays; and finally, across Barclays, there are statistically significant differences in degrees of perceived environmental uncertainty, the ability to cope and the perceived importance of being able to cope.

Two key inductive findings emerged from Project 3: first, there is a correlation between strategy development process and organisational performance; and second, there are key relationships between perceived environmental uncertainty and organisational performance.

## **6.1.2 Project 3 Overview**

### **6.1.2.1 Structure Of The Executive Doctorate**

This research examines the implications of perceived environmental uncertainty for strategy development processes across Barclays. There are two components to the managerial issue: perceived environmental uncertainty and strategy development processes. Project 2 represented the exploration of perceived environmental uncertainty and was undertaken with fifteen members of the Group Executive Committee and ten members of the Group Strategy & Planning Department. Project 3 is an examination of the implications for strategy development process and was carried out across the senior management teams of the seventeen strategic business units in the Barclays Group. Project 3 was successfully piloted in Barclays Solutions.

### **6.1.2.2 Project 3: An Investigation Of Strategy Development Processes**

In order to achieve its objectives, Project 3 consists of two key components: first, a quantitative exploration of strategy development processes across Barclays; and second, an investigation of the relationship between strategy development and perceived environmental uncertainty through testing a series of propositions discovered in the literature and developed in Project 2. The starting point for Project 3 is the testing and modification in the field at Barclays of the strategy process questionnaire originally built by Bailey (2000), and further enhanced by Bailey et al. (2000).

The investigation then utilises this amended research instrument to identify perceptions of the strategy development process across Barclays. Subsequently, the study moves on to analyse correlations in strategy development processes within the context of the literature review and conclusions drawn from existing academic research. Based on these findings and the conclusions of Project 2, the research examines the relationship between strategy development processes and perceptions of the environment held by the Group Executive Committee. The final element of Project 3 investigates the managerial implications arising from the relationship between perceived environmental uncertainty experienced by corporate strategists, and the processes for developing strategy at the strategic business unit level.

### **6.1.2.3 Project 3 Overview: Key Findings**

#### **6.1.2.3.1 Key Methodological Findings**

The research carried out in Project 3 discovered two key methodological findings: first, that the self-administered strategy process questionnaire (Bailey, 2000) is an effective instrument for identifying strategy development processes at Barclays; second, in order for the research instrument to produce the required results at Barclays, changes needed to be made to the questionnaire. Allied to this adaptation of the questionnaire to the organisational context at Barclays, it was necessary to test and validate the research instrument in the research field and to undertake a comprehensive analysis of the data prior to finalising the method for statistical analysis.

#### **6.1.2.3.2 Key Empirical Findings**

The investigation in Project 3 produced empirical findings in four key areas: the identification of strategy development processes across Barclays PLC; consistency of the Barclays results with the literature review and existing academic research; the identification of significant differences in strategy development processes across the Barclays portfolio; and the discovery of significant differences across the Barclays Group in degrees of perceived environmental uncertainty, the ability to cope with perceived environmental uncertainty and the perceived importance of being able to cope with such uncertainty.

Beginning with the *identification of strategy development processes across Barclays PLC*, the first key empirical finding from Project 3 is that the strategy development process at Barclays is typified by the incremental and planning approaches to strategy development. The results also produced significantly low scores on the political and enforced choice dimensions. Moving on to a *comparison of the Barclays results with the literature review and existing academic research*, the research found that the Barclays results were highly consistent with both the literature review and existing research – most notably the work of Bailey et al. (2000) and Collier et al. (2004).

The third key empirical finding is the *discovery of significant differences in strategy development processes across the Barclays portfolio*. In keeping with the Group results, there is a predominance of incrementalism and planning across the portfolio. However, some areas showed statistically significant evidence of other dimensions, for example the enforced choice dimension at Investment Management. Others showed a statistically significant move away from certain dimensions, for example the lack of the command dimension at Barclaycard, and the significantly low presence of the enforced choice dimension within Barclays Capital.

The final key empirical finding is the *discovery of significant differences in degrees of perceived environmental uncertainty across Barclays*. In Project 3, the data on perceived environmental uncertainty have been revisited to identify significant differences between business units and determine whether these differences are related to strategy development process. Here, Project 3 identifies significant differences in the degree of uncertainty and the level of complexity being experienced across Barclays. However, the findings show no significant differences in the rate of change being perceived across the Group. Interestingly, there were significant differences in the ability of the various businesses to cope with perceived environmental uncertainty, and the importance of their being able to cope.

#### **6.1.2.3.3 Key Inductive Findings**

Two key inductive findings emerged from Project 3. The first is the correlation between organisational performance and strategy processes; here the research found that the organisations that create the most value at Barclays are more likely to adopt the incremental or planning approach to strategy development. By way of comparison, the less successful organisations are more likely to adopt the political or the enforced choice dimensions.

The next key inductive finding is a significant correlation between perceived environmental uncertainty and organisational performance. The research found a significant positive correlation between the importance of being able to cope with perceived environmental uncertainty and the level of value created. The study was unable to prove a negative correlation between organisational performance and the degree of perceived environmental uncertainty, or between performance and the ability to cope with such uncertainty.

#### **6.1.2.4 Project 3 Overview: Key Conclusions**

There are nine key conclusions from the research in Project 3:

1. The strategy process questionnaire built by Bailey (2000), and enhanced by Bailey et al. (2000), with minor modifications, has proved robust in its application in the research field at Barclays.
2. The strategy development process across Barclays is multi-dimensional and processes transpire in combination, most notably the incremental approach to strategy development and the planning dimension.
3. A relationship between the command and enforced choice dimensions emerges at Barclays, which appears to be peculiar to the organisational structure of the Group.
4. The emergence of a relationship between the command and culture dimensions at Barclays highlights that the research instrument may not be entirely applicable to every organisation.
5. There are significant differences in the processes that are applied for developing strategy across the strategic business units within the Barclays Group.
6. There are also significant differences in the degree of uncertainty and the level of complexity being experienced by strategic business units across the Barclays Group. However, none of the strategic business units is deemed to face a significantly higher or lower rate of change than elsewhere across the Group.
7. There is a significant positive correlation between organisational performance and the incremental and planning dimensions to strategy development. There is also a significant negative correlation between organisational performance and the political and enforced choice dimensions to strategy development. These conclusions are consistent with the conclusions drawn by Bailey et al. (2000).
8. There is a significant positive correlation between organisational performance and the importance of being able to cope with perceived environmental uncertainty.
9. The importance of being able to cope with perceived environmental uncertainty is juxtaposed with the level of value contributed, when strategists at Barclays consider the relative perceived importance of strategic business units being able to cope with perceived environmental uncertainty.

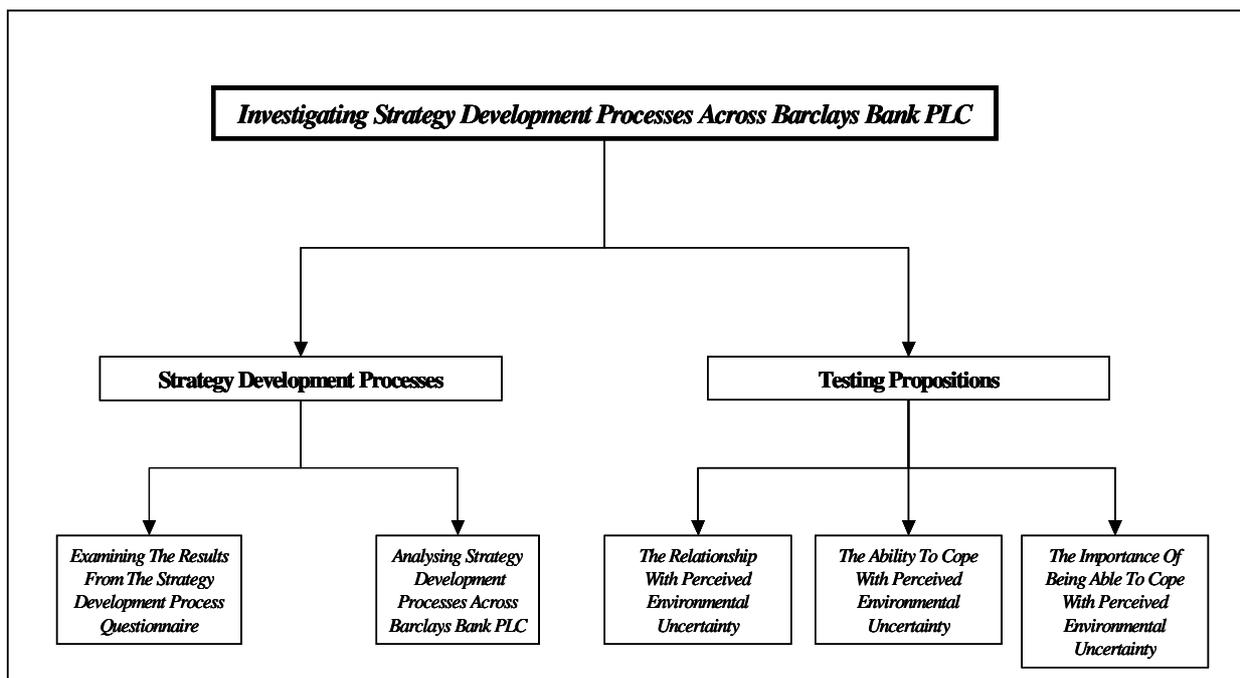
## 6.2 Introduction

### 6.2.1 Background

As outlined in the introduction (see Section 3.2), the managerial issue addressed in this research can be broken down into two component parts: perceived environmental uncertainty and strategy development processes. This element of the report presents the investigation of strategy development processes and their relationship with perceived environmental uncertainty, as defined by Duncan (1972), and discussed in detail in Section 4.3.10.

In order to examine strategy development processes across Barclays Bank PLC, this part of the research is also divided into two component parts: first, a quantitative exploration of strategy development processes across Barclays Bank PLC; and second, a quantitative investigation into the relationship between strategy development and perceived environmental uncertainty. This is achieved by testing a series of propositions discovered in the literature review and explored earlier in Project 2. The structure of Project 3 is set out in Figure 29 below:

Figure 29 – Breaking Project 3 Down Into Its Component Parts

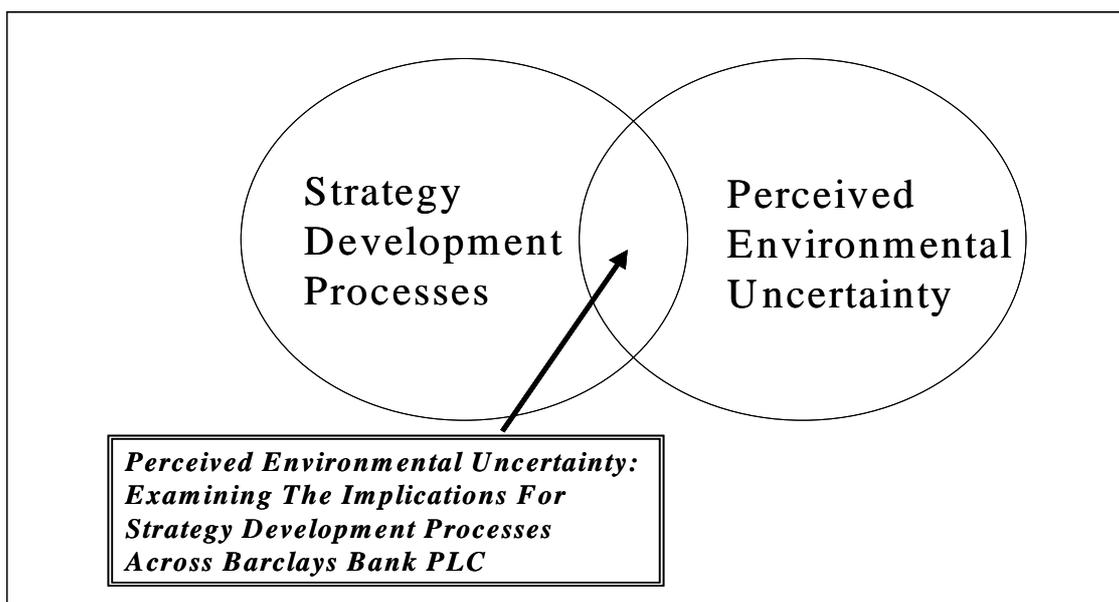


## 6.2.2 Rationale For Project 3

This research investigates the relationship between perceived environmental uncertainty and strategy development processes across Barclays Bank PLC. Consequently the rationale for Project 3 lies in developing two key aspects: first, to identify differences in the strategy development processes across the various businesses within the Barclays Group; and second to identify the relationship that exists between these processes and degrees of environmental uncertainty being perceived by the Group Executive Committee (see Project 2).

In order to achieve its objectives, Project 3 begins by using the self-administered questionnaire developed by Bailey et al. (2000) to identify perceptions of the strategy development process across Barclays. The research then moves on to analyse correlations in strategy development processes across the Barclays portfolio. The third element of Project 3 investigates the relationship between strategy development processes and perceptions of the environment held by the Group Executive Committee. The final element investigates the managerial implications arising from the relationship between perceived environmental uncertainty experienced by corporate strategists, and the process for strategy development at the strategic business unit level (see Figure 30 below):

*Figure 30 – Examining The Implications Of Perceived Environmental Uncertainty For Strategy Development*



## **6.3 Theoretical Overview: Synthesis Of The Literature Review**

### **6.3.1 The Linking Of Theoretical Concepts**

As detailed in Section 3.2.1 (developed through Project 2 – and set out in detail in Section 5), the Executive Doctorate investigates the relationship between two theoretical concepts: strategy development processes at the strategic business unit level, and degrees of perceived environmental uncertainty experienced by strategists on the Group Executive Committee at Barclays Bank PLC (see Figure 30 above).

Based on the literature review (see Section 4.1–4.2), Project 3 links theoretical concepts together at two levels. In order to achieve this, Project 3 first identifies perceptions of the strategy development process across the various strategic business units, analysing correlations between the various processes and exploring key differences that may exist across the portfolio; second, it investigates the relationship between strategy development processes and the degree of perceived environmental uncertainty experienced by members of the Group Executive Committee, pursuing the managerial implications of any such relationship.

### **6.3.2 Summarising Key Theoretical Arguments Informing Project 3**

Through a comprehensive review of the literature (see Section 4.1–4.2), and the examination of perceived environmental uncertainty in Project 2 (see Section 5), this part of the report summarises key theoretical arguments that underpin Project 3.

The first theoretical argument is that there is a reciprocal relationship between an organisation and the environment within which it operates (Mintzberg, 1973). Therefore, an organisation's strategy reflects the extent of match or alignment between the organisation's external environment and its internal structure and processes. Consequently the challenge for strategists is to adapt to their external environment in order for their organisation to remain viable and survive (Lenz, 1980) – see Section 4.1 (Chaffee, 1985).

The second theoretical argument informing Project 3 is that such an alignment, or ‘fit’ (Hatch, 1997), is achieved via a process of strategy development (Bailey et al., 2000). Through a comprehensive search of the literature, reviewed in Section 4.2, and an analysis of other models of strategy development, most notably the work of Hart (1992), Bailey et al. (2000) discovered six discrete dimensions of strategy development within three broad approaches to the strategy process (see Section 4.2). This research utilises the self-administered questionnaire developed by Bailey et al. to identify the strategy development processes adopted by Barclays at the strategic business unit level. The research instrument is set out in Appendix A.

This research also adopts the work of Bailey et al. to investigate the third theoretical argument that is probed in Project 3 – here the research analyses the results from the self-administered questionnaire to identify correlations in strategy development processes and examine whether there are any key differences in these processes across the Barclays portfolio.

The fourth theoretical argument that is investigated has three components: first, the relationship between a business unit’s strategy development process and the level of perceived environmental uncertainty being experienced by strategists (Bourgeois and Eisenhardt, 1988; Eisenhardt and Zbaracki, 1992; Brown and Eisenhardt, 1998); second, whether executives at Barclays use strategy to maintain effectiveness in the above relationship (Javidan, 1984; Chaffee, 1985); and finally, whether strategic business units modify their decision processes in response to varying degrees of perceived environmental uncertainty (Duncan, 1972; Hatch, 1997).

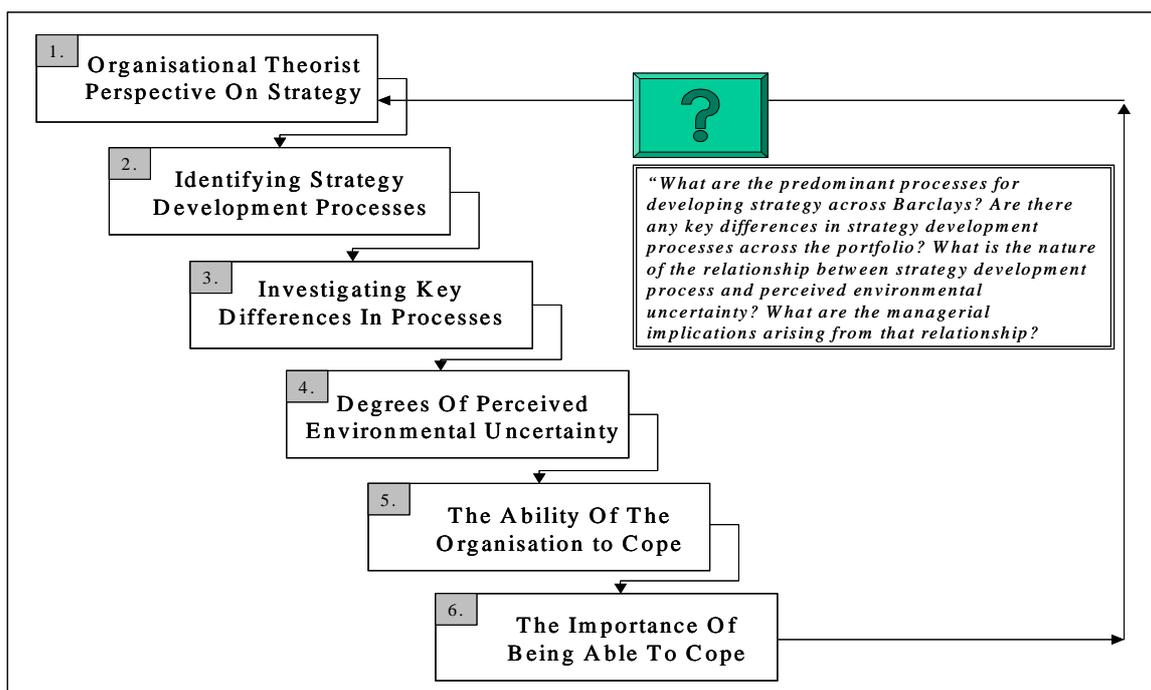
Project 3 then moves on to examine the managerial implications arising from the relationship between perceived environmental uncertainty and strategy development. To achieve this, Project 3 investigates whether the ability of a business unit to cope with its competitive environment is a product of its ability to cope with uncertainty, change and complexity (Hatch, 1997). And finally, it investigates whether the importance of the business unit being able to cope with perceived environmental uncertainty is a function of the importance of it being able to cope with uncertainty, change and complexity (Milliken, 1987), or whether such importance is driven by other factors, for example value creation (see Section 4.5.1–4.5.2).

### 6.3.3 Linking Theoretical Arguments To Frame The Research Question

Taking as a starting point the arguments set out in Section 6.3.1 it is possible to link them to show how the research issue for Project 3 (see Figure 31 below) is framed by the literature:

1. Through the application of the Bailey et al. (2000) strategy development questionnaire, what are the dominant processes for developing strategy across Barclays?
2. Are the correlations between the various dimensions consistent with previous research, and are there any key differences in strategy development processes across the Barclays Group?
3. What is the nature of the relationship between strategy development processes at the strategic business unit level and the degree of perceived environmental uncertainty experienced by strategists on the Group Executive Committee?
4. From a managerial perspective, do variances in strategy development process make some strategic business units more able to cope with uncertainty, change and complexity than others?
5. How do such variations relate to the importance of the various strategic business units being able to cope with uncertainty, change and complexity?

Figure 31 – Linking Theoretical Arguments To Frame The Research Question For Project 3



## **6.3.4 Development Of The Strategy Process Questionnaire**

### **6.3.4.1 The Original Research (Bailey, 2000)**

The strategy process questionnaire used for collecting data in Project 3 of this Executive Doctorate was originally developed by Bailey (2000). Bailey identified that numerous management and academic researchers have investigated strategy development and acknowledged a multitude of theories that sought to explain the precise nature of the strategy development process. The literature on strategy development processes is covered earlier in this report (see Section 4.2).

Through his research, Bailey developed a multi-dimensional framework to explain strategy development. The framework incorporates a number of perspectives on the strategy development process including: planning, incrementalism, cultural and political processes, command (the influence of a commanding leader), and enforced choice (the restrictions placed on an organisation by forces beyond its boundaries). Bailey's research included a large-scale survey of approximately 2,000 managers in over 300 different organisations, and found that the theoretical perspectives on the process of strategy development that informed his study corresponded well to managerial and academic understanding of the process.

The original strategy process questionnaire developed by Bailey took the form of a self-administered questionnaire comprising 72 items and was issued in a paper-based format. Of these items, 21 were used to collect information regarding the organisational context, for example the size of the firm, length of service and profitability. The remaining 48 items related to perceptions of strategy development process; Bailey allocated eight questions to each of the six processes.

Based on the original research by Bailey, Project 3 of this Executive Doctorate utilises the latest development of Bailey's strategy process questionnaire (see Appendix A) tailored to the organisational context at Barclays. Illustrations of such amendments include the replacement of the term 'chief executive' with 'managing director', and the use of the term 'managerial grade' instead of 'managerial level'.

### 6.3.4.2 Adaptation Of The Original Research (Bailey et al., 2000)

Building on the original research, Bailey et al. (2000) used the strategy process questionnaire at Cranfield School of Management and collected 5,332 observations from 937 organisations. In order to establish the face validity of the instrument and to ensure content validity, Bailey et al. appointed an expert panel of ten strategy academics to represent the characteristics singularly attributable to each of the six dimensions. Based on the identification of the characteristics, five practising managers were asked to work through the item pool and indicate items they believed to be unrelated to or inappropriate in explaining strategy development. Such items were either removed or modified, leaving a final selection of 39 items or statements.

Of the 49 items in the questionnaire originally designed by Bailey (2000), two (numbers 26 and 49) were found not to be statements designed to support dimensions of the strategy development process. Of the remaining 47 items, eight were deemed inappropriate (numbers 4, 12, 21, 30, 31, 37, 44 and 47) by the panel of experts commissioned by Bailey et al. (2000), and were therefore omitted from the questionnaire. A detailed breakdown of the remaining 39 items, and the dimensions of strategy development process they were designed to characterise, is set out in Table 80 below:

*Table 80 – Breakdown Of The 39 Items In The Original Design By Bailey (2000)*

<b>Dimensions Of Strategy Development Process</b>	<b>Item Numbers</b>	<b>Items Per Dimension</b>
Planning Dimension (see Section 4.2.5)	1, 3, 9, 14, 17, 34, 38, 42	<b>8</b>
Incremental Dimension (see Section 4.2.6)	2, 20, 24, 36, 40, 45	<b>6</b>
Cultural Dimension (see Section 4.2.8)	5, 8, 13, 25, 33, 39, 46	<b>7</b>
Political Dimension (see Section 4.2.7)	10, 19, 23, 29, 35, 48	<b>6</b>
Command Dimension (see Section 4.2.4)	6, 11, 16, 27, 41	<b>5</b>
Enforced Choice Dimension (see Section 4.2.9)	7, 15, 18, 22, 28, 32, 43	<b>7</b>

Clearly the decision to move away from the original design of the strategy process questionnaire (Bailey, 2000) had ramifications for the method of statistical analysis completed by Bailey et al. (2000) and further studies completed using this instrument (Fishwick, Johnson, and Collier, 2000; Collier et al., 2004). These implications are set out in detail later in this report (see Section 6.5.2).

## **6.4 Project 3: Research Pilot**

### **6.4.1 Development Of The Pilot For Project 3**

#### **6.4.1.1 The Nature Of The Pilot**

The pilot for the strategy development process element comprised the completion of 93 of the Bailey et al. (2000) self-administered questionnaires across Barclays Solutions, the internal consultancy of Barclays Bank. Each respondent was employed at a senior managerial grade, the same level as the respondents in the main research. Barclays Solutions was chosen for two key reasons: first, it was independent of the seventeen strategic business units that would be used in Project 3; and second, it was the area of Barclays within which the researcher was working at the time; therefore the pilot could be effectively managed, controlled and co-ordinated.

In preparation for the pilot, each respondent received a memo from the Managing Director of Barclays Solutions explaining that the organisation had agreed to support the research, and requesting co-operation and support in completing the questionnaire. Following the circulation of this note, each respondent was issued with a paper-based version of the Bailey et al. (2000) self-administered strategy process questionnaire (see Appendix A). For the pilot, respondents were not asked to complete the additional management information, for example length of service and managerial grade. In an attempt to encourage participation, a chocolate bar and a Barclays Solutions pen were enclosed with the questionnaire. A pre-addressed internal envelope was provided for returning the completed questionnaire.

For the pilot study, each respondent was given four weeks to complete the questionnaire. After two weeks had elapsed each non-respondent was issued a reminder to complete the questionnaire; copy questionnaires were issued if appropriate. After a further week, each non-respondent was again issued with a reminder by electronic mail. At the end of the four-week period, each non-respondent received a voice-mail message issuing a reminder to complete the questionnaire. At the end of the pilot, 67 of the 93 questionnaires had been completed and returned, representing a response rate of 72%.

### **6.4.1.2 The Purpose Of The Pilot**

There were ten key purposes to the pilot test for Project 3:

1. To test the process for positioning the research within the organisation, through a note from the Managing Director of Barclays Solutions.
2. To trial the process for the physical distribution and return of the paper-based strategy process questionnaires, including feedback on the covering letter, the complimentary chocolate bar and the free pen.
3. To test the distribution and response to an electronic version of the questionnaire.
4. To ensure the wording of individual items, or statements, was appropriately tailored to the organisational context at Barclays. For example, the questionnaire for the pilot replaced the terms ‘we’ and ‘our’ (Bailey et al., 2000) with the term ‘this business unit’. To illustrate, statement 3 was amended from ‘when we formulate a strategy it is planned in detail’ to ‘when this business unit formulates a strategy it is planned in detail’. The point here is that it was important that the respondents considered their own business area rather than Barclays as a whole when assessing the process for developing strategy.
5. To gauge the flow of responses effectively. To illustrate this point, the majority of responses were received in either the first week or the fourth week. Therefore, the electronic mail reminder was developed to ensure a consistent flow of completed questionnaires.
6. To assess the amount of time required to input data from the paper-based strategy process questionnaire into the electronic database.
7. To build and populate the electronic database and ensure the dimensions of strategy development could be reconciled to the work of Bailey et al. (2000).
8. To test (in the field) enhancements to the electronic database that were omitted by Bailey et al. (2000), for example the application of the arithmetic mean rather than the centre of the seven-point Likert scale (number 4) for unanswered questions.
9. To construct radar graphs within the electronic database to replicate the work of Bailey et al. (2000).
10. To gauge organisational feedback on the findings.

## **6.4.2 Pilot Findings: Strategy Development Processes**

### **6.4.2.1 Project 3 Pilot Findings**

#### **6.4.2.1.1 Obtaining Executive Sponsorship**

The pilot test found that it was imperative to obtain managerial commitment and this was achieved through an introductory meeting with the Managing Director of Barclays Solutions and his formal sponsorship of the research. At the meeting, the Managing Director was asked to circulate a memo to those of his direct or indirect reports who would be participating in the study, introducing the research, advising them of his commitment to achieving a successful outcome and requesting their support. This approach proved very successful and was pivotal to the high response rate.

#### **6.4.2.1.2 Distributing The Research Packs**

A key component of the pilot test was to trial the research packs. The paper-based strategy development process questionnaire was well received and the time requested for completion (15–20 minutes) was accurate. The complimentary chocolate bar and free pen received excellent feedback, as did the pre-addressed return envelope. Some concern was expressed over the respondent's name being on the questionnaire but this was resolved and retained for the main research.

#### **6.4.2.1.3 Electronic Version Of The Strategy Process Questionnaire**

As the majority of correspondence at Barclays takes place through electronic mail, the researcher built an electronic version of the strategy process questionnaire in Microsoft Excel (v5.0). As some senior managers no longer respond to paper-based mail, the plan was to circulate this file with the electronic mails designed to chase up responses. Unfortunately, the size of the file (1.17Mb) caused problems for respondents either because their electronic mailbox was full or downloading the file was slow. The file also contained a series of executable macros, which caused problems for virus checking software in the Group firewalls and at the network gateways. As a result of the pilot test, the electronic version of the file was dispensed with.

#### **6.4.2.1.4 Amendments To The Wording Of Particular Items Or Statements**

During the pilot test, careful attention was paid to the wording of each individual item or statement. As explained earlier (see Section 6.4.1.2), the terms ‘we’ and ‘our’ were replaced. More substantive changes were made to some items to ensure that the Barclays Group was being perceived as external to the strategic business unit. To illustrate this point, statement 15 of the Bailey et al. (2000) questionnaire asks whether strategy is imposed from outside the organisation, for example government. For this research, statement 15 asks whether strategy is imposed from outside the organisation, for example the Barclays Group Strategy & Planning Department. All amendments to the 49 items were well received; there was some confusion in the additional information section but these data were not used in the final analysis.

#### **6.4.2.1.5 Managing The Flow Of Responses**

Owing to the amount of effort required to input the data from paper-based questionnaires into the research database, it was important that the researcher received a steady flow of responses. This was achieved by targeting missing responses on a regular basis with a reminder by electronic mail. This did result in some additional work as many respondents claimed not to have received the questionnaire or secretaries admitted to destroying it. However, each batch of reminders resulted in a fresh influx of questionnaires and this proved a highly successful way of managing the study. Owing to the broad and international coverage of the main research, this proved an inexpensive and effective method of managing the flow of responses.

#### **6.4.2.1.6 Assessing The Time Required For Data Input**

Moving the responses from the paper-based questionnaire into the electronic database proved relatively straightforward for the pilot test. This was due to two factors: first, the relatively low number of responses (67); and second, the fact that respondents were not asked to complete the thirteen additional questions relating to length of service, managerial grade, etc. By engaging the support of family and friends to read out the respondent’s name and the 49 responses, the researcher was able to input one full questionnaire in three minutes and therefore this method was retained for the main research. For the main research, the time required for inputting data increased by a factor of three (9–10 minutes).

#### **6.4.2.1.7 Building The Research Database**

The building of the electronic research database in Microsoft Excel (v5.0) for the pilot test was relatively straightforward. The researcher built the database, and then validated the build of the pilot test version against the database at Cranfield School of Management and the work of Bailey et al. (2000). The research database was retained for the main research.

#### **6.4.2.1.8 Testing Enhancements To The Research Database**

Two key enhancements were made to the research database. First, where respondents had not answered a question, the database applied the arithmetic mean as the response rather than the mid-point of the seven-point Likert scale (4) used by Bailey et al. (2000), which normally skews the mean. Second, three additional questions were put into the questionnaire asking the respondent to assess their business unit's ability to cope with: uncertainty, change, and complexity. The use of the arithmetic mean was retained from the pilot test. However, the three additional questions were dropped from the main research, as respondents could not make a relative assessment of the ability of their business unit to cope against the ability of other business units within the Barclays Group.

#### **6.4.2.1.9 Constructing The Radar Graphs**

The construction of the radar graphs to replicate the illustrations used by Bailey et al. (2000) was relatively straightforward. These were also built in Microsoft Excel (v5.0). The final versions of the radar graphs were reconciled to the database at Cranfield School of Management. These radar graphs are illustrated in Section 6.5.3.

#### **6.4.2.1.10 Gauging Feedback On The Pilot Findings**

Feedback on the results of the pilot test was issued to the Managing Director of Barclays Solutions who expressed the desire to see the results of the main research. No specific managerial action was taken on the basis of the pilot test results. The pilot findings were also issued to the Strategic Management Group at Cranfield School of Management for inclusion in their database.

## **6.4.3 Pilot Test Conclusions**

### **6.4.3.1 General Conclusions**

There were five key conclusions drawn from the pilot test for Project 3:

1. That subject to minor amendments, the research design was robust and suitable for roll-out across the seven clusters, or seventeen strategic business units, within the Barclays Group.
2. That the research for Project 3 would benefit significantly from executive sponsorship. Based on this conclusion, Peter Herbert, the Director of Group Strategy & Planning, was invited to act as the executive sponsor, a position he accepted and tackled with tremendous energy and enthusiasm. He was hugely effective and influential in this role, making a key contribution to the overall success of the research programme. The contribution made by Peter Herbert in his role as executive sponsor is recognised in the acknowledgements.
3. Owing to the scale of the research in Project 3, which involved the distribution of more than 1,500 research packs, it was decided to adopt a phased approach to rolling out the distribution and collection of the strategy process questionnaires across Barclays. Based on this conclusion it was decided to adopt a four-phase approach to the research programme: first, Barclays Private Clients and Barclays Africa; second, Barclaycard; third, the Business Bank and the UK Retail Bank; and finally, Barclays Global Investors and Barclays Capital.
4. To ensure that the data collection for Project 3 was completed at the same time as the data collection for Project 2. The rationale behind this conclusion was based on the fact that both Projects were dealing with perceptions and it was clear that events, for example the disaster at the World Trade Centre in New York on September 11th 2001, could have a considerable impact on perceptions of uncertainty. The decision was therefore taken to run both projects concurrently.
5. That both Projects 2 and 3 would be completed within a single calendar year (2003), to enable the research to draw parallels with the performance of the Barclays Group during the same period.

### 6.4.3.2 The Strategy Development Process At Barclays Solutions

As detailed in Section 6.4.1.2, it was not one of the primary purposes to identify the strategy development process at Barclays Solutions. However, through the pilot test it is possible to discern that there is an emphasis on the political dimension of strategy development.

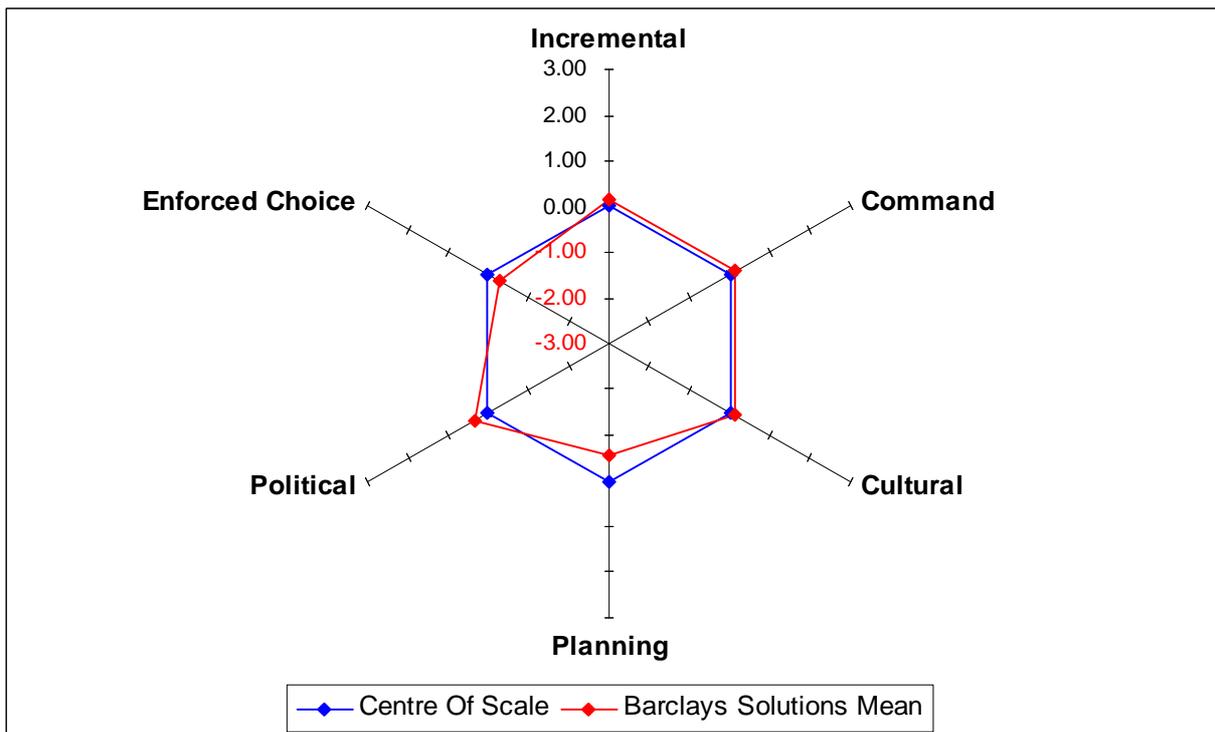
Interestingly, there was evidence that the organisation does not rely on the planning process nor does it perceive strategy to be developed from outside the unit (enforced choice). The results from the pilot are set out in Table 81 below:

*Table 81 – Project 3 Pilot: The Results From Barclays Solutions*

	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
<b>Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>Barclays Solutions</b>	4.146	4.142	4.105	3.429	4.322	3.701
<b>Result</b>	<b>0.146</b>	<b>0.142</b>	<b>0.105</b>	<b>-0.571</b>	<b>0.322</b>	<b>-0.299</b>

One of the primary purposes of the pilot test was to develop the electronic database to display the results in the form of a radar graph. The radar graph from the pilot test is displayed in Figure 32 below:

*Figure 32 – Project 3 Pilot: The Strategy Development Process At Barclays Solutions*



## 6.5 Empirical Study

### 6.5.1 Introduction To The Empirical Study

#### 6.5.1.1 Issuing The Strategy Process Questionnaire Across Barclays Bank PLC

The questionnaires were issued in paper format (see Appendix A). The packs were issued in the internal post and included: a letter detailing executive sponsorship, a complimentary chocolate bar, a free pen, and a pre-addressed return envelope. The address for the respondent was taken from the central staff database. Two address labels were produced: one for the envelope, the other attached to the questionnaire to identify the respondent.

The research packs were issued in four phases during 2003: Barclays Private Clients and Barclays Africa in the first quarter (547 packs); Barclaycard in the second quarter (280 packs); the Business Bank and the UK Retail Bank during the third quarter (331 packs); and finally, Barclays Global Investors and Barclays Capital in the fourth quarter (364 packs). The breakdown of the distribution of research packs across the Group is set out in Table 82 below:

*Table 82 – Strategy Process Questionnaires Issued Across Barclays*

<b>Cluster</b>	<b>Strategic Business Unit</b>	<b>Issued</b>	<b>Cluster Totals</b>
<b>Barclaycard</b>	Barclaycard UK	156	<b>280</b>
	Barclaycard Corporate	67	
	Barclaycard International	57	
<b>Barclays Africa</b>	Barclays Africa	88	<b>88</b>
<b>Barclays Global Investors</b>	Barclays Global Investors	72	<b>72</b>
<b>Barclays Capital</b>	Collateralised Financing	68	<b>292</b>
	Global Financing	71	
	Global Markets	74	
	Private Equity	79	
<b>Barclays Private Clients</b>	Europe	122	<b>459</b>
	International Bank	83	
	Investment Management	85	
	Private Bank	87	
	Premier Bank	82	
<b>UK Retail Bank</b>	Personal Financial Services	120	<b>229</b>
	Woolwich	109	
<b>Business Bank</b>	Business Bank	102	<b>102</b>
<b>TOTALS</b>		<b>1522</b>	<b>1522</b>

### 6.5.1.2 Collating The Responses And The Response Rate

Following the example of the pilot (see Sections 6.4.1–6.4.3), respondents were given four weeks to complete and return the questionnaires. Each non-respondent received a chase up reminder by electronic mail after the second and third weeks of the allotted period.

