The management of credit risk attitude in Australian retail banks is examined in this thesis. An underlying query is why retail banks repeatedly have been “economically irrational” in managing credit risk across numerous credit cycles. The period of study is 1996-1999 - characterised by a benign economy, intense competition and technological/analytical innovations.

Initially, the theory of credit rationing, which is an economic construct, is examined. Subsequent analysis of the data uses models from the theories of decision making under uncertainty (particularly prospect theory), organisational culture/climate and the Balanced Scorecard. Based on the grounded theory approach, the largely exploratory research incorporates data, theory and methodological triangulation. The research design includes individual interviews, focus groups and one questionnaire, with participants including Senior Credit Managers and Lending Officers.

Several models are developed. The multi-level model of “credit culture” is created to incorporate: Organisation culture, which resides at the subconscious, enduring “assumptions” level; Credit principles/culture, which resides at the relatively enduring “values” level and is the credit functions’ interpretation of organisation culture; Credit risk attitude, which is the Senior Credit Managers’ weighting of the credit risk versus income reward tradeoff at a point in time; and Credit infrastructure/climate, which resides at the behavioural level and operationalises the credit risk attitude through the controls and disciplines by which credit risk is managed throughout the organisation.

The overall model of credit risk attitude across the business cycle incorporates the phases of shock/remorse, resolve, cautious optimism and disaster myopia. The drivers of credit risk attitude model highlights the tradeoff between revenue growth and the visibility of credit losses (particularly the availability, threshold and representativeness heuristics). The Credit Confidence Survey measures the credit standards currently being applied. The Balanced Credit Scorecard provides a performance measurement framework with the dimensions of credit principles, policy, risk management methods, business processes/systems, staffing and controls. Additional heuristics/ motivators affecting individual and group decisions also are outlined.

A primary conclusion of the research is that retail credit managers benefit from using advanced risk management techniques to maximise the risk-adjusted return on assets, whilst maintaining non-volatile losses within the FI’s risk appetite.

Declaration relating to disposition of project report/thesis

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Signature             Witness       Date
Managing the Credit Risk Attitude
in Australian Retail Banks
across the Business Cycle

Volume 1 (of 2)

Jennifer A Fagg

2002

Thesis submitted in partial fulfilment of conditions for award of
PhD at University of Sydney
Acknowledgements

I am immensely grateful for the support I have received from many people over the years. This thesis has been made possible only by their contribution, particularly those listed below.

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To the examiners, I appreciate the time and effort you have taken to raise the issues and provide comments to improve the final quality of the thesis.
Dedication

This thesis is dedicated to my loving and generous mother, who died too young.

Wherever you are, Mum, I know you are looking out for us and you will be proud that this thesis has been completed.
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Credit losses are a cost of doing business in the retail lending market. However, the excessive level of unexpected credit losses incurred in Australian banks in the early 1990s highlight that the financial institutions’ core competency of credit risk management is not always managed well. The troubles experienced by financial institutions (“FIs”) are not unique to the most recent business cycle. As noted by the Deputy Governor of the Reserve Bank of Australia, Thompson (1997), all of the major periods of stress in Australian banking have been caused by credit losses. In addition, the management of credit risk has become more challenging over the last decade, as retail lenders have found themselves in previously uncharted territory: A deregulated market with intense competition and dramatic technological / analytical innovations. A review of the literature has not identified any comprehensive models which specifically address credit risk management in retail banks across the business cycle.

Given this historical context, the key question the study addresses is:

**How have retail banks in Australia established the credit risk attitude and managed its application in loan origination across the business cycle, focusing on the period 1996-1999?**

This Introductory Chapter provides an outline of the background, the research problem, rationale for the research, the methodological approach and the individual units of research.

### 1.1 Background to the thesis topic

This Section discusses the recent history of credit risk management, the FIs “irrational” behaviour in not learning from prior cycles and existing research into the retail credit risk function.

#### 1.1.1 The recent history of credit risk management

Prior to the 1980s, banks in Australia were subject to a high degree of regulation, with direct controls. Deregulation from 1983 onwards lead to increased competition in the financial sector, argued by Boynton (1997) to provide an impetus for technical, allocative and dynamic (innovative) efficiency.

However, the extent of the growth in credit to the business sector following deregulation was not expected (Boynton, 1997). On the supply side, the amount of capital in the sector rose from $4.5 billion in 1983 to $20 billion in 1998. From the demand side, the increase in credit by sector as a
percent of GDP rose from 54% in 1980 to 90% in 1990. The increase in business lending was the major driver, increasing from 26% to 58%.

Between the late 1980s and the early 1990s, during the first significant post-war banking cycle, Australian banks experienced aggregate losses of around $25 billion. The peak level of non-performing loans - running at 6% of assets - was experienced in early 1992, compared to 2.5% in 1994 (Fraser, 1994). In 1992, banks as a group experienced the first negative return on equity. There was re-capitilisation or takeover of major FIs, including some State banks (State Bank of Victoria and State Bank of South Australia) and some non-bank FIs (a Victorian based building society - Pyramid, a friendly society - OST and a fund manager - Estate Manager).

1.1.2 Irrational Behaviour: FIs do not learn from prior credit cycles

According to the neo-classical economics’ school, organisations in a competitive environment will act in a rational manner, based on complete information and contracts, to maximise profits across the business cycle. However, FIs do not exhibit practices to maximise the long-term profit of the organisation, given the impact of credit losses on the bottom line.

A series which reviewed the performance of Westpac/AGC up to and through the early 1990s provides an example of FIs’ behaviours (Financial Review, Dec 5, 1995):

"And the great fundamental flaw committed by nearly all banks was to try to maintain market share in an increasingly competitive environment. Effectively, a bank that is competing to lend money tends to cut its margins, lower credit standards, take worse and less security for its loans and to reduce the documentation. Westpac - and many other banks - did all these things."

Another example, which reflects the pattern of activities through the perspective of a senior loan officer, is provided by a fictional character. In the novel “A Man in Full”, Wolfe (1998) captures the essence of disaster myopia, which is examined in more detail and research depth in this thesis:

“In the 1980s Prudent hadn’t stood a chance; nor in the late 1990s. The boom was on, and the banking business had caught fire, and a wonderful giddy madness was in the air. The line officers from Marketing were pushing through loans, their “big sales”, with a pell-mell abandon. If you were a referee who insisted on detecting the madness and blowing your whistle, they just ran right over you, laughed at you, made you feel timid and old-fashioned. Like every other senior credit officer, Peepgass had signed off on tens of millions of dollars’ worth of loan with “self-destruct” written all over them …But to tell the truth, that explanation, sad as it was, wasn’t the whole story. In fact, he had been swept up in the madness himself. Like many other
bank officer, he had started getting a euphoric lift out of being part of the grand schemes and imperial visions…” (pg 239).

A key issue is that FIs do not seem to learn from prior cycles. As Furash (1998) comments:

“We should learn from our experiences; but regrettably, we seem to let the urgencies of the moment, competition, and profit pressures overcome good sense. We have short memories. History does repeat itself, albeit old temptations repeated in a new form. It’s almost as if the industry’ collective memory is periodically wiped out by believing that this time the same old consequences will not result from the same actions. Our hopes are always for the best and can cause us to override troubling signals and denied those who take a more conservative approach to things as being alarmist or fuddy-duddies and fossils.” pg 88.

Similarly, Mueller (1994) argues that “the dark side of credit history” seems to repeat itself about every eight to ten years.

1.1.3 Research in retail credit risk management

Credit risk management in retail lending is not a widely researched and documented field.

Empirical research

A review of the literature has not identified any comprehensive theoretical models which specifically address the issue of credit risk management in retail banks. One diagnostic tool has been identified, which analyses a banks’ credit cultures in terms of four possible credit cultures – values driven, immediate performance driven, market share / production driven and unfocused (McKinley, 1990). The tool appears to be based on McKinley’s practical experience (senior executive vice president, Bank South Corporation) and commentary was provided by a review panel of Senior Credit Managers. Barrickman and McKinley (1994) provides a comprehensive reference. In addition, two practical examples of the fluctuations in the focus on credit risk over the business cycle are provided by Mueller (1998) and KPMG (1996).

About a dozen articles on credit culture and related aspects of managing risk are included in the journal written by and for credit practitioners, the Journal of Lending and Credit Risk Management (formerly the Journal of Commercial Lending). A monthly Journal in 1998 focused on issues related to “credit culture”.

The areas in which extensive, rigorous research in retail lending has been conducted are very much at the pragmatic level. One such area is the examination of the effectiveness of artificial intelligence
models as compared to judgemental decision making. Examples include: Stone (1990), Technological Change Committee (1987), Lewis (1992) and Neagle (1995). Another area of practical research is provided by two surveys conducted by government bodies in the United States examining the comparative “tightness” of credit standards, namely: The United States Federal Reserve’s Senior Loan Officers Survey and the Officer of the Comptroller Survey. A third study is the 1983 Federal Reserve Survey of Consumer Finances.

One area in which there has been significant interest is credit risk modelling associated with capital adequacy (for example, the Federal Reserve Board, New York Conference, overviewed by Perraudin (1998). However, the focus again is on corporate models driving portfolio choices.

No equivalent research within Australia has been identified. There does not appear to have been significant research conducted into the underlying reasons for the behavioural manifestations of credit risk managers. Neither have the perceptions of the retail Lending Officers’ (who hold positions of comparatively low organisational status) been investigated - the studies have addressed the senior managers’ perspective. No practical “toolkits” for managing retail credit risk throughout the organisation from which insights have been identified.

However, whilst retail credit risk has not received extensive academic research, there appears to have been a heightened interest in more pro-active credit risk management during the second half of the 1990s. For example, the key writings in one issue of the Journal related to factors associated with “credit culture” towards the end of the 1990s. Further, two international conferences have been held towards the end of the 1990s specifically addressing credit risk management.

There are a number of reasons why retail credit risk management has not been heavily researched. Firstly, retail banking in Australia has been viewed as a low risk business for many years. Not only have credit losses in the retail sector been comparatively minor, but the previously regulated environment constrained the Bank’s lending behaviour. The higher risk credits were booked by the finance companies, which compensated with a higher lending margin. Secondly, the losses incurred in the early 1990s were mainly in the commercial/corporate banking arena. Hence, these lending areas received the focus of attention in subsequent analysis.

A third reason for the lack of research is that retail credit risk management is one of the few functional areas which traditionally has been learnt by experience, rather than academic pursuit. Credit risk is not widely taught at a graduate or post-graduate levels, unlike functions such as marketing, business, accounting and human resources. As noted by Kelley (1994), the role of the credit risk professionals is not well understood. Another reason is that retail lending does not have an “exciting” image as
compared to corporate lending. Retail credit risk management is more closely aligned with manufacturing production management than the “high-powered, deal making” atmosphere of corporate credits. The emphasis could change as banks focus on the earning power of the retail market. Finally, credit risk generally has not received the focus afforded traded market risk throughout the 1990s. The greater emphasis on traded market risk at least partially reflects the comparative ease with which it can be analysed, based primarily on the vastly shorter timeframes in which effects are observed. With credit risk, it typically takes years for the effect of the credit decision to be known.

**The related theoretical literature**

Commercial credit risk management has received comparatively extensive research, centring on the theory of credit rationing. The applicability of commercial lending principals (on which the theory is based) are examined in this thesis.

A high level model with some underlying constructs is provided by Guttentag and Herrings’ (1984) article on the theory of credit rationing and financial disorder, developed for commercial lending. The model incorporates empirical literature on decision making under uncertainty, to establish hypotheses regarding the way in which lenders form expectations of default.

### 1.2 Research problem and questions

As stated previously, the research problem this thesis addresses is:

> How have retail banks in Australia established the credit risk attitude and managed its application in loan origination across the business cycle, focusing on the period 1996-1999?

The retail credit lending environment in Australia has changed greatly in the 1990s and FIs have had to respond to this. New tools to describe the risk taking and decision-making behaviours in the credit risk management organisational context have also emerged or developed significantly during this period. The research has collected data using the methodology of grounded theory, informed by these emerging theories/models, to study how changes have affected (and can affect) the lenders in the changing retail environment. A series of models/framework of retail credit risk management has been the outcome. Table 1.1 outlines the key questions and hypotheses, the models related to the questions and the major benefits associated with the models.
TABLE 1.1 – The research questions

<table>
<thead>
<tr>
<th>Research questions and hypotheses</th>
<th>Model/framework developed and benefit</th>
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<tbody>
<tr>
<td><strong>1. Are there factors in the late 1990’s operating environment which make retail credit risk management fundamentally different?</strong>&lt;br&gt;Deregulation, innovation and the shock credit losses of the early 1990s have changed the retail lending environment. What are the key forces and has retail credit risk management fundamentally changed as a result?</td>
<td>A summary of the key forces emphasises the role of the credit risk manager has changed from the traditional “gatekeeper” (minimising losses) to a responsive role using advanced portfolio management techniques to focus on customer profitability.&lt;br&gt;The summary provides a new integration of issues from a variety of sources.</td>
</tr>
<tr>
<td><strong>2: Can the theory of credit rationing explain the cyclical behaviours demonstrated by retail lenders?</strong></td>
<td>The congruence between the theory of credit rationing and behaviours demonstrated in the Australian retail lending market are outlined.&lt;br&gt;The hypotheses are confirmed.&lt;br&gt;To my knowledge, such analysis has not been conducted previously.</td>
</tr>
<tr>
<td><strong>3: What are the primary influences of the credit risk attitude and how do they vary?</strong>&lt;br&gt;The key factors driving credit risk attitude in retail lending across the business cycle do not appear “economically rational”. The questions the thesis addresses are:&lt;br&gt;▪ What are the underlying reasons for the decisions driving the behaviours?&lt;br&gt;▪ What are the behavioural manifestations – that is, the cyclical trends demonstrated.</td>
<td>The two credit risk attitude models supported by a listing of heuristics/biases provide:&lt;br&gt;▪ A framework to analyse apparently anomalous behaviour in the market&lt;br&gt;▪ A means to guard against cyclical, excessive credit losses by acknowledging the underlying reasons and the behavioural manifestations of the losses&lt;br&gt;▪ A series of potential perceptual biases which Senior Credit Managers should be aware of which may lead to the Managers’ inaccurate assessment of the issues.&lt;br&gt;I am not aware of equivalent work in retail credit.</td>
</tr>
<tr>
<td>Research questions and “hypotheses”</td>
<td>Model/framework developed and benefit</td>
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<tr>
<td><strong>4: What are the credit standards currently being applied in Australian FIs?</strong>&lt;br&gt;A means to track credit confidence in the Australian market is required, to identify how “easy” or “tight” are the credit standards and policies being applied. A tool for determining the current credit risk appetite could be adopted from approaches available in the United States. It has been hypothesised that the nine largest Banks and medium FIs have essentially the same issues with credit risk management, although the Top 9 banks have a higher level of sophistication of data and analytics.</td>
<td>The Credit Confidence Survey:&lt;li&gt;Monitors trends in credit standards based on self-report by Senior Credit Managers in the Top 9 banks and medium FIs&lt;/li&gt;&lt;li&gt;Identifies factors associated with changes in credit standards&lt;/li&gt;&lt;li&gt;Identifies the key issues forecast for the next twelve months&lt;/li&gt;&lt;li&gt;Assists the credit risk manager in communicating the incumbent bank’s and the industry’s credit standards.&lt;/li&gt;</td>
</tr>
<tr>
<td><strong>5: Is there an integrated framework for managing the credit risk attitude throughout the lending organisation?</strong>&lt;br&gt;It is hypothesised that an integrated approach is required to manage alignment between the Senior Credit Managers’ credit risk appetite and the Lending Officers perceptions, supported by the credit risk infrastructure and organisational practices. Further, it is expected that such a framework will need to be developed. A related query is whether the Senior Credit Managers and Lending Officers have similar ideas as to what comprises a quality credit culture, but with different emphasises. Hence, the methodology includes both groups.</td>
<td>The “Balanced Credit Scorecard” provides:&lt;li&gt;A comprehensive, integrated list of dimensions. The “toolkit” will provide a practical means of measuring the FIs’ capability in the credit process at the behavioural level&lt;/li&gt;&lt;li&gt;A performance measurement and management framework for ongoing management usage.&lt;/li&gt;I am not aware of equivalent work in retail credit. No studies incorporating (junior) Lending Officers’ perceptions have been identified.</td>
</tr>
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</table>
TABLE 1.1 – The research questions (continued)

<table>
<thead>
<tr>
<th>Research questions and “hypotheses”</th>
<th>Model/framework developed and benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.  Do individual and focus groups generate similar information?</td>
<td>A mixed interview approach allows the examination of the effect of different interview styles and interviewee groups.</td>
</tr>
<tr>
<td>The use of individual and focus group interviews allows (limited) comparison of the data obtained from the two methodologies.</td>
<td>Only one prior study of the comparison of interview and focus group results has been found.</td>
</tr>
<tr>
<td>7.  How do the various elements of research form an integrated whole of decision making in credit risk management?</td>
<td>The credit culture model:</td>
</tr>
<tr>
<td>It is hypothesised that a model is required to show how the various data, theory and methodological sources come together.</td>
<td>▪ Provides a snapshot of the integration of theory and practice</td>
</tr>
<tr>
<td></td>
<td>▪ Highlights that credit culture/principles and credit infrastructure operate at different levels and must be actively managed.</td>
</tr>
<tr>
<td></td>
<td>I am not aware of equivalent work in retail credit.</td>
</tr>
</tbody>
</table>

A key assumption of the thesis is that senior credit managements’ attitude to credit risk is set at the strategic level and is reflected in the credit controls and disciplines by which strategy, policy and operations are managed throughout the lending organisation. Thus, it is assumed that “credit culture” operates at two levels: The credit risk attitude and its operationalisation throughout the organisation. This assumption is tested in each piece of research.

In addition to testing and developing the seven ideas as research foci, the thesis hopes to provide models that may help credit professionals to recognise when a particular error in judgement is likely, intuition cannot necessarily be trusted, and more critical or analytical thinking is required (adapted from Kahneman and Riepe, 1998). The models/framework could be used to support communication throughout the FIs to move towards a more considered and rational approach to credit risk management. Further, the diagrams could assist Senior Credit Managers in obtaining focus and resources on the credit cost line to avoid excesses. The models also could provide educational material for line managers who are not experienced in credit risk management.
1.3 Definitions, delimitations of scope and assumptions

The key definitions of this research question are addressed in this Section, along with delimitations of scope and assumptions.

1.3.1 Definitions and assumptions

The term “credit risk attitude” is used throughout the thesis to reflect the tightening or easing of credit standards. The term could be used interchangeably with the term “risk appetite”. The credit risk attitude is set at the strategic level by senior management and shows the organisation’s weighting of the (credit) risk versus (income) reward tradeoff at a point in time. The credit risk attitude is operationalised through controls and disciplines by which strategy, policy, and operations are managed.

The term “credit culture” has been used by credit practitioners in a very broad sense to encapsulate both the credit risk attitude and its operationalisation. There does not appear to be a universally accepted definition of credit culture. An underlying assumption of this thesis is that “credit culture” exists at two levels. The Senior Credit Managers establish the credit risk attitude of the organisation, which sets the financial institution’s appetite for credit risk. The next level is the mechanism whereby the risk appetite is operationalised, through the controls and disciplines by which strategy, policy, and operations are actually managed throughout the organisation.

The term “business cycle” has not been tightly defined, but refers generally to the cyclical movement between economic downturns (negative growth in the economy/a recessionary period) and economic growth periods (positive growth in the economy / a “boom” period).

The term “FI” refers broadly to retail banks or financial institutions which lend for non-business purposes to salaried employees. This provides the “intent” of the definition, and is not a strict definition of the retail market - the definitions applied by the various FIs differ.

Finally, the end-to-end credit cycle as assumed in this thesis (based on the researcher’s experience) is shown in Figure 1.1.
1.3.2 Delimitations of scope

**Australian financial institutions included in the sample**

The study examines the major retail banks in Australia, focusing on the top nine trading and saving banks in terms of assets held. Representation from the “Big Four” banks which hold in excess of 75% of bank market share (RBA Bulletin, 1998) and four of the next largest six banks has been included. In total, input from financial institutions representing in excess of 80% of market share has been obtained.

Overall, the aim of the sampling is to be sufficiently homogeneous for depth of information from FIs and to be sufficiently heterogeneous to provide different individual perspectives. The participants in the various units of research come from different institutions of different sizes, which have had different experiences across business cycles.

Other financial institutions were excluded from the interview population as the FIs do not represent a large percentage of the total share of the retail market. In addition, restricting the sample to the bank sector excludes any potential effect of generic differences in organisational cultures and practices which could occur between the smaller credit unions/building societies and the larger banks. Further,
restricting the sample to the Australian domestic market decreases the probable effect of cross-cultural biases in terms of personality / group / work practice interactions. Finally, the focus of the thesis is on the depth of (exploratory) analysis rather than generalisation.

The only exception to the sampling approach is with the Credit Confidence Survey, which was based on an existing research instrument. The sample was extended to financial institutions in Australia with assets in excess of $1 billion, as the express purpose of this component of the research was to increase the generality of findings.

The perceptions of Banks’ customers were not sought or researched.

**Timeframe**

The pieces of research extend from late 1996 to early 1999. The period represents a relatively benign component in the business cycle for credit. Credit losses were comparatively low, profits were comparatively high and economic fundamentals were sound. There could be differences in emphasis of responses if taken across different periods of the business cycle.

**Aspects of the credit risk function examined**

The thesis does not address the extremely broad topic of how to micro-manage all facets of the credit cycle (from strategy to operations) across the retail lending organisation. Instead, the thesis focuses on identifying the key strategy and policy issues in setting the credit risk attitude and its operationalisation for the successful, long term management of credit risk. Emphasis has been placed on the credit initiation (loan origination) function alone, consistent with most articles reviewed.

### 1.4 Rationale for the research: The importance of credit risk management

The research topic appears particularly pertinent given the importance of excellent credit risk management in the new lending environment and the potential downturn of the business cycle, discussed in this Section. The paucity of existing research was highlighted previously.

### 1.4.1 The importance of excellent credit risk management

It is critical that credit risk is managed well across the business cycle, with credit costs being well dimensioned and achieved.
Size of credit costs within FIs
Credit costs are a major component of the FIs operating costs. For example, since 1985, the ratio of credit losses to operating income has averaged around 9% to 18% for the Big Four banks (KPMG Financial Institutions Performance Survey, 1985 to 1999).

Further, good credit risk management can decrease the overall operating cost. Within the Australian retail sector, a study by the Credit Reference Association of Australia (1995) into profiling and privacy estimates that credit and behaviour scoring techniques equate to a saving of 200 basis points of costs (or, equivalently, allow credit card rates to be reduced by 2%). As loan spreads have been squeezed across the industry, there is less room for error in the selection and pricing of transactions, or the diversification and timing of portfolio decisions (Wilson, 1998).

The cost of not managing credit well is highlighted by the RMA (1997) report conducted in the USA on adding shareholder value through credit risk management. The report examines the commercial lending market from 1989 to 1997. Banks state that the return on investment on advanced portfolio management techniques exceeds 1000%, in terms of the incremental spending on credit risk management tools versus reduced credit losses.

Volatility and capital
The more important influence in improved risk management across Australian banks has been the potential for such systems to provide less volatile and improved shareholder value in an increasingly competitive market (Gray, 1998). There also has been recognition of the need for risk-adjusted profit and performance measures.