Where the response rate was particularly good and a high level of responses had been received, for example Barclaycard UK, then reminders ceased after the second week. Where the population was lower, for example Barclays Capital, all reminders were sent and some respondents were sent reminders by voice-mail message. In order to address the standard error of a sample it was decided that a minimum of thirty responses should be obtained from each of the strategic business units within Barclays Capital. Once this target had been reached the researcher stopped chasing responses. The overall response rate for Project 3 was 48%. The detailed response rate across the Barclays Group is set out in Table 83 below:

*Table 83 – Responses And Response Rates*

<b>Cluster</b>	<b>Strategic Business Unit</b>	<b>Responses (%)</b>	<b>Cluster Totals (%)</b>
<b>Barclaycard</b>	Barclaycard UK	84 (54%)	<b>159 (57%)</b>
	Barclaycard Corporate	39 (58%)	
	Barclaycard International	36 (63%)	
<b>Barclays Africa</b>	Barclays Africa	37 (42%)	<b>37 (42%)</b>
<b>Barclays Global Investors</b>	Barclays Global Investors	36 (50%)	<b>36 (50%)</b>
<b>Barclays Capital</b>	Collateralised Financing	30 (44%)	<b>123 (42%)</b>
	Global Financing	31 (44%)	
	Global Markets	31 (42%)	
	Private Equity	31 (39%)	
<b>Barclays Private Clients</b>	Europe	53 (43%)	<b>221 (48%)</b>
	International Bank	44 (53%)	
	Investment Management	43 (51%)	
	Private Bank	42 (48%)	
	Premier Bank	39 (48%)	
<b>UK Retail Bank</b>	Personal Financial Services	46 (38%)	<b>98 (43%)</b>
	Woolwich	52 (47%)	
<b>Business Bank</b>	Business Bank	57 (56%)	<b>57 (56%)</b>
<b>TOTALS</b>		<b>731 (48%)</b>	<b>731 (48%)</b>

## **6.5.2 The Method For Statistical Analysis**

### **6.5.2.1 Using The Strategy Process Questionnaire In Research**

Clearly, Project 3 of the Executive Doctorate involved the large-scale distribution, collection and analysis across Barclays of the strategy process questionnaire developed by Bailey (2000), and further enhanced by Bailey et al. (2000). As identified in Section 6.4.2.1.4, minor modifications were applied to the wording of particular items in order to make the questionnaire more appropriate to the organisational context at Barclays. Before commencing the statistical analysis of the data collected through the strategy process questionnaire, there were three key issues to consider: first, how to deal with unanswered questions; second, detailing the method for applying principal components analysis; and finally, reconciling the version of the questionnaire used in Project 3 to the work of Bailey et al. (2000).

### **6.5.2.2 Dealing With Unanswered Questions**

One of the key characteristics of Bailey’s original research (2000) is the use of the seven-point Likert scale (see Table 84 below). This seven-point scale is a proven instrument for this type of research and creates a construct between ‘strongly agree’ and ‘strongly disagree’, anchored at the centre. In their research, Bailey (2000) and Bailey et al. (2000) applied the centre point (4) as the response where respondents had failed to provide a response.

*Table 84 – Dealing With Unanswered Questions*

Item No.	Statement	Strongly Agree				Strongly Disagree		
16	A senior figure’s vision is our strategy	1	2	3	4	5	6	7

The problem with the approach adopted by Bailey (2000) and Bailey et al. (2000), is that it almost invariably skews the arithmetic mean. When using the strategy process questionnaire for this research, the arithmetic mean response for that item was applied as the response where respondents had failed to provide a response. Clearly, this approach ensures that the mean score on an item is not affected by non-responses.

### **6.5.2.3 Principal Components Analysis**

The second key issue to consider in the method for statistical analysis for Project 3 is detailing the method for applying principal components analysis<sup>57</sup>. Rather than building on Bailey's (2000) original thesis, in which the statistical analysis was based on only the first tranche of responses to the original survey, it was decided to draw on Bailey et al. (2000), where 5,332 observations were analysed, and on Collier et al. (2004), which repeated the analysis with a total population of 6,394.

Of the 49 items or statements in the original questionnaire designed by Bailey (2000), two (numbers 26 and 49) were found not to be statements designed to support dimensions of the strategy development process (see Appendix A). Section 6.3.4.2 describes how Bailey et al. (2000) used a panel of experts to reduce to 39 the number of items for input into factor analysis. The items omitted were numbers: 4, 12, 21, 30, 31, 37, 44 and 47 (see Table 80). The reason given for omitting these eight statements is that they were deemed inappropriate by the panel. A detailed discussion of the criteria applied for reaching the decision to drop these statements is not provided in the report published by Bailey et al.

Collier et al. (2004) report a factor analysis (both principal components analysis and alpha factoring, which produced identical results) of responses to 47 items (only items 26 and 49 were omitted). In the unrestrained principal components analysis, which is the preferred method for exploratory research (Hair et al., 1998; Comrey and Lee H.B., 1992), items 12 and 31 did not load significantly into any component, which supports their omission by Bailey et al. (2000). Item 4 was very marginally significant as an influence on strategy formation (reported eigen value<sup>58</sup> 1.03 – criterion significance 1.00) but it did not combine with any other item. As a consequence of this observation, Collier et al. (2004) concluded that it cannot be viewed as a dimension of the strategy development process. Whereas items 12 and 31 may be considered ambiguous, possibly linked with two or more dimensions, item 4 may be regarded as a tautology.

<sup>57</sup> Acknowledgement: Frank Fishwick, Cranfield School of Management

<sup>58</sup> The constant multiple associated with a particular linear transformation and eigen function, that is the constant (c) such that  $T(f) = cf$

While Collier et al. reached the same conclusion as Bailey et al. (2000) on items 4, 12 and 31, their principal components analysis showed that items 21, 30, 37, 44 and 47 formed a significant principal component with an eigen value of 1.22. They describe this component as ‘collective vision’. The development of this separate dimension can be questioned, given that scores on it were highly correlated with those on the planning dimension ( $r = 0.675$ ), but these authors were particularly interested in the relationships between involvement in strategy formation and managerial perceptions of the strategy process, in which ‘collective vision’ was potentially important. In retrospect it may have been this correlation that persuaded Bailey et al. (2000) to drop the five ‘collective vision’ statements.

Since managerial perceptions of strategy development processes within Barclays might form dimensions different from those of a population drawn from 601 diverse organisations, it was decided to undertake a new exploratory factor analysis of the 731 observations. The first run was an unrestrained principal components analysis. Items 4, 12 and 31 were omitted because both Bailey et al. (2000) and Collier et al. (2004) had found them to be unsatisfactory discriminators. The five ‘vision’ items were included. Like those of Collier et al. (2004), the results showed a significant separate dimension consisting of these five items. Otherwise, the only variation from Bailey et al (2000) was the transfer of item 20 from the Incremental Dimension to the Political Dimension. The wording for item 20 is:

“within this business unit we keep early commitment to a strategy tentative and subject to review”

The transfer of item 20 may seem counter-intuitive, but the aim of running an exploratory analysis was to identify how the statements were perceived and interpreted within Barclays. The significant loading with the other items in the Political Dimension and the lack of loading with the Incremental Dimension reflects the way statements are linked in the mind of the various respondents.

Scores on the ‘Vision Dimension’ were found to be even more highly correlated with the scores on the Planning Dimension than those in the computations made by Collier et al (2004) with  $r = 0.710$ . Since, unlike that research, there is no primary focus on ‘collective vision’, it was decided to repeat the principal components analysis but this time with a restriction to six dimensions. The key issue to address here was whether the association between ‘vision’ and planning was strong enough for them to combine into a single dimension. The result was positive and the Planning Dimension subsumed the five ‘vision’ items.

Clearly, having a dimension with 13 contributory items required further validation. For this purpose, Cronbach's Alpha Test<sup>59</sup> (Hair et al., 1998) was used. The Cronbach Alpha Test asserts that when the value of the coefficient exceeds 0.700, it indicates internal consistency (reliability) of components (Hair et al. suggest that 0.600 is acceptable in exploratory work). The results of the Cronbach Alpha Test are set out in Table 85 below:

*Table 85 – Results Of The Cronbach Alpha Test*

<b>Dimension</b>	<b>Result</b>	<b>Research Comment</b>
<b>Planning</b>	0.910	Good, therefore validating the inclusion of the ‘vision’ statements
<b>Cultural</b>	0.650	Satisfactory – lower than expected but not a cause for concern
<b>Command</b>	0.700	Satisfactory result
<b>Enforced Choice</b>	0.750	Good result
<b>Incremental</b>	0.580	Low result (see explanation on the Incremental Dimension below)
<b>Political</b>	0.730	Good result, validating the inclusion of Item 20

The low coefficient for incrementalism reflects the results of Bailey et al. (2000) and Collier et al. (2004). Since the Alpha co-efficient (Hair et al., 1998) is close to the acceptable borderline (Hair et al., 1998) and there is no focus on this one particular dimension in this research, all five constituent items have been retained. Bailey et al. (2000) and Collier et al. (2004) adopted the same approach.

<sup>59</sup> The measure of reliability that ranges from 0 to 1, with values of 0.60 and 0.70 deemed the lower limit of acceptability

A further departure from both referenced pieces of work is in the calculation of factor, or dimension, scores. Here both papers used the simple means of constituent item scores, though Collier et al. did report that means weighted by loadings were almost identical. For this type of analysis, two elements need to be considered: (a) whether, for each item or each respondent or both, the data need to be standardised to zero mean and unit standard deviation; and (b) whether scores should be simple means of those on each item, weighted means or calculations based on multiple regression techniques.

On (a), a principal components analysis with scores standardised on each item failed to converge after 50 iterations; the sample of respondents is fairly homogeneous in terms of cultural background and standardisation for each respondent was deemed unnecessary – a visual check on the consistency of standard deviations confirmed this.

Unlike those of Collier et al., weighted and unweighted means of dimension scores were not so closely correlated that (b) could be ignored. The topic is well covered by Comrey and Lee (1992), who suggest computations from multiple regressions as the technical ideal, but this procedure uses standardisation by item and produces standardised results that are difficult to interpret. Comrey and Lee therefore leave the choice of statistical method to the researcher.

Scores based on the procedure recommended by Comrey and Lee were computed from the 731 sets of observations and these were compared with (i) unweighted means of item scores and (ii) means weighted by factor loadings. The latter were found to be much more closely correlated with scores from the ideal procedure, with correlation coefficients as follows: Political 0.90, Incremental 0.93, Command 0.94, Cultural 0.96, Planning 0.98 and finally, Enforced Choice 0.99. Given these close correlations, it was decided to use the weighted means as factor scores.

#### 6.5.2.4 Reconciling The Research Instrument To The Work Of Bailey et al. (2000)

This section of the report takes the opportunity to reconcile the research instrument used in Project 3 to the strategy process questionnaire used by Bailey et al. (2000). There are five categories within the reconciliation: identical dimensions, minor amendments, re-defining the planning dimension, discarded items, and finally, redundant items.

Beginning with the category *identical dimensions*, three dimensions fit into this grouping: command, cultural and enforced choice. The detail of the specific items relating to these three dimensions is set out in Table 86 below. The second category in this reconciliation is *minor amendments*. The two dimensions that fit into this grouping are incremental and political. The minor amendment is a consequence of transferring item 20 from the incremental dimension to the political dimension. The reason for this transfer is set out in Section 6.5.2.3. The detail of specific items relating to these two dimensions is also set out below in Table 86.

The next category is the *re-defining of the planning dimension*; in this research the instrument uses items 1, 3, 9, 14, 17, 34, 38 and 42 in the same way as Bailey et al. However, there are five items added to this dimension (see Table 86 below); first, item 21 which was used in the command dimension in Bailey’s original thesis but not used by Bailey et al.; second, item 30 which was not used in Bailey’s thesis or by Bailey et al.; third, item 37 which was used in the command dimension in Bailey’s thesis but not used by Bailey et al.; fourth, item 44, which was used in the cultural dimension in Bailey’s thesis but not used by Bailey et al.; and finally, item 47, which was not used in Bailey’s thesis or by Bailey et al.

*Table 86 – Breakdown Of The 49 Items In This Research*

Dimensions	Item Numbers	Number Of Items
Planning Dimension	1, 3, 9, 14, 17, 21, 30, 34, 37, 38, 42, 44, 47	<b>13</b>
Incremental Dimension	2, 20, 24, 36, 40, 45	<b>6</b>
Cultural Dimension	5, 8, 13, 25, 33, 39, 46	<b>7</b>
Political Dimension	10, 19, 23, 29, 35, 48	<b>6</b>
Command Dimension	6, 11, 16, 27, 41	<b>5</b>
Enforced Choice Dimension	7, 15, 18, 22, 28, 32, 43	<b>7</b>
Discarded Items	4, 12, 31	<b>3</b>
Redundant Items	26, 49	<b>2</b>
	<b>TOTAL</b>	<b>49</b>

The next category is the *discarded items*. As identified in Section 6.5.2.3, Bailey et al. discarded items 4, 12, 21, 30, 31, 37, 44, and 47. This research has discarded only items: 4, 12, and 31; the remainder of these previously discarded items (21, 30, 37, 44 and 47) have all been subsumed into the planning dimension. The reason for using these items in this way is also set out in Section 6.5.2.3.

The final category is the *redundant items*. Here the research makes a distinction between questions that were asked and the response subsequently discarded, and questions that were asked where the response was never intended to be loaded into the dimensions of strategy development process. The two items that fall into this category are 26 and 49; the detail of these two questions is set Table 87 below:

*Table 87 – Redundant Items For Project 3*

No.	Item
26	As a strategic business unit our strategy is set by Barclays PLC
49	When strategy develops in this organisation I am actively involved

A reconciliation of the items that were used differently in this research from their application in the work of Bailey et al. (2000) is set out in Table 88 below:

*Table 88 – Reconciling The Different Use Of Items To The Work Of Bailey et al. (2000)*

No.	Item	Bailey et al. (2000)	Project 3
20	Within this business unit we keep early commitment to a strategy tentative and subject to review	Incremental	Political Dimension
21	Our strategy is driven by a vision of the future	Discarded	Planning Dimension
30	There is a commonly shared belief in this organisation about the strategic direction we should pursue	Discarded	Planning Dimension
37	There is a clear vision of our future which we pursue	Discarded	Planning Dimension
44	Our strategic direction is driven by commonly shared values	Discarded	Planning Dimension
47	A vision of what this strategic business unit will look like in the future guides what we do strategically	Discarded	Planning Dimension

### 6.5.2.5 The Finalised Research Instrument For Project 3 With Weighted Means

As outlined in Section 6.3.4.2, the strategy process questionnaire used in Project 3 was based on the original thesis published by Bailey (2000). However, the strategy process questionnaire used in this research was modified based on: a review of the relevant literature (see Section 4.2); a consideration of other referenced research that has previously used this instrument (Bailey et al., 2000; Fishwick et al., 2000; Collier et al., 2004); the Project 3 pilot (see Section 6.4); and the principal components analysis (see Section 6.5.2.3).

The construction of the final strategy process questionnaire that was used as the research instrument for Project 3 (with weighted averages) is set out in Table 89 below. As detailed in Section 6.5.2.4, items 4, 12, and 31 together with all the additional management information (see Appendix A) were discarded from the statistical analysis.

*Table 89 – The Modified Research Instrument For Project 3*

Planning		Cultural		Command		Enforced Choice		Incremental		Political	
Item	Weight	Item	Weight	Item	Weight	Item	Weight	Item	Weight	Item	Weight
1	0.625	5	0.641	6	0.574	7	0.746	2	0.440	10	0.300
3	0.726	8	0.643	11	0.609	15	0.379	24	0.472	19	0.603
9	0.701	13	0.619	16	0.756	18	0.747	36	0.687	20	0.417
14	0.689	25	0.487	27	0.422	22	0.728	40	0.515	23	0.628
17	0.690	46	0.415	41	0.740	28	0.576	45	0.622	29	0.551
21	0.437	33	0.384			32	0.530			35	0.350
30	0.531	39	0.420			43	0.628			48	0.574
34	0.757										
37	0.604										
38	0.699										
42	0.688										
44	0.386										
47	0.420										

As the Executive Doctorate is concerned with understanding the relationship between perceived environmental uncertainty and strategy development processes, the additional management information did not form part of the statistical analysis. This also ensured that Project 3 was kept to a manageable size given that it only represents one component of the overall research programme.

## 6.5.3 Identifying Strategy Development Processes Across Barclays

### 6.5.3.1 Introduction

This section of the report looks at the outputs of the strategy development process questionnaire to identify strategy development processes across the Barclays Group. The objective of this section is not to test specific propositions, but to identify strategy development processes and to make comparisons across the Group and within the various clusters. In order to achieve this purpose, there are three key objectives:

1. To identify strategy development processes across the Barclays Group.
2. To identify strategy development processes across the seven clusters and make comparisons with the Group results.
3. To identify strategy development processes in each of the strategic business units and make comparisons across each cluster and with the Group results.

### 6.5.3.2 The Group Results

#### 6.5.3.2.1 Identifying Strategy Development Processes At The Barclays Group Level

The results for the Barclays Group show that the incremental dimension and the planning dimension represent the predominant processes for developing strategy. The detailed results for the Group are set out in Table 90 below. Results significant at the 5% level are highlighted in bold text, and those significant at the 1% level are highlighted in red and bold text.

*Table 90 – The Barclays Group*

	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
<b>Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>Barclays Group</b>	4.300	3.861	3.908	4.408	3.840	3.606
<b>Result</b>	<b>0.300</b>	<b>-0.139</b>	<b>-0.092</b>	<b>0.408</b>	<b>-0.160</b>	<b>-0.394</b>
<b>t-values</b>	<b>9.958</b>	<b>-3.482</b>	<b>-2.941</b>	<b>10.862</b>	<b>-4.231</b>	<b>-10.826</b>

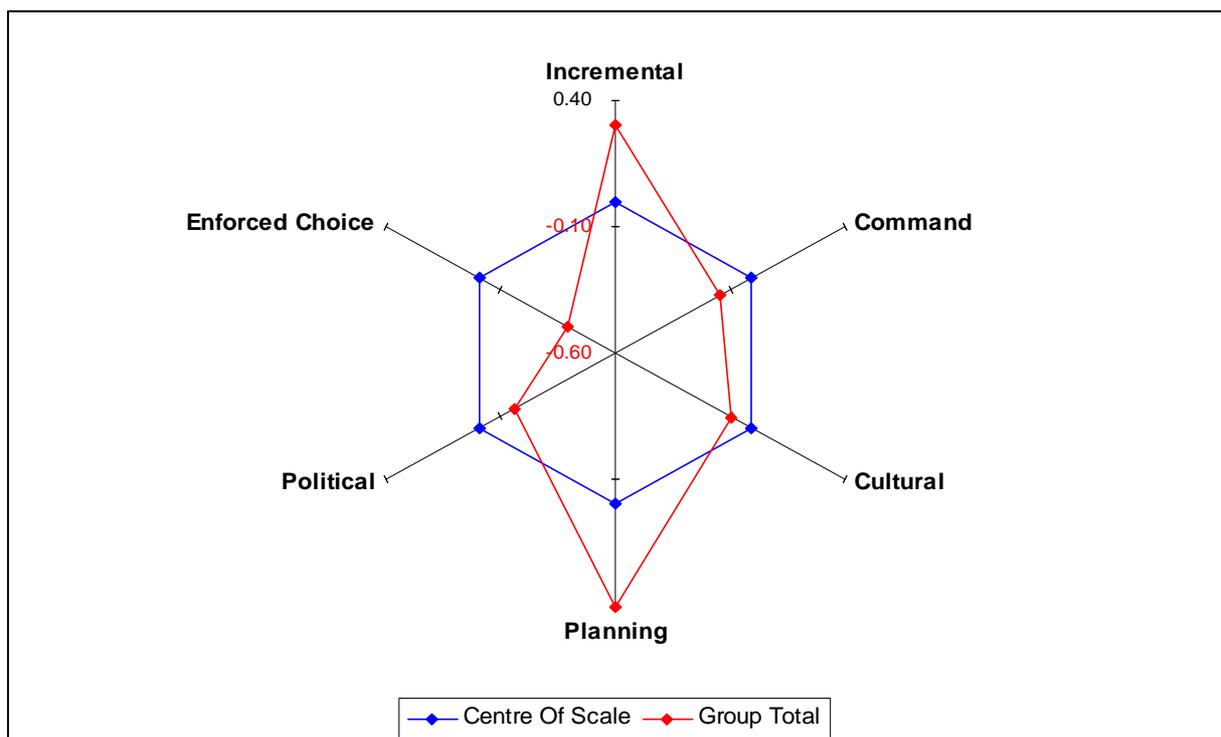
The results show Barclays is significantly below the centre of the scale for the command, cultural and political dimensions. The low score for the enforced choice dimension illustrates that few respondents believe strategy to be developed outside each particular business unit.

The results from across the Group present a rather interesting finding, as strength in both the incremental and planning dimensions is counter-intuitive. In his original thesis, Bailey (2000) proposed that the incremental and planning dimensions would be negatively correlated. The reason for this is that the incremental dimension is based on the assumption that strategy emerges as the organisation adopts a particular course, whereas the planning dimension is predicated on the assumption that strategy is formed at the outset and the organisation follows a pre-determined plan. The evidence at Barclays suggests that although the organisation develops plans, it remains incremental in its approach to strategy, probably by continually re-scheduling its plans. This fits more closely with the notion of ‘logical incrementalism’ developed by Quinn (1980), and discussed in detail in the literature review (see Section 4.1.6).

### 6.5.3.2.2 The Radar Graph For The Group Results

The application of planning and incrementalism as processes for developing strategy is displayed on the radar graph (see Figure 33 below). The radar graph also displays the low score for enforced choice as a process for developing strategy at Barclays. The results are set against the centre of the seven-point Likert scale.

Figure 33 – Identifying Strategy Development Processes Across The Barclays Group



### 6.5.3.2.3 Comparing The Group Results With The Results Across The Various Clusters

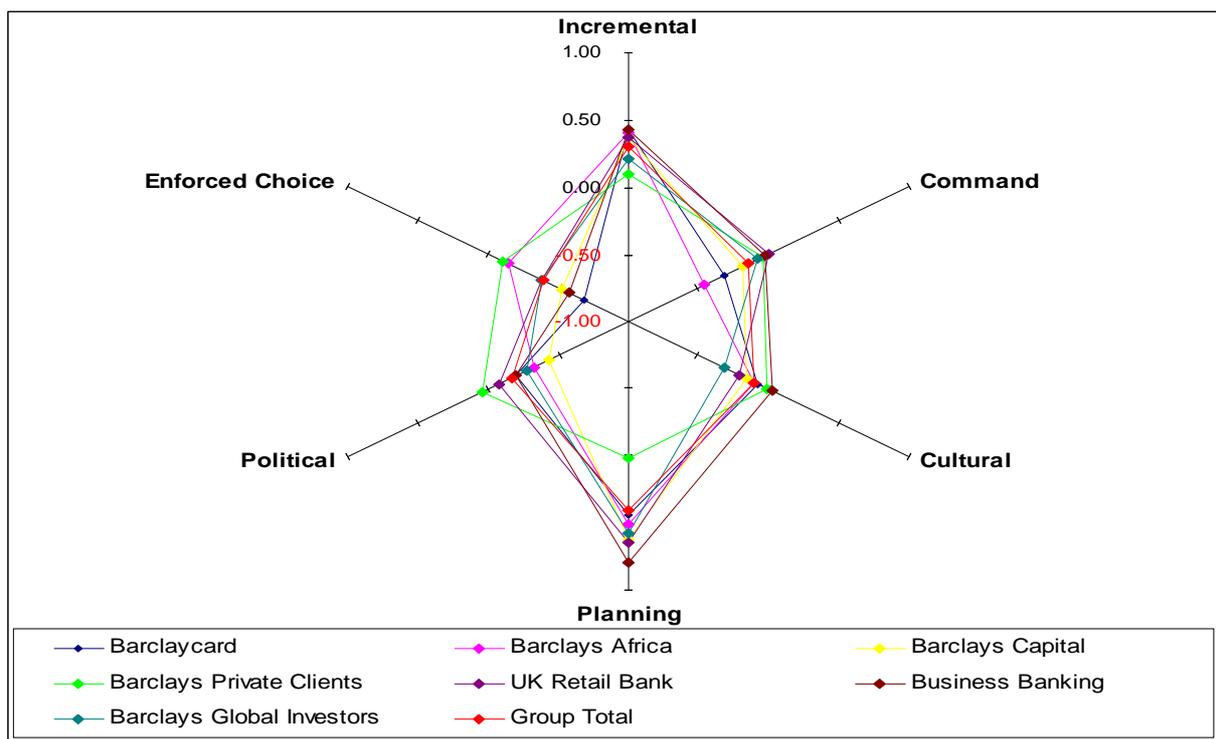
Comparing the Group results with the seven clusters, and it is again evident that the incremental and planning dimensions are the predominant processes. Barclays Private Clients provides evidence of politics and enforced choice (see Table 91 below). Results significant at the 5% level are highlighted in bold text, and those significant at the 1% level are highlighted in red and bold text. Criterion levels of significance vary with sample sizes in each cluster and with the standard deviation of scores across the Group on each dimension.

Table 91 – Comparing The Group Results With The Various Clusters

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Barclaycard	<b>0.135</b>	<b>-0.175</b>	0.014	0.031	-0.039	<b>-0.287</b>
Barclays Africa	0.110	-0.324	-0.007	0.010	-0.167	0.252
Barclays Capital	0.069	-0.040	-0.060	<b>0.217</b>	<b>-0.268</b>	-0.137
Barclays Private Clients	<b>-0.204</b>	0.095	0.084	<b>-0.392</b>	<b>0.195</b>	<b>0.281</b>
UK Retail Bank	0.073	0.142	-0.119	<b>0.234</b>	0.087	0.009
Business Bank	0.124	0.126	0.115	<b>0.391</b>	-0.044	-0.184
Barclays Global Investors	-0.086	0.071	-0.227	0.169	-0.103	0.016
Barclays Group	<b>0.300</b>	<b>-0.139</b>	<b>-0.092</b>	<b>0.408</b>	<b>-0.160</b>	<b>-0.394</b>

The results from across Barclays can also be displayed on a radar graph (see Figure 34 below):

Figure 34 – Comparing The Group Results With The Results From The Various Clusters



### 6.5.3.3 Barclaycard

#### 6.5.3.3.1 Identifying Strategy Development Processes Across Barclaycard

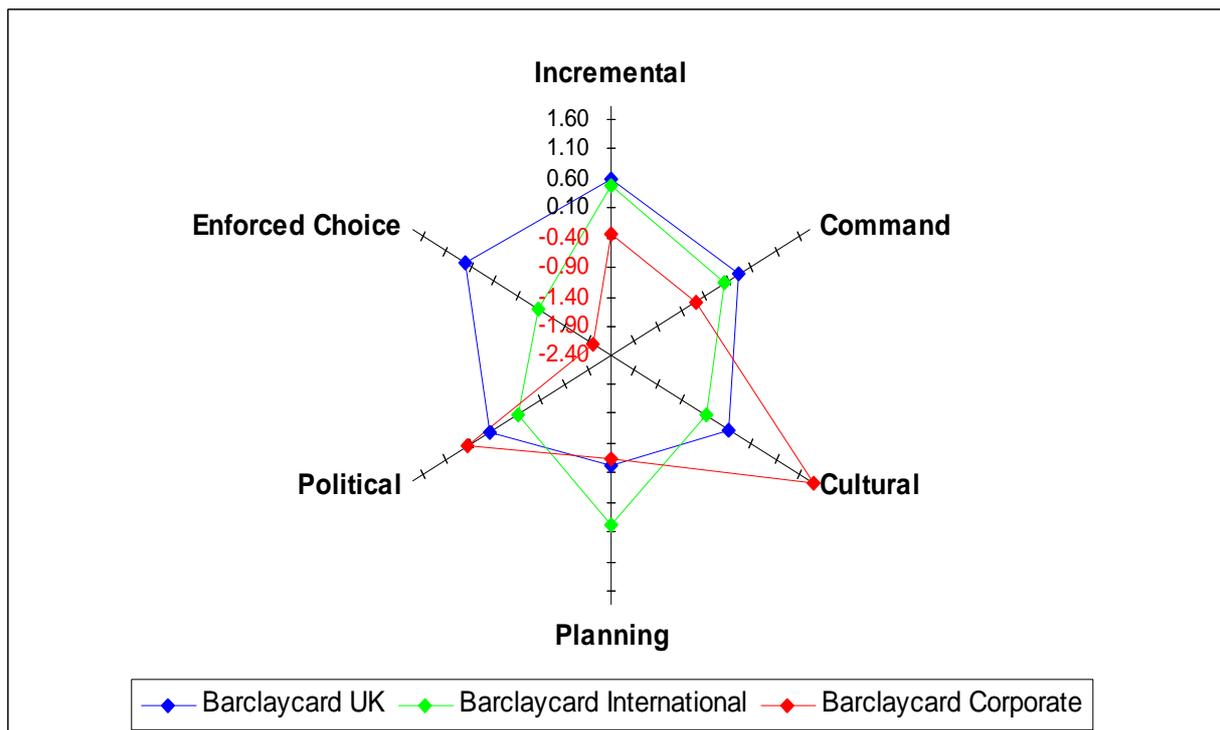
The results from the Barclaycard Cluster (see Table 92 below) also show a reliance on incrementalism and planning. Interestingly, the results from Barclaycard UK and Barclaycard International provide contradictory evidence on the enforced choice dimension. By the same token, Barclaycard International and Barclaycard Corporate provide contradictory evidence on the cultural dimension. Compared with the centre of the scale, the cluster has low scores that are statistically significant on the command, political and enforced choice dimensions.

*Table 92 – Identifying Strategy Development Processes Across The Barclaycard Cluster*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
<b>Barclaycard UK</b>	<b>0.574</b>	0.318	0.080	-0.558	0.167	<b>0.668</b>
<b>B'card Int'al</b>	0.467	0.008	<b>-0.404</b>	0.476	-0.423	<b>-0.881</b>
<b>B'card Corporate</b>	-0.364	<b>-0.630</b>	<b>1.903</b>	-0.647	0.665	-2.046
<b>Cluster Total</b>	<b>0.434</b>	<b>-0.314</b>	-0.077	<b>0.439</b>	<b>-0.199</b>	<b>-0.680</b>

The results can also be displayed on a radar graph (see Figure 35 below). The difference in the strategy process at Barclaycard Corporate is particularly evident on the radar graph.

*Figure 35 – Identifying Strategy Development Processes Across The Barclaycard Cluster*



### 6.5.3.3.2 Comparing The Barclaycard Cluster With The Group Results

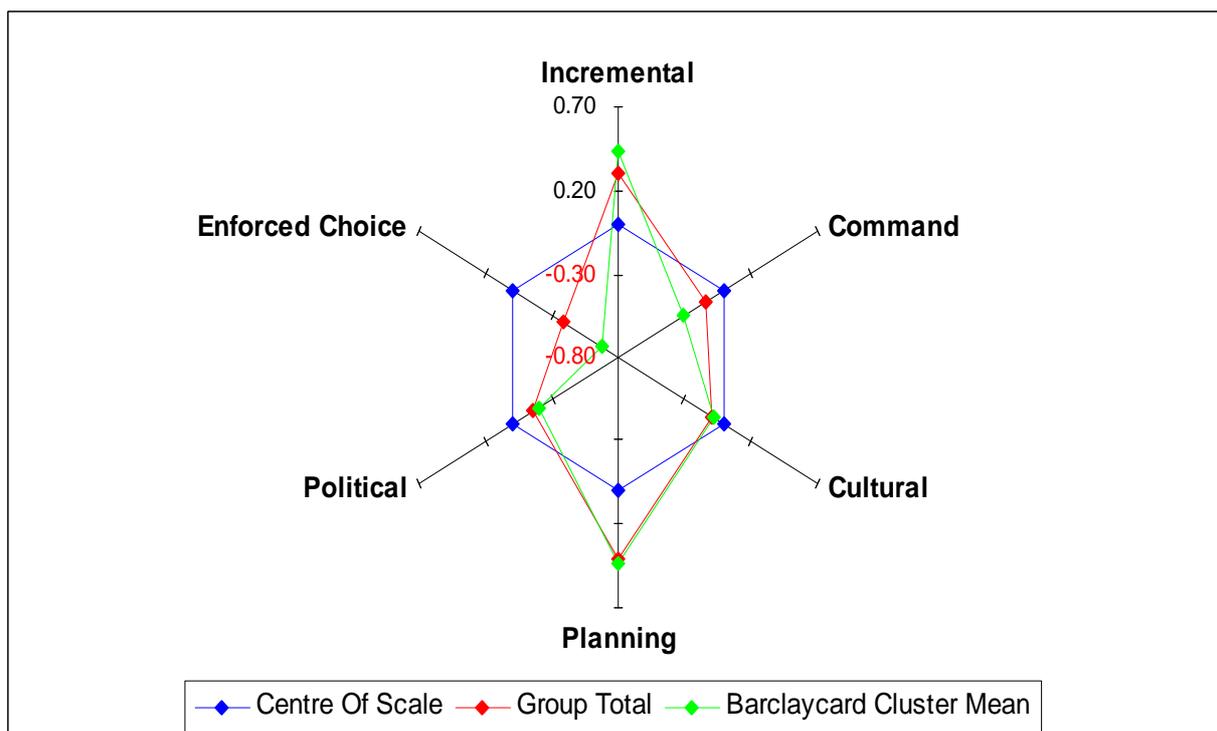
This section compares the results from the Barclaycard Cluster with the centre (4) of the seven-point Likert scale and the Group results. Here the results show that the Barclaycard Cluster relies significantly more than the Group on the incremental process for developing strategy. The results from the Barclaycard Cluster are similar to the Group results on the cultural, planning and political dimensions. The results (see Table 93 below) show that there is significantly less evidence of command and enforced choice as processes for developing strategy at Barclaycard than in the Barclays Group as a whole.

*Table 93 – Comparing The Barclaycard Cluster With The Group Results*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
<b>a) Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>b) Group</b>	4.300	3.861	3.908	4.408	3.840	3.606
<b>c) Barclaycard</b>	4.434	3.686	3.923	4.439	3.801	3.320
<b>Result (c-a)</b>	<b>0.434</b>	<b>-0.314</b>	-0.077	<b>0.439</b>	<b>-0.199</b>	<b>-0.680</b>
<b>Result (c-b)</b>	<b>0.134</b>	<b>-0.175</b>	0.015	0.031	-0.039	<b>-0.286</b>

These results can also be displayed on a radar graph (see Figure 36 below):

*Figure 36 – Comparing The Barclaycard Cluster With The Group Results*



### 6.5.3.4 Barclays Africa

#### 6.5.3.4.1 Identifying Strategy Development Processes At Barclays Africa

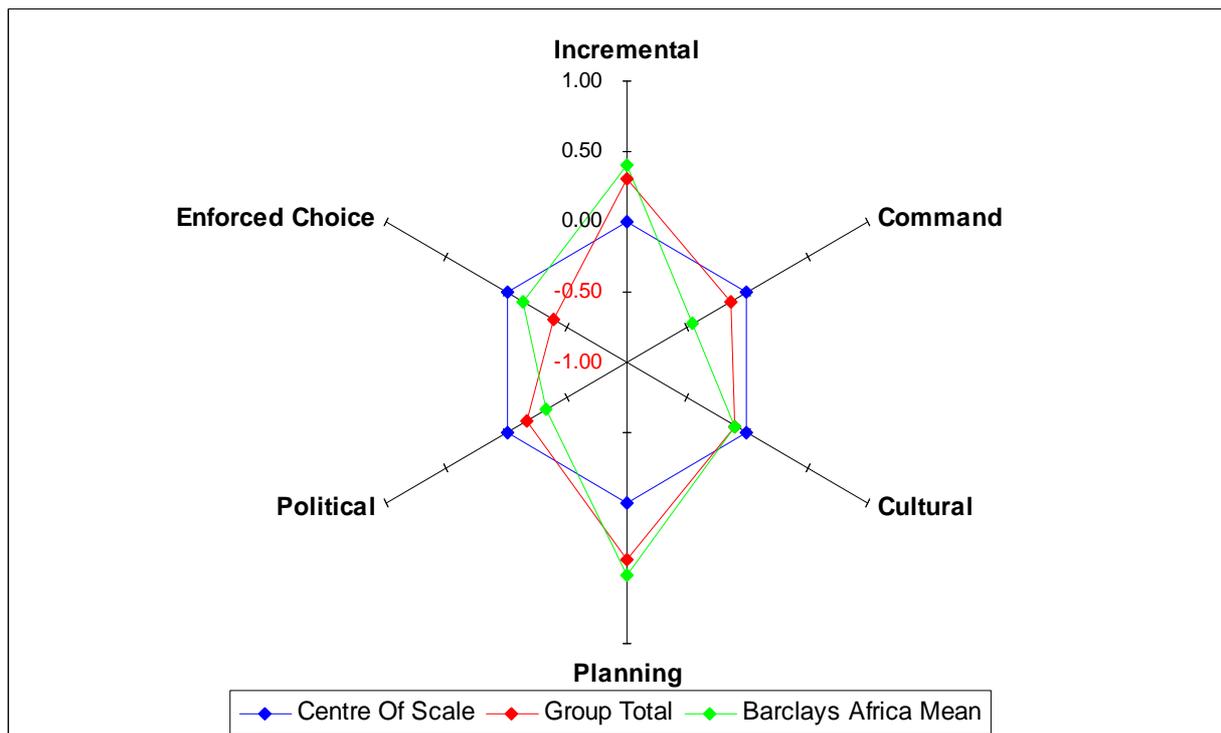
The results from Barclays Africa also show the predominance of incrementalism and planning as the processes for developing strategy (against the centre of the scale). Interestingly, Barclays Africa shows less statistically significantly evidence of command as a process for developing strategy. This could be a consequence of its geographical location. There are no statistically significant differences between Barclays Africa and the Barclays Group in the processes they adopt for developing strategy. The results are set out in Table 94 below:

*Table 94 – The Barclays Africa Results*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
a) Centre Of Scale	4.000	4.000	4.000	4.000	4.000	4.000
b) Group	4.300	3.861	3.908	4.408	3.840	3.606
c) Barclays Africa	4.409	3.537	3.901	4.507	3.672	3.858
Result (c-a)	<b>0.409</b>	<b>-0.463</b>	-0.099	<b>0.507</b>	-0.328	-0.142
Result (c-b)	0.109	-0.324	-0.007	0.099	-0.168	0.252

These results can also be displayed on a radar graph (see Figure 37 below):

*Figure 37 – Comparing The Results From Barclays Africa With The Group Results*



### 6.5.3.5 Barclays Capital

#### 6.5.3.5.1 Identifying Strategy Development Processes Across Barclays Capital

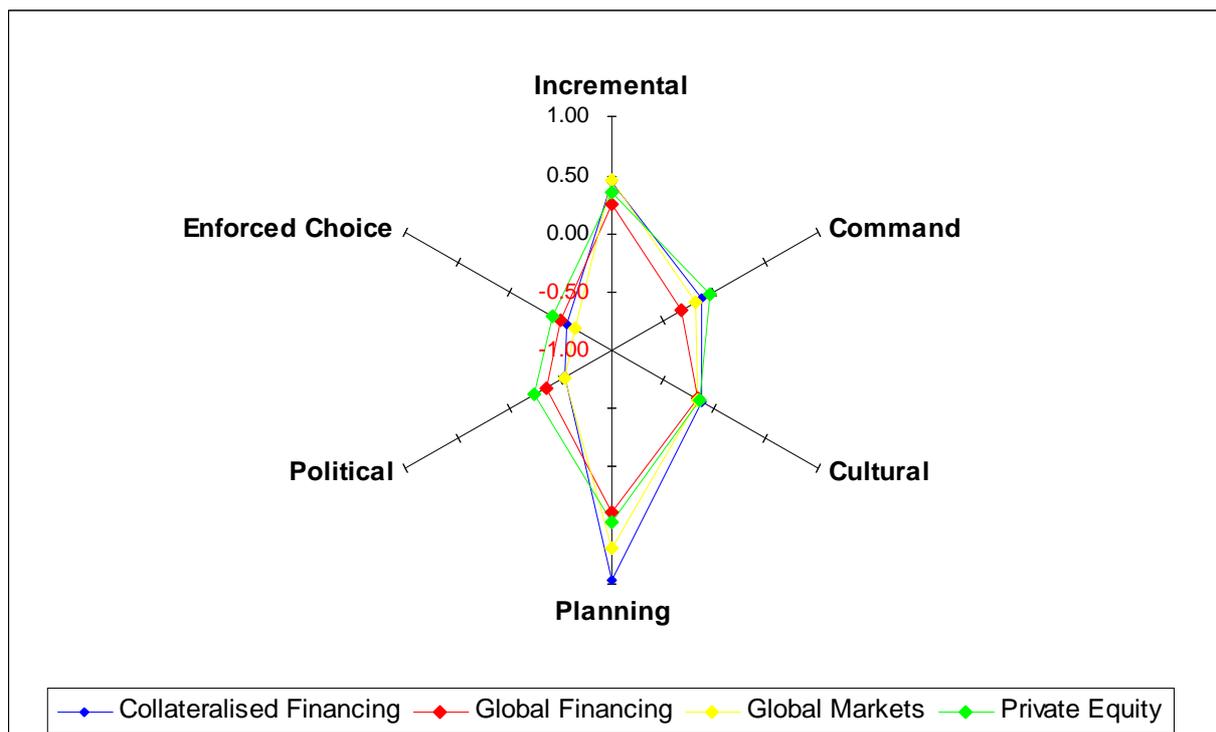
The reliance on incrementalism and planning as processes for developing strategy is particularly evident across Barclays Capital (see Table 95 below, which shows deviations from the centre of the Likert scale). The interesting aspect of these results is the statistically significant move away from the political and enforced choice processes across the cluster and Barclays Capital as a whole. It is also clear from these results that there is a relatively high level of consensus across Barclays Capital regarding the strategy development process.