There is a benefit to shareholders of managing credit loss to expected levels over the business cycle. For example, in the US, RMA (1997) reports that the best credit performing banks demonstrated 56% higher average annual total return than the lower performing banks, with only half the price volatility as the additional returns were earned. Further, the report found that the stock market reacted quickly and differentially to credit losses. Nearly all bank stocks reached a high in 1989, with their lows being reached only 12 to 18 months later. During the period, the best performing banks had a comparatively moderate decline of 33%, with the share prices of the surviving, lowest performing banks dropping 75%.

Capital is essential. The capital ratio has declined since the mid 1990s as banks have more aggressively managed their capital positions to achieve high rates of return in the competitive market. As Gray states:
“To the extent that a bank can demonstrate more sophisticated risk measurement approaches, and good operational controls, then it may be reasonable to expect that bank’s capital holding to be less, all else being equal, than a bank with less accurate measures and weaker underlying controls” (pg 16).

**Credit risk is a core competence**

Credit risk is one of the few remaining core capabilities/competitive advantages which the established, larger lenders have over the more nimble and specialised non-traditional entrants. Three (interrelated) core competencies are: (i) Detailed demographic, financial and credit information of the existing customer base; (ii) A wealth of practical credit knowledge acquired over years of operation; and (iii) The reputational capital of being a secure place to invest funds, with the perception of a public safety net.

The focus on competitive advantage is highlighted by Gray (1998, pg 8):

“Only through improved measurement will it be possible to assess where an institution’s comparative advantage resides. This has been the catalyst to the work now being carried out within the Australian banking system, focusing on the measurement of risk, performance and capital”.

Finally, the CSFI (1998) survey of mainly European banks highlighted that the biggest worry, management of risk, was what many regard as bankers’ core competency. The problems identified included inadequate controls, failure to understand the dynamics of a fast-moving business and in the worst cases, incompetence and greed.

**Other revenue and cost lines**

Good management of the credit cost line benefits the FI through four major profit drivers, not just decreased credit losses. Other revenue and cost lines are tightly associated with credit risk are summarised the following figure.
The size of the retail lending industry

The lending industry is critical to the overall economy and market place. Around one in three Australians hold shares, either directly or indirectly, in Australian banks. About four billion dollars in dividends were paid annually (Australian Bankers Association, 1999).

Within the FIs, there is a greater focus placed on the retail sector in the 1990s as compared to the commercial/corporate market. The changed focus reflects the comparatively wide profit earnings and lower volatility in retail lending (Fagg and Nicol, 1999). It also is more important to understand and pro-actively manage retail credit risk, as FIs move into new market segments in the attempt to increase volume and are exposed to decreased loss absorption capacity, as interest rate spreads are squeezed.

From the consumers’ perspective

Prudent credit standards have a critical impact from the consumer’s perspective. The mid- to late-1990s saw a period of economic growth with low interest rates and low inflation. A downturn in the economy could seriously impact consumers’ financial position, as consumers are carrying a higher level of debt. For example, private credit in Australia increased by around 35% from 1996 to 1998 (Reserve Bank of Australia Bulletin, 1999). Further, economic hardship could result from the failure of financial institutions, directly and through the systemic effect of financial instability on the economy (Davis, 1995 discussed the issues).
1.4.2 The changes in the retail market and “credit risk dinosaurs”

The deregulated market with intense competition and dramatic technological / analytical innovations has lead to a paradigm shift in the role of credit risk management. To maintain their credibility and ability to add value to the organisation, credit risk managers have to control and manage the new environment – or risk organisational extinction. Traditionally, credit managers have had to be experts in a range a disciplines (including marketing, accounting, business law, finance, and so on) to have the knowledge to provide the credit risk balance to allow profitable sales increases (Kelley, 1994). The new style credit risk managers have to retain these skills and also adapt to a statistically driven, automated portfolio-based approach to lending (as compared to the traditional one-on-one transactional approach).

In addition, Senior Credit Managers have had to be responsive to customers (for example, McKinley, 1998) and move from the objective of simply minimising credit losses to working in partnership with the marketing management to maximise profitability (as evidenced in a number of articles in the Journal of Lending and Credit Risk Management).

A more recent trend has been the emergence of “enterprise risk management”, requiring another transformation of some credit organisations. Centralised and independent risk management departments have been formed to assess all risks faced by the FI, including credit, market, operational, compliance, strategic, legal, and so on (for example, Hewlett Packard White Paper, 1998; Furash, 1996; Paul-Choudhury, 1996).

The paradigm shift in the industry also re-inforces the requirement for further research.

1.4.3 Complexity of the end-to-end organisational change

Finally, changing credit risk management within an organisation is complex. Taking credit risk management to the next level of sophistication within the FIs requires an end-to-end, organisation wide culture change. For example, Nimmo (1997) refers to the challenges of improving risk management as requiring:

“significant cultural change to make it effective. Implementation creates a great deal of discomfort amongst bank staff because it requires people to move away from traditional ways of doing things, to ways that are more logical but nonetheless familiar. There is typically huge resistance to that process of change. Nevertheless, these changes have to be implemented in such a way that they form a fundamental part of the management of financial institutions” (pg 245).
The methodological approach taken in the thesis

The objective of the thesis is to develop a holistic framework which both explains how the credit risk attitude is established and can assist in managing credit risk throughout the retail lending organisation. The topic is broad and the field has not been extensively researched. As the reasons for the retail lenders’ demonstrated behaviours undoubtedly are multi-faceted and complex and decisions are being made under conditions of uncertainty and incomplete information within an organisational context, a range of psychological, sociological and economic constructs have been examined. Further, it has been posited that the opinions of Senior Credit Managers and Lending Officers are needed to ensure a holistic view of the credit organisation is obtained.

As a result, the research has been based on a “grounded theory” methodology (for example, Glaser and Strauss, 1967; Strauss and Corbin, 1994, 1998). The objective is to develop classifications and theoretical models grounded in social/organisational context. The researcher constantly and recursively compares research interpretations against the data - a process known as the “constant comparative method”.

The research also been primarily exploratory. In addition, the research has been conducted at the practical end of the research continuum, rather than the theoretical end. There has been an attempt to balance this by analysing the underlying reasons for behaviours. Further, the research has focused on encompassing a breadth of issues, rather than drilling down into one specific theoretical area. In addition, the research format has acknowledged that a cultural, attitudinal change is required for the end-to-end credit organisation.

The research methodology also has focused on direction rather than magnitude. It has been more of an imperative to identify the key relevant factors than to weight their relative importance. Further, a number of theoretical frameworks have been integrated. The alternative was to develop a single theoretical model at a very high level of abstraction. However, as noted by Monkhouse (1995), abstraction reduces the applied nature of a model. In addition, the research has incorporated methodological, theoretical and data triangulation (Janesick, 1994). The research also has blended quantitative and qualitative methodological approaches. The methodological issues have been specifically identified and incorporated into the research design, recognising both qualitative and quantitative approaches:

“seek to find causally predictive relationships and, eventually, to devise ways to influence effectively behaviour in the marketplace” Templeton (1994, pg 57).
Another attribute of the research is that it has been conducted across levels within the organisation, integrating feedback from Senior Credit Managers and Lending Officers to obtain a holistic model. Finally, the research approach has attempted to combine sufficient depth of analysis to gain a qualitative understanding with a broad enough sample to give some comparative leverage (Denison, 1996). Denison comments that major contributions traditionally have been made using the type of design where a relatively small sample of organisations (three to eight organisations were used in the studies quoted) have been studied with a deep understanding, while trying to develop generalisations that can explain the differences and similarities among the organisations.

In establishing the theoretical framework, there have been two key dimensions which appear to interact in the decision making processes. The first dimension is the degree of rationality in decision making, given the level of information available. The second dimension is the impact of group dynamics, as compared to individual processes, on decision making. In addition, the Balanced Scorecard approach provides a framework from which to examine the core dimensions required for a quality credit risk infrastructure. The credit practitioners’ literature provided insight into the concept of “credit culture”.

Figure 1.3 shows the interaction between the different aspects of this thesis – theory, practitioners’ frameworks and thesis research.

FIGURE 1.3 – Overview of theories and research units in the thesis
1.6 Units of research and format of the thesis

This Section provides greater detail of the components of this thesis.

1.6.1 The new lending environment

The research process highlighted the need to examine the major factors affecting the retail lending market through the late 1990s and into the 21st century, which have resulted in a fundamentally different industry and operating environment over this business cycle. Chapter 2 provides an outline of “The New Lending Environment”, which provides context for discussion in the rest of the thesis.

1.6.2 The theory of credit rationing

The obvious area to commence a review of the existing theories is the theory of credit rationing. The fundamental premise is that price rationing (where prices in the form of interest rates charged reflect the credit risk of the borrower) and quantity rationing (where some borrowers will never be offered credit, due to the existence of moral hazard and adverse selection) drive the level of credit offered to borrowers. A review of the theoretical underpinnings of the theory is provided in Chapter 3 – Analytical Tools I.

Macro-level economic statistics have been examined for possible insights into the association between the level of private credit held, interest rates, bank credit losses, profitability, etc. Other areas examined include Bank Annual reports, bank practices and US risk measures. The theory of credit rationing does not appear to provide significant insight as to the reasons why the credit risk attitude varies across the business cycle in retail lending, as presented in Chapter 5 – Individual Research Results.

1.6.3 Theories relating to decision making under uncertainty

It became evident that another approach was required to determine the underlying factors which affected the decision making of senior management in establishing and managing the credit risk attitude of the organisation across the business cycle. The next research phase refers to psychological constructs developed to explain human behaviour when facing low-probability, high loss hazard events. A comparatively high level review of the decision making literature under uncertainty or incomplete information has been undertaken. The primary theoretical construct is “Prospect Theory” (Kahneman and Tversky, 1979), which provides a series of heuristics/biases to explain deviations from the expected “rational” model in conditions of risk/uncertainty. A number of related decision theories are outlined briefly also in Chapter 3 – Analytical Tools I.
1.6.4 Organisational culture and climate and “credit culture”

Organisational culture and organisational climate provide a theoretical model which appears particularly pertinent given the (unprompted) referral of the managers to: (a) the “credit culture”; and (b) the relative “strength” of credit as compared to other functional areas within the banks, such as sales. The organisational culture/climate models also appear appropriate as the interpretation of the credit risk attitude by credit risk officers appears to be heavily influenced by other group members and the organisational environment – and the constructs specifically address the perceptions of organisation members. Finally, the organisational culture/climate constructs provide a base to examine not only the underlying factors, but also how to implement change in the end-to-end credit risk process and culture.

As highlighted by Denison (1996), there is a considerable degree of overlap / duplication between the two areas. The study took the approach towards the interface between climate and culture demonstrated in the following figure.

FIGURE 1.4 – The interface between organisational culture and climate

![Figure 1.4](image)

Source: Original to author

The organisational culture/climate theories are discussed in Chapter 3 – Analytical Tools I.

1.6.5 “Credit culture”

“Credit culture” is a concept referred to by credit practitioners. Only two articles which directly refer to credit culture have been found in the academic-oriented journals. The writings by credit practitioners, largely in the Journal of Lending and Credit Risk Management, have been incorporated in the discussion on credit culture in Chapter 4 – Analytical Tools II.
1.6.6 The Balanced Scorecard measurement framework

A Balanced Scorecard is a performance measurement system which measures the few, key dimensions along which one must be successful to achieve the organisation’s goals. There is no weighting as to the relative importance of the dimensions - all are taken to be critical.

The Balanced Scorecard approach has been used to both identify what the desired credit risk management elements/dimensions are and provide a methodology to assist Senior Credit Managers and Lending Officers to work towards these. The approach supports the underlying principles applied in this thesis, although the analysis varies from the standard format in two key ways. Firstly, a Balanced Scorecard typically is developed within one organisation, whether for the entire organisation or an operational unit. However, the approach has been to establish a “Balanced Credit Scorecard” for the credit risk function. Secondly, the Balanced Credit Scorecard lists most of the key measurement areas which an organisation can choose from. There has been no attempt to identify the few, key dimensions and their related targets, as these vary for each organisation.

Chapter 4 – Analytical Tools II provides a summary of the Balanced Scorecard approach. Chapter 5 – Integrated Research Results details the Balanced Scorecard incorporating information from all of the units of research in this thesis.

1.6.7 Methodology

The grounded theory methodology and research design issues and dimensions are discussed in Chapter 4 – Analytical Tools II.

1.6.8 Interviews with Senior Credit Managers – drivers of credit risk attitude across the cycle

Using the data from the theories of decision making and my practical experience in executive management in credit risk as contextual background, a series of one-on-one interviews were held with Senior Credit Managers. The objective was to develop a model reflecting the Senior Credit Managers’ perceptions as to why the credit risk attitude varied across the business cycle.

Two credit risk attitude models were initially developed and then enhanced during the interviewing process. The model was further reviewed when new information has been collected throughout the remainder of the research process, consistent with the grounded theory methodology. Chapter 5 – Individual Research Results provides a more detailed outline of the methodology of the interviews, the analysis and the models of credit risk attitude across the business cycle.
1.6.9 Credit Confidence Survey

Following the qualitative interviews with Senior Credit Managers, a Credit Confidence Survey was developed to track how “easy” or “tight” were the credit standards and policies being applied by Australian financial institutions, from the Senior Credit Managers’ perspective. The Survey was developed to provide a systematic means to obtain the information relating to credit standards which could not be gleaned from traditional financial indicators. It was based upon the “Senior Loan Officers Opinion Survey” issued by the Federal Reserve Board of the United States, with some adjustments resulting from the ongoing literature review and feedback from senior credit practitioners. Chapter 5 – Individual Research Results provides an outline of the methodology and analysis.

1.6.10 Interviews with Lending Officers

As noted previously, to understand the interpretation of the credit risk attitude on the people affected by it at lower levels in the organisation (the Lending Officers), it has been necessary to obtain the perceptions of the Lending Officers directly. A mixed interview approach was used. Both one-on-one and focus group interviews were conducted in three of the Top Nine banks. The mixed methodology design both increased methodological robustness and allowed a comparison of the results obtained from the different interview styles.

The perceptions and experiences of Lending Officers have been examined for two key issues: (a) The drivers and communication of the credit risk attitude within the organisation; and (b) The requirements of a quality credit risk management culture / infrastructure. A summary of the research methodology, analysis and comparison of the different types of interviews are shown in Chapter 5 – Individual Research Results.

1.6.11 Integrated credit risk models

A summary of the models/frameworks integrating the various methodological, data and theory sources is provided in the Chapter 6 – Integrated Risk Models. The models include: The (revised) credit risk cycle models; The Balanced Credit Scorecard; The model of “credit culture”; Drivers of credit risk management in the 1990s compared to prior cycles (summarised from the Senior Credit Manager and Lending Officer interviews); and, An integrated framework of all of the models developed in the thesis.

1.6.12 Research conclusions

The thesis closes with the conclusions of the thesis’ research for credit risk managers and the challenges going forward.
1.7  In closing …

The thesis addresses the factors driving the setting of the credit risk attitude and its management in Australian banks across the business cycle, examining the period 1996-1999.

This first Chapter has provided the thesis’: Background; Research questions; Definitions; Delimitations and assumptions; Rationale for the research; Methodological approach; and Units of research and thesis format. The next Chapter provides context for the remainder of the thesis by providing an outline of retail lending environment in the 1990s.
The New Lending Environment

As discussed in the Introductory Chapter, the objective of the thesis is to identify the reasons why FIs establish the credit risk attitude across the business cycle and how they manage this throughout the organisation. In this Chapter, “the scene is set” by addressing the research question: What aspects of retail credit risk management have fundamentally changed over the current business cycle as a result of deregulation, innovation and the shock credit losses of the early 1990s?

The importance of the lending environment in the late 1990’s as compared to other cycles emerged during the research, particularly in the Senior Credit Managers interviews. Thus, whilst presented prior to the other research elements, the factors were actually analysed at the end of the research.

2.1 Background

Over the 1990’s, retail lenders have found themselves in previously uncharted territory: A deregulated market with intense competition and dramatic technological/analytical innovations. The main reason why the interface between credit risk management and the current business cycle is different from prior cycles is associated with the deregulation of the market in the 1980s. Deregulation has been widespread across OECD countries in the 1980s, including Australia. As noted by Hviding (1995), the reforms common to most countries have been the removal of most controls on credit, bank charges and interest rates, liberalisation of market access, and the abolition of restrictions on the movement of foreign exchange. The major factors affecting the offering of lending products in the Australian retail lending industry is summarised in Figure 2.1.
The early part of the 1990s was spent rebuilding the balance sheet. The initial focus was on allocating sufficient resources to deal with the immediate crisis. As the bulk of the problem loans were finalised the outstanding problem loans were quarantined. These portfolios were actioned by specialist teams of credit experts allowing the rest of the FI to move forward and deal with the new, emerging issues.

The severity of the credit losses in the early 1990’s in Australia had both negative and positive impacts on the long-term image and professionalism of credit risk management. On the positive side, resources were allocated to credit to not only fix the immediate problems but also build a robust infrastructure. With credit holding the short-term “power” in the tug-of-war between credit and marketing, there was both an opportunity and an organisational imperative to improve credit risk management capabilities. However, credit risk management also had an “image” problem, where its tarnished reputation had to be rebuilt by proving credit’s ability to establish a robust credit infrastructure.

As the industry moved into the second half of the decade, there was a fundamental shift in credit risk management approach in response to the changed retail lending environment. The focus on credit risk management also waned, associated largely with the industry competitive forces through the credit cycle. The key changes in the 1990s which are discussed in the remainder of the Chapter are shown in Figure 2.2.
2.2 Industry forces

The industry forces discussed are competition, credit-operating costs, marketing approach, industry structure, availability of capital and increased focus on retail versus corporate markets.

2.2.1 Competition

The increase in competition in the retail lending market is the most obvious change during the 1990s. One of the most profound effects has been the decrease in interest rate spreads, as shown in Figure 2.3.
The figure highlights both: The negative spread associated with the period around deregulation and during the peak of competition in the late 1980s; and the narrowing of the interest margin between 1993 and 1997. However, it should be noted that the interest rates are indicative only – the standard rate has been used, but there also are a range of “special” rates. Also, cheaper funding options than the 90-day bank bill rate may have been available from sources such as the deposit base and securitisation.

Retail lenders have five ways to maximise earnings (Matthews, 1994). Firstly, by expanding margins, where the main opportunity is in the migration to higher spread (and higher credit risk) portfolio segments. Secondly, lenders can enhance efficiency and cut costs – discussed in the next sub-section. Thirdly, lenders can reduce loan loss provisions, discussed later in the Chapter. In addition, lenders can enhance non-interest income - FIs increased their fee and commission based income, by 22% in the case of the Big Four Banks (KPMG Financial Institutions Performance Survey, 1999). Finally, lenders can increase volume.

The competitiveness of the market puts pressure on FIs to increase the volume of lending business written, to offset the marginal decrease in interest income and maintain, or preferably, decrease the average cost per account by achieving economies of scale (given fixed costs such as technology and a branch distribution structure).

The increased risk of competition to the long-term profitability (indeed survival) of the FI which the credit risk manager must trade-off includes: There is reduced loss absorption capacity (that is, there is
less income to cover the unexpected credit losses); There is pressure to maintain volumes in the short term by lowering credit standards to approve more applicants or actively up-sell the exposure of existing customers; A drive into non-traditional markets, in which the FIs do not have core capabilities or experience - the move into commercial lending by building societies in the late 1980s, associated with the eventual downfall of the FIs, provides a prime example; The increased operating cost of managing a larger number of more flexible product sets (such as loyalty programs which carry a significant cost of providing and administering the rewards) and heightened customer expectations of responsive service.

2.2.2 Change in marketing practices

To achieve the consumer-driven and cost-effective requirements of the competitive market, consumer lending is probably more reasonably viewed as a consumer marketing world than the traditional banking service. The approach is captured by Pei-Yuan Chia, Vice Chairman, Citicorp (1995):

"I think that the most important difference of all is that we really don't think of ourselves as a bank at all. We think of ourselves as running a consumer marketing organization. Selling products. Serving customers. Providing them with an experience in banking they can't get from the competition."

Increasingly, the ability to respond quickly and to innovate in order to meet customers' expectation is the major challenge for financial institutions in this new and competitive world. As Roth and van der Velde (1991) state, a bank's ultimate performance is strongly influenced by the predisposition of management to create innovative solutions and introduce these. Further discussion on systemic changes is provided by Financial System Inquiry Final Report (1997).

The implications of the increased expectations and demands of customers for improved service which the credit risk manager must incorporate include a decrease in both application and servicing turnaround times and levels of financial information provided by the customer.

Another change associated with competition has been a modification in the marketing approach. In their review of European banking, Gardener and Molyneux (1990, pg. 206), note that FIs have moved into the "marketing control" era, where the entire organisation becomes shaped by marketing and associated profitability requirements.

A similar framework to examine the change is provided by the “evolution of marketing” model (Fagg, 1999) adapted from Kotler (1991) and McColl-Kennedy et al (1992), as shown in Figure 2.4.
The fourth stage of the marketing model, societal marketing, has not been included as it does not appear applicable to the retail lending industry. As argued in Fagg (1999), whilst being slow starters, FIs appear to be rapidly moving to the selling or marketing of credit lending products as a commodity.

Another dramatic change associated with the technological and analytical innovation is a refocusing of marketing effort from traditional broadcast marketing methods to direct marketing initiatives (Fagg, 1999). The remainder of this sub-Section is taken largely from the article.

The increased focus on cost-effective distribution of product through a range of channels has encouraged the widespread usage of targeted, customer specific, cost-effective direct marketing initiatives. A key aspect of the re-focusing of marketing effort has been the focus on decision making based on comprehensive data analysis of portfolio segments, rather than “gut feel”.

Woolfe (1996) examines individual relationships through customer specific marketing within the retailing environment. He comments that retailers have not introduced differentiated pricing previously due to a lack of: Information on cost and profit differences; An easy way to calculate customer profit; and, A simple, speedy mechanism to implement customer specific pricing. Further, Woolfe provides two succinct and powerful principles for customer specific marketing: All customers are not equal, and behaviour follows rewards. Similar issues have applied to retail lending. The
challenge to retail credit risk managers is to access and utilise the much richer customer information which has been available to FIs for decades.

2.2.3 Credit operating costs

A focus on operating costs has resulted from the need to maximise shareholder value given intense pressure on revenue. The most obvious reduction in credit operating costs has been reflected in the dramatic “downsizing” of bank staff and the number of branches. For example, the number of branches in Australia (All Banks) decreased by around 20% in the four years to 1998 (RBA Bulletin, 1998). In addition, staff numbers have in the Big Four Banks decreased by around 26% from 1991 to 1998 (KPMG Financial Institutions Performance Survey, 1999). Further, the operating cost to income ratios of FIs has shown an overall downwards trend over the decade (KPMG Financial Institutions Performance Survey, 1999), from 72% in 1987 to under 64% in 1998. Options to decrease average costs, drawn from the researcher’s experience as a retail credit executive, are shown in Table 2.1.