*Table 95 – Identifying Strategy Development Processes Across The Barclays Capital Cluster*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
<b>Collateralised Fin.</b>	0.444	-0.127	-0.126	<b>0.964</b>	<b>-0.553</b>	-0.574
<b>Global Financing</b>	<b>0.242</b>	-0.334	-0.175	<b>0.382</b>	-0.375	<b>-0.498</b>
<b>Global Markets</b>	<b>0.447</b>	-0.200	-0.162	<b>0.697</b>	<b>-0.530</b>	<b>-0.641</b>
<b>Private Equity</b>	<b>0.342</b>	-0.055	-0.139	<b>0.468</b>	-0.255	<b>-0.413</b>
<b>Cluster Total</b>	<b>0.368</b>	-0.179	-0.151	<b>0.625</b>	<b>-0.427</b>	<b>-0.531</b>

These results can also be displayed on a radar graph (see Figure 38 below):

*Figure 38 – Identifying Strategy Development Processes Across The Barclays Capital Cluster*



### 6.5.3.5.2 Comparing The Barclays Capital Cluster With The Group Results

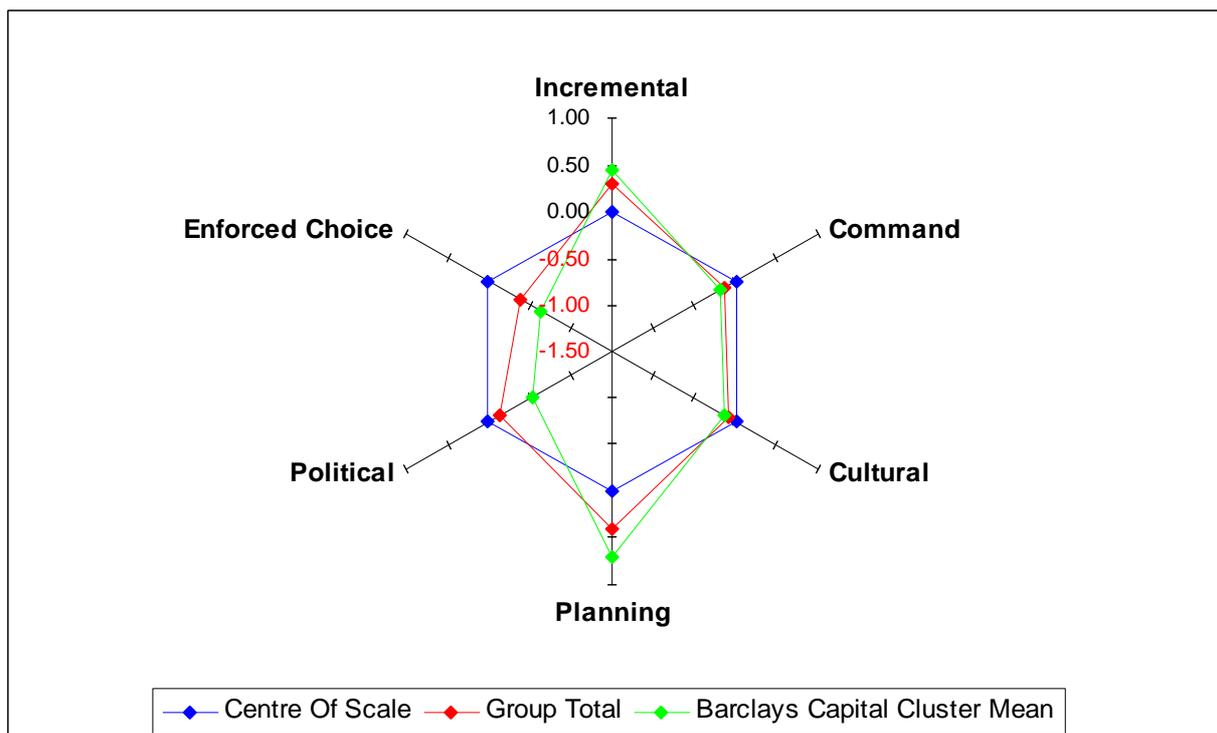
The report now moves on to compare the results from the Barclays Capital Cluster with the centre (4) of the seven-point Likert scale and the Group Results. Similarly to the results from the Barclaycard Cluster (see Section 6.5.3.3.2), the results show Barclays Capital relies significantly on the planning process for developing strategy. Barclays Capital also applies more planning than the Group and significantly less strategy development on the political dimension. The results for incrementalism, command, culture and enforced choice are aligned to the overall Group results (see Table 96 below).

*Table 96 – Comparing The Barclays Capital Cluster With The Group Results*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
<b>a) Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>b) Group</b>	4.300	3.861	3.908	4.408	3.840	3.606
<b>c) Barclays Capital</b>	4.368	3.821	3.849	4.625	3.573	3.469
<b>Result (c-a)</b>	<b>0.368</b>	-0.179	-0.151	<b>0.625</b>	<b>-0.427</b>	<b>-0.531</b>
<b>Result (c-b)</b>	0.068	-0.040	-0.059	<b>0.217</b>	<b>-0.267</b>	-0.137

These results can also be displayed on a radar graph (see Figure 39 below):

*Figure 39 – Comparing The Barclays Capital Cluster With The Group Results*



### 6.5.3.6 Barclays Private Clients

#### 6.5.3.6.1 Identifying Strategy Development Processes Across Barclays Private Clients

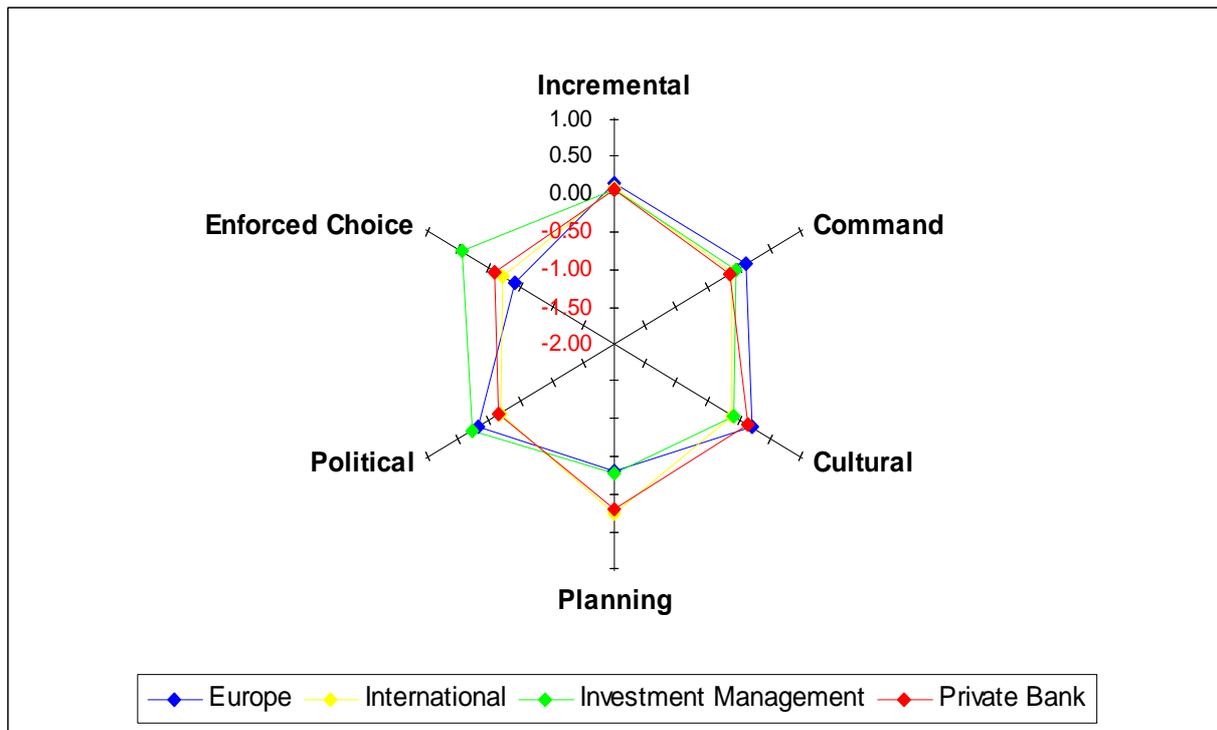
The evidence from Barclays Private Clients shows no significant differences from the centre of the Likert scale across the cluster as a whole (see Table 97 below). At the strategic business unit level, the data from Europe show a statistically significant lack of enforced choice, and a statistically significant move away from planning as a process for developing strategy.

*Table 97 – Identifying Strategy Development Processes Across The Barclays Private Clients Cluster*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Europe	0.128	0.104	0.181	<b>-0.331</b>	0.157	<b>-0.396</b>
International Bank	0.074	-0.109	-0.121	0.240	-0.180	-0.224
Investment Mgmt	0.035	-0.055	-0.095	-0.294	0.274	<b>0.429</b>
Private Bank	0.046	-0.146	0.123	0.176	-0.142	-0.087
Premier Bank	0.197	-0.051	-0.181	<b>0.403</b>	0.035	-0.228
<b>Cluster Total</b>	0.096	-0.044	-0.008	0.016	0.034	-0.113

These results can also be displayed on a radar graph (see Figure 40 below):

*Figure 40 – Identifying Strategy Development Processes Across The Barclays Private Clients Cluster*



### 6.5.3.6.2 Comparing The Barclays Private Clients Cluster With The Group Results

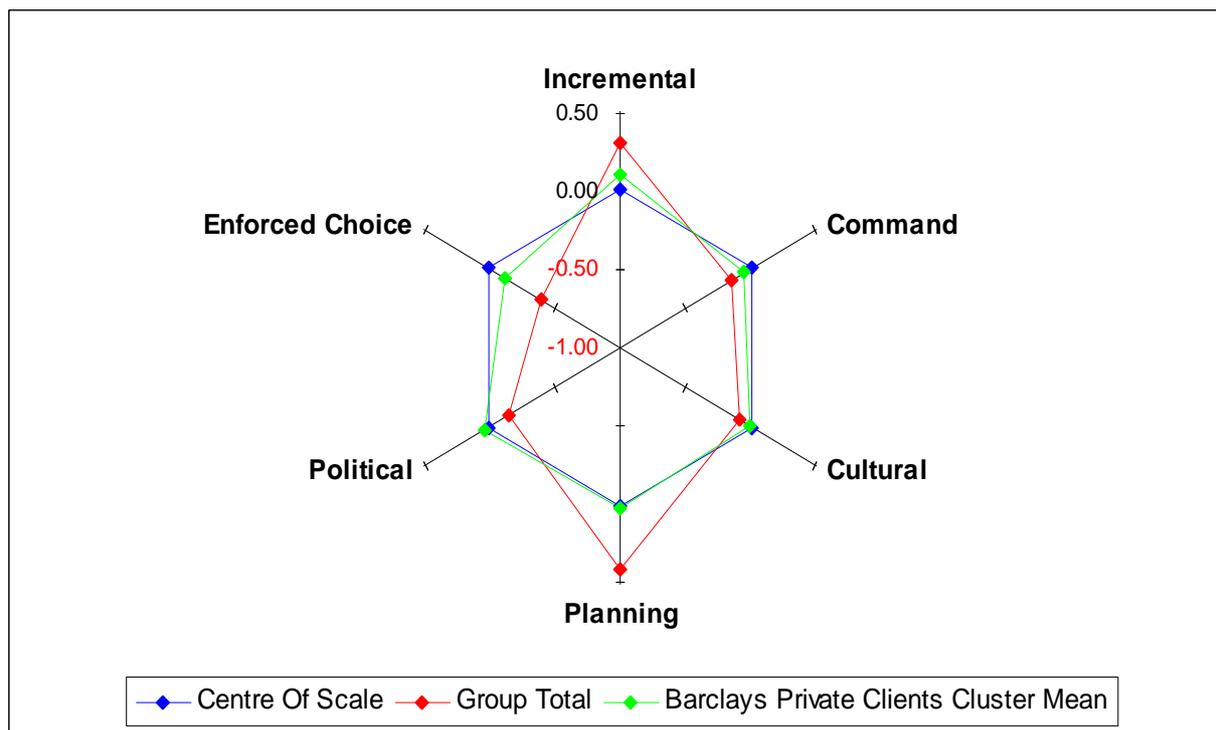
A comparison of the results from Barclays Private Clients with the centre (4) of the seven-point Likert scale and the Group results produces some interesting observations (see Table 98 below). First, there is evidence that the application of incrementalism and planning as processes for developing strategy at Barclays Private Clients is significantly lower than elsewhere across the Group. Second, this cluster appears to apply significantly more political processes than other areas of the Group. Finally, the results for enforced choice show much more evidence of strategy being imposed from outside Barclays Private Clients than elsewhere across the Group, especially when compared with Barclays Capital and Barclaycard.

*Table 98 – Comparing The Barclays Private Clients Cluster With The Group Results*

	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
<b>a) Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>b) Group</b>	4.300	3.861	3.908	4.408	3.840	3.606
<b>c) Private Clients</b>	4.096	3.956	3.992	4.016	4.034	3.887
<b>Result (c-a)</b>	0.096	-0.044	-0.008	0.016	0.034	-0.113
<b>Result (c-b)</b>	<b>-0.204</b>	0.095	0.084	<b>-0.392</b>	<b>0.194</b>	<b>0.281</b>

These results can also be displayed on a radar graph (see Figure 41 below):

*Figure 41 – Comparing The Barclays Clients Cluster With The Group Results*



### 6.5.3.7 UK Retail Bank

#### 6.5.3.7.1 Identifying Strategy Development Processes Across The UK Retail Bank

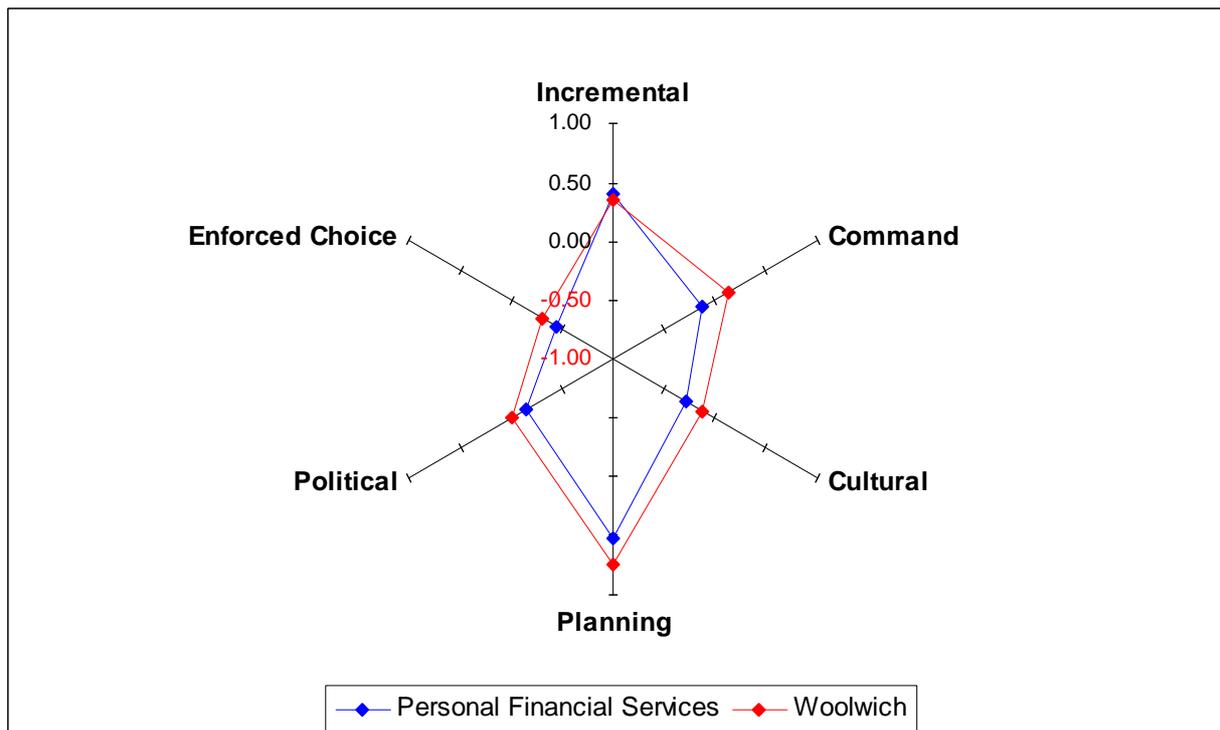
The results from the UK Retail Bank also show the domination of incrementalism and planning as processes for developing strategy (see Table 99 below, again showing deviations from the centre of the scale). The data also show significantly less evidence of the cultural dimension of strategy development across Personal Financial Services, which suggests that strategy is not developed through the social fabric of the UK Retail Bank. The low score for enforced choice shows that managers at Personal Financial Services and the Woolwich believe themselves to be active in the strategy development process.

*Table 99 – Identifying Strategy Development Processes Across The UK Retail Bank Cluster*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
PFS	0.399	-0.134	-0.299	0.522	-0.147	-0.458
Woolwich	0.350	0.124	-0.133	0.747	-0.008	-0.320
<b>Cluster Total</b>	<b>0.373</b>	0.003	<b>-0.211</b>	<b>0.641</b>	-0.073	<b>-0.385</b>

These results can also be displayed on a radar graph (see Figure 42 below):

*Figure 42 – Identifying Strategy Development Processes Across The UK Retail Bank Cluster*



### 6.5.3.7.2 Comparing The UK Retail Bank Cluster With The Group Results

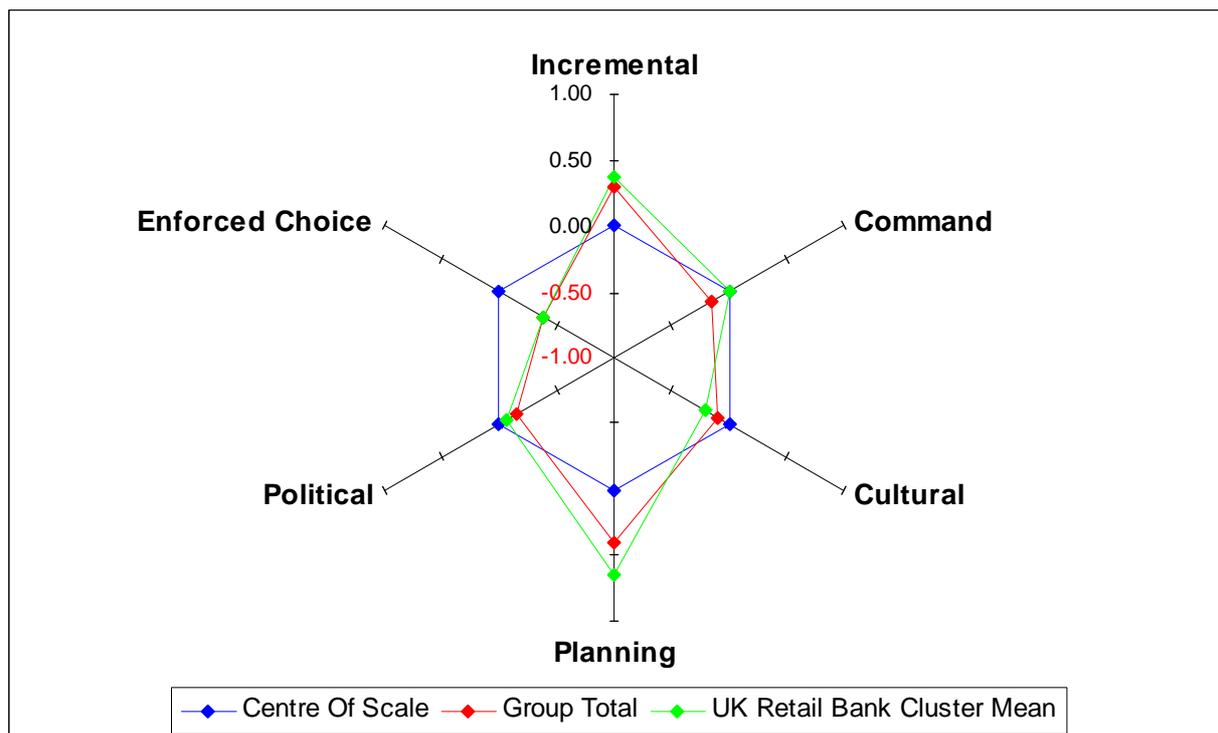
Comparison of the results from the UK Retail Bank with the centre (4) of the Likert scale and the Group results produces three key observations (see Table 100 below). As identified in the previous section, there are statistically significant levels of incrementalism and planning in the process for developing strategy, and a move away from culture or the perception of enforced choice. When compared with the Group, the UK Retail Bank displays a high degree of synergy across all six dimensions, but a statistically significant higher level (at the 5% level) of planning.

*Table 100 – Comparing The UK Retail Bank Cluster With The Group Results*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
<b>a) Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>b) Group</b>	4.300	3.861	3.908	4.408	3.840	3.606
<b>c) UK Retail Bank</b>	4.373	4.003	3.789	4.641	3.927	3.615
<b>Result (c-a)</b>	<b>0.373</b>	0.003	<b>-0.211</b>	<b>0.641</b>	-0.073	<b>-0.385</b>
<b>Result (c-b)</b>	0.073	0.142	-0.119	<b>0.233</b>	0.087	0.009

These results can also be displayed on a radar graph (see Figure 43 below):

*Figure 43 – Comparing The UK Retail Bank Cluster With The Group Results*



### 6.5.3.8 Barclays Global Investors

#### 6.5.3.8.1 Identifying Strategy Development Processes At Barclays Global Investors

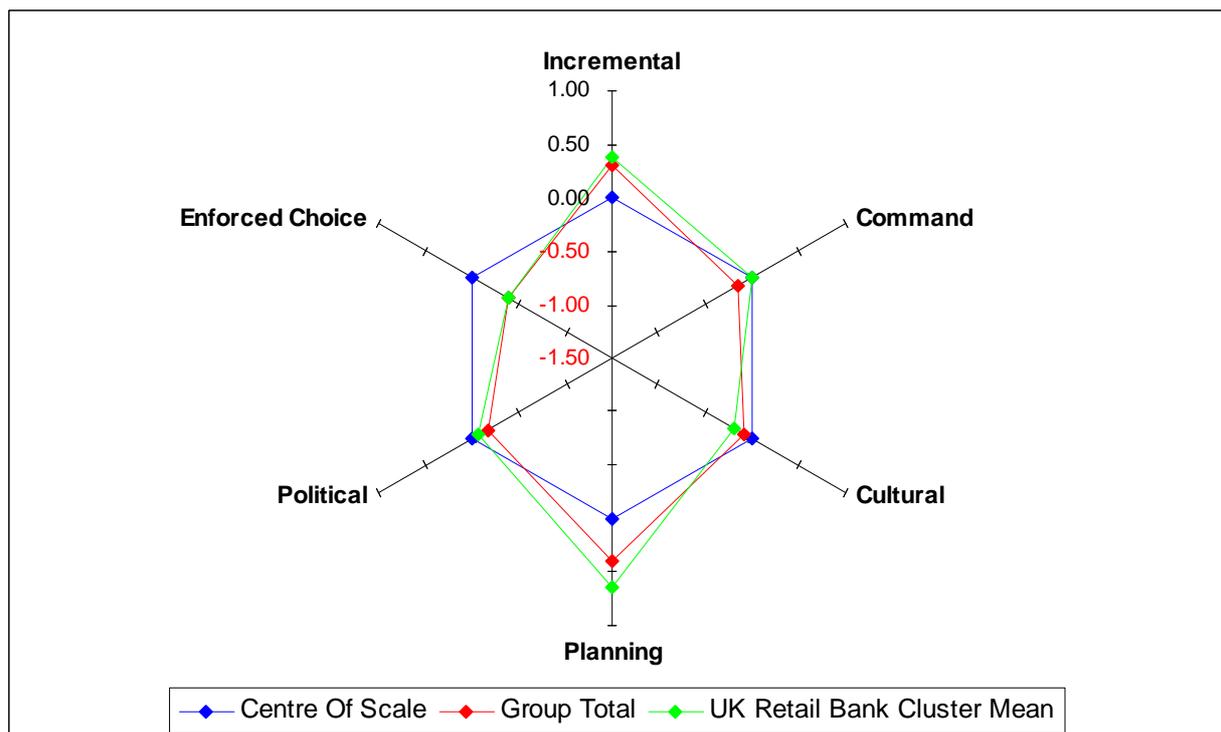
Four key observations emerge from the comparison of the results from Barclays Global Investors with the centre of the Likert scale and the Group results (see Table 101 below): first, the dominance of planning in what appears to be verging on a single process for developing strategy; second, a significantly low level of culture in the strategy development process; third, clear evidence that strategy development is not imposed from outside the organisation; and finally, high levels of synergy across all six dimensions with the Barclays Group as a whole.

*Table 101 – The Barclays Global Investors Results*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
a) Centre Of Scale	4.000	4.000	4.000	4.000	4.000	4.000
b) Group	4.300	3.861	3.908	4.408	3.840	3.606
c) BGI	4.213	3.931	3.682	4.577	3.737	3.622
Result (c-a)	0.213	-0.069	<b>-0.318</b>	<b>0.577</b>	-0.263	<b>-0.378</b>
Result (c-b)	-0.087	0.07	-0.226	0.169	-0.103	0.016

These results can also be displayed on a radar graph (see Figure 44 below):

*Figure 44 – Comparing The Results From Barclays Global Investors With The Group Results*



### 6.5.3.9 Business Bank

#### 6.5.3.9.1 Identifying Strategy Development Processes At The Business Bank

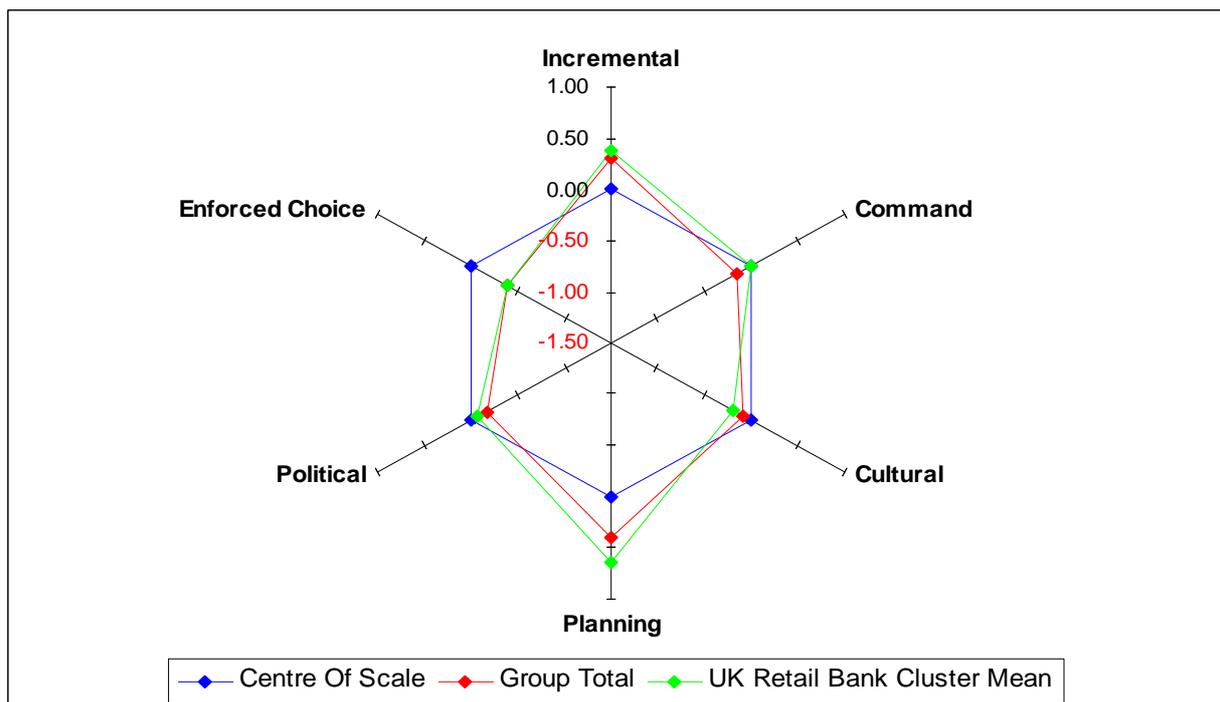
This section compares the Business Bank Results with the Likert scale and the Group results; and three observations emerge (see Table 102 below). First there is the dominance of incrementalism and planning as the processes for developing strategy – the mean of 4.799 for planning is the highest in the Group. Second there is evidence that strategy is not imposed on the cluster (low enforced choice), highlighting a view that the cluster determines its own strategy – through planning and incrementalism. And finally there is the high level of synergy with the overall Group results, apart from a statistically significantly higher level of planning.

*Table 102 – The Business Bank Results*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
<b>a) Centre Of Scale</b>	4.000	4.000	4.000	4.000	4.000	4.000
<b>b) Group</b>	4.300	3.861	3.908	4.408	3.840	3.606
<b>c) Business Bank</b>	4.423	3.987	4.023	4.799	3.795	3.422
<b>Result (c-a)</b>	<b>0.423</b>	-0.013	0.023	<b>0.799</b>	-0.205	<b>-0.578</b>
<b>Result (c-b)</b>	0.123	0.126	0.115	<b>0.391</b>	-0.045	-0.184

These results can also be displayed on a radar graph (see Figure 45 below):

*Figure 45 – Comparing The Results From The Business Bank With The Group Results*



## 6.5.4 Analysing Strategy Development Processes Across Barclays

### 6.5.4.1 Introduction

In his original thesis, Bailey (2000) found that the strategy development process is unlikely to be characterised by a single unitary dimension. Therefore, the process in an organisation like Barclays is likely to be multi-dimensional. Consequently, strategy development processes or dimensions are unlikely to be mutually exclusive but are much more likely to transpire in combination. The evidence collected in this research and presented in the previous section (see Section 6.5) supports this observation.

Based on this observation by Bailey and subsequent pieces of research, most notably Bailey et al. (2000), this section analyses the research results (see Table 103 below, again showing deviations from the centre of the Likert scale) to observe the relationships that exist between the individual strategy development processes or dimensions. The analysis is carried out at both the Group and individual cluster levels.

*Table 103 – The Barclays Group Results Expressed At The Strategic Business Unit Level*

<b>Business Unit</b>	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
Barclaycard UK	<b>0.574</b>	0.318	0.080	-0.558	0.167	<b>0.668</b>
Barclaycard Int.	0.467	0.008	<b>-0.404</b>	0.476	-0.423	<b>-0.881</b>
Barclaycard Corp.	-0.364	<b>-0.630</b>	<b>1.903</b>	-0.647	0.665	-2.046
Barclays Africa	<b>0.409</b>	<b>-0.463</b>	-0.099	<b>0.507</b>	-0.328	-0.142
Collateralised Fin.	0.444	-0.127	-0.126	<b>0.964</b>	<b>-0.553</b>	-0.574
Global Financing	<b>0.242</b>	-0.334	-0.175	<b>0.382</b>	-0.375	<b>-0.498</b>
Global Markets	<b>0.447</b>	-0.200	-0.162	<b>0.697</b>	<b>-0.530</b>	<b>-0.641</b>
Private Equity	<b>0.342</b>	-0.055	-0.139	<b>0.468</b>	-0.255	<b>-0.413</b>
Europe	0.128	0.104	0.181	<b>-0.331</b>	0.157	<b>-0.396</b>
International Bank	0.074	-0.109	-0.121	0.240	-0.180	-0.224
Investment Mgmt	0.035	-0.055	-0.095	-0.294	0.274	<b>0.429</b>
Private Bank	0.046	-0.146	0.123	0.176	-0.142	-0.087
Premier Bank	0.197	-0.051	-0.181	<b>0.403</b>	0.035	-0.228
PFS	<b>0.399</b>	-0.134	<b>-0.299</b>	<b>0.522</b>	-0.147	<b>-0.458</b>
Woolwich	<b>0.350</b>	0.124	-0.133	<b>0.747</b>	-0.008	<b>-0.320</b>
Business Bank	<b>0.423</b>	-0.013	0.023	<b>0.799</b>	-0.205	<b>-0.578</b>
BGI	0.213	-0.069	<b>-0.318</b>	<b>0.577</b>	-0.263	<b>-0.378</b>
<b>Group Mean</b>	<b>0.300</b>	<b>-0.139</b>	<b>-0.092</b>	<b>0.408</b>	<b>-0.160</b>	<b>-0.394</b>

## 6.5.4.2 Analysing Correlations Across The Barclays Group

### 6.5.4.2.1 Expected Correlations

The research carried out by Bailey et al. (2000) was also underpinned by the expectation that there would be a number of relationships between the six strategy development processes or dimensions. These expected relationships are detailed in Table 104 below:

*Table 104 – Expected Correlations (Bailey et al., 2000)*

	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
<b>Incremental</b>		–		+		
<b>Command</b>	–			–	+	
<b>Cultural</b>				–	+	+
<b>Planning</b>	+	–	–		–	–
<b>Political</b>		+	+	–		+
<b>Enforced Choice</b>			+	–	+	

Based on a review of relevant literature and starting with the command dimension, Bailey et al. predicted a negative relationship with planning and incrementalism but a positive relationship with political processes. Bailey et al. take the idea of command to reflect the application of power through institutionalised authority or the personality of the leader, rather than the rational application of planning processes or broader participation in the planning process, which underpins Quinn’s (1980) notion of logical incrementalism.

Developing their expectations further, Bailey et al. anticipated negative relationships between planning and the political, cultural and enforced choice dimensions on the basis that planning may be employed more readily in less constraining or turbulent environments. The expectation of a positive relationship between planning and incrementalism by Bailey et al. was a clear reflection on Quinn’s logical incrementalism. Finally, Bailey et al. predicted positive correlations among the political, cultural and enforced choice dimensions. The basis for this assumption was that power structures might reinforce cultural influences on strategy development, and therefore normative political and cultural influences may be more prevalent in highly regulated or coercive competitive environments.

### 6.5.4.2.2 Analysing The Group Results

This section looks at correlations between the dimensions in the Group results. The critical values are: 0.196 at the 5% significance level; and 0.258 at the 1% significance level. Where critical values are significant at the 5% level they are highlighted in bold; where the values are significant at the 1% level they are highlighted in red and bold (see Table 105 below):

*Table 105 – The Group Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.041873	1				
Cultural	0.066435	0.181822	1			
Planning	<b>0.429834</b>	-0.113938	-0.167811	1		
Political	-0.047269	<b>0.319822</b>	<b>0.401973</b>	<b>-0.428980</b>	1	
Enforced Choice	-0.083750	0.187310	<b>0.229983</b>	<b>-0.273104</b>	<b>0.392108</b>	1

The Group results show a positive relationship that is significant at the 1% level for: planning and incrementalism; command and politics; culture and politics; and enforced choice and politics. The positive relationship between enforced choice and culture is only significant at the 5% level. The Group results also show a negative relationship that is significant at the 1% level between: planning and politics; and the planning and enforced choice dimensions.

The Group results can be analysed against the ten key relationships identified by Bailey et al. (2000) (see Table 106 below). There were no other statistically significant relationships between the strategy development processes in the Group results.

*Table 106 – Group Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<1%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	Not Significant
Planning	Enforced Choice	Negative	✓	<1%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<5%

### 6.5.4.3 Analysing Correlations Across The Various Clusters

#### 6.5.4.3.1 Barclaycard

This section looks at correlations between the dimensions from the Barclaycard cluster. Owing to the sample size (159), critical values are the same as the Group: 0.196 (5% significance) and 0.258 (1% significance). Critical values significant at the 5% level are highlighted in bold; values significant at the 1% level are highlighted in red and bold (see Table 107 below):

*Table 107 – Barclaycard Cluster: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	0.092242	1				
Cultural	-0.038671	0.079973	1			
Planning	<b>0.397623</b>	<b>-0.219035</b>	<b>-0.221535</b>	1		
Political	-0.068329	<b>0.447170</b>	<b>0.410103</b>	<b>-0.505716</b>	1	
Enforced Choice	0.033882	0.053519	<b>0.208687</b>	<b>-0.272773</b>	<b>0.285954</b>	1

These results also show positive relationships, significant at the 1% level for: planning and incrementalism; command and politics; culture and politics; and enforced choice and politics. Again, the positive relationship between enforced choice and culture is only significant at the 5% level. The results also show negative correlations significant at the 1% level for: planning and politics; and the planning and enforced choice dimensions. Analysis of the results against the work of Bailey et al. (2000) shows the predicted negative correlation between command and incrementalism to be in fact positive at Barclaycard (see Table 108), although it is not statistically significant. There were no other significant correlations in the Barclaycard data.