TABLE 2.1 – The strategies used by retail lenders to decrease operational costs

| ✓ | Increased volume |
| ✓ | Automation of processes to reduce labour costs |
| ✓ | Migration of customers to low cost transactional channels (for example, encouraging customers to use relatively low-cost electronic transactions) |
| ✓ | Improved operational performance monitoring, using the principles of business process re-engineering or total quality management |
| ✓ | Outsourcing of non-core functions, such as application loading, mainframe support |
| ✓ | Centralisation of processing |
| ✓ | Pro-active credit initiation, credit servicing and collection strategy management, using decision support systems and champion/challenger approaches. |

The dangers of cost cutting in the commercial arena are highlighted by Furash (1998):

“Everyone will nod sagely, murmuring that cost-cutting must be done prudently, with careful attention to strategy, and other such caveats. But after tipping their hat to this wisdom, the majority will probably proceed the same old way and produce the same old insufficient and temporary results. The lessons from inappropriate cost-cutting are well-known, but heeding them is rare.”
Further, Furash (1998, pg 98) comments on the “re-engineering illusion”. Instead of designing a new way of doing things more productively:

“firings and other expense cuts that have murdered employee value, destroyed customer service, reduced revenue, and, in a significant number of instances, resulted in being merged out of existence” (pg 88).

The credit risk manager is likely to have had to manage the effect of cutting costs and enhancing productive efficiency in a number of ways.

**Level of automation.** The major benefit of decision support systems, in terms of operating costs, is associated with the level of automation. The FIs’ comfort with the level of risk is a strong determinant on the level of automated decisioning an FI has implemented, as compared to referral for manual review by a Lending Officer.

**Volume focus.** The reward structure for Lending Officers has been increasingly based on the volume of loan applications processed (using less information) as compared to the credit quality of the loan portfolio.

**Information on total exposure.** The total exposure of clients was often omitted from the credit analysis of a customer’s application for a particular product by some FIs due to inadequacies of legacy systems and customer databases to identify and incorporate data on all products.

**Quality assurance.** To counterbalance the movement towards more automated processes, quality assurance needed to be enhanced to ensure data integrity and compliance with policy. One reason was that a significant proportion of the loans would not be reviewed by Credit Officers who otherwise would be expected to detect any obvious anomalies in data. A second reason was the systems depended on strict compliance with rule-sets for the appropriate decisions to be made. Otherwise, it was difficult to ascertain whether portfolio dynamics were due to the decision support systems’ having the wrong parameters, being inappropriately applied by Lending Officers, or being incorrectly put into production on the system. However, an FI focusing on cost cutting might take the benefit of the decreased operating costs without the offsetting (comparatively minor) expense of increased quality reviews.

**Long term strategy.** The ongoing tactic of reducing operating costs could considerably limit long term, strategic business development. Most of the focus in developing decision support systems in the last few years focused on process efficiency to cut costs rather than identifying business opportunities.
to maximise customer profitability or risk-adjusted effectiveness (Furash, 1998, with regard to commercial lending).

*Customer/reputational capital.* Decreased customer satisfaction and damaged FIs’ reputational capital often resulted from cost-cutting, such as the closure of non-profitable country branches. More generally, there were customer complaints about the demise of the relationship with the Branch Manager – who used to take the time to discuss the customer’s situation and provide financial advice.

*Staff effects.* Staff morale was sometimes compromised as a result of the effective de-skilling of the “average” credit role, with less task variety and judgemental analysis.

2.2.4 *Change in industry structure*

The FI failures were a feature in a number of OECD countries in the 1990’s, with the downfall of thrifts in the US being a prime example. In Australia, there was limited experience of insolvency, with the major FIs to become insolvent in the 1990s being the Pyramid Building Society and the State Bank of Victoria. A small number of FIs were, however, in financial difficulty and were taken over by other FIs. The government historically supported FIs either through beneficial policies or the infusion of capital and protection of creditors.

The pressure on interest and fee revenue through increased competition was intensified by the increasing market share of non-traditional FIs - credit unions, insurance companies, mortgage management companies, as illustrated in Figure 2.5.
Non-financial sector entrants also emerged. The telecommunications, retail and services industry presented a formidable force in terms of competition (KPPG Financial Institutions Performance Survey, 1999, pg 6). An implication of the disintermediation in the retail market which the credit risk function must manage was the increased credit risk of the individual product portfolios. There was a breakdown in the multiple product relationship as customers fragmented their holding of financial products across FIs as they pursued the best product offers. In addition, lenders had to manage a possible skew towards a higher credit risk profile of the traditional portfolios as the new entrants (the “category killers”) cherry-picked the customers with good credit history. Finally, lenders needed to manage the strong bargaining position over the FIs held by the Originators sourcing loan applicants, in terms of turnaround times, the level of financial information provided and pressure to approve a loan.

In addition, disintermediation placed further pressure on costs as the new entrants established state-of-the-art systems comparatively cheaply (given the specialised lending they undertook and the absence of legacy systems) and promoted low-cost, largely electronic delivery channels. Also, the specialist service providers cherry-picked the profitable segments without having to provide associated services at a loss. There was less cross-subsidisation of unprofitable products (Fraser, 1994). Finally, the increased cost of acquisition was associated with the commissions paid to Originators.

Mergers and acquisitions have changed the face of retail banking in the last ten years. Compared to 1984, less than a third of the market leaders in terms of total assets (excluding the four major banks) are major players in 1999 – refer to Figure 2.6.

FIGURE 2.6 – Market leaders in 1994 versus 1999

Convergence of the roles of insurance companies, funds managers and banks has blurred the traditional markets as traditional banks combat revenue squeeze. However, experience from the US banking industry in the second half of the 1990s has shown that many mergers and acquisitions have not achieved the expected benefits (KPMG Survey, 1999).

The globality of banks in Australia provided the credit risk manager opportunities, in terms of economies of scale such as regional “hubs”, diversification of the lending portfolio and success transfer of people, systems, processes and risk management tools. An example of the latter was the transfer of global Recovery Management staff into the Asian region during the crisis, as local FIs had limited experience.

However, size and globality also added complexity to the integration of credit risk, as management attention has stretched from the traditional areas and the new entrants were forced to merge traditional areas of expertise with the fundamentally different set of customer relationships and credit risks which were associated with a lending contract. In addition, lending was undertaken in countries, regions and products where the FIs did not have experience, often without the accustomed network of systems and information.
2.2.5 **Availability of capital**

The tight restrictions of capital in terms of both interest rate ceilings and the availability have been removed in Australia since deregulation. There has been no shortage of funds for lending, as highlighted in the Senior Credit Manager interviews, which put pressure to “grow volume at all costs”.

2.2.6 **Increased focus on retail versus corporate markets**

The 1990s saw a significantly greater focus placed on the retail market, as compared to the commercial/corporate market. The focus reflected the wider profit earnings and lower volatility in retail lending (for example, the ANZ Annual Report, 1999). For example, corporate (investment quality) interest rates were reported as around 40 basis points (“bp”) to 200 bp whereas consumer rates (excluding mortgages) were reported typically in the 400 bp to 700 bp range (Fagg and Nicol, Credit Confidence Survey, 1999).

The changing focus made it more critical for lenders to understand and pro-actively manage retail credit risk for a number of reasons. Senior Management were more familiar with corporate, transaction-style lending than the high volume, statistically-driven requirements of retail lending. In addition, higher risk products were offered to the retail segment, such as margin lending products and equity home loans. Many consumers would not have had the experience of managing the higher risk profiles through a business cycle. Finally, FIs moved in to areas which have not received close risk management attention in the past.

2.3 **Risk management methods**

The period post-deregulation has been associated with a dramatic increase in technological innovations employed in retail lending. Enhanced risk assessment tools have been developed in all aspects of credit cycle management – business planning, product positioning, portfolio/segment risk analysis, portfolio management, credit initiation, credit servicing and the collections/remedial management processes. The changes have been associated with a move to a statistically driven, high volume portfolio-based approach to credit risk management, from a traditional transaction approach.

2.3.1 **Artificial intelligence models**

One of the major advances in retail lending has been the use of artificial intelligence models whereby computers are used to mimic (or imitate) human intelligence to simulate the decision-making process undertaken by the experienced credit Lending Officer. A brief summary credit scoring, expert systems and neural networks follows.
Credit scoring. Credit scoring can be defined as:

"the use of statistical techniques to estimate the future credit risk of an account. That is, currently available information is used to predict the status of an account 9 to 18 months in the future" (Gayler, 1994).

Relatively widespread use of the technique has been seen in unsecured lending from the 1970s (Lawrence, 1984; Lewis, 1992). The expansion to consumer secured lending only became widespread in Australia during the 1990s. However, Australia was comparatively well advanced in the use of Mortgage scoring (Neagle, 1995). As a further extension of the use of scoring, a growing number of companies began to look at the use of small business scoring (for example, Gayler, 1994; Asher, 1994) and customer scoring. Customer scoring incorporates the likely profitability of all products potentially held by the customer across the lifecycle.

Expert systems. Expert systems have been reasonably recent additions to the credit lending process and have not been as widely used or accepted as credit scores. Rather than using statistical modelling, an expert system:

"employs human knowledge captured in a computer to solve problems that require human expertise" (Dand and Shanmugan, 1993).

It is presumed that human experts follow their own rules of thumb, or heuristics, in arriving at a decision. These rules of are of the "conditional, probabilistic, fuzzy, heuristic type" (Bushby and Robbins-Jones, 1989), which allow human experts to make decisions (or sometimes educated guesses) using incomplete data.

Neural networks. Though still not widely used, through the 1990s, neural networks have been implemented for a variety of functions by FIs, from detecting credit card fraud to bond rating modelling (Widrow et al, 1994; The Economist, 1995; Ghosh and Reilly, 1994). Neural networks are modelled on the way in which human learning occurs and intuition is formed (McLeod et al, 1993). Unlike the other two models, there is no need to specify the exact relationship or rules between the input variables and the output variables. The input and output variables are simply provided to the neural network by the user, and, the system is "trained" by using historical examples of input and output variables. However, there seems to be a general perception that neural networks have yet to prove themselves (Asher, 1994; Levinsohn, 1998), in other than fraud detection.
The power of artificial intelligence models has been achieved through the integration of the models with the use of data and analytics for the ongoing testing of the effectiveness of credit policy and operational practices. The co-ordinated approach is referred to as a “decision support system”. Further, the use of automated workflow management systems increased efficiency of processing. The more recent improvements in credit risk management appear to be largely associated with improvements to processes, required to decrease operating cost and improve customer service in the competitive Australian market.

A summary of the opportunities offered through decision support systems and automated workflow management systems is shown in the Chapter - Introduction. The benefits, derived from researcher’s practical experience and the literature (Leonard and Banks, 1994; Asher, 1994; Steiner and Texeira, 1990; Lewis, 1992; Johnson, 1992; Wilkinson, 1992, Hottinger and Wenger, 1992; Zawa, 1989) are shown in Table 2.2.
<table>
<thead>
<tr>
<th>Table 2.2 – The benefits of artificial intelligence models</th>
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<tr>
<td><strong>Customer service</strong></td>
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<tr>
<td>- Decreased turnaround time for responding to the customer</td>
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<tr>
<td>- Increased consistency of decision making</td>
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<tr>
<td>- Apparent decentralisation of decision making, if the risk assessment tools allow decisions “on-the-spot”</td>
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<tr>
<td><strong>Cost effectiveness of operations</strong></td>
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<tr>
<td>- Lower cost of processing, with automation decreasing the amount of time allocated to manual assessment</td>
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<tr>
<td>- Better use of limited resources – experienced credit officers are decisioning the more complex applications, rather than the straightforward applications</td>
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<td>- Background data can be gathered faster, at lower cost</td>
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<tr>
<td>- Streamlined and faster workflow, through partial or full automation</td>
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<td>- Decreased need for training and experienced staff</td>
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<tr>
<td>- Decreased re-work and human error</td>
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<tr>
<td><strong>Business development opportunities</strong></td>
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<tr>
<td>- Increased speed of introduction of new products to the market</td>
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<tr>
<td>- Competitive edge through accurate risk based pricing</td>
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<tr>
<td>- Ability to pursue either decreased loss rates with a given approval rate or increased approval rates with a given loss rate</td>
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<td>- Identification of segments of the population which are potentially profitable, which traditionally were not approved through the judgmental credit lending process</td>
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<tr>
<td>- Subsequent use of data gathered for the development of the standardised methods in targeting marketing efforts</td>
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<tr>
<td>- The promotion of the financial institutions image as a “high tech.” firm exuding competence and fairness.</td>
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<tr>
<td><strong>Risk control and standardisation</strong></td>
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<tr>
<td>- Improved quality of decision making. Scoring models have been proven to be more accurate than judgemental decision making processes</td>
</tr>
<tr>
<td>- Increased objectivity, with the removal of individual bias</td>
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<tr>
<td>- Increased level of confidence in the predictiveness of the credit review process – scoring models can identify the likelihood (probability) of default</td>
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<td>- Increased consistency – decisions will be the same, regardless of time and location. This applies to:</td>
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<tr>
<td>• The approve/decline/refer decision</td>
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<td>• The verification of details listed on the application</td>
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<td>• The structure and terms of the loan (such as credit limit, collateral)</td>
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<td>- Automation allows the credit manager to closely control the credit operation and enforce guidelines and standards</td>
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<td>- Increased flexibility to change credit strategy, policy, processes and practices (for example, changing the cut-off score)</td>
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<td>- Provision of an early warning system for deterioration in credits</td>
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<td>- Monitoring of aggregate credit portfolio quality, including portfolio concentrations to a more detailed level</td>
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<td>- Improved loss forecasting ability</td>
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<td>- Improved reliability of stress testing of the portfolio</td>
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<td>- Improved ease of conducting controlled tests of different credit strategies</td>
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<td>- Monitoring regulatory compliance</td>
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<tr>
<td>- Supporting eventual securitisation.</td>
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</table>
2.3.2 Capital and portfolio management

Capital and portfolio management have also been a key element of portfolio risk management. Capital management received much greater emphasis in the latter, positive part of the business cycle (Matten, 1996). One factor increasing the focus on capital allocation and portfolio management over this business cycle was that regulators were concerned to improve the current system of bank capital requirements relating to credit risk (for example, Perraudin, 1998), with the United States leading the trend. In addition, there were more opportunities to proactively manage exposure following its origination. New markets emerged in credit derivatives and the marketability of existing loans developed through growth in such techniques as securitisation, liquidity in the secondary loan sales market and third party guarantees (Perraudin, 1998; Wilson 1998).

Another factor contributing to the increased focus on capital allocation and portfolio management was the decreased margin within retail lending. This emphasised the need not only to assess credit risk properly to evaluate eventual credit losses, but also to minimise the unnecessary allocation of capital given the declining profitability of traditional credit products (Wilson, 1998). The analysis allowed the FI to identify the most profitable customers through better pricing and structuring by comparison with competitors and to decrease the probability of adverse selection. Finally, there was an improvement of the analytical tools to derive statistically valid models. Morisano (1998) argues that a risk-adjusted performance measurement (RAPM) process is the key tool that links results, risk and shareholder value creation. The foundation of RAPM is the calculation of economic capital or “risk adjusted capital” to reflect the net revenue minus costs compared with the amount of economic capital which must be reserved.

The level of capital held as a buffer against future unexpected losses is associated with credit rating agency perceptions, the FIs’ internal assessment of the capital at risk and regulatory requirements (Matten, 1996). In addition, my practical experience suggests that perceptions of market analysts and shareholders as to the acceptable level of capital, and return on capital, is an issue.

Figure 2.7 highlights the trends of “All Banks” in Australia. Consistent with Basle Committee on Banking Regulation and Supervisory Practices, 1988, the regulatory requirement is for 8% of risk weighted assets to be held as capital. The capital held is conservative. It is argued that banks throughout the world have held a higher level of capital than regulatory requirements (Matten, 1996). Note: The increase in 1998 is largely associated with the introduction of dynamic provisioning (discussed in the next sub-Section).
In summarising the capital position, Gray (1998) states that leading Australian banks have begun to measure risk adjusted performance and estimate economic measures of capital:

“The accuracy of these measures will, of course, turn on how well the underlying data in the related grading systems capture risk. The absence of comprehensive data on how well or otherwise the Australian banking sector performs in times of economic downturn will, for some time, place a question mark on the reliance that can be put on such figures, especially those relating to business and corporate loans” (pg 11).

The secondary market for retail lending portfolios generally has not been active in Australia apart from securitisation. This compares with McKinley’s (1998) comment on the emergence of efficient secondary markets in the Unites States, which means that virtually all types of loans can be sold.

Finally, the operational implications of securitisation must have had to be managed for compliance with the conditions of maintenance/servicing. This was particularly important in the event of default, where there probably was less flexibility in re-negotiating terms with a customer than in a non-securitised portfolio.
The primary implication for credit risk managers was that well-dimensioned and non-volatile credit losses and operating losses associated with the credit process became a requirement. Portfolio analysis needed to be adequate for the task – lack of information was no longer an excuse.

2.3.3 Provisioning

Provisioning is another factor which changed significantly in this business cycle. The 1990’s recession was the first post-war recession in which banks did not use a standard methodology to smooth the impact of bad debts on profits (Burroughs, 1995). Prior to this, the Leach Lawson methodology was used,

“which was an unabashed (and undisclosed) mechanism for smoothing the charge to profits” (pg 13).

The accounting standards applied by other industries were found wanting when the 1990s recession hit (Burroughs, 1995). By the 1998 financial year, all of the Big Four Banks had implemented dynamic provisioning, where:

“Dynamic provisioning attempts to recognise in the current period the inherent loss over the term to maturity of the current lending portfolio based on historic and expected loan loss experience” (KPMG Financial Institutions Performance Survey, 1999, pg 36).

The relative merits of dynamic provisioning received considerable discussion. As raised in KPMG FIPS (1999), the Securities and Exchange Commission questioned whether dynamic provisioning was just a profit-smoothing tool. Regardless, as the standard industry approach, credit risk managers learned to be fully cognisant of the approach and to produce sensible loss expectations.

2.3.4 Data and analytics

Data and analytics will be discussed in terms of its uses and limitations, methodologies, loss absorption capacity, types of reporting/analysis and supporting systems.

Uses and limitations

Data and sophisticated analytics have been shown to be the central links to manage the risk/reward trade-off and maximise the effectiveness of credit operations in a high-volume, statistically driven process. As argued in Fagg (2001), the accurate estimates of delinquency and credit loss levels are required to: Establish the budget for credit costs; Set risk premia to be incorporated in segment-based profitability models and risk-based pricing of customers; Establish early warning indicators of
impending credit risk issues, to help reduce both the volatility and the absolute level of credit costs; Establish provisioning levels across the business cycle; Compare the credit performance of retail portfolios by applying common criteria; Assist the re-balancing of portfolios to diversify risk; and, Manage Collections operations capacity planning. However, the prediction of credit costs potentially has a high margin of error, due to both the long term contract between the customer and the financial institution and the credit risk associated both with incomplete contracts and with uncertainty (resulting from lack of information on the future state). Credit risk managers found they had a high reliance on the accuracy with which future default and credit loss positions were predicted given the widespread implementation of artificial intelligence models and workflow management systems. A number of factors emerged of which credit risk managers became cognisant:

**Historical context.** The risk assessment tools were developed based on historical data - and this was a unique economic, regulatory and social environment.

**Availability of data.** Historically, FIs did not gather the comprehensive level of data required to build risk assessment models. The gathering of data was made more difficult by legacy systems. Data typically were inadequate in terms of: There were insufficient data fields captured; There were concerns with the accuracy of the data definition, collection and storage; and, The data were not collected for a long enough time frame. Gray (1998) notes that there has been significant progress in data collection, but the data sets still cover relatively short time frames.

**Lag from modelling to effect.** There was a lag between current credit policies/practices and the onset of credit problems (say, up to 24 months), so the accuracy of the models could not be tested in real time.

**Validity of assumptions.** The assumptions underlying the portfolio analytics needed to be robust, which was difficult to ascertain given the models were new and untested. The stress-testing of assumptions could provide a level of comfort, but no guarantees.

**Enforceability of contracts.** There was no test of the enforceability (both practical and legal) of contracts in the economic and legislative regime of the future.

**Industry standards.** There were no commonly applied standards across the industry in Australia.

**Counter-cyclical lending.** It was difficult to determine what phase the business cycle was moving towards, given the role that highly infrequent (and hence difficult to predict) exogenous shocks played
in effecting turns in the previous business cycles. Thus, it was difficult to know when to implement policies and practices driving towards counter-cyclical lending.

Information gathering. The face-to-face contact between the lender and the borrower was integral in the relationship building process and in providing qualitative information on the applicant in the traditional lending models. The scoring and risk-grading models developed in the 1990s had not been through a period of economic stress to identify whether they would have offset the removal of this information.

Over-confidence. Faith in the portfolio based models often led to riskier lending in the marginal segments – which exaggerated the negative effect on credit quality if the models were inaccurate.

Impact of lifestyle issues. Issues which caused borrowers to default were basically unchanging and related to the economy (unemployment and bankruptcy) and lifestyle (divorce and illness). Thus, unless the models could predict lifestyle and health trends, over and above the more commonly analysed economic factors, they would be of limited value. The models typically were not constructed to detect systemic swings in societal attitudes.

Implementation. Whilst the models themselves might have been appropriate, their implementation in the lending process (in computer systems and work practices) was not necessarily sufficiently rigorous. In my practical experience, this was a surprisingly common occurrence.

At a more philosophical level, the question is to what extent can the past ever be relied upon to predict the future? As Bernstein (1997, pg 20) argues:

“But the sum and substance of risk management is in the recognition of variety. Losses stem, not from deviations from average results, but from deviations from the average or norm, from the outliers at the far reaches of the tails, and from outcomes never even imagined … The trick in risk management, perhaps, is in recognising that normal is not a state of nature but of transition, and trend is not destiny”.

Apart from driving the data and analytic capability, credit risk managers found they could provide the subjective, judgemental review of the scorecards before they were finalised (to determine whether any “just don’t make sense”) and could set strategies and policies in light of trends in external and organisational factors.
**Portfolio measurement methodologies**

An attempt to provide a standard approach for measuring delinquency and credit losses has been provided by Fagg (2001). In essence, the methodologies use historical data to measure the inherent credit quality of an existing retail lending portfolio, which in turn is used to predict future delinquencies and losses. The only condition is that it seems reasonable to use historic data to predict the future. A summary is shown in Figure 2.8.

FIGURE 2.8 – The tools to forecast delinquency and credit losses

A more judgemental overlay will then typically factor in the possible effects of external (shown in Figure 2.9) and internal factors (shown in Figure 2.10) driving changes to the lending environment.
The kinds of data used as inputs, based on my experience as a retail credit executive, are shown in the following Table 2.3.
TABLE 2.3 – Data inputs for forecasting portfolio credit quality

<table>
<thead>
<tr>
<th>Borrower characteristics</th>
<th>Loan characteristics</th>
<th>Security characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Type of borrower (self-employed vs PAYE)</td>
<td>- Loan to security ratio</td>
<td>- Residential vs commercial</td>
</tr>
<tr>
<td>- Investor vs owner-occupier</td>
<td>- Loan size</td>
<td>- Urban vs. rural</td>
</tr>
<tr>
<td>- Income/debt servicing ratio</td>
<td>- Tenor of loan</td>
<td>- Prime or sub-prime location</td>
</tr>
<tr>
<td>- Industry</td>
<td>- Interest only or amortising</td>
<td>- Asset quality</td>
</tr>
<tr>
<td>- Purpose of loan</td>
<td>- Source / channel</td>
<td>- Rental prospects</td>
</tr>
</tbody>
</table>

**Loss absorption capacity**

The inherent risk and the loss absorption capacity of the portfolio are critical. The inherent risk is the underlying credit risk in the asset class (for example, credit cards are high risk compared to mortgages). The loss absorption capacity refers to the ability of a portfolio to absorb credit losses from operating profit after operating (non-credit) costs have been deducted from revenue. The credit losses could be both “expected” (the forecast credit loss forecast) and “unexpected” (which occur when volatility is greater than expected as a result of “improbable” or unforeseen events).