*Table 108 – Barclaycard Cluster Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	<5%
Command	Incremental	Negative	✗	Not Significant
Command	Political	Positive	✓	<1%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	<5%
Planning	Enforced Choice	Negative	✓	<1%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<5%

### 6.5.4.3.2 Barclays Africa

The analysis now moves on to look at correlations between the dimensions from Barclays Africa. Owing to the size of the sample (37), the critical values are: 0.316 (5% significance) and 0.408 (1% significance). Critical values significant at the 5% level are highlighted in bold; values significant at the 1% level are highlighted in red and bold (see Table 109 below):

*Table 109 – Barclays Africa: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	0.099924	1				
Cultural	-0.153883	<b>0.378186</b>	1			
Planning	<b>0.554553</b>	0.155080	-0.175851	1		
Political	-0.095536	0.254777	<b>0.525861</b>	<b>-0.423940</b>	1	
Enforced Choice	<b>-0.415091</b>	-0.015489	<b>0.472587</b>	<b>-0.322163</b>	<b>0.484350</b>	1

These results show positive relationships significant at the 1% level for: planning and incrementalism; culture and politics; enforced choice and culture; and enforced choice and politics. The results from Barclays Africa show a negative correlation significant at the 1% level for planning and politics.

Analysis of the results against the work of Bailey et al. (2000) shows the predicted negative correlations between command and planning, and command and incrementalism, to be positive at Barclays Africa, although neither result is statistically significant. The results are set out in Table 110 below:

*Table 110 – Barclays Africa Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✗	Not Significant
Command	Incremental	Negative	✗	Not Significant
Command	Political	Positive	✓	Not Significant
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	Not Significant
Planning	Enforced Choice	Negative	✓	<5%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<1%

The interesting aspect of the results from Barclays Africa is the emergence of two relationships that were not predicted by Bailey et al. (2000): first, the negative correlation at the 1% significance level between enforced choice and incrementalism; and second, the positive relationship at the 5% significance level between culture and command.

Beginning with the negative correlation between enforced choice and incrementalism, the results show that as enforced choice becomes more prevalent at Barclays Africa, then incrementalism declines, and vice versa. Although this relationship is predictable, as there is a high correlation between incrementalism and planning, and a predicted negative correlation between enforced choice and planning, the observation of such a strong negative relationship (-0.4151) between enforced choice and incrementalism is interesting.

There are two possible explanations for this relationship: first, the geographical dispersion of Barclays Africa, which may lead to the perception that strategy is developed by the Group Centre in London and tends to be constant in the short-term; and second, that the high level of merger and acquisition activity in Barclays Africa during 2003 (primarily managed from London) means that strategy may be perceived as being enforced on the cluster rather than emerging from within Barclays Africa in Johannesburg.

The second new relationship to emerge from Barclays Africa is the positive relationship between culture and command (0.3782), which is significant at the 5% level and is therefore a weaker relationship than the correlation between enforced choice and incrementalism. This result shows that as command increases then the cultural approach to strategy development also increases, and vice versa.

Again, this relationship is predictable and consistent with the Group results however, the strength of the correlation is interesting and again there are two possible explanations. First, the strategy development process although closely associated with a strong leader, or commander, could be one of subtle symbolism, ritual and the application of experience, consistent with the cultural dimension of strategy development (see Section 4.2.8).

Alternatively, the result could be a product of the cluster changing Chief Executive Officer during 2003 and this change being reflected in a 'mixed' process for developing strategy.

### 6.5.4.3.3 Barclays Capital

This section looks at correlations between the dimensions from Barclays Capital. Owing to the size of the sample (123), the critical values are the same as for the Group: 0.196 (5% significance) and 0.258 (1% significance) – see Table 111 below:

*Table 111 – Barclays Capital Cluster: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.083322	1				
Cultural	0.106707	0.076070	1			
Planning	<b>0.473630</b>	-0.050259	0.100251	1		
Political	0.020602	<b>0.216057</b>	<b>0.404979</b>	<b>-0.318274</b>	1	
Enforced Choice	-0.017363	0.149592	0.191717	<b>-0.263208</b>	<b>0.378991</b>	1

Consistent with the Group results, the data from Barclays Capital show positive relationships, significant at the 1% level for: planning and incrementalism; culture and politics; and enforced choice and politics. The positive relationship between command and politics is only significant at the 5% level. These results also show negative correlations significant at the 1% level for: planning and politics and the planning and enforced choice dimensions.

Analysis of the Barclays Capital results against the work of Bailey et al. (2000) shows the predicted negative correlation between planning and the cultural approach to strategy development to be positive at Barclays Capital, but it is not a statistically significant result (see Table 112). There were no other significant correlations in the Barclays Capital data.

*Table 112 – Barclays Capital Cluster Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<5%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✗	Not Significant
Planning	Enforced Choice	Negative	✓	<1%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	Not Significant

#### 6.5.4.3.4 Barclays Private Clients

Analysis of the results from across the cluster at Barclays Private Clients forms this section of the report. Once again owing to the size of the sample (221), the critical values are the same as for the Group results: 0.196 (5% significance) and 0.258 (1% significance) – see Table 113 below:

*Table 113 – Barclays Private Clients Cluster: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.040167	1				
Cultural	0.140320	<b>0.271860</b>	1			
Planning	<b>0.348879</b>	-0.164477	<b>-0.286889</b>	1		
Political	0.025085	<b>0.316916</b>	<b>0.361745</b>	<b>-0.446267</b>	1	
Enforced Choice	-0.075278	<b>0.261524</b>	0.155586	<b>-0.260352</b>	<b>0.406299</b>	1

The results from Barclays Private Clients are also consistent with the Group results, showing positive relationships significant at the 1% level for: planning and incrementalism; culture and politics; command and politics; and enforced choice and politics. These results also show negative correlations significant at the 1% level for: planning and culture; planning and politics; and finally the planning and enforced choice dimensions.

Analysis of the results from Barclays Private Clients against the work of Bailey et al. (2000) shows a high level of consistency with the correlations predicted in their research. The results are set out in Table 114 below:

*Table 114 – Barclays Private Clients Cluster Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<1%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	<1%
Planning	Enforced Choice	Negative	✓	<1%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	Not Significant

The results show the predicted negative correlations between planning and the command approach to strategy development, and command and incrementalism to be negative, but not statistically significant result. By the same token, the predicted positive correlation between culture and the enforced choice dimension is positive but not statistically significant. There were no other significant correlations evident in the data from Barclays Private Clients.

An interesting aspect of the results from Barclays Private Clients is the evidence of two correlations that are both statistically significant at the 1% level and that were not predicted by Bailey et al. (2000): first, the positive correlation between enforced choice and command; and second, similarly to Barclays Africa, the positive relationship between culture and command.

Beginning with the positive correlation between enforced choice and command (0.2615), the results show that when managers believe strategy is being imposed on them from outside Barclays Private Clients, then the perception held by senior managers is that strategy is developed by a strong leader, or commander. The explanation for this could lie in the experience of 2003, where the strategy may have been perceived as being determined by the Group Executive Committee as a consequence of consistent under-performance. This resulted in the Chief Executive Officer being replaced by the Group Finance Director in April 2003.

The explanation for the significant positive correlation between culture and command (0.2719) could also lie in the leadership of the cluster. In the same way that Barclays Africa produced a mixed process for strategy development owing to leadership changes, Barclays Private Clients produced similar results. This also appears to be linked to the leadership of the cluster because during the period of the data collection (2003), Barclays Private Clients had three different Chief Executive Officers and three different Chief Operating Officers.

Clearly, the change in leadership had ramifications for how leadership was perceived in the organisation and this is reflected in the command dimension. The strong correlation with the cultural dimension is probably a consequence of a symbolic and ritualistic approach to strategy based more on the application of experience than on the manipulation of managerial techniques by the various leaders of Barclays Private Clients during 2003.

### 6.5.4.3.5 The UK Retail Bank

The report now moves on to analyse correlations between the dimensions in the results from the UK Retail Bank. Owing to the size of the sample (98), the critical values are: 0.197 (5% significance) and 0.257 (1% significance). The results are set out in Table 115 below:

*Table 115 – UK Retail Bank Cluster: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.047349	1				
Cultural	<b>0.216002</b>	<b>0.246024</b>	1			
Planning	<b>0.369904</b>	-0.059684	-0.041287	1		
Political	-0.072335	<b>0.279784</b>	<b>0.383903</b>	<b>-0.377474</b>	1	
Enforced Choice	0.064747	<b>0.237356</b>	<b>0.337629</b>	-0.159665	<b>0.536467</b>	1

Also consistent with the Group results, the UK Retail Bank results show positive correlations significant at the 1% level for: planning and incrementalism; culture and politics; culture and enforced choice; command and politics; and enforced choice and politics. The results also show a negative correlation significant at the 1% level for planning and politics.

Analysis of the results from the UK Retail Bank against the work of Bailey et al. (2000) shows a high level of consistency with the correlations predicted in their research. The negative correlations between: command and planning; command and incrementalism; planning and culture; and, planning and enforced choice are negative but not statistically significant. The results are set out in Table 116 below:

*Table 116 – UK Retail Bank Cluster Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<1%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	Not Significant
Planning	Enforced Choice	Negative	✓	Not Significant
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<1%

The interesting aspect of the results from the UK Retail Bank is the evidence of three relationships that were not predicted in the work of Bailey et al. (2000). These three correlations which are positive, and significant at the 5% level are between: incrementalism and culture; command and culture; and command and enforced choice.

The first correlation (0.2160) recognises that when incrementalism is present in the strategy process then so is the cultural approach to strategy development, and vice versa. This observation is particularly interesting because the logical prediction would be for a negative relationship between incrementalism and culture owing to the high level of correlation between incrementalism and planning, and the predicted negative correlation between planning and culture. However, the positive relationship is consistent with the Group results and could be explained by a cultural change in the strategy development process following the acquisition of the Woolwich, resulting in a mixture of two different strategy development processes.

The second two correlations recognise that when command is present in the strategy development process, then so is the cultural approach (0.2460) and the enforced choice (0.2374) dimension of strategy development, and vice versa. These relationships are also counter-intuitive, as one would logically expect that the presence of enforced choice and culture would exclude characteristics associated with the command dimension (see Section 4.2.4). For example, enforced choice (see Section 4.2.9) is when the responsibility for strategy development lies outside the organisation. This approach is not compatible with strategy being developed by a strong leader, or commander, which implies that the leader is within the cluster – unless of course the particular leadership resides in the Group Centre and is therefore perceived as being outside the cluster, a view that appears consistent with the results from Barclays Private Clients (see Section 6.5.4.3.4).

The positive correlation between command and culture is also consistent with the results at Barclays Private Clients (and Barclays Africa), providing evidence that although leadership is perceived as strong, the style adopted is cultural – depending on the use of symbols and the application of experience rather than the manipulation of managerial tools and techniques (see Section 4.2.8), as for example with value-based management (see Section 2.1.7).

### 6.5.4.3.6 Barclays Global Investors

This section of the report looks at correlations between the dimensions from Barclays Global Investors. Owing to the size of the sample (36), the critical values are: 0.321 (5% significance) and 0.413 (1% significance). The detailed results are set out in Table 117 below:

*Table 117 – Barclays Global Investors: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.198370	1				
Cultural	-0.148871	0.066513	1			
Planning	<b>0.610441</b>	-0.156274	<b>-0.326227</b>	1		
Political	-0.151536	<b>0.320491</b>	<b>0.449058</b>	<b>-0.568013</b>	1	
Enforced Choice	0.040190	0.148753	<b>0.502992</b>	-0.289018	<b>0.578587</b>	1

Consistent with the Group results, the results from Barclays Global Investors show positive correlations significant at the 1% level for: planning and incrementalism; culture and politics; command and politics; culture and enforced choice; and enforced choice and politics. The positive relationship between politics and command is only significant at the 5% level. The results also show a negative correlation significant at the 5% level for culture and politics.

Analysis of these results against the work of Bailey et al. (2000) shows a high level of consistency with the correlations predicted in their research. The negative correlations between: command and planning; command and incrementalism; and planning and enforced choice are negative but not statistically significant. The results are set out in Table 118 below:

*Table 118 – Barclays Global Investors Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<5%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	<5%
Planning	Enforced Choice	Negative	✓	Not Significant
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<1%

### 6.5.4.3.7 The Business Bank

The final part of this section examines correlations between the dimensions from the Business Bank. Owing to the size of the sample (57), the critical values are: 0.268 (5% significance) and 0.335 (1% significance). The detailed results are set out in Table 119 below:

*Table 119 – Business Bank: Correlation Matrix*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.164594	1				
Cultural	0.021863	0.190494	1			
Planning	<b>0.511059</b>	-0.007252	-0.180075	1		
Political	-0.048663	<b>0.304821</b>	<b>0.455715</b>	<b>-0.278219</b>	1	
Enforced Choice	-0.241745	<b>0.363545</b>	0.116720	-0.133474	0.081486	1

The results from the Business Bank show positive correlations significant at the 1% level for: planning and incrementalism; and culture and politics. The positive relationship between politics and command is only significant at the 5% level. The results also show a negative correlation significant at the 5% level for politics and planning. Analysis of these results against the work of Bailey et al. (2000) shows a high level of consistency with the correlations predicted in their research. Interestingly an unpredicted relationship statistically significant at the 1% level is identified between command and enforced choice. This observation is consistent with other areas of the Group, where strategy is developed through a strong leader but the individual is perceived as being outside the organisation. The results are set out in Table 120 below:

*Table 120 – Business Bank Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<5%
Planning	Political	Negative	✓	<5%
Planning	Cultural	Negative	✓	Not Significant
Planning	Enforced Choice	Negative	✓	Not Significant
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	Not Significant
Cultural	Enforced Choice	Positive	✓	Not Significant

## **6.5.5 Strategy Process And Perceived Environmental Uncertainty**

### **6.5.5.1 Introduction**

This report now goes on to set out a key component of this Executive Doctorate, the analysis of the relationship between strategy development process and perceived environmental uncertainty. In order to achieve this objective, this section consists of seven (statistically significant) component parts:

1. Differences in strategy development process across the seventeen strategic business units in the Barclays portfolio.
2. Differences in perceived environmental uncertainty across the Barclays portfolio.
3. Differences in the ability of the various strategic business units to cope with perceived environmental uncertainty.
4. Differences in the importance of each strategic business units being able to cope with perceived environmental uncertainty.
5. Correlations between strategy development process and perceived environmental uncertainty across the Barclays portfolio.
6. Correlations between strategy development process and the ability of the various strategic business units to cope with perceived environmental uncertainty.
7. Correlations between strategy development process and the importance of the various strategic business units being able to cope with perceived environmental uncertainty.

## 6.5.5.2 Strategy Development Processes

### 6.5.5.2.1 Comparing Strategy Development Processes Across Strategic Business Units

This section of the report identifies significant differences in strategy development processes across the individual strategic business units within the Barclays Group. Here the results of the individual strategic business units have been compared with the overall Group results. Results significant at the 5% level are highlighted in bold text; those significant at the 1% level are highlighted in red and bold text. The full results are set out in Table 121 below:

*Table 121 – Identifying Significant Differences In Strategy Development Processes Across The Barclays Group*

Business Unit	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Barclaycard UK	<b>0.574</b>	0.318	0.080	-0.558	0.167	<b>0.668</b>
Barclaycard Int.	0.467	0.008	<b>-0.404</b>	0.476	-0.423	<b>-0.881</b>
Barclaycard Corp.	-0.364	<b>-0.630</b>	<b>1.903</b>	-0.647	0.665	-2.046
Barclays Africa	0.409	-0.463	-0.099	0.507	-0.328	-0.142
Collateralised Fin.	0.444	-0.127	-0.126	<b>0.964</b>	<b>-0.553</b>	-0.574
Global Financing	0.242	-0.334	-0.175	0.382	-0.375	-0.498
Global Markets	0.447	-0.200	-0.162	0.697	<b>-0.530</b>	-0.641
Private Equity	0.342	-0.055	-0.139	0.468	-0.255	-0.413
Europe	0.128	0.104	<b>0.181</b>	<b>-0.331</b>	<b>0.157</b>	-0.396
International Bank	0.074	-0.109	-0.121	0.240	-0.180	-0.224
Investment Mgmt	0.035	-0.055	-0.095	<b>-0.294</b>	<b>0.274</b>	<b>0.429</b>
Private Bank	<b>0.046</b>	-0.146	0.123	0.176	-0.142	<b>-0.087</b>
Premier Bank	0.197	-0.051	-0.181	0.403	0.035	-0.228
PFS	0.399	-0.134	-0.299	0.522	-0.147	-0.458
Woolwich	0.350	0.124	-0.133	0.747	<b>-0.008</b>	-0.320
Business Bank	0.423	-0.013	0.023	<b>0.799</b>	-0.205	-0.578
BGI	0.213	-0.069	-0.318	0.577	-0.263	-0.378
<b>Group Mean</b>	0.300	-0.139	-0.092	0.408	-0.160	-0.394

#### **6.5.5.2.2 Incremental**

The results show that Barclaycard UK is the only strategic business unit to show a significant result at the 1% level on the incremental dimension (0.574). The research can therefore conclude that incrementalism is applied at Barclaycard UK significantly more than at other business units across the portfolio, and significantly more than in the Group as a whole. The Private Bank shows a significant result at the 5% level (0.046); the report is therefore able to conclude that there is significantly more incrementalism in the strategy development process at the Private Bank than elsewhere in the Barclays Group.

#### **6.5.5.2.3 Command**

This analysis shows that Barclaycard Corporate is the only strategic business unit to show a significant result on the command dimension (-0.630), significant at the 1% level. The research can therefore conclude that there is significantly less command in the strategy development process at Barclaycard Corporate than elsewhere across the Group.

#### **6.5.5.2.4 Culture**

The results show statistically significant differences on the cultural dimension. Barclaycard Corporate (1.903) and Europe (0.181) show more evidence of the use of culture (both at the 5% significance level) than elsewhere across the Group. By way of comparison, Barclaycard International (-0.404) shows significantly (at the 5% level) less use of culture in its strategy development process.

#### **6.5.5.2.5 Planning**

The results from the investigation into statistically significant differences on the planning dimension show significantly more use of planning as a process for developing strategy at: the Business Bank (0.799), which is significant at the 1% level; and Collateralised Financing (0.964), which is also significant at the 1% level. By way of comparison, the results show that there is significantly less planning in the strategy process at: Europe (-0.331) and Investment Management (-0.294), both significant at the 1% level.

#### **6.5.5.2.6 Political**

The results from the investigation into statistically significant differences on the political dimension show a significantly greater use of politics in the process for developing strategy at: Investment Management (0.274), which is significant at the 1% level; and Europe (0.157), which is significant at the 5% level. It is therefore safe to conclude that there is a significant use of politics in the strategy development process at Investment Management and Europe – and appreciably more politics in these two organisations than elsewhere across the Group. The relationship between the use of politics and organisational performance is examined later in this report (see Section 6.5.6.2).

By way of comparison, the Group results show that there is significantly less evidence of politics in the strategy development process at: Collateralised Financing (-0.553), Global Markets (-0.530), and the Woolwich (-0.008), which are all significant at the 5% level.

#### **6.5.5.2.7 Enforced Choice**

The final element of this section examines statistically significant differences in enforced choice as a process for strategy development across the Barclays Group. There are four statistically significant differences on this dimension. The result from Investment Management (0.429), which is statistically significant at the 1% level, highlights a perception of strategy being imposed upon the business unit. By the same token, the data from Barclaycard UK (0.668), which are statistically significant at the 5% level, also highlight a perception of strategy being developed from outside the strategic business unit. The relationship between organisational performance and the enforced choice dimension is examined later in this report (see Section 6.5.6.2).

By way of comparison, the result from Barclaycard International (-0.881), which is statistically significant at the 1% level, shows that they believe themselves to have more input and influence (or less enforced choice) on the development of strategy in their particular business unit than elsewhere across the Group. This finding is consistent with the data at the Premier Bank (-0.087), although this latter finding is significant only at the 5% level.

### 6.5.5.3 Perceived Environmental Uncertainty

#### 6.5.5.3.1 Perceived Environmental Uncertainty Across Strategic Business Units

This section of the report identifies significant differences in perceived environmental uncertainty across the Barclays Group. Here the results of the individual strategic business units have been compared with the centre (50) of the 0–100 scale used in Project 2 to identify statistically significant means, and also with the total Group score (‘Variance’). Owing to the size of the sample (15), the critical value for significance at the 5% level is 2.16, the critical value at the 2% level is 2.62, and the critical value at the 1% significance level is 3.01.

Results significant at the 5% level are highlighted in bold text, those significant at the 2% level are highlighted in green and bold text, and the results significant at the 1% level are highlighted in red and bold text. The full results are set out in Table 122 below. When considering these results it is useful to be mindful of the lack of managerial consensus that was discovered in Project 2 among the assessments of perceived environmental uncertainty made by the fifteen members of the Group Executive Committee (see Section 5.7.2.1).

Table 122 – Identifying Significant Differences In Perceived Environmental Uncertainty Across Barclays

Business Unit	Levels Of Perceived Environmental Uncertainty					
	Degree Of Uncertainty		Rate Of Change		Level Of Complexity	
	Centre	Variance	Centre	Variance	Centre	Variance
Barclaycard UK	48.400	-1.280	56.000	7.836	52.333	2.482
Barclaycard Int.	58.333	8.653	56.667	8.503	53.000	3.148
Barclaycard Corp.	<b>37.667</b>	<b>-12.014</b>	<b>41.667</b>	-6.497	42.000	-7.852
Barclays Africa	49.000	-0.680	42.000	-6.164	44.667	-5.185
Collateralised Fin.	50.385	0.704	44.615	-3.548	46.538	-3.313
Global Financing	55.769	6.089	46.538	-1.625	54.615	4.764
Global Markets	<b>62.000</b>	<b>12.320</b>	50.769	2.606	52.308	2.456
Private Equity	58.571	8.891	<b>37.143</b>	-11.021	45.714	-4.137
Europe	46.667	-3.014	48.333	0.170	48.333	-1.518
International Bank	46.667	-3.014	47.667	-0.497	47.733	-2.118
Investment Mgmt	55.667	5.986	53.000	4.836	57.000	7.148
Private Bank	51.733	2.053	55.400	<b>7.236</b>	47.667	-2.185
Premier Bank	46.000	-3.680	54.000	5.836	55.733	5.882
PFS	46.400	-3.280	54.000	5.836	<b>66.333</b>	<b>16.482</b>
Woolwich	44.733	-4.947	44.400	-3.764	41.333	-8.518
Business Bank	42.000	-7.680	42.333	-5.830	48.000	-1.852
BGI	50.067	0.386	44.333	-3.830	43.667	-6.185
<b>Group Mean</b>	49.680		48.164		49.852	

#### ***6.5.5.3.1.1 The Degree Of Uncertainty***

The key observation from these results is that the mean assessment for the degree of uncertainty faced by Barclaycard Corporate is significantly different both from the middle of the construct (50) presented to the members of the Group Executive Committee (0–100), and compared with the overall Group results. This result is significant at the 1% level. Therefore, the results show that the Group Executive Committee believe that Barclaycard Corporate faces a low degree of uncertainty. This result is also reflected in the comparison with the Group results, where the variance is significantly lower than the rest of the Group. This result is significant at the 5% level and suggests that the Group Executive Committee believes that Barclaycard Corporate face a significantly lower level of uncertainty than other strategic business units within the Group.

By way of comparison, Global Markets in the Barclays Capital Cluster show evidence of facing a significantly higher level of uncertainty – this result is significant at the 5% level. Again, this result is also reflected in the comparison with the Group results, which therefore suggests that the Group Executive Committee believes that Global Markets faces significantly more uncertainty than other strategic business units within the Group. This finding could be a product of the fee-based business model in investment banking at Barclays Capital, as opposed to the traditional, well-proven business model of the Barclays Group (see Section 5.5.2.1).

#### ***6.5.5.3.1.2 The Rate Of Change***

The observation here is that Barclaycard Corporate faces a significantly lower rate of change – this result is significant at the 5% level. Equally, Private Equity in the Barclays Capital Cluster is also perceived to be facing a significantly lower rate of change, a result that is significant at the 2% level.

Interestingly, the Private Bank is deemed to be facing a rate of change that is significantly higher than the rate of change being experienced by every other strategic business unit within the Group. This result is significant at the 2% level. None of the other strategic business units is deemed to be facing a significantly higher or lower rate of change than the rest of the Group, an interesting observation in that the qualitative exploration in Project 2 of this report (see Section 5.5) identified discernible qualitative differences between the environments within which these various strategic business units operate.

#### ***6.5.5.3.1.3 The Level Of Complexity***

The key observation here is that Personal Financial Services is perceived as being faced with a significantly high rate of complexity, a result that is significant at the 1% level. This finding is consistent with the qualitative exploration (see Section 5.5.2.3), which found that the size of an organisation increases the level of complexity it faces. During 2003, Personal Financial Services had 2,070 branches, 25,800 employees, and 10.5m customers. The qualitative exploration also identified as contributory factors in the level of complexity: the number of stakeholders, the level of information required to manage the business, and the geographical dispersion of the organisation. All these factors represent key characteristics of the business model at Personal Financial Services.

When compared with the rest of the Group, Personal Financial Services is deemed to face an appreciably higher level of complexity than the rest of the strategic business units in the Barclays portfolio, a result significant at the 1% level. This finding is also a consequence of the relatively complex business model (also see Section 5.5.2.3). None of the other business units can be differentiated from any other areas of the Group in terms of the level of complexity they are perceived to face. As in the previous section, this observation is interesting in that the qualitative exploration in Project 2 (see Section 5.5) identified discernible qualitative differences between the environments within which these various strategic business units operate.

### 6.5.5.3.2 Comparing The Ability To Cope Across The Portfolio

This section of the report identifies significant differences in the ability to cope with the degree of uncertainty, the rate of change, and the level of complexity faced by business units in their competitive environment. Here the results of the individual strategic business units have been compared both with the centre (50) of the 0–100 construct used in Project 2 to identify statistically significant means, and also with the overall Group results (‘Variance’). Owing to the size of the sample (15), the critical value for significance at the 5% level is 2.16, the critical value at the 2% level is 2.62, and the critical value at the 1% significance level is 3.01.

Results significant at the 5% level are highlighted in bold text, those significant at the 2% level are highlighted in green and bold text, and the results significant at the 1% level are highlighted in red and bold text. The full results are set out in Table 123 below. When considering these results it is again useful to be mindful of the lack of managerial consensus that was discovered in Project 2 among the assessments of perceived environmental uncertainty made by the members of the Group Executive Committee (see Section 5.7.2.1).

*Table 123 – Identifying Significant Differences In The Ability To Cope Across The Barclays Group*

Business Unit	Ability To Cope With					
	Degree Of Uncertainty		Rate Of Change		Level Of Complexity	
	Centre	Variance	Centre	Variance	Centre	Variance
Barclaycard UK	<b>69.643</b>	8.304	<b>72.333</b>	<b>11.960</b>	<b>74.000</b>	<b>10.868</b>
Barclaycard Int.	<b>58.000</b>	-3.339	55.333	-5.040	57.667	-5.465
Barclaycard Corp.	<b>67.400</b>	6.061	<b>66.400</b>	6.027	<b>67.333</b>	4.202
Barclays Africa	58.000	-3.339	59.667	-0.707	60.067	-3.065
Collateralised Fin.	<b>74.231</b>	<b>12.892</b>	<b>71.154</b>	<b>10.781</b>	<b>77.000</b>	<b>13.868</b>
Global Financing	<b>74.615</b>	<b>13.277</b>	<b>73.846</b>	<b>13.473</b>	<b>78.077</b>	<b>14.945</b>
Global Markets	<b>74.615</b>	<b>13.277</b>	<b>72.692</b>	<b>12.319</b>	<b>79.231</b>	<b>16.099</b>
Private Equity	<b>71.429</b>	<b>10.090</b>	<b>65.714</b>	5.341	<b>79.357</b>	<b>16.225</b>
Europe	50.333	<b>-11.006</b>	51.333	-9.040	51.333	<b>-11.798</b>
International Bank	58.667	-2.672	53.733	-6.640	56.000	-7.132
Investment Mgmt	46.667	<b>-14.672</b>	46.333	<b>-14.040</b>	49.333	<b>-13.798</b>
Private Bank	<b>57.400</b>	-3.939	52.333	<b>-8.040</b>	<b>57.733</b>	-5.398
Premier Bank	53.000	-8.339	51.333	-9.040	53.333	<b>-9.798</b>
PFS	51.333	-10.006	51.667	-8.707	50.000	<b>-13.132</b>
Woolwich	44.667	<b>-16.672</b>	48.400	<b>-11.973</b>	40.667	<b>-22.465</b>
Business Bank	<b>71.000</b>	<b>9.661</b>	<b>72.067</b>	<b>11.694</b>	<b>71.733</b>	<b>8.602</b>
BGI	<b>67.000</b>	5.661	<b>66.533</b>	6.160	<b>75.667</b>	<b>12.535</b>
<b>Group Mean</b>	<b>61.339</b>		<b>60.373</b>		<b>63.132</b>	

#### **6.5.5.3.2.1 *The Ability To Cope With The Degree Of Uncertainty***

The key observation from these results is that the ability to cope with uncertainty is significantly high against the centre (50) of the 0–100 scale at all the strategic business units within: the Barclaycard Cluster, the Barclays Capital Cluster, the Business Bank, and Barclays Global Investors. All these results are significant at the 1% level and show that the Group Executive Committee believes that these strategic business units have a significantly high level of ability to cope with the degree of uncertainty in their competitive environments.

The Private Bank in the Barclays Private Clients Cluster has also been deemed to have a significantly high level of ability to cope with the degree of uncertainty in its competitive environment – this result is significant at the 5% level. Interestingly, the overall mean for the Group as a whole is significantly high at the 1% level, which shows the Group Executive Committee believes the Group has a significantly high level of ability to cope with the degree of uncertainty in its competitive environment.

When comparing individual strategic business units with other business units in the Barclays Group, it is evident that the four strategic business units in the Barclays Capital Cluster are deemed to have a significantly higher level of ability to cope with uncertainty than the Group as a whole. The same applies for the Business Bank and Private Equity, albeit their results are significant only at the 5% level.

By way of comparison, the Woolwich in the UK Retail Bank Cluster is deemed to have a significantly lower level of ability to cope with uncertainty than the Group as a whole. This is almost certainly the result of the Group Executive Committee not yet having seen the Woolwich cope with a period of uncertainty, as the Woolwich only joined the Barclays Group in 2001 (see Section 5.5.3.1). The two other strategic business units that are deemed to have a significantly lower level of ability to cope with uncertainty are Investment Management and Europe. These two business units are within the Barclays Private Clients Cluster and are significant at the 1% and 5% levels respectively. These two business units produced relatively poor results in 2003. The relationship between the ability to cope with uncertainty and organisational performance is covered later in this report (see Section 6.5.6.3).

#### **6.5.5.3.2.2 *The Ability To Cope With The Rate Of Change***

The key observation from these results is that the ability to cope with the rate of change is significantly high against the centre (50) of the 0–100 scale at all the strategic business units within: the Barclays Capital Cluster, the Business Bank, and Barclays Global Investors. In the Barclaycard Cluster, Barclaycard UK and Barclaycard Corporate are deemed to have a significantly higher level of ability to cope with the rate of change. All these results are significant at the 1% level. As in the previous section, the overall mean for the Group as a whole is significantly high at the 1% level, which shows the Group Executive Committee believe the Group has a significantly high level of ability to cope with the rate of change in its competitive environment.

When comparing the individual strategic business units with other business units in the Barclays Group, it is evident that three of the four strategic business units in the Barclays Capital Cluster are deemed to have a significantly higher level of ability to cope with change than the Group as a whole. Only Private Equity fails to produce a significant result. By the same token, only Barclaycard UK in the Barclaycard Cluster is deemed to have a significantly higher level of ability to cope with change (1%), when compared to the rest of the Group. The same applies for the Business Bank which is also significant at the 1% level.

In comparison, the Woolwich in the UK Retail Bank Cluster is deemed to have a significantly lower level of ability to cope with change than the Group as a whole. As in the previous section, this is almost certainly a consequence of the Group Executive Committee having not yet seen the Woolwich cope with a period of change, as it only joined the Barclays Group in 2001 (see Section 5.5.3.1). The two other strategic business units that are deemed to have a significantly lower level of ability to cope with change are Investment Management and the Private Bank – these two business units are within the Barclays Private Clients Cluster and are significant at the 1% and 5% levels respectively. As identified in the previous section, these two business units produced particularly poor results in 2003. The relationship between the ability to cope with change and organisational performance is covered later in this report (see Section 6.5.6.3).

### **6.5.5.3.2.3 The Ability To Cope With The Level Of Complexity**

Along similar lines to the previous two sections, the key observation from this part of the research is that the ability to cope with complexity is significantly high against the centre (50) of the 0–100 scale at all the strategic business units within: the Barclays Capital Cluster, the Business Bank, and Barclays Global Investors. In the Barclaycard Cluster, Barclaycard UK and Barclaycard Corporate are deemed to have a significantly high level of ability to cope with the level of complexity. All these results are significant at the 1% level.

Aligned to the findings of the previous section, the Private Bank in the Barclays Private Clients Cluster again is deemed to have a significantly high level of ability to cope with the level of complexity in its competitive environment – this result is significant at the 5% level. Again the overall mean for the Group is significantly high at the 1% level, which shows the Group Executive Committee believes the Group has a significantly high level of ability to cope with the level of complexity in its competitive environment.

Comparing the individual strategic business units with other business units in the Barclays Group, it is evident that the four strategic business units in the Barclays Capital Cluster are deemed to have a significantly higher level of ability to cope with complexity than the Group as a whole. The same applies for the Business Bank (5%) and Barclays Global Investors (2%). In the Barclaycard Cluster, only Barclaycard UK is deemed to have a significantly higher level of ability to cope with complexity (1%) when compared to the rest of the Group.

In comparison, both strategic business units in the UK Retail Bank (Personal Financial Services and the Woolwich) are deemed to have a significantly lower level of ability to cope with complexity than the Group as a whole. The three other strategic business units that are deemed to have a significantly lower level of ability to cope with complexity than the rest of the Group are: Investment Management (1%), Europe (2%), and the Premier Bank (2%). These three strategic business units are in the Barclays Private Clients Cluster and produced particularly poor results in 2003. The relationship between the ability to cope with complexity and organisational performance is also covered later in this report (see Section 6.5.6.3).

### 6.5.5.3 Comparing The Importance Of Being Able To Cope Across The Portfolio

This section of the report identifies significant differences in the importance of the various business units in the Barclays Group being able to cope with the degree of uncertainty, the rate of change, and the level of complexity. Once again, the results of the individual strategic business units have been compared both with the centre (50) of the 0–100 scale used in Project 2 to identify statistically significant means, and also compared with the mean for the overall Group (‘Variance’). Again, the critical value for significance at the 5% level is 2.16, the critical value at the 2% level is 2.62, and the critical value at the 1% significance level is 3.01.

Results significant at the 5% level are highlighted in bold text, those significant at the 2% level are highlighted in green and bold text, and the results significant at the 1% level are highlighted in red and bold text. The full results are set out in Table 124 below. When considering these results it is once again useful to be reminded of the lack of managerial consensus among the assessments of perceived environmental uncertainty made by the fifteen members of the Group Executive Committee (see Section 5.7.2.1).

Table 124 – Identifying Significant Differences In The Importance Of Being Able To Cope Across Barclays

Business Unit	The Importance Of Being Able To Cope With					
	Degree Of Uncertainty		Rate Of Change		Level Of Complexity	
	Centre	Variance	Centre	Variance	Centre	Variance
Barclaycard UK	<b>74.333</b>	<b>16.588</b>	<b>80.667</b>	<b>18.509</b>	<b>75.000</b>	<b>12.523</b>
Barclaycard Int.	<b>65.333</b>	7.588	<b>70.000</b>	7.842	<b>67.667</b>	5.189
Barclaycard Corp.	44.667	<b>-13.078</b>	48.000	<b>-14.158</b>	50.333	<b>-12.144</b>
Barclays Africa	40.333	<b>-17.412</b>	45.333	<b>-16.825</b>	48.333	<b>-14.144</b>
Collateralised Fin.	<b>62.308</b>	4.563	59.231	-2.927	<b>68.462</b>	5.984
Global Financing	<b>71.923</b>	<b>14.178</b>	<b>70.077</b>	<b>7.919</b>	<b>77.692</b>	<b>15.215</b>
Global Markets	<b>71.923</b>	<b>14.178</b>	<b>71.154</b>	<b>8.996</b>	<b>80.000</b>	<b>17.523</b>
Private Equity	52.857	-4.888	51.786	-10.372	62.500	0.023
Europe	37.667	<b>-20.078</b>	43.000	<b>-19.158</b>	43.333	<b>-19.144</b>
International Bank	54.667	-3.078	<b>64.400</b>	2.242	62.333	-0.144
Investment Mgmt	55.333	-2.412	59.067	-3.091	55.333	-7.144
Private Bank	44.667	<b>-13.078</b>	55.667	-6.491	54.333	-8.144
Premier Bank	61.000	3.255	<b>70.333</b>	8.175	<b>66.000</b>	3.523
PFS	<b>71.333</b>	13.588	<b>76.667</b>	<b>14.509</b>	<b>73.000</b>	10.523
Woolwich	48.000	-9.745	54.000	-8.158	45.667	<b>-16.811</b>
Business Bank	<b>73.000</b>	<b>15.255</b>	<b>75.667</b>	<b>13.509</b>	<b>72.000</b>	9.523
BGI	53.667	-4.078	<b>60.333</b>	-1.825	62.000	-0.477
<b>Group Mean</b>	<b>57.745</b>		<b>62.158</b>		<b>62.477</b>	

#### ***6.5.5.3.3.1 The Importance Of Being Able To Cope With The Degree Of Uncertainty***

The key observation from this part of the research is that the score in respect of the importance of being able to cope with uncertainty is significantly high against the centre (50) of the 0–100 construct at the Business Bank and at three of the strategic business units within the Barclays Capital Cluster. Only Private Equity failed to produce a significantly high result. In the Barclaycard Cluster, both Barclaycard UK and Barclaycard International produced significantly high results, both significant at the 1% level.

Another of the large value-creating businesses, Personal Financial Services, also produced a significantly high score (1%) on this dimension. The overall Group mean is significant at the 2% level and shows the Group Executive Committee believes it is important that the Group is able to cope with the degree of uncertainty in its competitive environment.

When comparing the individual strategic business units with other business units in the Barclays Group it is evident that two of the four strategic business units in the Barclays Capital Cluster (Global Financing and Global Markets) are deemed significantly higher in terms of the importance of their being able to cope with uncertainty. The same applies with the Business Bank and Barclaycard UK within the Barclaycard Cluster. These results were significant at the 5% and 1% level respectively.

At the opposite end of the scale, it is deemed significantly less important that: Barclays Africa, Europe, the Private Bank and Barclaycard Corporate are able to cope with the rate of change in their competitive environments. As in the previous section, all these strategic business units produced relatively low levels of economic profit for the Group in 2003. The relationship between the perceived importance of being able to cope with uncertainty and the level of economic profit created is covered in detail later in this report (see Section 6.5.6.3).

#### ***6.5.5.3.3.2 The Importance Of Being Able To Cope With The Rate Of Change***

This element of the research discovers that the score in respect of the importance of being able to cope with change is significantly high against the centre (50) of the 0–100 construct at the Business Bank and Barclays Global Investors. On this dimension, two of the three strategic business units within the Barclays Capital Cluster produced significantly high results – Global Financing and Global Markets. As in the previous section, in the Barclaycard Cluster, both Barclaycard UK and Barclaycard International produced statistically significant high results – both significant at the 1% level.

Once again, the large value-creating business at Personal Financial Service produced a significantly high score (1%) on this dimension. The results from the International Bank and the Premier Bank were both significantly high on this dimension. This result is almost certainly a consequence of the high levels of change they encountered during 2002 and 2003. The overall Group mean is significant at the 1% level and shows the Group Executive Committee believes it is important that the Group is able to cope with the rate of change in its competitive environment.

When comparing the individual strategic business units with other business units in the Barclays Group, it is evident that two of the four strategic business units in the Barclays Capital Cluster (Global Financing and Global Markets) are deemed significantly higher in terms of the importance of their being able to cope with change. The same applies with the Business Bank and Barclaycard UK within the Barclaycard Cluster. These results were significant at the 5% and 1% level respectively. Once again, the large value-creating business at Personal Financial Service produced a significantly high score (5%) when compared with the rest of the Group in terms of the importance of its being able to cope with change.

At the opposite end of the scale, it was deemed significantly less important that: Barclays Africa, Europe and Barclaycard Corporate are able to cope with the rate of change in their competitive environments. As in the previous section, all these strategic business units produce relatively low levels of economic profit for the Group. The relationship between the perceived importance of being able to cope with change and the level of economic profit created is covered in detail later in this report (see Section 6.5.6.3).

### ***6.5.5.3.3 The Importance Of Being Able To Cope With The Level Of Complexity***

The final part of this element of the research investigates the importance of being able to cope with complexity. When compared against the centre (50) of the 0–100 construct, the level of importance on this dimension was significantly high at the Business Bank and at three of the strategic business units within the Barclays Capital Cluster. Only Private Equity failed to produce a significantly high result. In the Barclaycard Cluster, both Barclaycard UK and Barclaycard International produced significantly high results, both at the 1% level.

As in the previous sections, the large value-creating business at Personal Financial Services also produced a significantly high score (1%) on this dimension, as did the Premier Bank. Again this is likely to be a consequence of its relatively complex business model (see Section 5.5.2.3). The overall Group mean is significant at the 1% level and shows the Group Executive Committee believes it is important that the Group is able to cope with the level of complexity in its competitive environment.

When comparing the individual strategic business units with other business units in the Barclays Group, two of the four strategic business units in the Barclays Capital Cluster (Global Financing and Global Markets) are deemed significantly higher in terms of the importance of their being able to cope with complexity. The same applies to Barclaycard UK in the Barclaycard Cluster. Interestingly, the largest value-creating business (the Business Bank) does not produce significant results in terms of the importance of its being able to cope with complexity. This is likely to be a consequence of its relatively simple business model (see also Section 5.5.2.3).

At the opposite end of the scale, it was deemed significantly less important that: the Woolwich, Barclays Africa, Europe, the Private Bank and Barclaycard Corporate are able to cope with the level of complexity in their competitive environments. As in the previous section, all these strategic business units produce relatively low levels of economic profit for the Group. The relationship between the perceived importance of being able to cope with complexity and the level of economic profit created is covered in detail later in this report (see Section 6.5.6.3).

## 6.5.5.4 Testing The Relationship

### 6.5.5.4.1 Strategy Development Processes And Perceived Environmental Uncertainty

#### 6.5.5.4.1.1 The Findings

The research now moves on to analyse the relationship between strategy development processes and perceived environmental uncertainty. For this part of the analysis, the results from the strategy development process questionnaires collated in Project 3 are compared with the mean assessments on perceived environmental uncertainty collected in Project 2.

For Project 2 (see Figure 10 in Section 5.2.1), the investigation into perceived environmental uncertainty was broken down into three sections: first, the degree of uncertainty, change, and complexity; second, the ability to cope with uncertainty, change and complexity; and finally, the importance of the various strategic business units being able to cope with these three phenomena. This section of the report utilises the same structure to analyse the relationship between perceived environmental uncertainty and strategy development process.

The analysis begins with the relationship between strategy development processes and: the degree of uncertainty, the rate of change, and the level of complexity (see Table 125). In terms of the observation of the seventeen business units, the significant value of the correlation coefficient is 0.482 at the 5% level and 0.606 at the 1% level. Here the results show only one statistically significant relationship, namely a negative correlation (-0.489) between the degree of uncertainty and the cultural approach to strategy development (highlighted in bold). There are no statistically significant relationships between: strategy development processes and perceptions on the rate of change; or strategy development processes and the level of complexity with which strategists believe the various strategic business units to be faced.

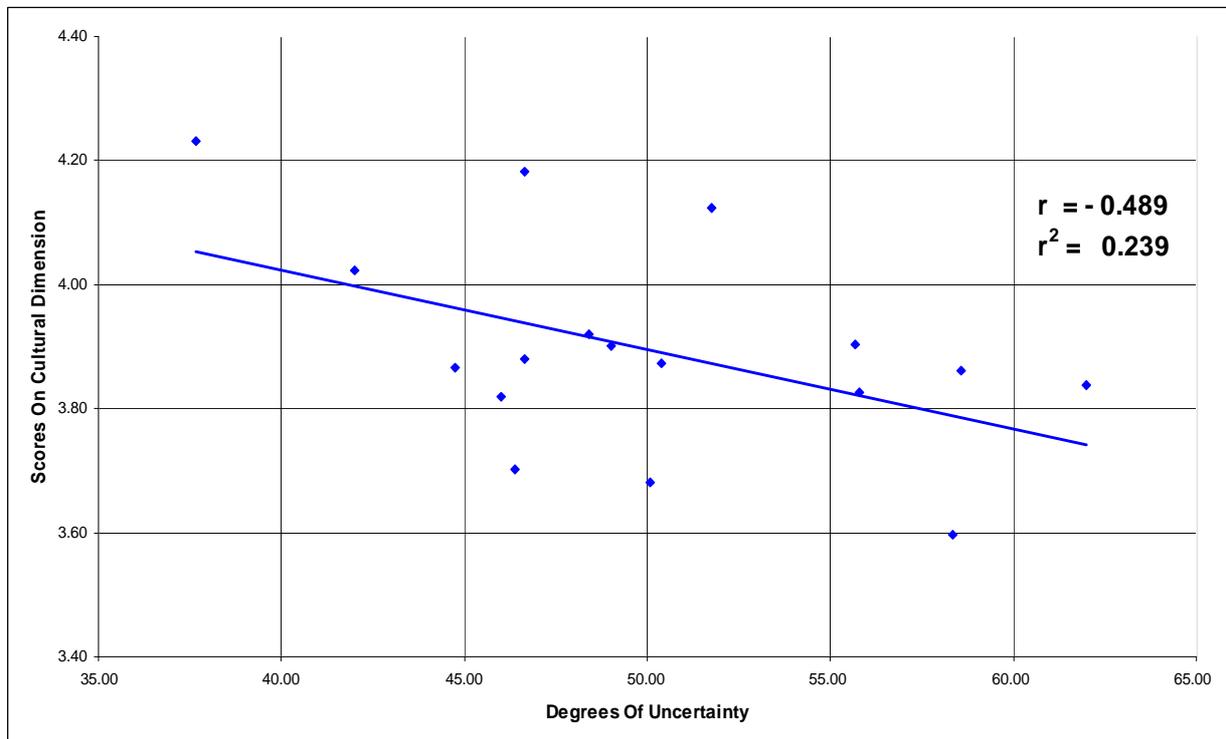
*Table 125 – Testing The Relationship: Strategy Development Process And Perceived Environmental Uncertainty*

	Degree Of Uncertainty	Rate Of Change	Level Of Complexity
<b>Incremental</b>	0.191	0.002	0.112
<b>Command</b>	0.165	0.164	0.090
<b>Cultural</b>	<b>-0.489</b>	-0.238	-0.407
<b>Planning</b>	0.023	-0.233	-0.149
<b>Political</b>	-0.421	0.165	0.106
<b>Enforced Choice</b>	-0.027	0.028	0.048

#### 6.5.5.4.1.2 Culture And The Degree Of Uncertainty

This section of the analysis investigates the relationship between the degree of uncertainty and the cultural dimension of strategy development. This finding shows a statistically significant negative correlation (-0.489) between the degree of uncertainty faced by a strategic business unit and the application of the cultural dimension in the strategy development process. This correlation is significant at the 5% level (see Figure 46 below).

Figure 46 – The Cultural Dimension And The Degree Of Uncertainty



In managerial terms, this finding shows that where the degree of uncertainty is high, then the application of culture as a process for developing strategy decreases across Barclays. The qualitative exploration in Project 2 (see Section 5.5.2.1) found that under conditions of high uncertainty the environment is typified by the increasing demands of customers, regulation and new technologies. The literature review in Project 1 (see Section 4.2.8) found the cultural approach to strategy development to be characterised by symbolism, rituals, and the application of experience rather than the manipulation of managerial tools such as value-based management (see Section 2.1.7). The findings of Project 3 show that the cultural dimension to strategy development and the perception of a high degree of uncertainty are mutually exclusive at Barclays.

#### 6.5.5.4.2 Strategy Development Processes And The Ability To Cope

##### 6.5.5.4.2.1 The Findings

The analysis of the relationship between strategy development processes and perceived environmental uncertainty now moves on to investigate the association between strategy development process and the ability to cope with the degree of uncertainty, the rate of change, and the level of complexity (see Table 126). As in the previous section, in terms of the observations of seventeen strategic business units, the significant value of the correlation coefficient is 0.482 at the 5% level, and 0.606 at the 1% level. The relationships that are significant at the 5% level are highlighted in bold, significant values at the 1% level are highlighted in bold with red text.

*Table 126 – Testing The Relationship: Strategy Development Process And The Ability To Cope*

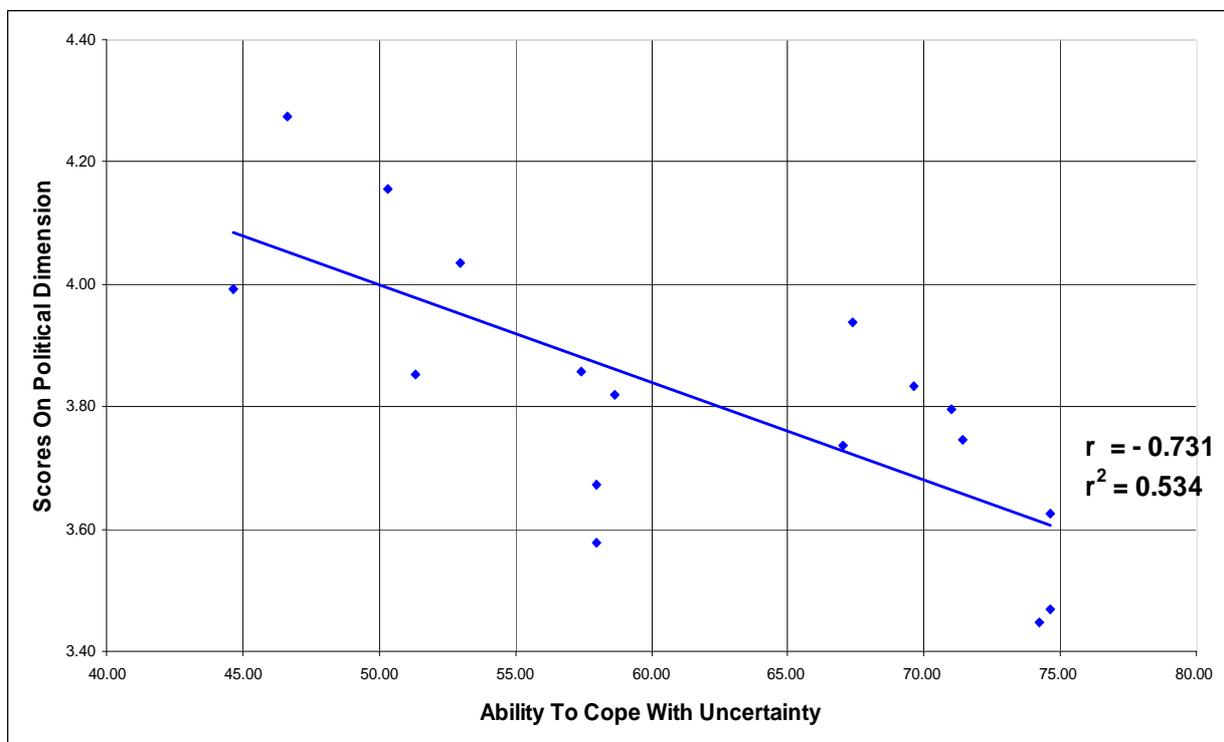
	The Ability To Cope With		
	Degree Of Uncertainty	Rate Of Change	Level Of Complexity
<b>Incremental</b>	0.390	<b>0.498</b>	0.364
<b>Command</b>	-0.433	<b>-0.459</b>	-0.392
<b>Cultural</b>	-0.006	0.008	-0.053
<b>Planning</b>	0.494	<b>0.539</b>	0.430
<b>Political</b>	<b>-0.731</b>	<b>-0.679</b>	<b>-0.679</b>
<b>Enforced Choice</b>	<b>-0.561</b>	<b>-0.594</b>	-0.477

Through this analysis, the findings show statistically significant relationships across all three aspects of the perceived ability to cope. First, there are statistically significant negative relationships between the ability to cope with the degree of uncertainty on the one hand and, on the other, the political and enforced choice dimensions. Second, there are statistically significant positive correlations between the ability to cope with change on the one hand and, on the other, the incremental dimension, and the planning dimension. There are also statistically significant negative correlations between the ability to cope with the rate of change and the command, political, and enforced choice dimensions. Finally, there is a statistically significant negative correlation between the ability to cope with the level of complexity and the political dimension.

#### 6.5.5.4.2.2 Politics And The Ability To Cope With The Degree Of Uncertainty

This element of the analysis investigates the relationship between the perception of the Group Executive Committee on the ability of the various strategic business units to cope with the degree of uncertainty and the political dimension of strategy development. This finding shows a statistically significant negative correlation (-0.731) between the ability to cope with uncertainty and the application of the political dimension in the strategy development process. This is a strong correlation, significant at the 1% level (see Figure 47 below).

Figure 47 – The Political Dimension And The Ability To Cope With The Degree Of Uncertainty

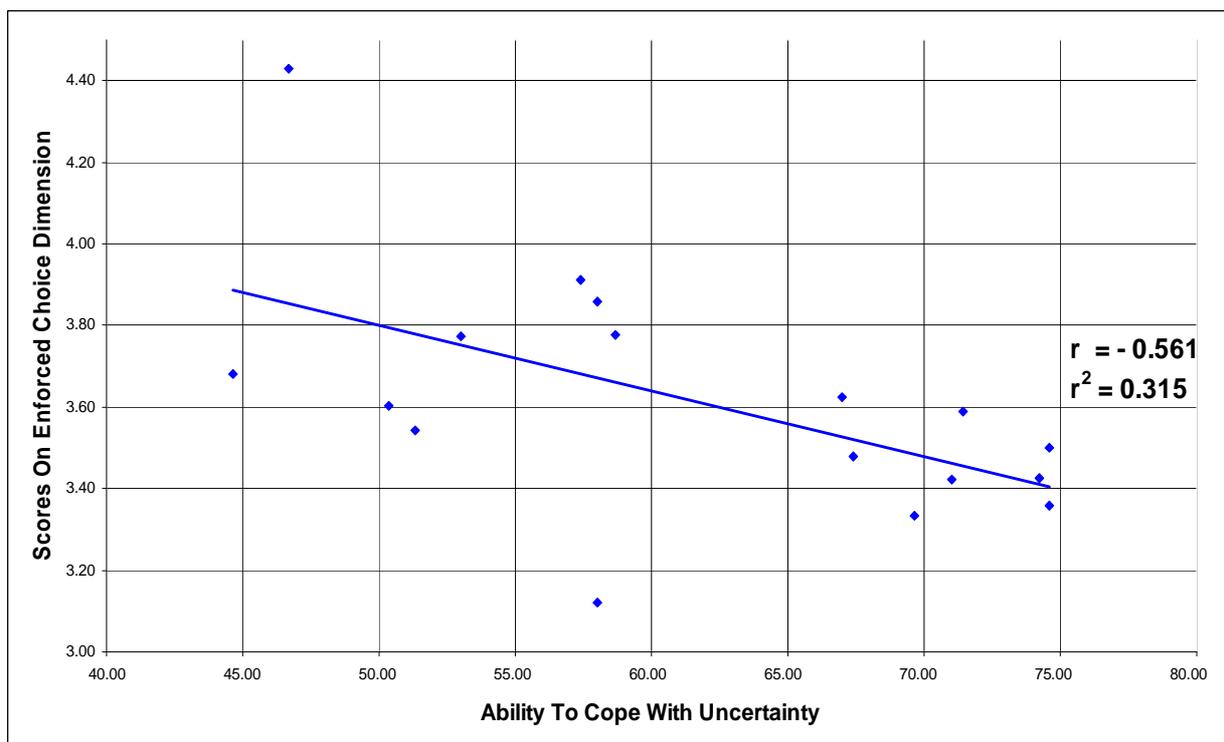


This finding shows that where business units across Barclays are deemed highly able to cope with uncertainty, they do not use the political process for developing strategy. The qualitative exploration in Project 2 (see Section 5.5.3.1) found the ability to cope with uncertainty to be characterised by: a resilient business model, a dominant market share, and the experience of managing uncertainty in the past. The literature review in Project 1 (see Section 4.2.7) found the political dimension to be characterised by: imbalances of power, partially conflicting priorities, and coalitions with competing interests where the most powerful manage to get what they want. These findings show that the political dimension to strategy development and the perception of a high ability to cope with uncertainty are mutually exclusive at Barclays.

### 6.5.5.4.2.3 Enforced Choice And The Ability To Cope With The Degree Of Uncertainty

The research now moves on to investigate the relationship between the Group Executive Committee’s perception of the ability of the various strategic business units to cope with uncertainty on the one hand and, on the other, the enforced choice dimension of strategy development. The research identifies a statistically significant negative correlation (-0.561) in this relationship. This negative correlation is significant at the 5% level (see Figure 48 below).

Figure 48 – The Enforced Choice Dimension And The Ability To Cope With The Degree Of Uncertainty

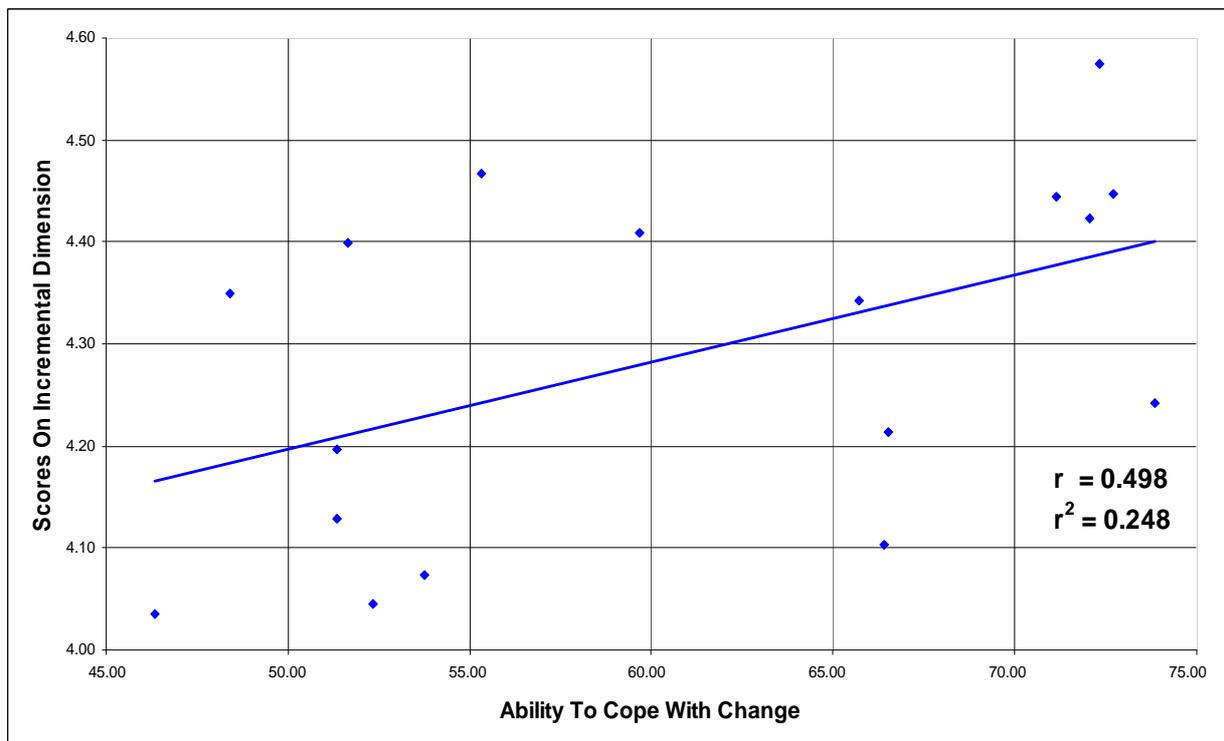


In managerial terms, this finding shows that where business units across Barclays are deemed highly able to cope with uncertainty, the enforced choice process for developing strategy diminishes. As detailed in the previous section, the qualitative exploration in Project 2 (see Section 5.5.3.1) found the ability to cope with uncertainty to be characterised by: a resilient business model, a dominant market share, and the experience of managing uncertainty in the past. The literature review in Project 1 (see Section 4.2.9) found the enforced choice dimension to be a consequence of the environment constraining the organisation and strategy being determined by forces external to the business. These findings show that when business units at Barclays are deemed highly able to cope with uncertainty, managers within the units do not perceive enforced choice as a dominant process for developing strategy.

#### 6.5.5.4.2.4 Incrementalism And The Ability To Cope With The Rate Of Change

This section of the report examines the association between the perceptions held on the Group Executive Committee regarding the ability of the various strategic business units to cope with the rate of change, and the incremental approach to strategy development. The research identifies a statistically significant positive correlation (0.498) in this relationship, significant at the 5% level (see Figure 49 below).

Figure 49 – The Incremental Dimension And The Ability To Cope With The Rate Of Change

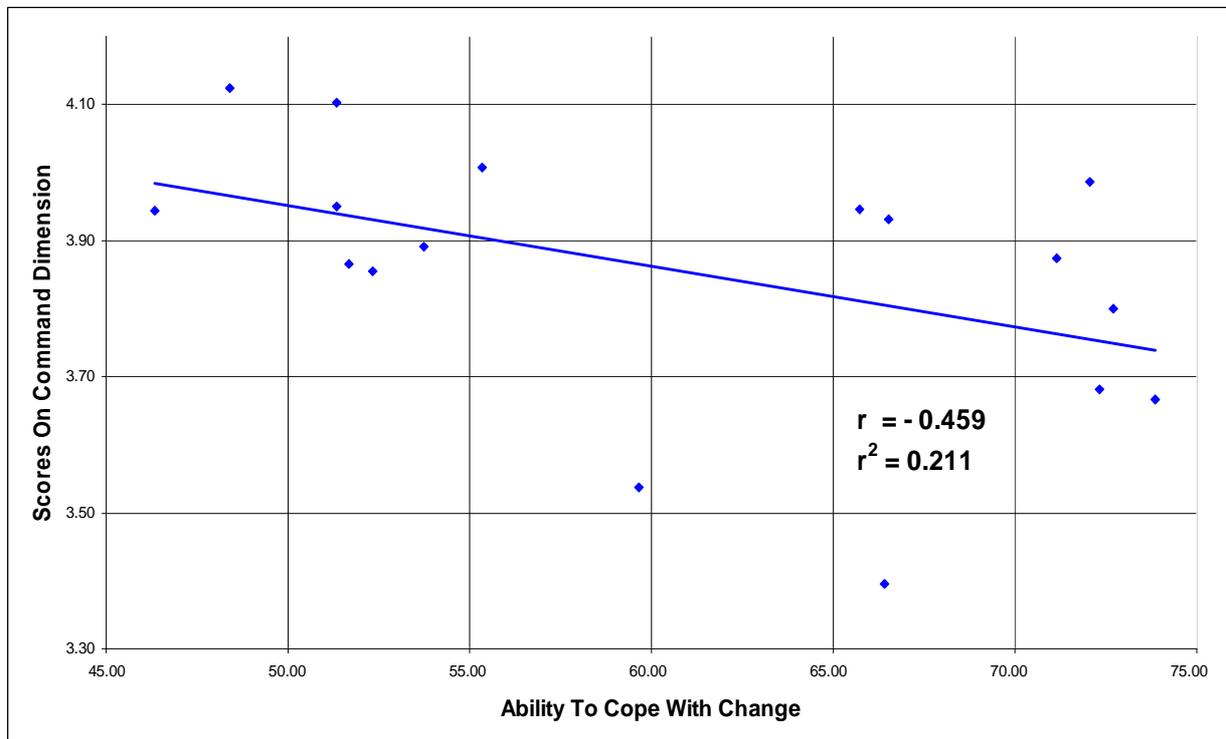


This positive correlation shows that where business units across Barclays are deemed highly able to cope with change, then there is a propensity to adopt the incremental approach to strategy development. The qualitative exploration in Project 2 (see Section 5.5.3.2) found the ability to cope with change to be characterised by: a strategic agility; a speed of response to market forces; and organisational flexibility. The literature review presented in Project 1 (see Section 4.2.6) found the incremental dimension to be a rational process, typified by: the strategy process being split into stages; an acceptance by managers of uncertainty; and the stating of goals in non-specific terms. This finding is consistent with the literature and shows that when business units at Barclays adopt the incremental approach to strategy development, they are deemed more able to cope with the rate of change, and vice versa.

#### 6.5.5.4.2.5 Command And The Ability To Cope With The Rate Of Change

Developing this section on the ability to cope with change, this part of the report examines the relationship between perceptions held on the Group Executive Committee regarding the ability of the various strategic business units to cope with change, and the command dimension to strategy development. The research identifies a statistically significant negative correlation (-0.459) in this relationship, significant at the 5% level (see Figure 50 below).

Figure 50 – The Command Dimension And The Ability To Cope With The Rate Of Change

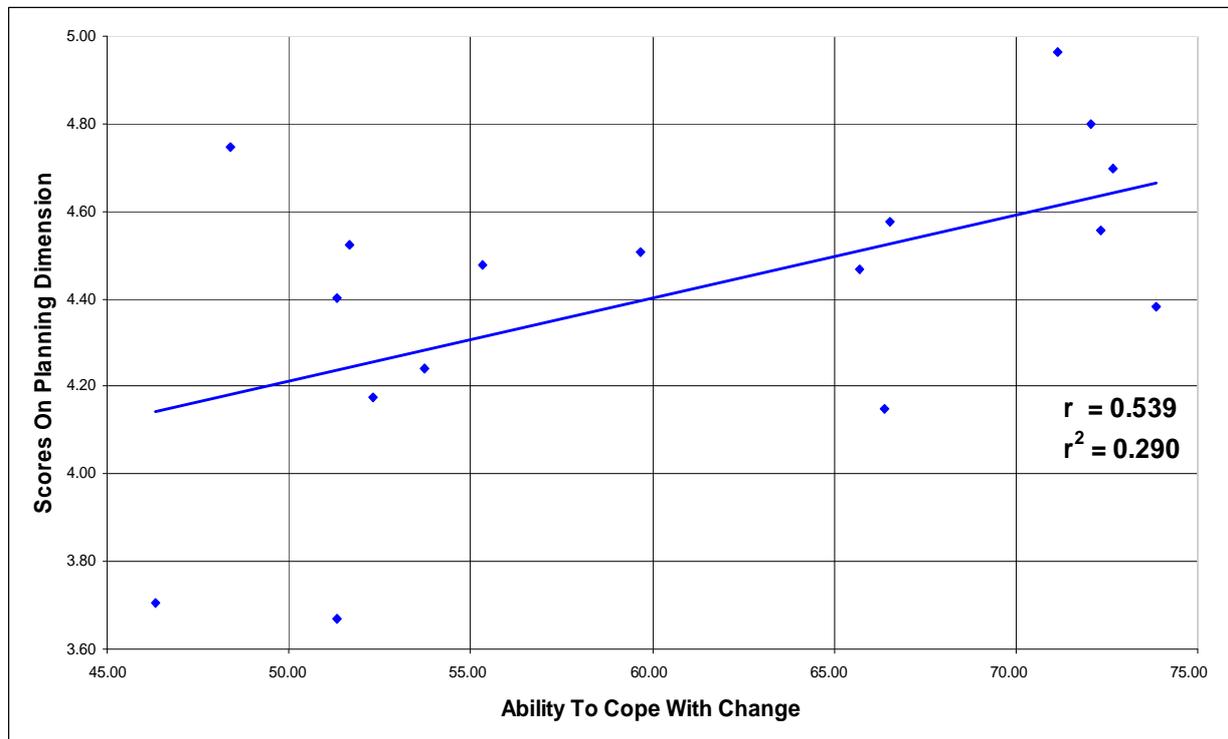


This negative correlation shows that where business units adopt the command dimension to strategy development, then they are deemed less able to cope with the rate of change, and vice versa. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.3.2) found the ability to cope with change to be typified by: a strategic agility; a speed of response to market forces; and, organisational flexibility. The literature review in Project 1 (see Section 4.2.4) found that the command dimension identifies the role of Chief Executive Officer, or Commander, assuming sole responsibility for internal operations, taking the role of a rational actor and issuing directives from the seat of power. Interestingly, this research finds this approach to strategy development to be incompatible with an increased perception on the Group Executive Committee of the ability of the business unit to cope with the change.

#### 6.5.5.4.2.6 Planning And The Ability To Cope With The Rate Of Change

The report now moves on to examine the association between the perceptions held on the Group Executive Committee regarding the ability of the various strategic business units to cope with the rate of change, and the planning approach to strategy development. The research identifies a statistically significant positive correlation (0.539) in this relationship, significant at the 5% level (see Figure 51 below).

Figure 51 – The Planning Dimension And The Ability To Cope With The Rate Of Change

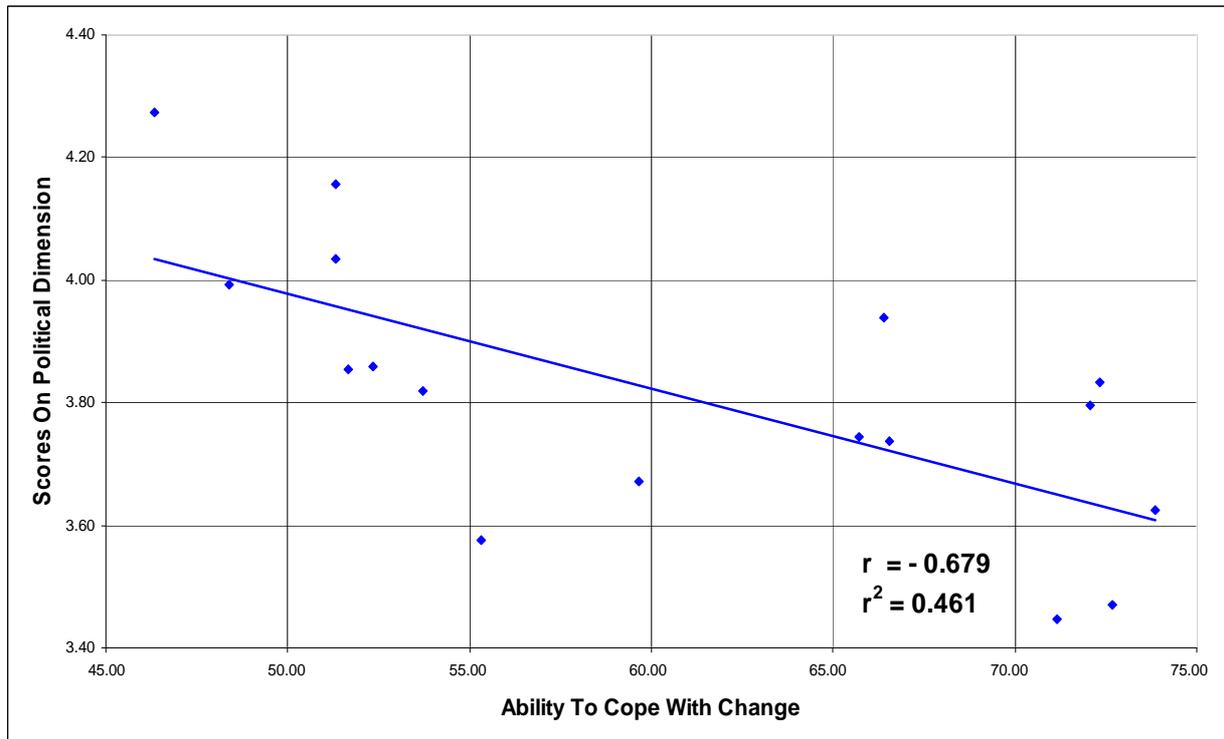


In simple managerial terms, this positive correlation shows that where business units across Barclays are effective in adopting the planning dimension to strategy development, they are deemed more able to cope with change. As in the previous sections, the qualitative exploration in Project 2 (see Section 5.5.3.2) found the ability to cope with change to be characterised by: a strategic agility; a speed of response to market forces; and organisational flexibility. The literature review presented in Project 1 (see Section 4.2.5) found the planning dimension to be a rational process, involving a logical, sequential, analytical and deliberate set of procedures. This finding is consistent with the literature review, and shows that when business units at Barclays adopt the planning approach to strategy development, they are deemed more able to cope with the rate of change.

#### 6.5.5.4.2.7 Politics And The Ability To Cope With The Rate Of Change

This section of the report now moves on to examine the association between the political dimension to strategy development and perceptions held by the Group Executive Committee of the ability of the various strategic business units to cope with the rate of change. The research identifies a statistically significant negative correlation (-0.679) in this relationship, significant at the 1% level (see Figure 52 below).

Figure 52 – The Political Dimension And The Ability To Cope With The Rate Of Change

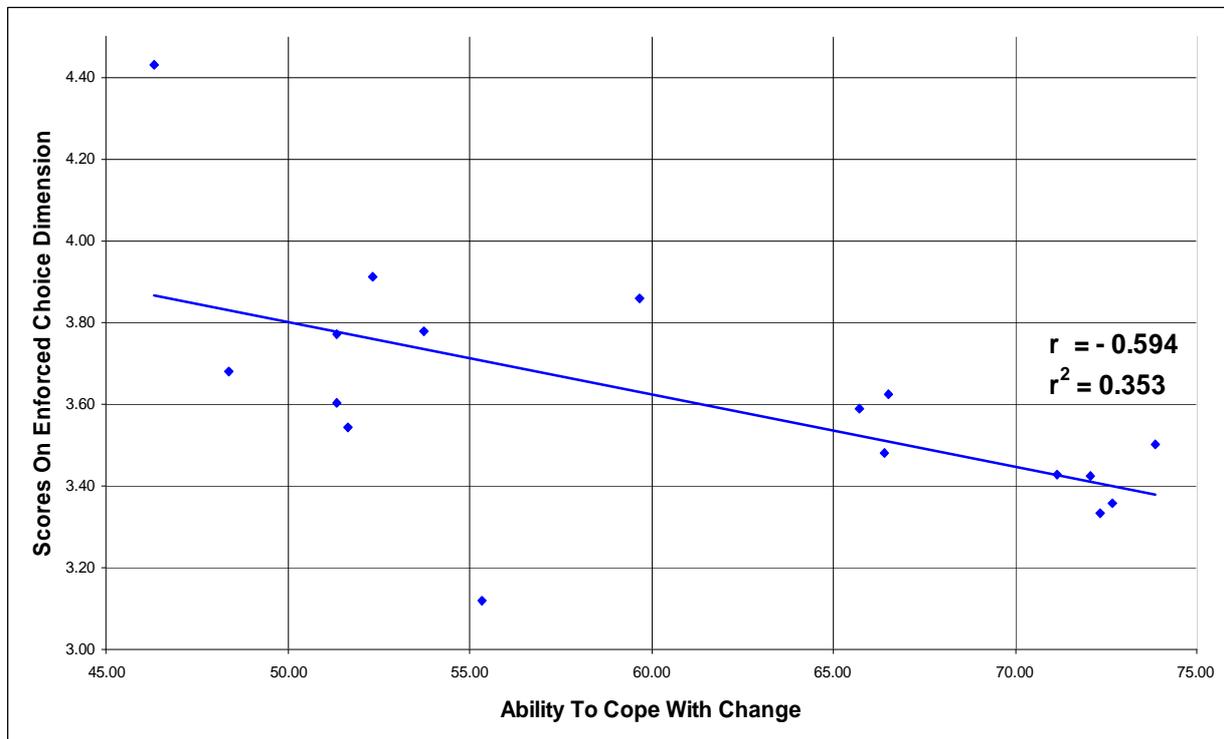


In managerial terms, this finding shows that where business units across Barclays adopt the political dimension to strategy development, they are deemed less able to cope with the rate of change. As in the previous sections, the qualitative exploration in Project 2 (see Section 5.5.3.2) found the ability to cope with change to be characterised by: a strategic agility; a speed of response to market forces; and organisational flexibility. The literature review in Project 1 (see Section 4.2.7) found the political dimension to be characterised by: imbalances of power; partially conflicting priorities; and coalitions with competing interests where the most powerful manage to get what they want. This finding is also consistent with the literature review, and shows that when business units at Barclays adopt the political approach to strategy development, they are deemed less able to cope with the rate of change.

#### 6.5.5.4.2.8 Enforced Choice And The Ability To Cope With The Rate Of Change

This final section on the ability to cope with the rate of change examines the relationship between the enforced choice dimension to strategy development, and perceptions held by the Group Executive Committee on the ability of the various strategic business units to cope with the rate of change. The research identifies a statistically significant negative correlation in this relationship (-0.594), significant at the 5% level (see Figure 53 below).