The following factors need to be taken into account when reviewing the loss absorption capacity: The inherent loss rate; The average loss rate; The volatility of loss rate and Concentrations within the portfolio (that is, the level of diversification which can smooth out unexpected losses in one segment of the portfolio).

**Type of reporting/analysis**

One approach I have used in drilling down though the different levels of analysis is shown in the Figure 2.11.
Figure 2.11 – A framework for drilling down levels of portfolio analysis

Figure 2.12 provides a sample format for a one page report to be used in regular monthly reporting of key credit risk dynamics, drawn from my experience.
Credit risk managers could determine the priority of portfolio (segments) under review based on the interaction of the importance of the portfolio segment (dollars at risk) and the FIs’ capability. The relationship, drawn from my experience, is shown in Figure 2.13.
Accessibility of reporting/analysis is a key issue for credit risk managers. One key element is ensuring Senior Credit Managers appreciate the value of forecasting techniques and are comfortable with their application. Data warehouses which store a sub-set of the primary variables can provide Senior Managers with accessible and comprehensible reporting and commonly conducted segment-analysis. Exception reporting also is key, as outlined in the Chapter – Analytical Tools II.

**Supporting systems**

The requirements for data capture and transformation of credit-risk related data, drawn from my experience, are summarised in Figure 2.14. Over and above the architecture of the system, a key issue is the integrity of the data.
2.3.5 Enterprise-wide risk management

A trend in the late 1990’s has been the emergence of enterprise or firm-wide risk management (for example, Hewlett Packard, 1998; Infinity, 1996; Hamilton 1996). Centralised and independent risk management units assess all risks faced by the FI, including credit risk, interest rate risk, liquidity risk, price risk, foreign exchange risk, transaction risk, compliance risk, strategic risk (Furash, 1996), spanning continents, markets, products and risks (Paul-Choudhury, 1996). In terms of achieving enterprise-wide risk management, Drzik (1996) argues:

"the finance industry has a near-monopoly over specialists in evaluating, pricing and managing financial risks. Given its centrality, it is surprising that risk management in most financial institutions has been practised as a collection of relatively insular specialities: credit experts evaluate default risk; mortgage specialists evaluation and manage prepayment risk; traders and derivatives specialists evaluate, price and manage market risks; and actuaries evaluate and price mortality, liability and other insurance risks” pg 14.

The implication for credit risk managers is that there is further re-definition of the credit risk role, requiring flexibility in approach.
2.4 Internal processes, staffing and systems

This business cycle has seen fundamental changes to the FIs’ lending approach.

2.4.1 Changes to the lending process

The process of offering credit products to the consumer market remained fundamentally the same for thousands of years. Indeed, evidence of lending contracts existed two centuries before Christ (Allen and Gale, 1994). The lending process was driven by an experienced lender (in more recent times, the Bank Manager) determining the creditworthiness of potential borrowers. An in-depth review of each loan applicant was conducted using the “Three Cs of Credit” (character, capacity and collateral). As noted previously, the advent of artificial intelligence fundamentally changed the way of doing business.

2.4.2 Lending staff

The 1990’s showed that were potential issues with the experience and the capabilities of staff in the event of a downturn in the economy. Factors driving the decrease in the number of credit staff and their skill level included: The use of decision support/automated processing systems and the benign economic conditions of the late 1990s which meant that fewer experienced Credit Officers were required; The ease with which comparatively unskilled and inexperienced staff (and hence less expensive staff) could use the automated workflow management systems; and The FI staff who dealt directly with customers increasingly were not experienced credit lenders but were commissioned salespeople (for example, mobile lenders for home loans). Further, the quality of the automated decision was dependent upon the integrity of the information provided by the inexperienced front-line staff and the focus on costs placed pressure on decreasing the level of quality assurance, as discussed previously.

In addition, only limited formal training was conducted to equip Lending Officers with an understanding of the current lending environment. As Morsman (1998, pg 62) comments on training in the United States:

“training has gone into a real slump in the banking industry since the terrible credit period nearly a decade ago. I heard at that time that no-one could afford it. Now, when bank earnings are as high as they’ve ever been historically, I’m still hearing they can’t afford it. It makes me wonder”.

As with most functions within FIs, Lending and Collection areas were exposed to significant downsizing. In addition to the pressure on the availability of experienced Credit Officers, there was
significant negative impact on the morale and career paths of Credit Officers. One reason was that credit was not a high profile function compared with marketing in the latter part of the business cycle. Hence, there was less emphasis on attracting and retaining good staff through tangible and intangible benefits. In addition, the traditional support for the Lending Officer (the Bank Manager who came up through the ranks and had experience involving judgmental credit lending and collections) was eroded, with non-bankers increasingly filling senior roles. Finally, functional specialisation, in association with high levels of automation and highly parameterised policy rules, led to decreased task complexity, task completion and task variety. In my experience, these factors resulted in Lending Officers having lower credit skills, lower job satisfaction and taking less personal responsibility for the quality of their decisions.

Given the above factors, the credit risk manager needed to ensure that a sufficient number of experienced Lending Officers were retained to establish the credit strategy and risk management infrastructure. Experienced Lending Officers also were needed to review the complex loan applications/policy exceptions, train the less experienced credit staff (which is particularly important in times of economic downturn) and remember the lessons learnt in the prior economic cycle.

2.4.3 Senior management and organisation structure

The change of the traditional career structure within FIs, where senior management roles were filled by “lifetime bankers”, created a new management challenge in the late 1990’s. Whilst being only one of the managerial requirements for a successful FI, credit is relatively unique in that it is one of the few functions which is not readily transferable between industries. Credit is not quickly “taught”- it is one of the few areas where tertiary training is not readily available. Experience has been the key.

Also, pressure was placed on senior management in terms of “short-termism”, and chasing revenue growth and/or cost reductions. One reason for this was that the share market rewarded the short term improvements to operating costs and revenue (most readily obtained in the credit area through short term practices) rather than looking at long-term resource allocation. Monkhouse (1997) provides a discussion on short-termism. In addition, the short-term nature of a number of contracts of FIs’ senior management (as compared to the traditional format where Bankers stayed with the Bank for life) put pressure on short-term results. Finally, in the 1990’s, senior management had not personally experienced the effects of excessively generous lending policies in prior downturns in the economy – many of the managers who experienced the last credit cycle had retired or moved on.

Another factor which affected credit management was the new “team approach” and constant organisation change. It is argued that these led to less accountability (for example, Furash, 1998, referring to the commercial arena). The use of the committee approach to lending might also have
decreased personal responsibility for lending decisions, as discussed in the Chapter – Analytical Tools I.

In addition, strong management of new distribution channels (such as Originators) was required. The right product needed to be sold to the customer, regardless of source or commission structure.

Further, the move to business unit ownership of the credit risk that occurred in a number of the large FIs brought with it a new set of challenges for credit risk managers. By “owning” both the revenue and the credit loss line, it could be expected that more rational long-term decision making might merge. However, the business unit heads have had to build their understanding of the idiosyncratic world of credit risk management. In principle, the transition to line of business ownership of credit should have been supported by clearly defined accountabilities between the business unit and the centralised credit functions, with experienced credit staff in all areas. This was not always the case.

Overall, the roles of the various individuals and committees comprising the end-to-end credit risk management organisation need to be clearly articulated and empowered. The following table summarises one potential model of the interacting roles and responsibilities.
Table 2.4. Roles of the individuals and committees in the credit risk management organisation

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Board</strong></td>
<td>Sets the credit risk appetite and principles of the FI, reflected in high-level</td>
</tr>
<tr>
<td></td>
<td>Group-wide strategy, policy and credit boundary conditions. Regulatory standards</td>
</tr>
<tr>
<td></td>
<td>are taken as a given.</td>
</tr>
<tr>
<td><strong>Board Credit Committee</strong></td>
<td>A sub-set of Board members, acting with delegation from the Board, with a more</td>
</tr>
<tr>
<td></td>
<td>detailed level of focus</td>
</tr>
<tr>
<td></td>
<td>Approves the appointment of Chief Risk Officer</td>
</tr>
<tr>
<td></td>
<td>Approves the framework (or architecture) for risk management, including</td>
</tr>
<tr>
<td></td>
<td>principles, strategies and standards</td>
</tr>
<tr>
<td></td>
<td>Approves the high-level credit policy applicable to all business units</td>
</tr>
<tr>
<td><strong>Group Executive Credit Committee</strong></td>
<td>Recommends high-level credit strategy and policy applicable to all business units</td>
</tr>
<tr>
<td></td>
<td>Approves large policy changes within business units</td>
</tr>
<tr>
<td></td>
<td>Reviews key portfolio monitoring and measurement information, including risk</td>
</tr>
<tr>
<td></td>
<td>concentrations</td>
</tr>
<tr>
<td></td>
<td>Approves large credit transactions (or lending commitments)</td>
</tr>
<tr>
<td></td>
<td>Approves large credit delegations and oversees compliance with these</td>
</tr>
<tr>
<td></td>
<td>Oversees compliance with key regulatory requirements</td>
</tr>
<tr>
<td><strong>Chief Executive Officer</strong></td>
<td>Articulates and is responsible for enacting the Board’s appetite for credit</td>
</tr>
<tr>
<td></td>
<td>risk to business units</td>
</tr>
<tr>
<td></td>
<td>Responsible for the credit quality of the FI’s portfolios overall</td>
</tr>
<tr>
<td></td>
<td>Acts as a filter between the Board and business units/the Chief Risk Officer’s</td>
</tr>
<tr>
<td></td>
<td>unit for new business initiatives and opportunities</td>
</tr>
<tr>
<td></td>
<td>Adjudicates on issues where there are differing opinions between the Chief</td>
</tr>
<tr>
<td></td>
<td>Risk Officer unit and business units</td>
</tr>
<tr>
<td><strong>Chief Credit / Risk Officer</strong></td>
<td>Recommends the framework (or architecture) for risk management</td>
</tr>
<tr>
<td></td>
<td>Ensures that appropriate strategy, policy, controls, skills, decisioning</td>
</tr>
<tr>
<td></td>
<td>committees and systems are in place to enable compliance with the Bank’s risk</td>
</tr>
<tr>
<td></td>
<td>standards, framework and appetite</td>
</tr>
<tr>
<td></td>
<td>Recommends group policy applicable to all business units</td>
</tr>
<tr>
<td></td>
<td>Sets the credit risk boundary conditions for each business unit</td>
</tr>
<tr>
<td></td>
<td>Approves material credit policy changes between and within business units</td>
</tr>
<tr>
<td></td>
<td>Through active portfolio measurement, monitors the levels of risk and</td>
</tr>
<tr>
<td></td>
<td>concentrations within and between portfolios and ensures the Business Units are</td>
</tr>
<tr>
<td></td>
<td>actively managing emerging issues</td>
</tr>
<tr>
<td></td>
<td>Manage credit delegations for all credit staff</td>
</tr>
<tr>
<td></td>
<td>Approves material credit transactions</td>
</tr>
<tr>
<td></td>
<td>Approves credit risk modelling and grading frameworks eg. credit scores and</td>
</tr>
<tr>
<td></td>
<td>validation of the models</td>
</tr>
<tr>
<td><strong>Chief Financial Officer</strong></td>
<td>Manages the Bank’s key financials and budgeting process, where credit losses</td>
</tr>
<tr>
<td></td>
<td>are a major line item</td>
</tr>
<tr>
<td></td>
<td>The Chief Risk Officer may report in to the Chief Financial Officer, particularly</td>
</tr>
<tr>
<td></td>
<td>in smaller organisations.</td>
</tr>
<tr>
<td><strong>Chief Auditor</strong></td>
<td>Reports directly to the Board on existing and emerging issues of</td>
</tr>
<tr>
<td></td>
<td>materiality which impact the credit quality of the FI across all or any of the</td>
</tr>
<tr>
<td></td>
<td>business or Chief Risk Officers units</td>
</tr>
<tr>
<td></td>
<td>Monitors compliance with the FI’s credit risk framework</td>
</tr>
<tr>
<td><strong>Line of Business Executive</strong></td>
<td>Responsible for overall business profitability, including credit losses</td>
</tr>
<tr>
<td></td>
<td>Responsible for the business unit’s compliance with the FI’s credit risk</td>
</tr>
<tr>
<td></td>
<td>framework</td>
</tr>
<tr>
<td><strong>Line of Business Manager</strong></td>
<td>Manages policy, models, procedure and process within business unit, to ensure</td>
</tr>
<tr>
<td></td>
<td>compliance with FI’s credit risk framework, standards and appetite</td>
</tr>
</tbody>
</table>

Source: Based on industry experience
2.4.4 Business strategy, processes and systems

The new decision support models, workflow management systems, processes and practices provided major advances in the efficiency and controls, but also led to a whole range of management issues. In the portfolio-based model, management methods were more aligned with production management than traditional credit management.