Figure 53 – The Enforced Choice Dimension And The Ability To Cope With The Rate Of Change

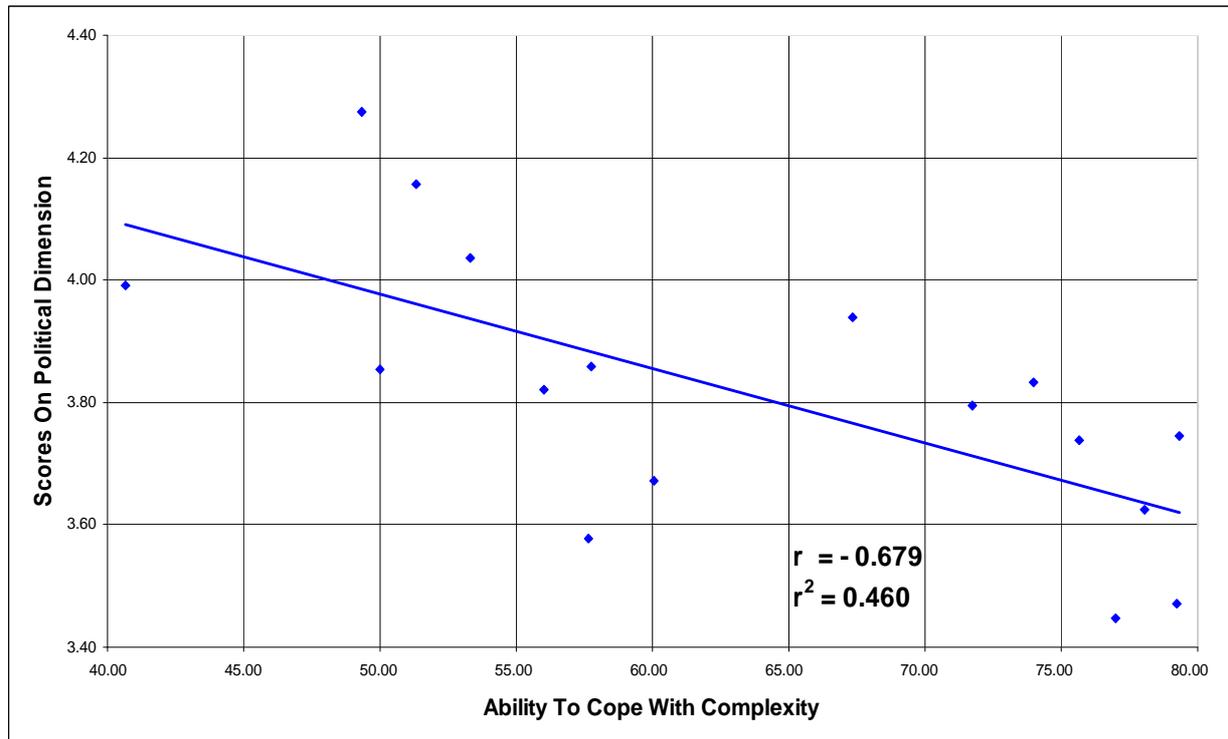


This finding shows that where business units across Barclays are deemed less able to cope with the rate of change, they are more likely to perceive that strategy is enforced on them. As in the previous sections, the qualitative exploration in Project 2 (see Section 5.5.3.2) found the ability to cope with change to be characterised by: a strategic agility; a speed of response to market forces; and organisational flexibility. The literature review in Project 1 (see Section 4.2.9) found the enforced choice dimension to be a consequence of the environment constraining the organisation and strategy being determined by forces external to the strategic business unit. As identified earlier, such forces could be the result of strategy being perceived as being enforced by the Group. This finding is therefore also consistent with the literature review.

#### 6.5.5.4.2.9 Politics And The Ability To Cope With The Level Of Complexity

This section of the report examines the relationship between the political dimension to strategy development, and perceptions held by the Group Executive Committee of the ability of the various strategic business units to cope with the level of complexity. The research identifies a statistically significant negative correlation in this relationship (-0.679), significant at the 1% level (see Figure 54 below).

Figure 54 – The Political Dimension And The Ability To Cope With The Level Of Complexity



This finding shows that where strategic business units across Barclays adopt the political dimension to strategy development, they are deemed less able to cope with the level of complexity. The qualitative exploration in Project 2 (see Section 5.5.3.3) found the ability to cope with complexity to be characterised by: a willingness to trust other strategic business units; the effective management of internal competition and conflict; and the eradication of dysfunctional internal politics. The literature review in Project 1 (see Section 4.2.7) found the political dimension to be characterised by: imbalances of power; partially conflicting priorities; and coalitions with competing interests where the most powerful manage to get what they want. Clearly, the political dimension to strategy development is diametrically opposed to key elements that contribute to an increase in the ability to cope with complexity.

### 6.5.5.4.3 Strategy Development Processes And The Importance Of Being Able To Cope

#### 6.5.5.4.3.1 The Findings

The analysis of the relationship between strategy development processes and perceived environmental uncertainty now moves on to investigate the association between strategy development process and the importance of being able to cope with: the degree of uncertainty, the rate of change, and the level of complexity (see Table 127). As in the previous section, in terms of the observation of the seventeen strategic business units, the significant value of the correlation coefficient is 0.482 at the 5% level, and 0.606 at the 1% level. The relationships that are significant at the 5% level are highlighted in bold, and significant values at the 1% level are highlighted in bold with red text. Again, it is important to be mindful of the lack of managerial consensus discovered in the assessments of perceived environmental uncertainty made by the fifteen members of the Group Executive Committee (see Section 5.7.2.1).

*Table 127 – Testing The Relationship: Strategy Development Process & The Importance Of Being Able To Cope*

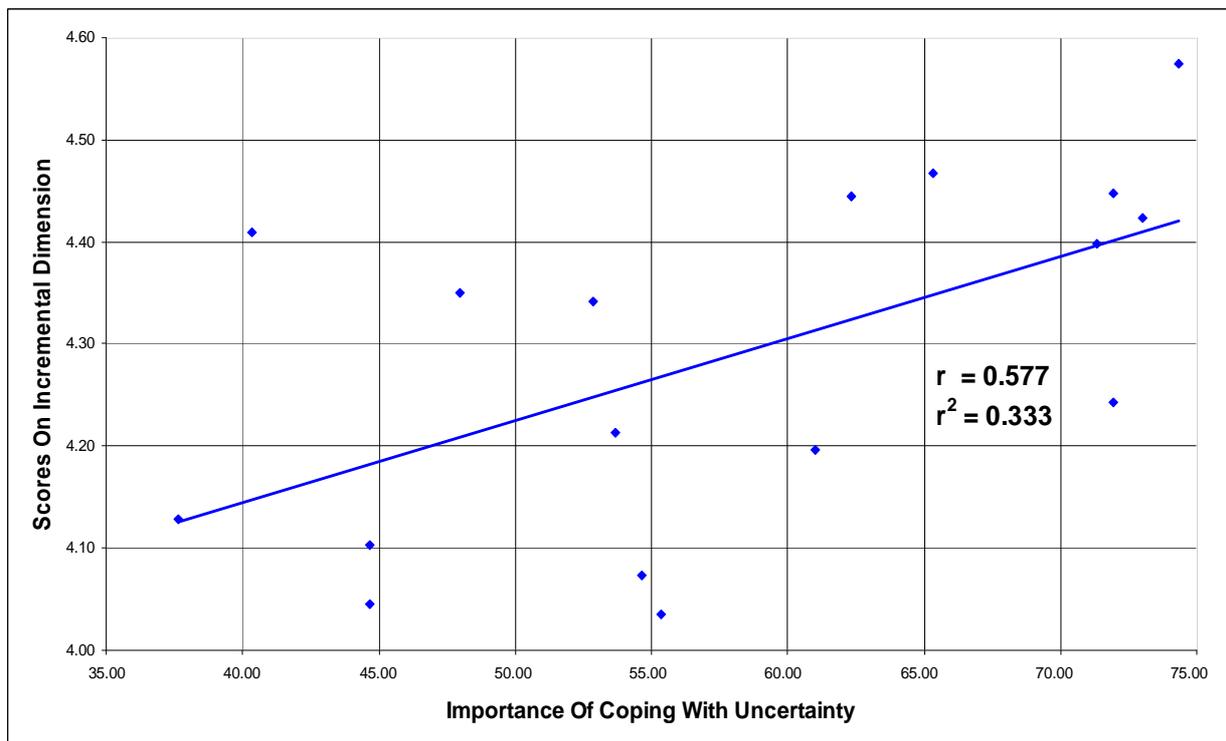
	<b>The Importance Of Being Able To Cope</b>		
	<b>Degree Of Uncertainty</b>	<b>Rate Of Change</b>	<b>Level Of Complexity</b>
<b>Incremental</b>	<b>0.577</b>	0.469	<b>0.519</b>
<b>Command</b>	0.006	0.065	-0.094
<b>Cultural</b>	<b>-0.505</b>	-0.503	<b>-0.505</b>
<b>Planning</b>	<b>0.504</b>	0.420	<b>0.507</b>
<b>Political</b>	-0.424	-0.271	<b>-0.580</b>
<b>Enforced Choice</b>	-0.475	-0.382	<b>-0.495</b>

This analysis identifies statistically significant relationships across only two of the three aspects of the perceived importance of being able to cope: there are no statistically significant relationships between strategy development processes and the perceived importance of being able to cope with change. In terms of the perceived importance of being able to cope with the degree of uncertainty, there are three correlations with strategy development processes that are statistically significant at the 5% level. The relationship with incrementalism and planning is positive, whereas the association with the cultural approach to strategy development is negative. Observation of the relationship between strategy development processes and the importance of being able to cope with the level of complexity highlights five correlations significant at the 5% level. The correlations with incrementalism and planning are again positive, but the relationship with culture, politics and enforced choice are all negative.

### 6.5.5.4.3.2 Incrementalism And The Importance Of Being Able To Cope With Uncertainty

This section of the report begins by examining the relationship between the assessments made by the Group Executive Committee, of the importance of the various business units being able to cope with the degree of uncertainty on the one hand and, on the other, the incremental approach to strategy development. The research identifies a statistically significant positive correlation (0.577) in this relationship, significant at the 5% level (see Figure 55 below).

Figure 55 – Incrementalism And The Importance Of Being Able To Cope With The Degree Of Uncertainty

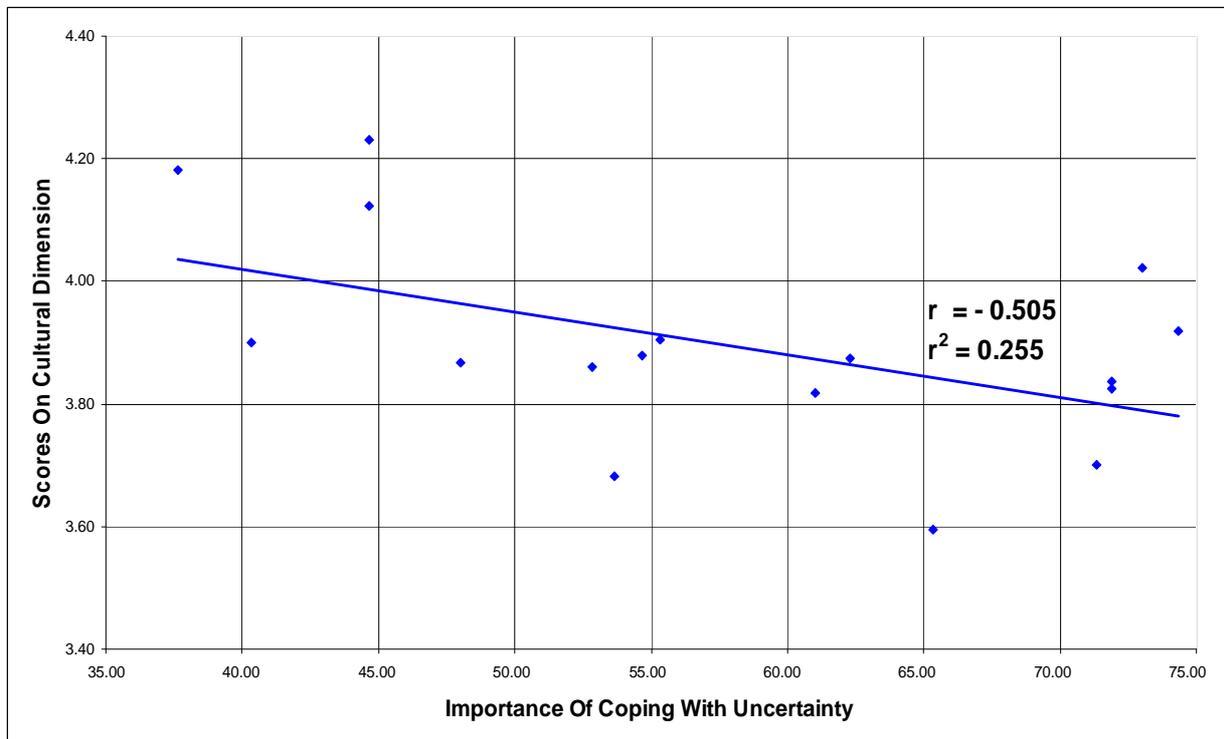


This finding shows that where it is deemed more important that a strategic business unit is able to cope with uncertainty, then these business units will have a greater propensity to adopt the incremental approach to strategy development. The qualitative exploration in Project 2 (see Section 5.5.4.1) found that the importance of being able to cope with uncertainty is typified by: a long-term pressure to increase shareholder value; regulatory change breaking down barriers to entry; the emergence of international competition; and a fall in the level of inertia and loyalty in the customer base. The literature review presented in Project 1 (see Section 4.2.6) found the incremental dimension to be a rational process, typified by: the strategy process being split into stages; an acceptance by managers of uncertainty; and the stating of goals in non-specific terms.

### 6.5.5.4.3.3 Culture And The Importance Of Being Able To Cope With Uncertainty

This part of the research examines the relationship between, on the one hand, the assessments made by the Group Executive Committee of the importance of the various strategic business units being able to cope with the degree of uncertainty and, on the other, the cultural approach to strategy development. The research identifies a statistically significant negative correlation (-0.505) in this relationship, significant at the 5% level (see Figure 56 below).

Figure 56 – Culture And The Importance Of Being Able To Cope With The Degree Of Uncertainty

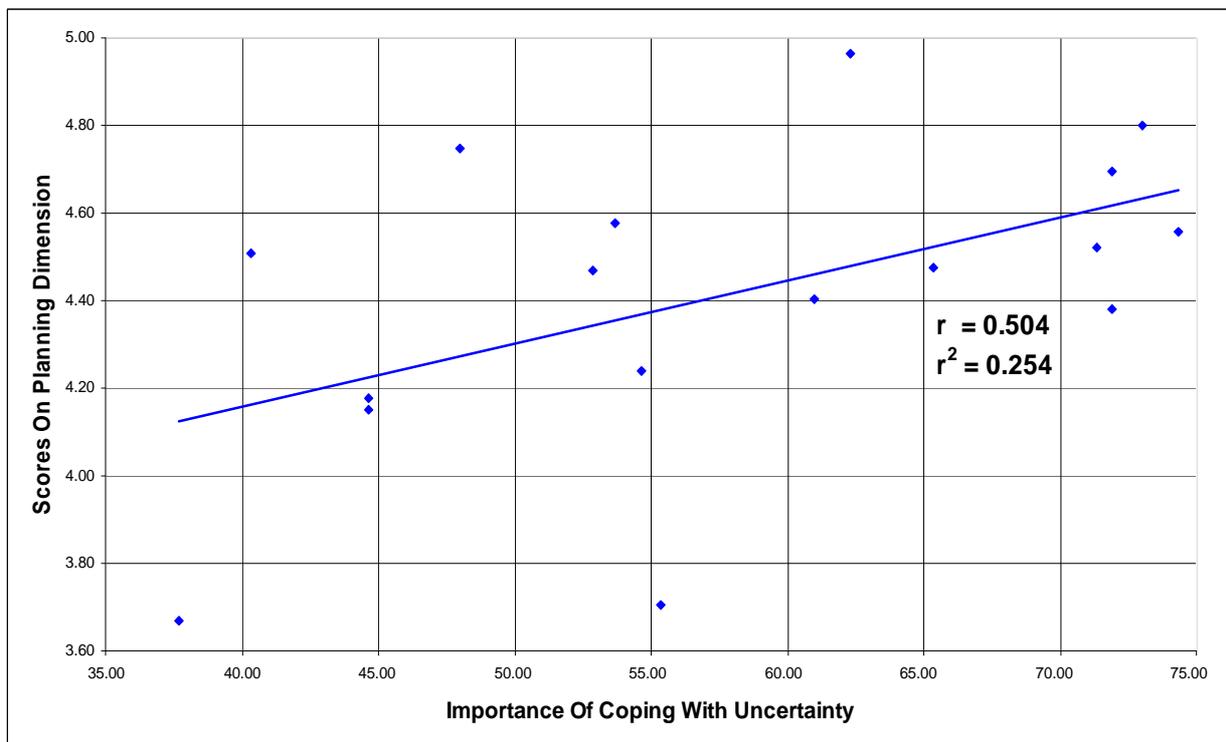


This negative correlation shows that where it is deemed more important that a business unit is able to cope with uncertainty, then these business units are less likely to adopt the cultural approach to strategy development. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.4.1) found that the importance of being able to cope with uncertainty is typified by: a long-term pressure to increase shareholder value; regulatory change breaking down barriers to entry; the emergence of international competition; and a fall in the level of inertia and loyalty in the customer base. The literature review in Project 1 (see Section 4.2.8) found the cultural approach to strategy development to be characterised by: symbolism; rituals; and the application of experience rather than the manipulation of managerial tools such as value-based management (see Section 2.1.7).

#### 6.5.5.4.3.4 Planning And The Importance Of Being Able To Cope With Uncertainty

The report now moves on to examine the relationship between the assessments made by the Group Executive Committee of the importance of the various business units being able to cope with the degree of uncertainty on the one hand and, on the other, the planning dimension approach to strategy development. The research identifies a statistically significant positive correlation (0.504) in this relationship, significant at the 5% level (see Figure 57 below).

Figure 57 – Planning And The Importance Of Being Able To Cope With The Degree Of Uncertainty

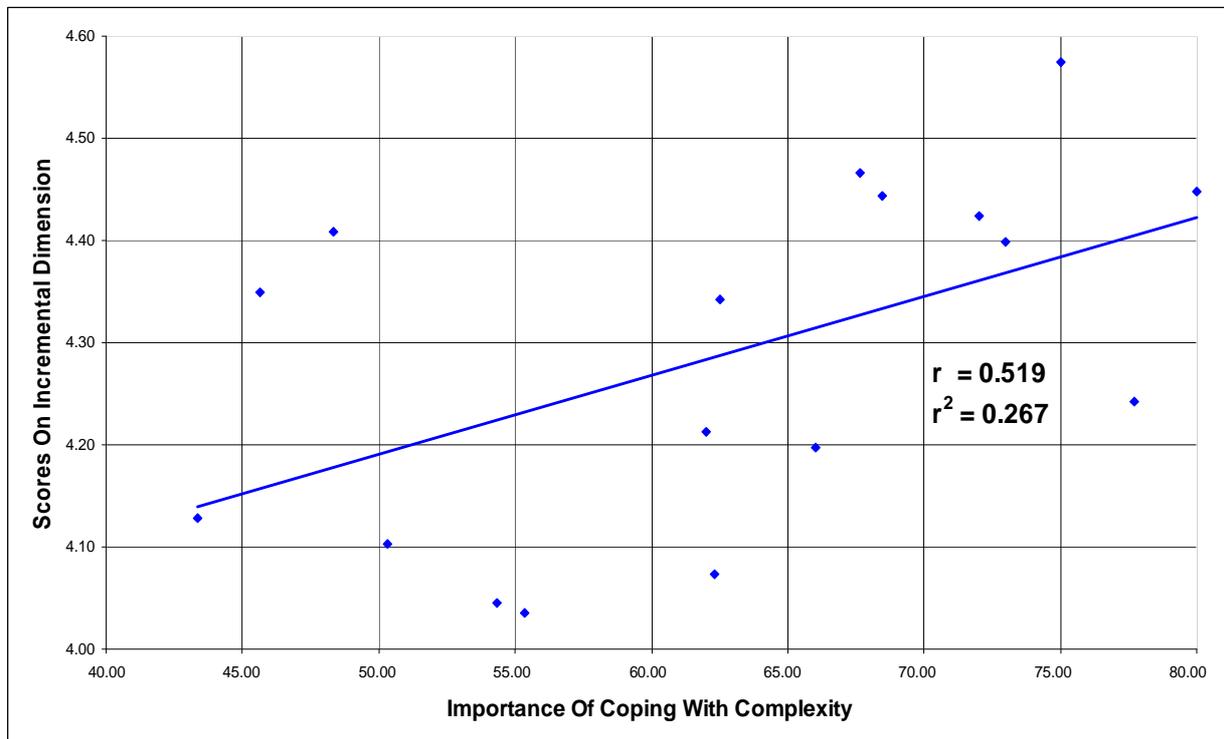


In managerial terms, this positive correlation shows that that where it is deemed more important that a business unit is able to cope with uncertainty, then these business units will be more likely to adopt the planning approach to strategy development. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.4.1) found that the importance of being able to cope with uncertainty is typified by: a long-term pressure to increase shareholder value; regulatory change breaking down barriers to entry; the emergence of international competition; and a fall in the level of inertia and loyalty in the customer base. The literature review presented in Project 1 (see Section 4.2.5) found the planning dimension to be a rational process, involving a logical, sequential, analytical and deliberate set of procedures.

#### 6.5.5.4.3.5 Incrementalism And The Importance Of Being Able To Cope With Complexity

The report now moves on to examine the relationship between the assessments made by the Group Executive Committee of the importance of the various strategic business units being able to cope with the level of complexity, and the incremental approach to strategy development. The research identifies a statistically significant positive correlation (0.519) in this relationship, significant at the 5% level (see Figure 58 below).

Figure 58 – Incrementalism And The Importance Of Being Able To Cope With The Level Of Complexity

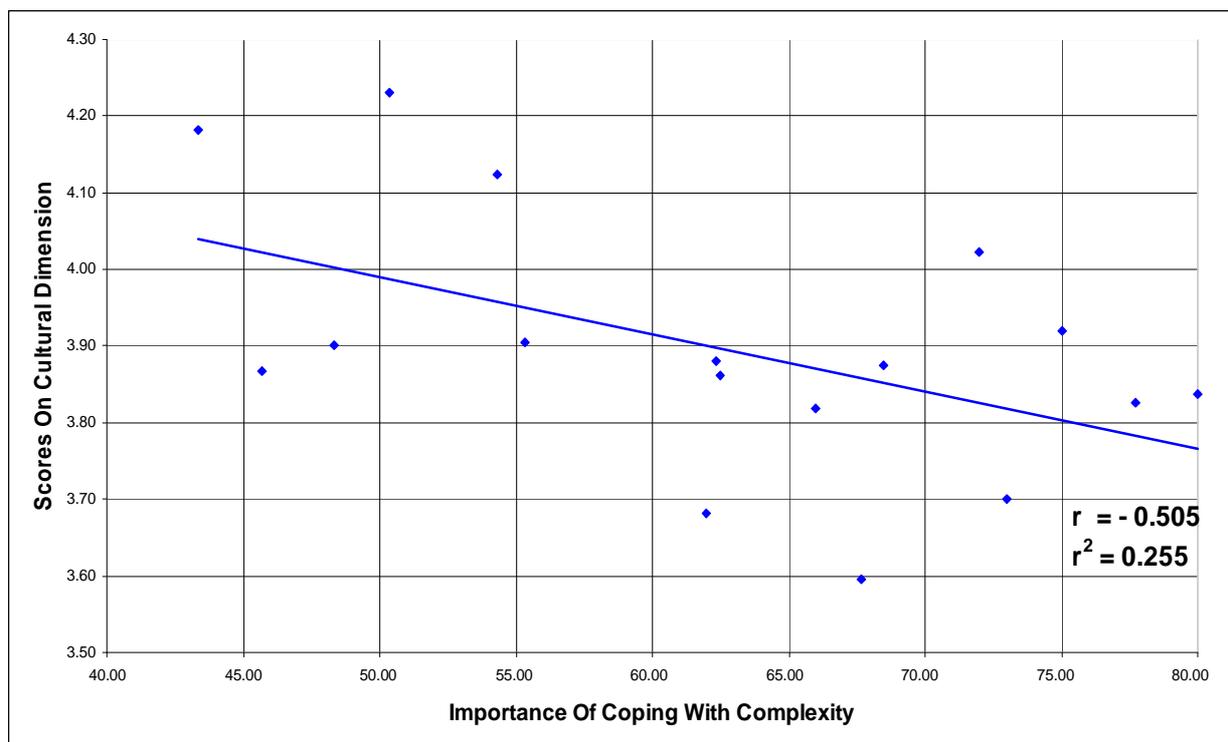


This finding shows that where it is deemed more important that a strategic business unit is able to cope with complexity, then these business units will have a greater propensity to adopt the incremental approach to strategy development. The qualitative exploration in Project 2 (see Section 5.5.4.3) found that the importance of being able to cope with complexity is typified by: the relative complexity of the business model; globalisation; emerging distribution channels, and, onerous legal and regulatory obligations. The literature review presented in Project 1 (see Section 4.2.6) found the incremental dimension to be a rational process, typified by: the strategy process being split into stages; an acceptance by managers of uncertainty; and the stating of goals in non-specific terms.

#### 6.5.5.4.3.6 Culture And The Importance Of Being Able To Cope With Complexity

The report now moves on to examine the relationship between the assessments made by the Group Executive Committee of the importance of the various strategic business units being able to cope with the level of complexity, and the cultural dimension to strategy development. The research identifies a statistically significant negative correlation (-0.505) in this relationship, significant at the 5% level (see Figure 59 below).

Figure 59 – Culture And The Importance Of Being Able To Cope With The Level Of Complexity

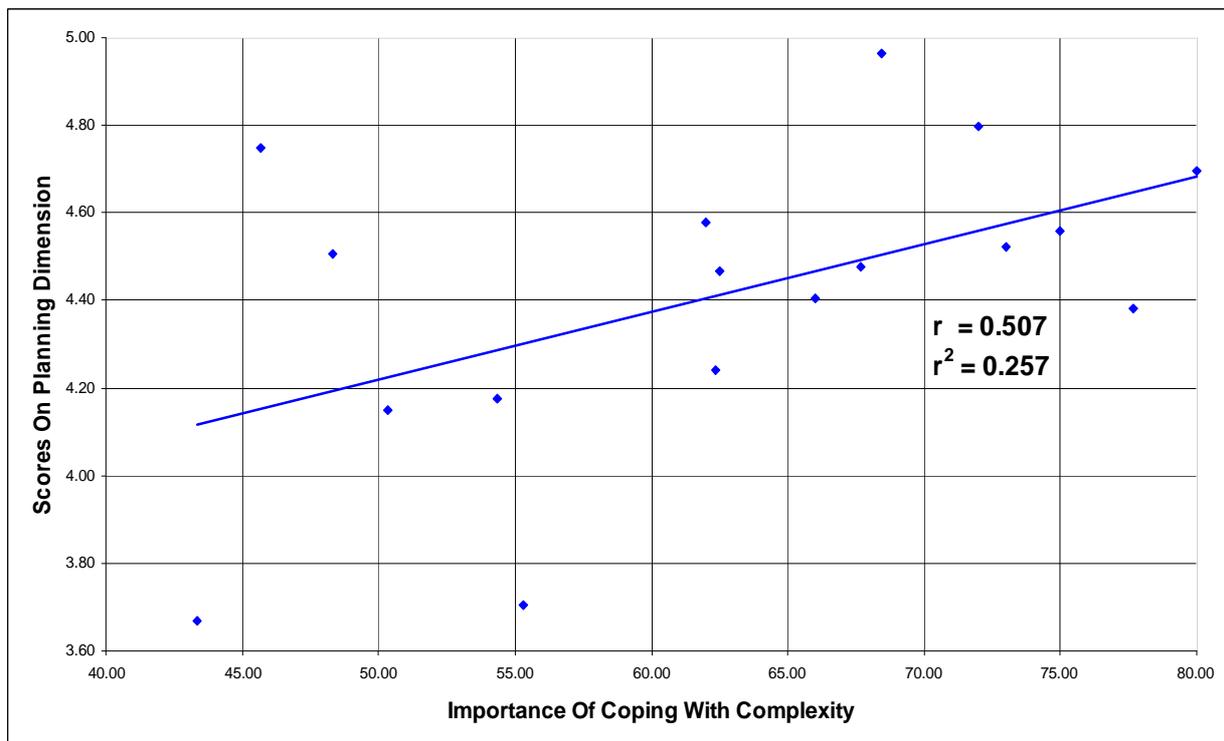


This finding shows that where it is deemed more important that a strategic business unit is able to cope with complexity, then these business units will be less likely to adopt the cultural approach to strategy development. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.4.3) found that the importance of being able to cope with complexity is typified by: the relative complexity of the business model; globalisation; emerging distribution channels, and onerous legal and regulatory obligations. The literature review in Project 1 (see Section 4.2.8) found the cultural approach to strategy development to be characterised by: symbolism; rituals; and the application of experience rather than the manipulation of managerial tools such as value-based management (see Section 2.1.7).

#### 6.5.5.4.3.7 Planning And The Importance Of Being Able To Cope With Complexity

This section of the report moves on to examine the relationship between the assessments made by the Group Executive Committee of the importance of the various strategic business units being able to cope with the level of complexity, and the planning dimension to strategy development. The research identifies a statistically significant positive correlation (0.507) in this relationship, significant at the 5% level (see Figure 60 below).

Figure 60 – Planning And The Importance Of Being Able To Cope With The Level Of Complexity

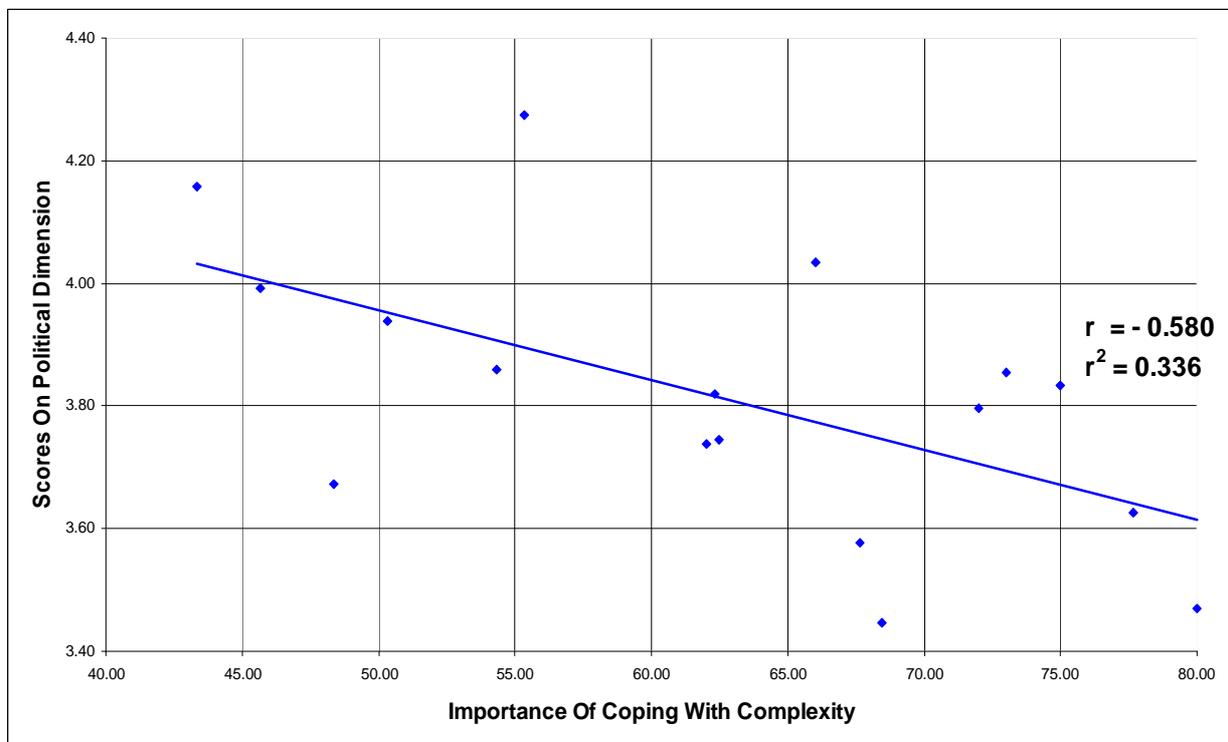


In managerial terms, this positive correlation shows that where it is deemed more important that a strategic business unit is able to cope with complexity, then these business units will be more likely to adopt the planning approach to strategy development. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.4.3) found that the importance of being able to cope with complexity is typified by: the relative complexity of the business model; globalisation; emerging distribution channels; and onerous legal and regulatory obligations. The literature review presented in Project 1 (see Section 4.2.5) found the planning dimension to be a rational process, involving a logical, sequential, analytical and deliberate set of procedures.

#### 6.5.5.4.3.8 Politics And The Importance Of Being Able To Cope With Complexity

The examination of the relationship between the assessments made by the Group Executive Committee of the importance of the various business units being able to cope with the level of complexity on the one hand, and the political dimension to the strategy development process on the other, forms the penultimate element of this section. The research identifies a statistically significant negative correlation (-0.580) in this relationship, significant at the 5% level (see Figure 61 below).

Figure 61 – Politics And The Importance Of Being Able To Cope With The Level Of Complexity

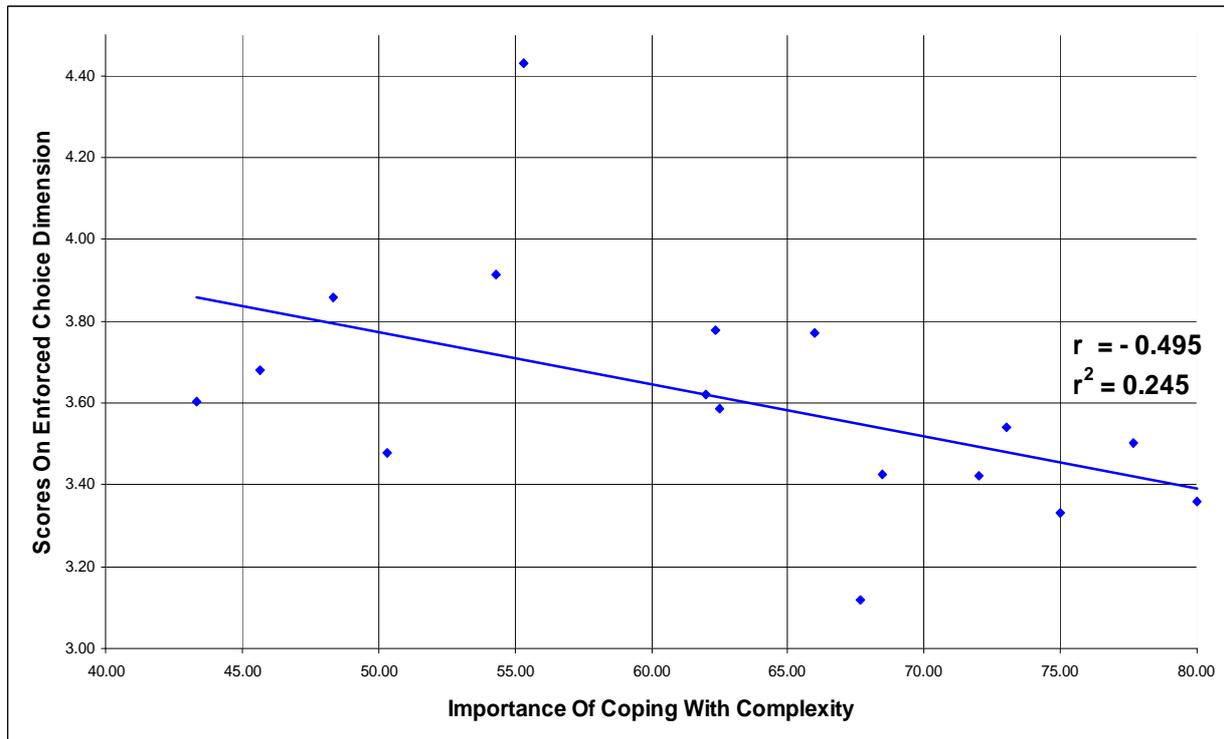


This finding shows that where it is deemed more important that a strategic business unit is able to cope with complexity, then these business units will be less likely to adopt the political approach to strategy development. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.4.3) found that the importance of being able to cope with complexity is typified by: the relative complexity of the business model; globalisation; emerging distribution channels; and onerous legal and regulatory obligations. The literature review in Project 1 (see Section 4.2.7) found the political dimension to be characterised by: imbalances of power; partially conflicting priorities; and coalitions with competing interests where the most powerful manage to get what they want.

#### 6.5.5.4.3.9 Enforced Choice And The Importance Of Being Able To Cope With Complexity

The final part of this section examines the relationship between the assessments made by the Group Executive Committee of the importance of the various strategic business units being able to cope with the level of complexity, and the enforced choice dimension to strategy development. The research identifies a statistically significant negative correlation (-0.495) in this relationship, significant at the 5% level (see Figure 62 below).

Figure 62 – Enforced Choice And The Importance Of Being Able To Cope With The Level Of Complexity



This negative correlation shows that where it is deemed more important that a strategic business unit is able to cope with complexity, then these business units will be less likely to perceive that strategy is enforced on them. As in the previous section, the qualitative exploration in Project 2 (see Section 5.5.4.3) found that the importance of being able to cope with complexity is typified by: the relative complexity of the business model; globalisation; emerging distribution channels; and onerous legal and regulatory obligations. The literature review in Project 1 (see Section 4.2.9) found the enforced choice dimension to be a consequence of the environment constraining the organisation and strategy development being determined by forces external to the business.

## 6.5.6 Considering The Managerial Implications

### 6.5.6.1 Introduction

This investigation now moves on to consider the managerial implications arising from the examination of strategy development processes and perceived environmental uncertainty. The managerial implications are considered within the context of value-based management (see Section 2.1.7). In order to achieve its objective, this element of the report is broken down into two sections: first, an investigation of the relationship between organisational performance (value creation) and strategy development processes; and second, an investigation of the relationship between organisational performance and perceived environmental uncertainty.

Beginning with the relationship between *value creation and strategy development processes*, this section is also broken down, into four sections: first, a summary of value creation across the seven clusters during 2003; second, a review of the different strategy development processes across the seven clusters; third, the testing of the propositions built by Bailey et al. (2000), which propose a positive correlation between organisational performance and the planning and incremental dimensions of strategy development; and finally, the testing of the propositions built by Bailey et al. (2000), which propose a negative correlation between organisational performance and the political and enforced choice dimensions of strategy development.

The second element of this section investigates the relationship between *value creation and perceived environmental uncertainty* – this section is broken down into three propositions. The propositions are built from the review of literature on perceived environmental uncertainty presented earlier in this report (see Section 4.3): first, that there should be a negative correlation between organisational performance (or value created) and the degree of perceived environmental uncertainty the organisation is deemed to face; second, that there should be a positive correlation between organisational performance and the ability of the organisation to cope with perceived environmental uncertainty; and finally, that there should be a positive correlation between the performance of an organisation and the importance of its being able to cope with perceived environmental uncertainty.

## **6.5.6.2 Organisational Performance And Strategy Development Processes**

### **6.5.6.2.1 Organisational Performance: Total Shareholder Return**

As identified in Section 2.1.5, the primary focus of the Barclays Group is to deliver superior value to its shareholders (Barclays Bank PLC, 2004). In order to achieve this, the Group uses the principles of value-based management to develop strategy, allocate resources and manage performance. The approach is explained in the Barclays Group Accounts 2003:

“Through the application of value-based management principles, Barclays has developed a disciplined fact-based approach to strategy development and business planning, which aims to build sustainable competitive advantage. Individual businesses generate alternative business strategies to facilitate the selection of the most appropriate value-maximising option. Our aim is to achieve profitable growth in all our businesses.”

At the end of 1999, Barclays set a series of four-year performance goals for the period 2000 to 2003 inclusive. The primary goal was to achieve top quartile total shareholder return relative to a peer group<sup>60</sup> of financial services companies. Total shareholder return is defined as the value created for shareholders through share price appreciation, plus re-invested dividend payments (Barclays Bank PLC, 2004). For the period 2000–2003, Barclays was positioned third within its peer group, thereby achieving its primary goal of top quartile performance – when measured by total shareholder return.

The supporting goal was to double the absolute value of a hypothetical £100 invested in Barclays over this four-year period. At the time of setting the performance goal (1999), analysis of financial services companies who had achieved top quartile performance (measured by total shareholder return) indicated that this level of value creation would be required for a financial services company to be in the top quartile of its peer group.

<sup>60</sup> Abbey, ABN Amro, BBVA, BNP Paribas, Citigroup, Deutsche Bank, Halifax Bank of Scotland, HSBC, Lloyds TSB, Royal Bank of Scotland and Standard Chartered

### 6.5.6.2.2 Value Creation: Economic Profit

As identified in Section 2.1.6, another supporting goal of the Barclays Group during the four-year period (2000–2003) was to double economic profit. Economic profit is defined as:

“Profit after tax and minority interests plus certain gains (and losses) reported within the statement of total recognised gains and losses where they arise from the Group’s business activities and which are in respect of transactions with third parties, less a charge for the cost of average shareholders’ funds (which includes purchased goodwill).” (Barclays Bank PLC, 2004)

When computing economic profit, the cost of shareholders’ funds is calculated using the capital asset pricing model for the Group. The cost of equity comprises three key components: the equity risk premium, the market beta, and the risk-free rate of capital.

It is important to note that the success criterion across the Barclays Group is purely the measured growth of economic profits across the portfolio – against the four-year goal set out in the previous section. No consideration or weighting is given to additional competitive factors (or volatility), for example relative market growth across the portfolio or prevailing economic conditions. It is also not possible to monitor performance of the various clusters over time as the structure of the clusters changed significantly during the period of the research (1999–2005). The performance of the seven clusters during 2003 is set out in Table 128 below:

*Table 128 – Value Creation: Economic Profit Contribution Across The Various Clusters In 2003*

	<b>2003 (£m)</b>	<b>% Contribution</b>	<b>2002 (£m)</b>	<b>% Variance</b>
Barclaycard	319	15.69%	267	19.48%
Barclays Africa	36	1.77%	22	63.64%
Barclays Capital	320	15.74%	178	79.78%
Barclays Private Clients	163	8.02%	328	-49.70%
UK Retail Bank	460	22.63%	395	16.46%
Business Bank	623	30.64%	574	8.54%
Barclays Global Investors	112	5.51%	56	100.00%
<b>TOTAL</b>	<b>2,033</b>	<b>100.00%</b>	<b>1,820</b>	<b>11.70%</b>

### 6.5.6.2.3 Organisational Performance: Operating Profits Before Tax For 2003

Using a more traditional measure of organisational performance (operating profits before tax), the results for 2003 also display strong performance across the Group, standing at a record level of £3,845m (2002: £3,205m) an increase of 19.97% (Barclays Bank PLC, 2004). The only cluster that failed to produce annual growth on this measure was Barclays Private Clients (-10.87%). The performance of the seven clusters during 2003 is set out in Table 129 below:

*Table 129 – Organisational Performance: Operating Profits Before Tax (Cluster Results 2003)*

	2003 (£m)	% Contribution	2002 (£m)	% Variance
Barclaycard	722	16.36%	615	17.40%
Barclays Africa	113	2.56%	89	26.97%
Barclays Capital	782	17.72%	580	34.83%
Barclays Private Clients	328	7.43%	368	-10.87%
UK Retail Bank	967	21.92%	871	11.02%
Business Bank	1,308	29.66%	1,227	6.60%
Barclays Global Investors	192	4.35%	111	72.97%
<b>TOTAL</b>	<b>4,412</b>	<b>100.00%</b>	<b>3,861</b>	<b>14.27%</b>

\*Source – Barclays Bank PLC, Audited Accounts For 2003, Published February 2004

### 6.5.6.2.4 Strategy Development Processes

Through the findings of Project 3 (cluster comparisons to the centre of the Likert scale), it is also possible to present the adopted strategy development processes across the seven clusters in the Barclays Group. Results significantly different from 4.000 at the 5% level are highlighted in bold, with those results significant at the 1% level highlighted in bold and red text. The detailed results across the various clusters are set out in Table 130 below:

*Table 130 – Strategy Development Processes: Cluster Comparison To The Centre Of The Likert Scale*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Barclaycard	<b>0.434</b>	<b>-0.314</b>	-0.077	<b>0.439</b>	<b>-0.199</b>	<b>-0.680</b>
Barclays Africa	<b>0.409</b>	<b>-0.463</b>	-0.099	<b>0.507</b>	-0.328	-0.142
Barclays Capital	<b>0.368</b>	-0.179	-0.151	<b>0.625</b>	<b>-0.427</b>	<b>-0.531</b>
Private Clients	0.096	-0.044	-0.008	0.016	0.034	-0.113
UK Retail Bank	<b>0.373</b>	0.003	<b>-0.211</b>	<b>0.641</b>	-0.073	<b>-0.385</b>
Business Bank	<b>0.423</b>	-0.013	0.023	<b>0.799</b>	-0.205	<b>-0.578</b>
BGI	0.213	-0.069	<b>-0.318</b>	<b>0.577</b>	-0.263	<b>-0.378</b>
<b>Group</b>	<b>0.300</b>	<b>-0.139</b>	<b>-0.092</b>	<b>0.408</b>	<b>-0.160</b>	<b>-0.394</b>

Through this analysis it is possible to present the findings of Project 3 so as to compare the cluster results to the overall Group results. Once again, results significant at the 5% level are highlighted in bold, and results significant at the 1% level are highlighted in bold and red text. The critical value at the 5% level is again 1.960 and the critical value at the 1% level is 2.580. The detailed results are set out in Table 131 below:

*Table 131 – Strategy Development Processes: Cluster Comparison To The Group Results*

	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
Barclaycard	<b>0.434</b>	<b>-0.314</b>	-0.077	0.439	-0.199	<b>-0.680</b>
Barclays Africa	0.409	-0.463	-0.099	0.507	-0.328	-0.142
Barclays Capital	0.368	-0.179	-0.151	<b>0.625</b>	<b>-0.427</b>	-0.531
Private Clients	<b>0.096</b>	-0.044	-0.008	<b>0.016</b>	<b>0.034</b>	<b>-0.113</b>
UK Retail Bank	0.373	0.003	-0.211	<b>0.641</b>	-0.073	-0.385
Business Bank	0.423	-0.013	0.023	<b>0.799</b>	-0.205	-0.578
BGI	0.213	-0.069	-0.318	0.577	-0.263	-0.378

The findings of Project 3 can be presented so as to compare the results from the individual strategic business units to the overall Group results. Once again, results significant at the 5% level are highlighted in bold, and results significant at the 1% level are highlighted in bold and red text. The detailed results are set out in Table 132 below:

*Table 132 – Strategy Development Processes: Comparing Strategic Business Units To The Group Results*

<b>Area Of Group</b>	<b>Incremental</b>	<b>Command</b>	<b>Cultural</b>	<b>Planning</b>	<b>Political</b>	<b>Enforced Choice</b>
Barclaycard UK	<b>0.574</b>	-0.318	-0.080	0.558	-0.167	<b>-0.668</b>
B'card Int'nal	0.467	0.008	<b>-0.404</b>	0.476	-0.423	<b>-0.881</b>
B'card Corporate	0.103	<b>-0.604</b>	<b>0.231</b>	0.149	-0.062	-0.521
Barclays Africa	0.409	-0.463	-0.099	0.507	-0.328	-0.142
Collateralised Fin.	0.444	-0.127	-0.126	<b>0.964</b>	<b>-0.553</b>	-0.574
Global Financing	0.242	-0.334	-0.175	0.382	-0.375	-0.498
Global Markets	0.447	-0.200	-0.162	0.697	<b>-0.530</b>	-0.641
Private Equity	0.342	-0.055	-0.139	0.468	-0.255	-0.413
Europe	0.128	0.104	<b>0.181</b>	<b>-0.331</b>	<b>0.157</b>	-0.396
International Bank	0.074	-0.109	-0.121	0.240	-0.180	-0.224
Investment Mgmt	<b>0.035</b>	-0.055	-0.095	<b>-0.294</b>	<b>0.274</b>	<b>0.429</b>
Private Bank	<b>0.046</b>	-0.146	0.123	0.176	-0.142	<b>-0.087</b>
Premier Bank	0.197	-0.051	-0.181	0.403	0.035	-0.228
PFS	0.399	-0.134	-0.299	0.522	-0.147	-0.458
Woolwich	0.350	0.124	-0.133	<b>0.747</b>	-0.008	-0.320
Business Bank	0.423	-0.013	0.023	<b>0.799</b>	-0.205	-0.578
BGI	0.213	-0.069	-0.318	0.577	-0.263	-0.378

### 6.5.6.2.5 Value Creation And The Incremental Dimension

Citing the work on logical incrementalism (see Section 4.2.6) proposed by Quinn (1980), Bailey et al. (2000) postulated that measures of organisational performance could be related positively to high scores on the incremental dimension of the strategy development process. Logical incrementalism is described as a rational process, typified by various characteristics, but primarily: the strategy process being split into stages; an acceptance by managers of uncertainty and therefore a reduction in attempts to predict the future; and the stating of goals in non-specific terms. For this study, organisational performance is the creation of long-term shareholder value – measured in economic profit contribution (see Section 6.5.6.2.2).

The results at Barclays provide evidence of support for the proposition developed by Bailey et al. (2000), because the clusters that are strong on the incremental dimension (Barclaycard, Barclays Africa, Barclays Capital, the UK Retail Bank and Business Bank); all demonstrated excellent organisational performance in 2003. The lowest performing cluster (Barclays Private Clients) is significantly lower than the Group on the incremental dimension (see Table 133 below):

*Table 133 – Value Creation And The Incremental Dimension*

	Variation From		Value Contribution (Economic Profit)		
	Centre	Group	2003 (£m)	2002 (£m)	% Increase
Barclaycard	<b>0.434</b>	<b>0.135</b>	319	267	19.48%
Barclays Africa	<b>0.409</b>	0.110	36	22	63.64%
Barclays Capital	<b>0.368</b>	0.069	320	178	79.78%
Private Clients	0.096	<b>-0.204</b>	163	328	-49.70%
UK Retail Bank	<b>0.373</b>	0.073	460	395	16.46%
Business Bank	<b>0.423</b>	0.124	623	574	8.54%
BGI	0.213	-0.086	112	56	100.00%

Evidence to support the proposition that there is a positive correlation between high scores on the incremental dimension and superior organisational performance is not totally compelling, as Barclaycard achieved the highest score on the incremental dimension and growth of 19.48% against an overall Group performance of 14.79%, but were outperformed by Barclays Africa, Barclays Capital and Barclays Global Investors. Interestingly, the highest growth area in Barclays during 2003 (Barclays Global Investors) did not provide any significant results on the incremental dimension.

### 6.5.6.2.6 Value Creation And The Planning Dimension

Through their investigation Bailey et al. (2000) also proposed that measures of organisational performance could be positively related to high scores on the planning dimension (Rhyne, 1986; Pearce, Robbins, and Robinson, 1987). As a process for developing strategy, planning is typified as a rational model, involving a logical, sequential, analytical and deliberate set of procedures (see Section 4.2.5). As in the previous section, organisational performance is the creation of value, measured in the contribution of economic profit.

Once again, the results at Barclays provide evidence to support the proposition developed by Bailey et al. (2000), because the clusters that outperformed the Group as a whole in 2003 (Barclaycard, Barclays Africa, Barclays Capital, the UK Retail Bank, and Barclays Global Investors) all produced significant evidence of the application of the planning approach to strategy development. Interestingly, the Business Bank, which is significantly more reliant on planning than the rest of the Group, underperformed in relation to its peers with growth of only 8.54%. However, as the Business Bank is the largest producer of economic profit (£623m), it started from a very high baseline. The lowest performing cluster in the Group (Barclays Private Clients) was again significantly weaker in the application of the planning dimension in the strategy development process. The results are presented in detail in Table 134 below:

*Table 134 – Value Creation And The Planning Dimension*

	Variation From		Value Contribution (Economic Profit)		
	Centre	Group	2003 (£m)	2002 (£m)	% Increase
Barclaycard	<b>0.439</b>	0.031	319	267	19.48%
Barclays Africa	<b>0.507</b>	0.100	36	22	63.64%
Barclays Capital	<b>0.625</b>	<b>0.217</b>	320	178	79.78%
Private Clients	0.016	<b>-0.392</b>	163	328	-49.70%
UK Retail Bank	<b>0.641</b>	<b>0.234</b>	460	395	16.46%
Business Bank	<b>0.799</b>	<b>0.391</b>	623	574	8.54%
BGI	<b>0.577</b>	0.169	112	56	100.00%

The support for this proposition is stronger than in the previous section as there is clear evidence of a positive correlation between organisational performance and high scores on the planning dimension.

### 6.5.6.2.7 Value Creation And The Political Dimension

Developing their research further, Bailey et al. (2000) proposed that measures of organisational performance could be negatively correlated to high scores on the political dimension. Citing Hrebiniak (1982), Bailey et al. (2000) proposed that a level of consensus is necessary for high performance. Making reference to Johnson (1988), they proposed that political activity can increase in difficult times. Here the political dimension to strategy development is characterised by: imbalances of power; partially conflicting priorities; and coalitions with competing interests where the most powerful manage to get what they want (see Section 4.2.7). Organisational performance is again defined by the creation of value or economic profit.

Once again, the results at Barclays provide evidence to support the proposition developed by Bailey et al. (2000), because the cluster that is the strongest on the political dimension (Barclays Private Clients) was the lowest performing cluster during 2003. By the same token, significantly low scores were evident on the political dimension from Barclaycard and Barclays Capital, which were two of the highest performing clusters in the Barclays Group during 2003. The results are presented in detail in Table 135 below:

*Table 135 – Value Creation And The Political Dimension*

	Variation From		Value Contribution (Economic Profit)		
	Centre	Group	2003 (£m)	2002 (£m)	% Increase
Barclaycard	<b>-0.199</b>	-0.039	319	267	19.48%
Barclays Africa	-0.328	-0.167	36	22	63.64%
Barclays Capital	<b>-0.427</b>	<b>-0.267</b>	320	178	79.78%
Private Clients	0.034	<b>0.195</b>	163	328	-49.70%
UK Retail Bank	-0.073	0.087	460	395	16.46%
Business Bank	-0.205	-0.045	623	574	8.54%
BGI	-0.263	-0.103	112	56	100.00%

The results provide support for the proposition that there is a negative correlation between organisational performance and high scores on the political dimension. However, the correlation is not as strong as in the previous sections, as one would logically expect that the highest performing cluster (Barclays Global Investors) would apply significantly less politics than the Group as a whole in the application of the strategy development process.

### 6.5.6.2.8 Value Creation And The Enforced Choice Dimension

The final proposition developed by Bailey et al. (2000) postulated that measures of organisational performance could be negatively correlated to high scores on the enforced choice dimension of strategy development. Quoting Grant (1995), Bailey et al. (2000) argue that coercive pressures in mature industries (such as UK banking and the financial services industry) may serve to limit strategic choice and therefore lead to lower performance. Here again, organisational performance is defined as the level of value created or economic profit.

The results at Barclays once again provide evidence to support the proposition developed by Bailey et al., because the cluster that is significantly stronger than the Group on the enforced choice dimension (Barclays Private Clients) was the lowest performing cluster during 2003. By the same token, five of the highest value creating clusters (Barclaycard, Barclays Capital, the UK Retail Bank and the Business Bank) produced significantly low scores on the enforced choice dimension. The results from Barclays Africa are not significantly different from the rest of the Barclays Group. The results are presented in detail in Table 136 below:

*Table 136 – Value Creation And The Enforced Choice Dimension*

	Variation From		Value Contribution (Economic Profit)		
	Centre	Group	2003 (£m)	2002 (£m)	% Increase
Barclaycard	<b>-0.680</b>	<b>-0.287</b>	319	267	19.48%
Barclays Africa	-0.142	0.252	36	22	63.64%
Barclays Capital	<b>-0.531</b>	-0.137	320	178	79.78%
Private Clients	-0.113	<b>0.281</b>	163	328	-49.70%
UK Retail Bank	<b>-0.385</b>	0.009	460	395	16.46%
Business Bank	<b>-0.578</b>	-0.184	623	574	8.54%
BGI	<b>-0.378</b>	0.016	112	56	100.00%

The results from this aspect of the research provide support for the proposition that there is a negative correlation between organisational performance and high scores on the enforced choice dimension. Again one could logically expect that the highest performing cluster (Barclays Global Investors) would perceive themselves to be more involved in the strategy development process, by displaying significantly lower levels of enforced choice than the Group as a whole.

### 6.5.6.3 Organisational Performance And Perceived Environmental Uncertainty

#### 6.5.6.3.1 Degrees Of Perceived Environmental Uncertainty

This section of the report tests the proposition that there should be a negative correlation between organisational performance or value created on the one hand, and on the other hand the degree of perceived environmental uncertainty the organisation is deemed to face. In simpler managerial terms, the question is whether measures of organisational performance could be negatively related to high scores for perceived environmental uncertainty.

The evidence from across the Barclays portfolio is presented in Table 137 below, where the mean score obtained by the strategic business unit for the degree of uncertainty, the rate of change, and the level of complexity it is deemed to face is compared with the Group mean for the same three assessments. The strategic business units are then ranked in terms of their variance from the Group mean, so that the business units deemed to face the highest degree of perceived environmental uncertainty are ranked at the top.

Clearly, if the proposition were true then the highest creators of value, or the most successful business units, would be ranked at the lower end of the spectrum.

*Table 137 – Degrees Of Perceived Environmental Uncertainty*

	Degrees Of			Mean Comparisons			
	Unc	Cha	Com	Mean	Group	Variance	Rank
Barclaycard International	58.333	56.667	53.000	56.000	49.331	6.669	<b>1</b>
Personal Financial Services	46.400	54.000	<b>66.333</b>	55.578	49.331	6.246	<b>2</b>
Investment Management	55.667	53.000	57.000	55.222	49.331	5.891	<b>3</b>
Global Markets	<b>62.000</b>	50.769	52.308	55.026	49.331	5.694	<b>4</b>
Global Financing	55.769	46.538	54.615	52.308	49.331	2.976	<b>5</b>
Barclaycard UK	48.400	56.000	52.333	52.244	49.331	2.913	<b>6</b>
Premier Bank	46.000	54.000	55.733	51.911	49.331	2.580	<b>7</b>
Private Bank	51.733	55.400	47.667	51.600	49.331	2.269	<b>8</b>
Europe	46.667	48.333	48.333	47.778	49.331	-1.554	<b>9</b>
International Bank	46.667	47.667	47.733	47.356	49.331	-1.976	<b>10</b>
Collateralised Financing	50.385	44.615	46.538	47.179	49.331	-2.152	<b>11</b>
Private Equity	58.571	<b>37.143</b>	45.714	47.143	49.331	-2.189	<b>12</b>
Barclays Global Investors	50.067	44.333	43.667	46.022	49.331	-3.309	<b>13</b>
Barclays Africa	49.000	42.000	44.667	45.222	49.331	-4.109	<b>14</b>
Business Bank	42.000	42.333	48.000	44.111	49.331	-5.220	<b>15</b>
Woolwich	44.733	44.400	41.333	43.489	49.331	-5.842	<b>16</b>
Barclaycard Corporate	<b>37.667</b>	<b>41.667</b>	42.000	40.444	49.331	-8.887	<b>17</b>

There is some evidence to support the proposition, with the Business Bank (15), Barclays Africa (14) and Barclays Global Investors (13) represented at the lower end. However, Personal Financial Services (2), Global Markets (4) and Global Financing (5) are ranked at the top of the scale and each is a large creator of value.

Presentation of the results in the seven clusters gives a clearer picture (see Table 138), with two of the highest performers in 2003 (Barclays Africa and Barclays Global Investors) deemed to face the lowest degree of perceived environmental uncertainty. This is also the case for the highest value contributor (the Business Bank), which is deemed to face a lower degree of perceived environmental uncertainty. By the same token, the lowest performing cluster in 2003 (Barclays Private Clients) is deemed to face the highest degree of perceived environmental uncertainty.

*Table 138 – Value Creation And The Degree Of Perceived Environmental Uncertainty*

	Mean Comparisons			Value Contribution (Economic Profit)		
	Cluster	Group	Variance	2003 (£m)	2002 (£m)	% Increase
Barclaycard	49.563	49.331	0.232	319	267	19.48%
Barclays Africa	45.222	49.331	-4.109	36	22	63.64%
Barclays Capital	50.414	49.331	1.083	320	178	79.78%
Private Clients	50.773	49.331	1.442	163	328	-49.70%
UK Retail Bank	49.533	49.331	0.202	460	395	16.46%
Business Bank	44.111	49.331	-5.220	623	574	8.54%
BGI	46.022	49.331	-3.309	112	56	100.00%

Interestingly, the results from the UK Retail Bank and Barclaycard also support the proposition as they are deemed to encounter a slightly higher degree of perceived environmental uncertainty relative to other areas of the Group, and produced slightly lower than average growth in value contribution during 2003.

By way of comparison, Barclays Capital provides evidence to refute the proposition because it faces a higher degree of perceived environmental uncertainty relative to the Group itself, and yet continues to outperform the Group with an increase in value creation of 79.78%. This could be due to various factors, for example the uncertain nature of investment banking, the quality of the people at Barclays Capital or the level of economic growth during 2003.

### 6.5.6.3.2 The Ability To Cope

This section of the report tests the proposition that there should be a positive correlation between organisational performance and the ability of the organisation to cope with perceived environmental uncertainty – or, in simpler managerial terms, measures of organisational performance should relate positively to high scores for the ability to cope with perceived environmental uncertainty.

The results from across the Barclays portfolio are presented in Table 139 below, where the mean score obtained by the strategic business unit for its ability to cope with: the degree of uncertainty, the rate of change, and the level of complexity is compared with the Group mean for the same three assessments. Again the strategic business units are then ranked in terms of their variance from the Group mean, so that the business units deemed the most able to cope are ranked at the top.

Clearly, if the proposition were true then the highest creators of value, or the most successful business units, would be ranked at the top end of the spectrum and vice versa. This analysis provides a great deal of evidence to support the proposition, with the highest value creators dominating the top of the rankings.

*Table 139 – The Ability To Cope With Perceived Environmental Uncertainty*

	The Ability To Cope			Mean Comparisons			
	Unc	Cha	Com	Mean	Group	Variance	Rank
Global Financing	<b>74.615</b>	<b>73.846</b>	<b>78.077</b>	75.513	61.910	13.603	<b>1=</b>
Global Markets	<b>74.615</b>	<b>72.692</b>	<b>79.231</b>	75.513	61.910	13.603	<b>1=</b>
Collateralised Financing	<b>74.231</b>	<b>71.154</b>	<b>77.000</b>	74.128	61.910	12.218	<b>3</b>
Private Equity	<b>71.429</b>	<b>65.714</b>	<b>79.357</b>	72.167	61.910	10.257	<b>4</b>
Barclaycard UK	<b>69.643</b>	<b>72.333</b>	<b>74.000</b>	71.992	61.910	10.082	<b>5</b>
Business Bank	<b>71.000</b>	<b>72.067</b>	<b>71.733</b>	71.600	61.910	9.690	<b>6</b>
Barclays Global Investors	<b>67.000</b>	<b>66.533</b>	<b>75.667</b>	69.733	61.910	7.823	<b>7</b>
Barclaycard Corporate	<b>67.400</b>	<b>66.400</b>	<b>67.333</b>	67.044	61.910	5.135	<b>8</b>
Barclays Africa	58.000	59.667	60.067	59.244	61.910	-2.665	<b>9</b>
Barclaycard International	<b>58.000</b>	55.333	57.667	57.000	61.910	-4.910	<b>10</b>
International Bank	58.667	53.733	56.000	56.133	61.910	-5.777	<b>11</b>
Private Bank	<b>57.400</b>	52.333	<b>57.733</b>	55.822	61.910	-6.088	<b>12</b>
Premier Bank	53.000	51.333	53.333	52.556	61.910	-9.354	<b>13</b>
Personal Financial Services	51.333	51.667	50.000	51.000	61.910	-10.910	<b>14=</b>
Europe	50.333	51.333	51.333	51.000	61.910	-10.910	<b>14=</b>
Investment Management	46.667	46.333	49.333	47.444	61.910	-14.465	<b>16</b>
Woolwich	44.667	48.400	40.667	44.578	61.910	-17.332	<b>17</b>

Presentation of the results in the seven clusters again gives a much clearer picture of the evidence that supports the proposition (see Table 140) with the two highest performers in the Barclays Group during 2003 (Barclays Capital and Barclays Global Investors) being deemed among the most able to cope with perceived environmental uncertainty. This is also the case for the highest value contributor (the Business Bank), which is deemed the cluster second most able to cope with the degree of perceived environmental uncertainty. By the same token, the lowest performing cluster in 2003 (Barclays Private Clients) is deemed the second least able to cope with perceived environmental uncertainty.

*Table 140 – Value Creation And The Ability To Cope*

	Mean Comparisons			Value Contribution (Economic Profit)		
	Cluster	Group	Variance	2003 (£m)	2002 (£m)	% Increase
Barclaycard	65.346	61.910	3.436	319	267	19.48%
Barclays Africa	59.244	61.910	-2.665	36	22	63.64%
Barclays Capital	74.330	61.910	12.420	320	178	79.78%
Private Clients	52.591	61.910	-9.319	163	328	-49.70%
UK Retail Bank	47.789	61.910	-14.121	460	395	16.46%
Business Bank	71.600	61.910	9.690	623	574	8.54%
BGI	69.733	61.910	7.823	112	56	100.00%

The cluster that provides evidence to refute the proposition is the UK Retail Bank, which is perceived to be one of the least able to cope with uncertainty (-13.647), change (-10.607), and complexity (-18.110) in its competitive environment, but produced £460m of economic profit in 2003 – an increase of 16.46% on its performance in 2002. The explanation for this irregularity could be the difficult integration programme with the Woolwich during 2002, or a function of a business model that could not fail in 2003, irrespective of its ability to cope.

The results from Barclays Africa also appear to refute the proposition because it is deemed considerably less able (-2.370) than the Group as a whole to cope with environmental uncertainty yet outperformed the Group in terms of its growth in value contribution (63.64%). These low scores are again spread across the ability to cope with: uncertainty (-3.647), change (-0.973), and complexity (-3.376). The explanation for these results probably lies in the uncertainty, change and complexity inherent in the political, social and economic ‘meltdown’ of Zimbabwe in 2003 and the forced transfer of operations to South Africa, a period of real difficulty for Barclays Africa.

### 6.5.6.3.3 The Importance Of Being Able To Cope

The final part of this section tests the proposition that there that there should be a positive correlation between organisational performance and the importance of being able to cope with perceived environmental uncertainty – or, in simpler managerial terms, that measures of organisational performance should relate positively to high scores for the importance of the strategic business unit being able to cope with perceived environmental uncertainty.

The results from across the Barclays portfolio are presented in Table 141 below, where the mean score obtained by the strategic business unit for the importance of its being able to cope with the degree of uncertainty, the rate of change, and the level of complexity is compared with the Group mean for the same three assessments. Each strategic business unit is again ranked in terms of its variation from the Group mean.

Clearly, if the proposition were true then the highest creators of value, or the most successful business units, would be ranked at the top end of the spectrum and vice versa. As with the previous analysis, this analysis also provides a great deal of evidence to support the proposition, with the highest value creators dominating the top of the rankings.

*Table 141 – The Importance Of Being Able To Cope With The Degree Of Perceived Environmental Uncertainty*

	Importance Of Being Able			Mean Comparisons			
	Unc	Cha	Com	Mean	Group	Variance	Rank
Barclaycard UK	<b>74.333</b>	<b>80.667</b>	<b>75.000</b>	76.667	60.831	15.836	<b>1</b>
Global Markets	<b>71.923</b>	<b>71.154</b>	<b>80.000</b>	74.359	60.831	13.528	<b>2</b>
Personal Financial Services	<b>71.333</b>	<b>76.667</b>	<b>73.000</b>	73.667	60.831	12.836	<b>3</b>
Business Bank	<b>73.000</b>	<b>75.667</b>	<b>72.000</b>	73.556	60.831	12.725	<b>4</b>
Global Financing	<b>71.923</b>	<b>70.077</b>	<b>77.692</b>	73.231	60.831	12.400	<b>5</b>
Barclaycard International	<b>65.333</b>	<b>70.000</b>	<b>67.667</b>	67.667	60.831	6.836	<b>6</b>
Premier Bank	61.000	<b>70.333</b>	<b>66.000</b>	65.778	60.831	4.947	<b>7</b>
Collateralised Financing	<b>62.308</b>	59.231	<b>68.462</b>	63.333	60.831	2.502	<b>8</b>
International Bank	54.667	<b>64.400</b>	62.333	60.467	60.831	-0.364	<b>9</b>
Barclays Global Investors	53.667	<b>60.333</b>	62.000	58.667	60.831	-2.164	<b>10</b>
Investment Management	55.333	59.067	55.333	56.578	60.831	-4.253	<b>11</b>
Private Equity	52.857	51.786	62.500	55.714	60.831	-5.117	<b>12</b>
Private Bank	44.667	55.667	54.333	51.556	60.831	-9.275	<b>13</b>
Woolwich	48.000	54.000	45.667	49.222	60.831	-11.609	<b>14</b>
Barclaycard Corporate	44.667	48.000	50.333	47.667	60.831	-13.164	<b>15</b>
Barclays Africa	40.333	45.333	48.333	44.667	60.831	-16.164	<b>16</b>
Europe	37.667	43.000	43.333	41.333	60.831	-19.498	<b>17</b>

These results also provide evidence to support the proposition, with Barclaycard UK (1), Personal Financial Services (3), and the Business Bank (4) ranked high – these organisations were all large creators of value in 2003. Also at the top of the rankings are Global Markets (2) and Global Financing (5), both of which are key to the creation of value at Barclays Capital. At the other end of the scale, Europe (17), Barclaycard Corporate (15) and the Private Bank (13) all make relatively small value contributions.

Presentation of the results in the seven clusters once again gives a much clearer picture (see Table 142), with the four largest contributors of value in 2003 at the top of the list: Barclaycard, Barclays Capital, the Business Bank and the UK Retail Bank. By the same token, the lowest creator of value in 2003 (Barclays Africa) is deemed far less important in terms of its ability to cope with perceived environmental uncertainty.

*Table 142 – Value Creation And The Importance Of Being Able To Cope*

	Mean Comparisons			Value Contribution (Economic Profit)		
	Cluster	Group	Variance	2003 (£m)	2002 (£m)	% Increase
Barclaycard	64.000	60.831	3.169	319	267	19.48%
Barclays Africa	44.667	60.831	-16.164	36	22	63.64%
Barclays Capital	66.659	60.831	5.828	320	178	79.78%
Private Clients	55.142	60.831	-5.689	163	328	-49.70%
UK Retail Bank	61.444	60.831	0.613	460	395	16.46%
Business Bank	73.556	60.831	12.725	623	574	8.54%
BGI	58.667	60.831	-2.164	112	56	100.00%

Also at the bottom of the rankings is Barclays Private Clients, who are also relatively low in terms of their value contribution in 2003 (£328m), closely followed in the rankings by Barclays Global Investors who also created a relatively small level of value (£112m). These findings show that there is a high level of correlation between the importance of being able to cope with perceived environmental uncertainty and the value contribution made by each of the seven clusters during 2003.

## 6.6 Summary Of Key Research Findings

### 6.6.1 Key Research Findings: Strategy Development Processes

#### 6.6.1.1 Identifying Strategy Development Processes Across The Barclays Group

##### 6.6.1.1.1 Using The Research Instrument In The Field

There are three key findings from the use of the strategy process questionnaire (Bailey et al., 2000) in this research programme: first, the adaptation of the questionnaire to the organisational context; second, the validation of the instrument; and finally, a comprehensive analysis of the research data prior to the testing of formal research propositions.

Beginning with the *adaptation of the questionnaire to the organisational context*, there were five key findings: first, it was essential to pilot the instrument thoroughly in the field; second, the wording of particular items needed to be adjusted to suit the organisational context; third, prior to distribution it was vital to obtain executive sponsorship to the circulation of the questionnaire; fourth, it was useful to provide creative ‘teasers’ and incentives to encourage completion of the questionnaire; and finally, regular reminders by electronic mail were an efficient and effective method for chasing non-respondents and managing the response rate.

In terms of the *validation of the instrument*, there were three key elements: first, it was important to focus on the absolute sample size from each strategic business unit rather than the percentage response rate; second, the additional information questions were time consuming to complete and not easy to analyse and were inappropriate at Barclays; third, unanswered questions should be completed using the mean response for that question rather than the centre of the Likert scale.

Finally, a *comprehensive analysis of the research data* was absolutely essential in order to validate the research instrument at Barclays. This process included: a principal components analysis to check the validity of individual dimensions; the moving of an item into a different dimension and the completion of a Cronbach alpha test.

### 6.6.1.1.2 The Key Findings

#### 6.6.1.1.2.1 Strategy Development Processes Across The Strategic Business Units

With the modifications set out in the previous section, the self-administered strategy process questionnaire built by Bailey (2000) and subsequently amended by Bailey et al. (2000) proved to be an effective research instrument at Barclays.

Through the completion of 731 questionnaires across the Barclays portfolio, it is possible to discern different strategy development processes across the seventeen strategic business units. In this investigation, the relevant sample size is the number of individual responses received from each strategic business unit. Once this exceeds thirty, the critical values approach 1.96 at the 5% level, and 2.58 at the 1% level. There were no borderline cases in Project 3.

A summary of the results is presented in Table 143, with results significant at the 5% level highlighted in bold and results significant at the 1% level highlighted in bold and red text.

*Table 143 – The Strategic Business Unit Results: Variance From Centre Of Likert Scale*

Area Of Group	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Barclaycard UK	<b>4.574</b>	<b>3.682</b>	3.920	<b>4.558</b>	3.833	<b>3.332</b>
B'card Int'nal	<b>4.467</b>	4.008	<b>3.596</b>	<b>4.476</b>	<b>3.577</b>	<b>3.119</b>
B'card Corporate	4.103	<b>3.396</b>	4.231	4.149	3.938	<b>3.479</b>
Barclays Africa	<b>4.409</b>	<b>3.537</b>	3.901	<b>4.507</b>	3.672	3.858
Collateralised Fin.	<b>4.444</b>	3.873	3.874	<b>4.964</b>	<b>3.447</b>	<b>3.426</b>
Global Financing	<b>4.242</b>	3.666	3.825	<b>4.382</b>	3.625	<b>3.502</b>
Global Markets	<b>4.447</b>	3.800	3.838	<b>4.697</b>	<b>3.470</b>	<b>3.359</b>
Private Equity	<b>4.342</b>	3.945	3.861	<b>4.468</b>	3.745	<b>3.587</b>
Europe	4.128	4.104	4.181	<b>3.669</b>	4.157	<b>3.604</b>
International Bank	4.074	3.891	3.879	4.240	3.820	3.776
Investment Mgmt	4.035	3.945	3.905	3.706	4.274	<b>4.429</b>
Private Bank	4.046	3.854	4.123	4.176	3.858	3.913
Premier Bank	4.197	3.949	3.819	<b>4.403</b>	4.035	3.772
PFS	<b>4.399</b>	3.866	<b>3.701</b>	<b>4.522</b>	3.853	<b>3.542</b>
Woolwich	<b>4.350</b>	4.124	3.867	<b>4.747</b>	3.992	<b>3.680</b>
Business Bank	<b>4.423</b>	3.987	4.023	<b>4.799</b>	3.795	<b>3.422</b>
BGI	4.213	3.931	<b>3.682</b>	<b>4.577</b>	3.737	<b>3.622</b>
<b>Barclays Group</b>	<b>4.300</b>	<b>3.861</b>	<b>3.908</b>	<b>4.408</b>	<b>3.840</b>	<b>3.606</b>

### 6.6.1.1.2.2 Strategy Development Processes Across The Seven Clusters

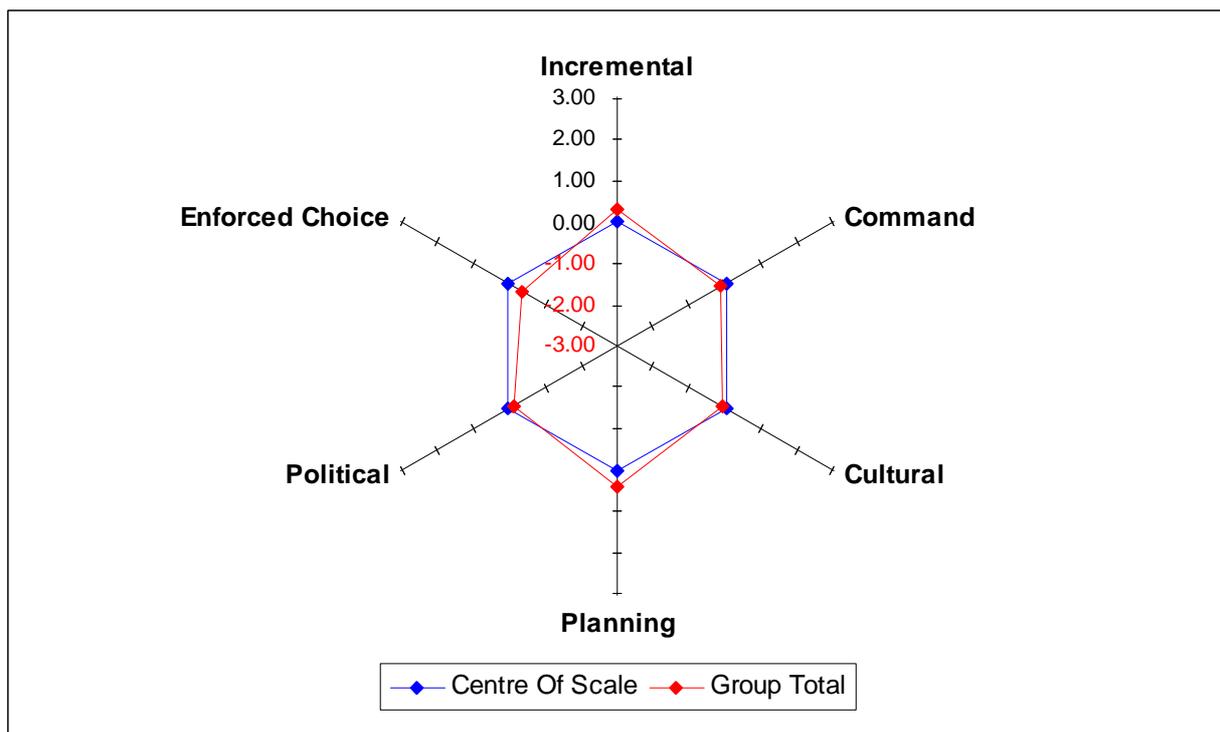
The results from the seventeen strategic business units can also be arranged in the seven clusters. A cluster summary is presented below in Table 144 – again, the significant value at the 5% level is 1.96, and the significant value at the 1% level is 2.58. Results significant at the 5% level are again highlighted in bold, and results significant at the 1% level are highlighted in bold and red text.

*Table 144 – The Cluster Results: Variance From Centre Of Likert Scale*

Area Of Group	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Barclaycard	<b>4.434</b>	<b>3.686</b>	3.923	<b>4.439</b>	<b>3.801</b>	<b>3.320</b>
Barclays Africa	<b>4.409</b>	<b>3.537</b>	3.901	<b>4.507</b>	3.672	3.858
Barclays Capital	<b>4.368</b>	3.821	3.849	<b>4.625</b>	<b>3.573</b>	<b>3.469</b>
Private Clients	4.096	3.956	3.992	4.016	4.034	3.887
UK Retail Bank	<b>4.373</b>	4.003	<b>3.789</b>	<b>4.641</b>	3.927	<b>3.615</b>
Business Bank	<b>4.423</b>	3.987	4.023	<b>4.799</b>	3.795	<b>3.422</b>
BGI	4.213	3.931	<b>3.682</b>	<b>4.577</b>	3.737	<b>3.622</b>

A summary of the findings show that the incremental and planning dimensions are the dominant processes for developing strategy at Barclays (see Figure 63 below):

*Figure 63 – Summary Of Key Findings: Identifying Strategy Development Processes Across The Barclays Group*



## 6.6.1.2 Analysing Strategy Development Processes Across Barclays

### 6.6.1.2.1 The Group Correlation Matrix

This element of the summary of key findings highlights the correlations between the various dimensions. A correlation matrix for the Barclays Group is presented below in Table 145, with the significant value at the 5% level again 1.96, and the significant value at the 1% level 2.58. The results significant at the 5% level are highlighted in bold, and results significant at the 1% level are again highlighted in bold and red text.

*Table 145 – Analysing Strategy Development Processes Across Barclays*

	Incremental	Command	Cultural	Planning	Political	Enforced Choice
Incremental	1					
Command	-0.042	1				
Cultural	0.066	0.182	1			
Planning	<b>0.430</b>	-0.114	-0.168	1		
Political	-0.047	<b>0.320</b>	<b>0.402</b>	<b>-0.429</b>	1	
Enforced Choice	-0.084	0.187	<b>0.230</b>	<b>-0.273</b>	<b>0.392</b>	1

### 6.6.1.2.2 Testing The Ten Key Relationships (Bailey et al., 2000)

An examination of the findings against the ten key correlations predicted by Bailey et al. (2000), show a high degree of correlation. The ten key tests are set out in Table 146 below:

*Table 146 – Group Results: Testing The Ten Key Relationships (Bailey et al., 2000)*

1 <sup>st</sup> Variable	2 <sup>nd</sup> Variable	Prediction	Result	Significance
Command	Planning	Negative	✓	Not Significant
Command	Incremental	Negative	✓	Not Significant
Command	Political	Positive	✓	<1%
Planning	Political	Negative	✓	<1%
Planning	Cultural	Negative	✓	Not Significant
Planning	Enforced Choice	Negative	✓	<1%
Planning	Incremental	Positive	✓	<1%
Political	Cultural	Positive	✓	<1%
Political	Enforced Choice	Positive	✓	<1%
Cultural	Enforced Choice	Positive	✓	<5%

### 6.6.1.2.3 Identifying Unexpected Correlations In The Data (Bailey et al., 2000)

The results from across the seven clusters within the Barclays Group produced eight correlations that were statistically significant, but were not predicted in the research of Bailey et al. (2000). These relationships were between: command and enforced choice (3); command and culture (3); incrementalism and culture (1); and finally, incrementalism and enforced choice (1). These findings are summarised in Table 147 below:

*Table 147 – Cluster Results: Unexpected Correlations (Bailey et al., 2000)*

<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable</b>	<b>Cluster</b>	<b>Result</b>	<b>Significance</b>
Command	Enforced Choice	Business Bank	0.364	<1%
Command	Enforced Choice	Barclays Private Clients	0.262	<1%
Command	Enforced Choice	UK Retail Bank	0.237	<5%
Command	Culture	Barclays Africa	0.378	<5%
Command	Culture	Barclays Private Clients	0.272	<1%
Command	Culture	UK Retail Bank	0.246	<5%
Incremental	Culture	UK Retail Bank	0.216	<5%
Incremental	Enforced Choice	Barclays Africa	-0.415	<1%

Clearly, the positive correlation between command and enforced choice is interesting as it is counter-intuitive, in that the enforced choice dimension for strategy development is present when the responsibility for strategy development is perceived to reside outside the cluster. Evidently, this approach is not compatible with strategy being developed by a strong leader, or commander, which implies that the leader is within the cluster. The finding suggests that a leader is developing strategy from outside the cluster, but within the Group, probably a member of the Group Executive Committee.

The positive correlation between command and culture is also interesting but more predictable. This finding suggests a leader is closely associated with the strategy but is adopting a cultural approach to strategy development. The relationship between incrementalism and enforced choice at Barclays Africa is less predictable but probably represents a perception that the cluster has little ownership of its strategy development process, while the strategy itself is constantly changing. Finally, the relationship between culture and incrementalism at the UK Retail Bank is probably a reflection of a mixture of strategy development processes following the acquisition of the Woolwich.

### 6.6.1.3 Strategy Development Process And Perceived Environmental Uncertainty

#### 6.6.1.3.1 Strategy Development Processes

##### 6.6.1.3.1.1 Introduction

This summary of key findings looks at the research results across the six dimensions of strategy development developed by Bailey (2000) and later enhanced by Bailey et al. (2000). Each correlation is presented in the positive.

##### 6.6.1.3.1.2 Incremental Dimension

The only business unit to show an average score on the incremental dimension significantly higher than the Group mean is Barclaycard UK (0.274), a result significant at the 1% level. Investment Management (-0.265) and the Private Bank (-0.254) produced results significantly lower than the Group mean on this dimension, both significant at the 5% level. Significant differences between business units on this dimension are set out in Table 148 below:

*Table 148 – Differences Between Strategic Business Units: Incremental Dimension*

Business Unit	Score	Business Unit	Score	Significance
Personal Financial Services	4.399	Investment Management	4.035	<5%
Personal Financial Services	4.399	Private Bank	4.046	<5%
Barclaycard UK	4.574	Europe	4.128	<1%
Business Bank	4.423	Investment Management	4.035	<5%
Barclays Africa	4.409	Investment Management	4.035	<5%
Barclaycard International	4.467	Investment Management	4.035	<5%
Barclaycard UK	4.574	Investment Management	4.035	<1%
Collateralised Financing	4.444	Investment Management	4.035	<5%
Global Markets	4.447	Investment Management	4.035	<5%
Business Bank	4.423	International Bank	4.074	<5%
Barclaycard International	4.467	International Bank	4.074	<5%
Barclaycard UK	4.574	International Bank	4.074	<5%
Global Markets	4.447	International Bank	4.074	<5%
Business Bank	4.423	Private Bank	4.046	<5%
Barclays Africa	4.409	Private Bank	4.046	<5%
Barclaycard International	4.467	Private Bank	4.046	<5%
Barclaycard UK	4.574	Private Bank	4.046	<1%
Collateralised Financing	4.444	Private Bank	4.046	<5%
Global Markets	4.447	Private Bank	4.046	<5%
Barclaycard UK	4.574	Premier Bank	4.197	<5%
Barclaycard UK	4.574	Barclays Global Investors	4.213	<5%
Barclaycard UK	4.574	Barclaycard Corporate	4.103	<1%

### **6.6.1.3.1.3 Command Dimension**

The only strategic business unit to show an average score on the command dimension that is significantly different from the Group mean is Barclaycard Corporate, which has an average score of 3.396, compared to the Group mean of 3.861. This difference from the overall Group mean (-0.456) is significant at the 1% level.

Significant differences between the individual strategic business units on the command dimension are set out in Table 149 below:

*Table 149 – Differences Between Strategic Business Units: Command Dimension*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Woolwich	4.124	Barclays Africa	3.537	<5%
Woolwich	4.124	Barclaycard Corporate	3.396	<1%
Woolwich	4.124	Barclaycard UK	3.682	<5%
Personal Financial Services	3.866	Barclaycard Corporate	3.396	<5%
Europe	4.104	Barclays Africa	3.537	<5%
Europe	4.104	Barclaycard Corporate	3.396	<5%
Europe	4.104	Barclaycard UK	3.682	<5%
Investment Management	3.945	Barclaycard Corporate	3.396	<5%
International Bank	3.891	Barclaycard Corporate	3.396	<5%
Premier Bank	3.949	Barclaycard Corporate	3.396	<5%
Barclays Global Investors	3.931	Barclaycard Corporate	3.396	<5%
Business Bank	3.987	Barclays Africa	3.537	<5%
Business Bank	3.987	Barclaycard Corporate	3.396	<1%
Barclaycard International	4.008	Barclaycard Corporate	3.396	<5%
Private Equity	3.945	Barclaycard Corporate	3.396	<5%

#### **6.6.1.3.1.4 Cultural Dimension**

There are three significant differences from the Group mean (3.908) on the cultural dimension. Barclaycard Corporate has a mean that is significantly higher (0.323) than the Group mean – a result that is significant at the 5% level. Europe also has a mean on the cultural dimension that is significantly higher (0.273) than the Group mean – this result is also significant at the 5% level. The only strategic business unit to have a mean significantly lower than the Group mean on this dimension is Barclaycard International (-0.312). This result is also significant at the 5% level.

Significant differences between individual strategic business units on the cultural dimension are set out in Table 150 below:

*Table 150 – Differences Between Strategic Business Units: Cultural Dimension*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Barclaycard Corporate	4.231	Woolwich	3.867	<5%
Europe	4.181	Personal Financial Services	3.701	<1%
Private Bank	4.123	Personal Financial Services	3.701	<5%
Barclaycard Corporate	4.231	Personal Financial Services	3.701	<1%
Europe	4.181	Premier Bank	3.819	<5%
Europe	4.181	Barclays Global Investors	3.682	<1%
Europe	4.181	Barclaycard International	3.596	<1%
Private Bank	4.123	Barclays Global Investors	3.682	<5%
Private Bank	4.123	Barclaycard International	3.596	<1%
Barclaycard Corporate	4.231	Premier Bank	3.819	<5%
Barclaycard Corporate	4.231	Barclays Global Investors	3.682	<1%
Business Bank	4.023	Barclaycard International	3.596	<5%
Barclaycard Corporate	4.231	Barclaycard International	3.596	<1%
Barclaycard Corporate	4.231	Global Financing	3.825	<5%

### 6.6.1.3.1.5 Planning Dimension

There are three business units with mean scores on the planning dimension significantly higher than the Group average (4.408): Collateralised Financing (0.556), the Business Bank (0.391), and the Woolwich (0.339). The results from Collateralised Financing and the Business Bank are significant at the 1% level. The Woolwich result is significant at the 5% level. There are two business units with mean scores on this dimension that are significantly lower than the Group average. These business units are: Investment Management (-0.702), and Europe (-0.739). Both of these results are statistically significant at the 1% level. Differences between individual strategic business units that are statistically significant at the 1% level are presented in Table 151. See Appendix C for results significant at the 5% level.

*Table 151 – Differences Between Strategic Business Units: Planning Dimension*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Woolwich	4.747	Europe	3.669	<1%
Woolwich	4.747	Investment Management	3.706	<1%
Woolwich	4.747	Private Bank	4.176	<1%
Woolwich	4.747	Barclaycard Corporate	4.964	<1%
Personal Financial Services	4.522	Europe	3.669	<1%
Personal Financial Services	4.522	Investment Management	3.706	<1%
Europe	3.669	International Bank	4.240	<1%
Europe	3.669	Premier Bank	4.403	<1%
Europe	3.669	Barclays Global Investors	4.577	<1%
Europe	3.669	Business Bank	4.799	<1%
Europe	3.669	Barclays Africa	4.507	<1%
Europe	3.669	Barclaycard International	4.476	<1%
Europe	3.669	Barclaycard UK	4.558	<1%
Europe	3.669	Collateralised Financing	4.964	<1%
Europe	3.669	Global Financing	4.382	<1%
Europe	3.669	Global Markets	4.697	<1%
Europe	3.669	Private Equity	4.468	<1%
Premier Bank	4.403	Investment Management	3.706	<1%
Barclays Global Investors	4.577	Investment Management	3.706	<1%
Business Bank	4.799	Investment Management	3.706	<1%
Barclays Africa	4.507	Investment Management	3.706	<1%
Barclaycard International	4.476	Investment Management	3.706	<1%
Barclaycard UK	4.558	Investment Management	3.706	<1%
Collateralised Financing	4.964	Investment Management	3.706	<1%
Global Financing	4.382	Investment Management	3.706	<1%
Global Markets	4.697	Investment Management	3.706	<1%
Private Equity	4.468	Investment Management	3.706	<1%
Business Bank	4.799	International Bank	4.240	<1%
Collateralised Financing	4.964	International Bank	4.240	<1%
Business Bank	4.799	Private Bank	4.176	<1%
Collateralised Financing	4.964	Private Bank	4.176	<1%
Barclaycard Corporate	4.149	Business Bank	4.799	<1%
Collateralised Financing	4.964	Barclaycard Corporate	4.964	<1%

### **6.6.1.3.1.6 Political Dimension**

Analysis of the results on the political dimension shows that there are two strategic business units with mean scores significantly higher than the Group average (3.840): Investment Management (0.434), and Europe (0.317). The result from Investment Management is significant at the 1% level and the result from Europe is significant at the 5% level.

There are two business units with mean scores on this dimension that are significantly lower than the Group average. These business units are: Global Markets (-0.370) and Collateralised Financing (-0.393). Both of these results are statistically significant at the 5% level.

Statistically significant differences between individual strategic business units on the political dimension are summarised in Table 152 below:

*Table 152 – Differences Between Strategic Business Units: Political Dimension*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Woolwich	3.992	Collateralised Financing	3.447	<5%
Woolwich	3.992	Global Markets	3.470	<5%
Europe	4.157	Barclays Africa	3.672	<5%
Europe	4.157	Barclaycard International	3.577	<1%
Europe	4.157	Collateralised Financing	3.447	<1%
Europe	4.157	Global Financing	3.625	<5%
Europe	4.157	Global Markets	3.470	<1%
Investment Management	4.274	International Bank	3.820	<5%
Investment Management	4.274	Barclays Global Investors	3.737	<5%
Investment Management	4.274	Business Bank	3.795	<5%
Investment Management	4.274	Barclays Africa	3.672	<1%
Investment Management	4.274	Barclaycard International	3.577	<1%
Investment Management	4.274	Barclaycard UK	3.833	<5%
Investment Management	4.274	Collateralised Financing	3.447	<1%
Investment Management	4.274	Global Financing	3.625	<1%
Investment Management	4.274	Global Markets	3.470	<1%
Investment Management	4.274	Private Equity	3.745	<5%
Premier Bank	4.035	Collateralised Financing	3.447	<5%
Premier Bank	4.035	Global Markets	3.470	<5%
Barclaycard Corporate	3.938	Collateralised Financing	3.447	<5%

### 6.6.1.3.1.7 Enforced Choice Dimension

There are two business units with mean scores significantly higher on the enforced choice dimension than the Group average (3.606): Investment Management (0.823), and the Private Bank (0.307). These results are significant at the 1% level and 5% level respectively. There are two business units with mean scores significantly lower than the Group average: Barclaycard International (-0.487) and Barclaycard UK (-0.274), again significant at the 1% and 5% levels respectively. Statistically significant differences between individual strategic business units on the enforced choice dimension are summarised in Table 153 below:

*Table 153 – Differences Between Strategic Business Units: Enforced Choice Dimension*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Investment Management	4.429	Woolwich	3.680	<1%
Woolwich	3.680	Barclaycard International	3.119	<1%
Woolwich	3.680	Barclaycard UK	3.332	<5%
Investment Management	4.429	Personal Financial Services	3.542	<1%
Investment Management	4.429	Europe	3.604	<1%
Europe	3.604	Barclaycard International	3.119	<5%
Investment Management	4.429	International Bank	3.776	<1%
Investment Management	4.429	Private Bank	3.913	<5%
Investment Management	4.429	Premier Bank	3.772	<1%
Investment Management	4.429	Barclays Global Investors	3.622	<1%
Investment Management	4.429	Business Bank	3.422	<1%
Investment Management	4.429	Barclays Africa	3.858	<1%
Investment Management	4.429	Barclaycard Corporate	3.479	<1%
Investment Management	4.429	Barclaycard International	3.119	<1%
Investment Management	4.429	Barclaycard UK	3.332	<1%
Investment Management	4.429	Collateralised Financing	3.426	<1%
Investment Management	4.429	Global Financing	3.502	<1%
Investment Management	4.429	Global Markets	3.359	<1%
Investment Management	4.429	Private Equity	3.587	<1%
International Bank	3.776	Barclaycard International	3.119	<1%
International Bank	3.776	Barclaycard UK	3.332	<5%
Private Bank	3.913	Business Bank	3.422	<5%
Private Bank	3.913	Barclaycard Corporate	3.479	<5%
Private Bank	3.913	Barclaycard International	3.119	<1%
Private Bank	3.913	Barclaycard UK	3.332	<1%
Private Bank	3.913	Collateralised Financing	3.426	<5%
Private Bank	3.913	Global Markets	3.359	<5%
Premier Bank	3.772	Barclaycard International	3.119	<1%
Premier Bank	3.772	Barclaycard UK	3.332	<5%
Barclays Global Investors	3.622	Barclaycard International	3.119	<5%
Barclays Africa	3.858	Business Bank	3.422	<5%
Barclays Africa	3.858	Barclaycard International	3.119	<1%
Barclays Africa	3.858	Barclaycard UK	3.332	<1%
Barclays Africa	3.858	Global Markets	3.470	<5%

### **6.6.1.3.2 Perceived Environmental Uncertainty**

#### **6.6.1.3.2.1 Introduction**

This section of the summary of key findings looks at the research results across the degree of uncertainty, the rate of change, and the level of complexity. Each difference is presented in the positive.

#### **6.6.1.3.2.2 Degrees Of Perceived Environmental Uncertainty**

This section examines differences in the degree of uncertainty across the portfolio. There are two business units with mean scores significantly different from the Group average of 49.680. First is, Barclaycard Corporate with a mean significantly lower than the overall Barclays Group mean (-12.013); it is therefore deemed to face a significantly lower degree of uncertainty than all the other business units in the Barclays Group. This result is significant at the 1% level. Second is, Global Markets, which has a mean significantly higher than the overall Group mean (12.320); it is therefore deemed to face a significantly higher degree of uncertainty than all the other strategic business units in the Barclays Group. This result is significant at the 5% level.

Statistically significant differences between individual strategic business units, in terms of the degree of uncertainty they are perceived to face, are summarised in Table 154 below:

*Table 154 – Differences Between Strategic Business Units: Degrees Of Perceived Environmental Uncertainty*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Investment Management	55.667	Barclaycard Corporate	37.667	<1%
Private Bank	51.733	Barclaycard Corporate	37.667	<5%
Barclaycard International	58.333	Business Bank	42.000	<5%
Barclaycard International	58.333	Barclaycard Corporate	37.667	<1%
Global Financing	55.769	Barclaycard Corporate	37.667	<2%
Global Markets	62.000	Woolwich	44.733	<2%
Global Markets	62.000	Personal Financial Services	46.400	<5%
Global Markets	62.000	Europe	46.667	<5%
Global Markets	62.000	International Bank	46.667	<5%
Global Markets	62.000	Premier Bank	46.000	<5%
Global Markets	62.000	Business Bank	42.000	<2%
Global Markets	62.000	Barclaycard Corporate	37.667	<1%
Private Equity	58.571	Woolwich	44.733	<5%
Private Equity	58.571	Business Bank	42.000	<5%
Private Equity	58.571	Barclaycard Corporate	37.667	<1%

### **6.6.1.3.2.3 Rates Of Change**

There are two strategic business units whose mean score for the rates of change they face are significantly different from the Group average of 48.164: Private Equity and Barclaycard Corporate.

Beginning with Private Equity, this business unit has an average score that is significantly lower than the Group mean (-11.021), a result that is statistically significant at the 2% level. Private Equity is therefore deemed to face the lowest rate of change in the Barclays Group. Second, with a result that is statistically significant at the 5% level, on the assessments for the rate of change Barclaycard Corporate has a significantly lower mean (-6.497) than the mean for the Group. Barclaycard Corporate is therefore deemed to face a significantly lower rate of change than every other strategic business unit in the Barclays Group – with the exception of Private Equity.

Significant differences between individual strategic business units, in terms of the rate of change they are perceived to face, are set out in Table 155 below:

*Table 155 – Differences Between Strategic Business Units: Rates Of Change*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Personal Financial Services	54.000	Private Equity	37.143	<5%
Investment Management	53.000	Private Equity	37.143	<5%
Private Bank	55.400	Business Bank	42.333	<5%
Private Bank	55.400	Barclays Africa	42.000	<5%
Private Bank	55.400	Barclaycard Corporate	41.667	<2%
Private Bank	55.400	Private Equity	37.143	<2%
Premier Bank	55.400	Private Equity	37.143	<5%
Barclaycard International	56.667	Business Bank	42.333	<5%
Barclaycard International	56.667	Barclays Africa	42.000	<5%
Barclaycard International	56.667	Barclaycard Corporate	41.667	<2%
Barclaycard International	56.667	Private Equity	37.143	<2%
Barclaycard UK	56.000	Business Bank	42.333	<5%
Barclaycard UK	56.000	Barclaycard Corporate	41.667	<5%
Barclaycard UK	56.000	Private Equity	37.143	<2%

#### **6.6.1.3.2.4 Levels Of Complexity**

In terms of levels of complexity, there is only one strategic business unit that has an average score significantly different from the overall Group mean of 49.852: Personal Financial Services. With an average score that is statistically significant at the 5% level, on the assessments for the level of complexity Personal Financial Services has a significantly higher mean (16.481) than the mean for the Group. Personal Financial Services is therefore deemed by the Group Executive Committee to face a significantly higher level of complexity in its competitive environment than every other strategic business unit in the Barclays Group.

Significant differences between the individual strategic business units, in terms of the level of complexity they are deemed to face, are summarised in Table 156 below:

*Table 156 – Differences Between Strategic Business Units: Levels Of Complexity*

<b>Business Unit</b>	<b>Score</b>	<b>Business Unit</b>	<b>Score</b>	<b>Significance</b>
Personal Financial Services	66.333	Woolwich	41.333	<1%
Personal Financial Services	66.333	Europe	48.333	<5%
Personal Financial Services	66.333	International Bank	47.733	<2%
Personal Financial Services	66.333	Private Bank	47.667	<2%
Personal Financial Services	66.333	Barclays Global Investors	43.667	<1%
Personal Financial Services	66.333	Business Bank	48.000	<2%
Personal Financial Services	66.333	Barclays Africa	44.667	<2%
Personal Financial Services	66.333	Barclaycard Corporate	42.000	<1%
Personal Financial Services	66.333	Barclaycard International	53.000	<5%
Personal Financial Services	66.333	Collateralised Financing	46.538	<2%
Personal Financial Services	66.333	Private Equity	45.714	<2%
Investment Management	57.000	Woolwich	41.333	<5%
Investment Management	57.000	Barclaycard Corporate	42.000	<5%
Premier Bank	55.733	Barclaycard Corporate	42.000	<2%
Barclaycard International	53.000	Barclaycard Corporate	42.000	<5%
Global Financing	54.615	Barclaycard Corporate	42.000	<5%

### 6.6.1.3.3 Strategy Development Process And Perceived Environmental Uncertainty

#### 6.6.1.3.3.1 Summary Of Key Findings

There was only one significant relationship between strategy developments processes and the degree of perceived environmental uncertainty (see Table 157 below):

*Table 157 – Strategy Development Processes And The Degree Of Perceived Environmental Uncertainty*

<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable</b>	<b>Result</b>	<b>Significance</b>
Degree Of Uncertainty	Cultural	-0.489	<5%

The statistically significant relationships between strategy development processes and the ability to cope with the degree of uncertainty, the rate of change, and the level of complexity are summarised in Table 158 below:

*Table 158 – Strategy Development Processes And The Ability To Cope*

<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable</b>	<b>Result</b>	<b>Significance</b>
Ability To Cope With Degree Of Uncertainty	Political	-0.731	<1%
Ability To Cope With Degree Of Uncertainty	Enforced Choice	-0.561	<5%
Ability To Cope With Rate Of Change	Incremental	0.498	<5%
Ability To Cope With Rate Of Change	Command	-0.459	<5%
Ability To Cope With Rate Of Change	Planning	0.539	<5%
Ability To Cope With Rate Of Change	Political	-0.679	<1%
Ability To Cope With Rate Of Change	Enforced Choice	-0.594	<5%
Ability To Cope With Level Of Complexity	Political	-0.679	<1%

The statistically significant relationships between strategy development processes and the importance of being able to cope with the degree of uncertainty, the rate of change, and the level of complexity are summarised in Table 159 below:

*Table 159 – Strategy Development Processes And The Importance Of Being Able To Cope*

<b>1<sup>st</sup> Variable</b>	<b>2<sup>nd</sup> Variable</b>	<b>Result</b>	<b>Significance</b>
Importance Of Being Able To Cope With Uncertainty	Incremental	0.577	<5%
Importance Of Being Able To Cope With Uncertainty	Cultural	-0.505	<5%
Importance Of Being Able To Cope With Uncertainty	Planning	0.504	<5%
Importance Of Being Able To Cope With Complexity	Incremental	0.519	<5%
Importance Of Being Able To Cope With Complexity	Cultural	-0.505	<5%
Importance Of Being Able To Cope With Complexity	Planning	0.507	<5%
Importance Of Being Able To Cope With Complexity	Political	-0.580	<5%
Importance Of Being Able To Cope With Complexity	Enforced Choice	-0.495	<5%

## 6.6.1.4 Considering The Managerial Implications

### 6.6.1.4.1 Organisational Performance And Strategy Development Processes

#### 6.6.1.4.1.1 Relating Value Creation To The Incremental And Planning Dimensions

Through a review of the relevant literature, Bailey et al. (2000) proposed that measures of organisational performance can be related positively to high scores on both the incremental and planning dimensions of the strategy development process – or, in simple managerial terms, successful organisations score highly on both the incremental and planning dimensions of the strategy development process.

The finding of this research supports the proposition developed by Bailey et al., and is summarised in Table 160 below:

*Table 160 – Relating Value Creation To The Incremental And Planning Dimensions*

	Dimension Score		Value Created By The Barclays Group		
	Centre Of Scale	Barclays	2003 (£m)	2002 (£m)	% Increase
Incremental	4.000	4.300	3,845	3,205	19.97%
Planning	4.000	4.408			

#### 6.6.1.4.1.2 Relating Value Creation To The Political And Enforced Dimensions

Bailey et al. (2000) also proposed that measures of organisational performance can be related positively to low scores on both the political and enforced choice dimensions of the strategy development process – or, in managerial terms, successful organisations score lower on both the political and enforced choice dimensions of the strategy development process.

The finding of this research supports the proposition developed by Bailey et al., and is summarised in Table 161 below:

*Table 161 – Relating Value Creation To The Political And Enforced Choice Dimensions*

	Dimension Score		Value Created By The Barclays Group		
	Centre Of Scale	Barclays	2003 (£m)	2002 (£m)	% Increase
Political	4.000	3.606	3,845	3,205	19.97%
Enforced Choice	4.000	3.840			

#### 6.6.1.4.2 Organisational Performance And Perceived Environmental Uncertainty

##### 6.6.1.4.2.1 Relating Value Creation To Degrees Of Perceived Environmental Uncertainty

The study was unable to establish a relationship between measures of organisational performance and the degree of uncertainty, the rate of change, and the level of complexity different businesses within the Barclays portfolio are perceived to face.

This key finding is illustrated through a comparison of Barclays Capital and Barclays Private Clients, who are deemed to be facing a similar degree of perceived environmental uncertainty but are producing very different levels of organisational performance. This finding is summarised in Table 162 below:

*Table 162 – Relating Value Creation (Annual Growth) To Degrees Of Perceived Environmental Uncertainty*

	Mean Comparisons			Value Contribution		
	Cluster	Group	Variance	2003 (£m)	2002 (£m)	% Increase
Barclays Capital	50.414	49.331	1.083	782	580	34.83%
Barclays Private Clients	50.773	49.331	1.442	328	368	-10.87%

##### 6.6.1.4.2.2 Relating Value Creation To Degrees Of Perceived Environmental Uncertainty

The study was also unable to establish a relationship between measures of organisational performance and the perceived ability of the different businesses within the Barclays portfolio to cope with the degree of uncertainty, the rate of change, and the level of complexity in their respective competitive environments.

This key finding is illustrated through a comparison of the UK Retail Bank and the Business Bank. The Business Bank is deemed to be significantly more able than the UK Retail Bank to cope with perceived environmental uncertainty, but it is being outperformed by the UK Retail Bank. This finding is summarised in Table 163 below:

*Table 163 – Relating Value Creation (Annual Contribution) To The Ability To Cope*

	Mean Comparisons			Value Contribution		
	Cluster	Group	Variance	2003 (£m)	2002 (£m)	% Increase
UK Retail Bank	47.789	61.910	-14.121	967	871	11.02%
Business Bank	71.600	61.910	9.690	1,308	1,227	6.60%

#### **6.6.1.4.2.3 Relating Value Creation To The Importance Of Being Able To Cope**

The study was also unable to establish a relationship between measures of organisational performance and the importance of being able to cope with perceived environmental uncertainty, when organisational performance was measured in terms of the percentage increase in value created. This finding is illustrated by the results for the Business Bank, which is deemed most important in terms of the importance of its being able to cope. However, it is only ranked sixth in terms of increases in its value creation during 2003. The results are summarised in Table 164 below:

*Table 164 – Relating Value Creation To The Importance Of Being Able To Cope*

	<b>Cluster</b>	<b>Group</b>	<b>+/-</b>	<b>Rank</b>	<b>'03 (£m)</b>	<b>'02 (£m)</b>	<b>+/-</b>	<b>Rank</b>
Business Bank	73.556	60.831	12.725	<b>1</b>	1,308	1,227	6.60%	<b>6</b>
Barclays Capital	66.659	60.831	5.828	<b>2</b>	782	580	34.83%	<b>2</b>
Barclaycard	64.000	60.831	3.169	<b>3</b>	722	615	17.40%	<b>4</b>
UK Retail Bank	61.444	60.831	0.613	<b>4</b>	967	871	11.02%	<b>5</b>
BGI	58.667	60.831	-2.164	<b>5</b>	192	111	72.97%	<b>1</b>
Private Clients	55.142	60.831	-5.689	<b>6</b>	328	368	-10.87%	<b>7</b>
Barclays Africa	44.667	60.831	-16.164	<b>7</b>	113	89	26.97%	<b>3</b>

However, when performance is measured in terms of the size of the value contribution, the relationship with the importance of being able to cope with perceived environmental uncertainty is much clearer. Utilising this approach, the Business Bank assumes its place at the top of the rankings, with Barclays Africa (the smallest contributor of value) at the bottom. The other three large contributors of value (Barclays Capital, Barclaycard, and the UK Retail Bank) occupy the other top placings in the rankings. This finding shows a positive correlation between the level of value created and high scores in relation to the perceived importance of being able to cope. This finding is summarised in Table 165 below:

*Table 165 – Relating Value Creation To The Importance Of Being Able To Cope*

	<b>Cluster</b>	<b>Group</b>	<b>+/-</b>	<b>Rank</b>	<b>'03 (£m)</b>	<b>'02 (£m)</b>	<b>+/-</b>	<b>Rank</b>
Business Bank	73.556	60.831	12.725	<b>1</b>	1,308	1,227	6.60%	<b>1</b>
Barclays Capital	66.659	60.831	5.828	<b>2</b>	782	580	34.83%	<b>3</b>
Barclaycard	64.000	60.831	3.169	<b>3</b>	722	615	17.40%	<b>4</b>
UK Retail Bank	61.444	60.831	0.613	<b>4</b>	967	871	11.02%	<b>2</b>
BGI	58.667	60.831	-2.164	<b>5</b>	192	111	72.97%	<b>6</b>
Private Clients	55.142	60.831	-5.689	<b>6</b>	328	368	-10.87%	<b>5</b>
Barclays Africa	44.667	60.831	-16.164	<b>7</b>	113	89	26.97%	<b>7</b>

## **6.6.2 Serendipitous Findings**

Through the research undertaken during Project 3, the research identified a series of serendipitous findings, some of which could provide the starting point for other areas of research. These serendipitous findings are set out below:

1. The close relationship between the incremental and planning dimensions in the strategy development process questionnaire requires further investigation. The results at Barclays suggest that planning is not always resolved at the outset of the strategy development process and that as plans are re-published with amended baselines there is an element of ‘incremental planning’ at Barclays.
2. The command dimension in the strategy process questionnaire also requires further investigation as it relates more to the individual responsible for developing strategy than to the process that is being followed. Clearly, the Chief Executive Officer, or Commander, could be developing strategy through the application of one or more of the other dimensions.
3. The research at Barclays could be developed to work with the managerial teams in the strategic business units over a period of time. A programme of longitudinal research would enable research of the strategy development process to monitor changes in strategy process over time and therefore facilitate a closer comparison with events, for example the Barclays Group results, over an extended period of time.
4. A useful area of research would be to re-run the distribution of the questionnaires but to drop the additional managerial information section and collect the necessary information, for example length of service, managerial grade, age and salary from the central Barclays database.
5. An interesting development on the research would be to compare the results from the strategy development questionnaire with other organisational characteristics, for example the size of the strategic business unit in terms of the number of employees, or the geographical dispersion of the business unit. An interesting improvement would be to consider the results in terms of the geographical location of particular business units, for example Barclays Global Investors in San Francisco, compared to Barclays Capital in London or Barclays Africa in Johannesburg.

## **6.7 Conclusions And Comparisons With The Literature Review**

### **6.7.1 Identifying Strategy Development Processes Across Barclays**

There were five key conclusions drawn from Project 3 when identifying strategy development processes across the Barclays Group. These conclusions are set out below:

1. The strategy development process questionnaire built by Bailey (2000) and further enhanced by Bailey et al. (2000) is a highly efficient and effective instrument for collecting data at an organisation like Barclays.
2. Through its application in this research, the strategy development process questionnaire (Bailey, 2000; Bailey et al., 2000) has been further validated and enhanced. Such enhancements include: use of the arithmetic mean for unanswered questions, the discarding of individual items, and the application of weighted averages.
3. The strategy development process at Barclays is dominated by the incremental and planning approaches to strategy development. This is a further enhancement to the original work by Bailey (2000), who proposed that the incremental and planning dimensions would be negatively correlated. This research concludes that although Barclays produces strategic plans, it remains incremental in its approach to strategy, by continually re-scheduling its plans. This model of strategy development fits more closely with the concept of logical incrementalism developed by Quinn (1980).
4. This report concludes that, like most successful organisations (Bailey et al., 2000), Barclays has a low propensity for the adoption of the political approach to strategy development. The political approach to strategy is typified by imbalances of power and partially conflicting strategic objectives, characteristics that are not conducive to strong organisational performance.
5. This research also concludes that strategic business units within Barclays are not necessarily constrained by the environment and this is illustrated by a low score on the enforced choice dimension, another characteristic of successful organisational performance (Bailey et al., 2000).

## **6.7.2 Analysing Strategy Development Processes Across Barclays**

Analysis of strategy development processes across Barclays produced key conclusions:

1. Consistent with the findings of Bailey's (2000) original thesis, the strategy development process at Barclays is multi-dimensional and therefore not characterised by a single unitary dimension. Consequently, strategy development processes at Barclays are not mutually exclusive but transpire in combination, most notably the incremental approach to strategy development and the planning dimension.
2. The correlations in the data at the Barclays Group level are entirely consistent with the ten key relationships that were predicted through the work of Bailey et al. (2000). Of these ten relationships, six are statistically significant at the 1% level, one at the 5% level, and three are not statistically significant. These results show a high level of consistency with the data presented in the academic literature (Bailey, 2000) and published in previous research (Bailey et al., 2000; Fishwick et al., 2000; Collier et al., 2004). No other significant correlations were evident in the Barclays Group results.
3. Analysis of the research data across the seven clusters in the Barclays Group produced four statistically significant correlations: first, a positive correlation between command and enforced choice (3); second, a positive correlation between command and culture (3); third, a positive correlation between incrementalism and culture (1); and finally, a negative correlation between incrementalism and enforced choice (1).
4. This report concludes that the relationship between command and enforced choice is peculiar to Barclays. Although the Group is organised into seventeen business units and seven clusters, it appears that responsibility for strategy development process is perceived to reside in the Group Centre, hence the mixture between command and enforced choice.
5. This report concludes that the correlation between command and culture is a product of the original design of the questionnaire (Bailey, 2000) – the problem being that the command approach to strategy is concerned with 'who' is responsible for strategy development, whereas the other five dimensions are concerned with 'how' the process is executed. Consequently, a mixture of the command dimensions with other approaches to strategy development is inevitable.

### **6.7.3 Strategy Process And Perceived Environmental Uncertainty**

Examination of strategy development processes within the context of perceived environmental uncertainty across the Barclays Group produced five key conclusions. These conclusions are set out below:

1. There are significant differences in the processes that are applied for developing strategy by the seventeen strategic business units within the Barclays Group.
2. There are also significant differences in the degree of uncertainty and the level of complexity being experienced by strategic business units across the Barclays Group. However, none of the strategic business units is deemed to face a significantly higher or lower rate of change than elsewhere across the Group.
3. There is only one significant relationship between strategy development processes and the degree of uncertainty being experienced by the various strategic business units in the Barclays Group.
4. There is a series of statistically significant relationships between strategy development processes and the ability to cope with the degree of uncertainty, the rate of change, and the level of complexity. The most notable relationship is the negative correlation between the political dimension to strategy development and the ability to cope with uncertainty, change and complexity.
5. There is also a series of statistically significant relationships between strategy development processes and the importance of being able to cope with the degree of uncertainty, and the level of complexity. There are no significant relationships between strategy development processes and the perceived importance of being able to cope with the rate of change.

#### **6.7.4 Considering The Managerial Implications**

When considering the managerial implications of the relationship between strategy development processes and perceived environmental uncertainty across the Barclays Group, there are eight key conclusions. These conclusions are set out below:

1. Organisational performance (value creation) at Barclays during 2003 was superior, both in terms of comparison with previous performance, and when evaluated against peer organisations in the UK banking and financial services industry.
2. Through this study, this research concludes that it is possible to discern strategy development processes across the various clusters in the Barclays Group and compare them with organisational performance.
3. This research concludes that there is a significant positive correlation between superior organisational performance and the incremental and planning dimensions to strategy development. This conclusion is consistent with the study by Bailey et al. (2000).
4. This research concludes that there is a significant negative correlation between superior organisational performance and the political and enforced choice dimensions to strategy development. This conclusion is also consistent with the conclusions drawn by Bailey et al. (2000).
5. This study is unable to conclude that there is a significant negative correlation between superior organisational performance and the degree of perceived environmental uncertainty being faced by the strategic business units within the Barclays Group.
6. This investigation is also unable to conclude that there is a significant positive correlation between superior organisational performance and the ability of the various strategic business units to cope with perceived environmental uncertainty.
7. This research is able to conclude that there is a significant positive correlation between superior organisational performance and the importance of being able to cope with perceived environmental uncertainty.
8. This investigation is able to conclude that when assessing the importance of being able to cope with perceived environmental uncertainty, strategists interpret this quality as the level of value contributed to the Barclays Group.

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