The trend towards centralisation tended to have the positive aspect of increased standardisation and control of lending practices. Senior Credit Managers had to provide a clear picture of the credit strategy driving the use of the methodologies and ensure the strategic direction was encapsulated in policies and practices. Care had to be taken to get the strategy right, or the errors would be systemic. Further, a comprehensive feedback loop was required to ensure the areas still communicated to compare emerging trends. Whilst portfolio analysis was not as strong in prior cycles, experienced Lending Officers who were dealing with the end-to-end customer file used to be able to pick up a number of trends which were not apparent in the specialised teams characterising Lending and Collections Centres at the end of the 1990’s.

The issue was compounded if Senior Management were (sub)consciously relaxing formal lending standards. Lending Officers then tended to relax informal lending standards. Hence, there was likely to be a strengthened negative effect and standards would be relaxed more than intended by Senior Managers. Senior Managers were able to loosen standards deliberately to a limited degree, expecting that Lending Officers would pick up on the signals and interpret the policies more loosely on the marginal cases.

Staff empowerment placed pressure on credit risk management by emphasising the requirement for on-the-spot credit decisions. An offsetting control was the increase in retrospective quality assurance.

A related management issue in the late 1990’s was outsourcing. Traditionally, outsourcing had been relegated to non-core, non-strategic, non-value-added functions such as stationery, printing and payroll. However, outsourcing expanded to include large core functions, including IT operations and development (KPMG Financial Institutions Performance Survey, 1998). Outsourcing of credit applications (through centres such as the Westpac mortgage processing centre) also took place. The effect on credit quality and the responsiveness of service providers in times of crises is as yet unknown. Further, outsourcing ran the risk of closing off FIs’ options for the future for internal versus external processing. The key issue was that experienced staff were made redundant due to the outsourcing arrangement, making it difficult subsequently to in-source the function.
In addition, there was a growing need for flexible working hours to meet the customers’ expected turnaround times, to offer credit staff flexible working conditions and to maximise contact rates when the FIs attempted to contact customers (for example, in Collections operations). Finally, there was the effect of high-lend Mortgage insurance.

The effect of the Millennium Bug on the credit losses, associated both with the financial position of borrowers and the FIs’ internal systems problems, was an unknown throughout the latter part of the 1990s. Whilst the feared problems did not eventuate, the impact was considerable leading up to the Year 2000, with systems resources being diverted from developmental and compliance-oriented system work throughout the late 1990s.

Finally, the credit risk manager found he or she needed to remain somewhat tentative about the effectiveness of the new business practices and systems. They would not truly be known until they were tested in harsh economic times/recession. Whilst the processes might appear to provide sufficient controls, the ability to pursue debt and enforce contracts was untried by the year 2000.

2.4.5 Monitoring and control

The emphasis on functional specialisation, automation and cost reduction increased the credit risk managers’ focus on MIS (management information systems) for improving the effectiveness of operational practices. The key categories of MIS, drawn from my experience as a retail credit executive, are shown in Table 2.5.

<table>
<thead>
<tr>
<th>Item</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>Number of applications received</td>
</tr>
<tr>
<td>Productivity</td>
<td>Number of applications processed daily per staff member</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Critical error rate as a percentage of applications reviewed</td>
</tr>
<tr>
<td>Service</td>
<td>Turnaround time from receipt of application to issuance of credit card</td>
</tr>
<tr>
<td>Financials</td>
<td>Number of staff and their associated cost</td>
</tr>
</tbody>
</table>

Outsourcing also increased the requirement for a robust performance measurement framework, with service level agreements specifying the acceptable conduct of the third party service providers.

2.5 Customers

The changing nature of customer sophistication/profile, level of consumer debt, customer repayment behaviour and usage of loans had a dramatic impact on retail lending in the late 1990’s.
2.5.1 Customer sophistication and profile

The customer profile and relationship with the FIs changed as customers increasingly became aware of the variety of financial products and suppliers and were willing to adopt technology. In my practical experience, customers requirements were straightforward. Firstly, customers required consistent service and reasonable pricing for the “basics”, such as receiving statements on time, receiving a prompt answer when phoning in for a balance enquiry, etc. The levels of service could vary with customer profitability. The high levels of service offered to private banking customers provided an example. Secondly, customers required responsiveness and empathy in the really critical contact points – when the account was set up initially and when problems arose. Thirdly, customers wanted the Banks to recognise and reward their ongoing relationship with the Bank.

Credit risk managers found they needed to respond to customer requirements, as well as the fundamental change in customer profiles and needs. Increasing wealth and changing financial needs were associated with demographic and life cycle changes (Financial System Inquiry Final Report, 1997). As households increased their borrowings and their financial asset holdings and tended to shift their preferences towards the higher end of the risk-return spectrum, they were more exposed to the financial system generally. An example of the higher risk profile of portfolios is provided by the increased exposure of small investors to the share market over the 1990s (discussed in the next Section).

2.5.2 Decrease in Savings Rate / Increase in Debt

Overview

Another trend which has been observed in Australia (and other countries) since deregulation has been a decrease in the saving rate. One argument is that deregulation has simply allowed households to break from credit rationing. For example, Davis (1995) states that the role of liberalisation in the growth of debt to the household sector and small firms seems fairly clear, as these segments have historically been the residual recipients of credit in the case of restrictions. Similarly, Hartropp (1992) refers to studies which propose that deregulation provided a substantial boost to consumer borrowing in the 1980s, enabling households to break from credit rationing, to raise their debt/income ratios to the levels they had always desired.

The counter-argument is that consumers are over-indebted and / or inexperienced at carrying the level of debt. Antzoulatos (1994) states that financial deregulation which improved consumer access to credit has triggered or contributed to a decline in saving rates across a number of diverse countries, including the United States, the Nordic countries and Japan.
A decline in the saving rate as a potentially worrying sign was first noted in relation to the Great Depression (Fisher, 1932, reported in Davis, 1995), where a period of over-indebtedness built up during the prosperous period prior to 1929 followed by deflation. Prior to 1929 there had been an increase in fixed investment and speculation in the assets markets, which was debt financed. With the onset of the downturn, the over-indebtedness led to a wave of bankruptcies. This put further downward pressure on the deflating property market, which fed back to worsen the downturn.

**Overall trends in the Australian savings profile and private credit**
The savings rate shows a declining trend in savings, as shown in Figure 2.15.

FIGURE 2.15 – Saving as a percentage of Household Disposable Income

![Graph showing saving as a percentage of Household Disposable Income](image)

Source: Reserve Bank Bulletin (1999)

It should be noted that the aggregate savings rate does not reflect the diversion of funds from savings into wealth-creation alternatives such as the share-market, superannuation and home ownership.

The increase in private credit (housing and other personal lending) and total lending is shown in Figure 2.16.
The chart shows that “other personal” credit moves generally in association with total credit (which includes business lending). The rate of growth of “other personal” and housing credit has grown steadily in the latter half of the 1990s, although the increases are not as dramatic as those experienced in the late 1980s or the 1992/1994 period (where credit growth was coming off a low base). All Banks Lending to Persons (RBA Bulletin, 1998) increased 285% from $80,665 million in June 1989 to $229 676 in June 1998. In comparison, the average weekly earnings (all employees) had increased only 138%, from $431.05 per week to $592.1.

In addition, the exposure of borrowers to a downturn in the economy could be affected by the changes to the nature of the workforce. For example, in Australia from 1998 to1999, there was a 17% increase in the number of employed persons. However, the overall figure comprised a 51% increase in part-time employment and only a 9% increase in full-time employment (Reserve Bank of Australia Bulletin, 1999).

The figures outlined in this Section have been at the aggregated level. However, the aggregates can mask the impact of the level of indebtedness, with population segments addressed next.
Population segment – Household Expenditure Survey

The distribution of debt to income segments is demonstrated in the Household Expenditure Survey. Conducted by the Australian Bureau of Statistics in 1984, 1989 and 1994, the Survey indicates the low-income quintile segment has shown the most significant increase in debt. Repayments for the total population as a percentage of expenditure increased from 6.4% to 7.9% during the period. The repayments ratio has increased from 3.3% in 1984 to 9.4% for the lowest quintile of income earners, whereas the proportion has remained relatively flat for the highest quintile of income earners. Figure 2.17 highlights the trends taken from the 1994 survey.

FIGURE 2.17 – Repayments as a % expenditure for low to high income groups

source: ABS Household Expenditure Survey (1999)

Population segment – Household Savings Report

Another source for examining the distribution of debt is the Mercantile Mutual-Melbourne Institute Household Savings Report (1999). The December 1999 Report showed a small decline in the proportion of households running into debt or drawing on savings, with an increase in the number of households saving, according to the Report. Low-income households were more likely than average to be running into debt or drawing on savings. The following table shows the distribution between the income ranges, with the percentages reflecting the proportion of the income band which is dis-saving, making ends meet or saving.
TABLE 2.6 – (Dis)Saving Patterns by Income Range

<table>
<thead>
<tr>
<th>Household Income ($000)</th>
<th>Running into debt or Drawing on savings</th>
<th>Making ends meet (%)</th>
<th>Saving a little or a lot (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 20</td>
<td>17</td>
<td>54</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>21 – 30</td>
<td>16</td>
<td>46</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>31 – 40</td>
<td>11</td>
<td>38</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>41 – 50</td>
<td>11</td>
<td>39</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>51 – 60</td>
<td>6</td>
<td>24</td>
<td>69</td>
<td>100</td>
</tr>
<tr>
<td>61 – 70</td>
<td>2</td>
<td>43</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>71 – 80</td>
<td>7</td>
<td>16</td>
<td>77</td>
<td>100</td>
</tr>
<tr>
<td>81 – 90</td>
<td>6</td>
<td>25</td>
<td>69</td>
<td>100</td>
</tr>
<tr>
<td>91 – 100</td>
<td>2</td>
<td>21</td>
<td>77</td>
<td>100</td>
</tr>
<tr>
<td>&gt; 100</td>
<td>6</td>
<td>16</td>
<td>78</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>37</td>
<td>50</td>
<td>97**</td>
</tr>
</tbody>
</table>

Source: Adapted from the Mercantile Mutual-Melbourne Institute Household Savings Report (1999). Responses are shown as a percentage of the income range whose responses where other than none or don’t know.

According to the report and contrary to the ongoing concerns raised in the media about households’ capacity to support the level of debt, respondents showed a marked improvement in the ability to service debt. For example, 69% said debt obligations were less than 10% of household income as compared to 51% 12 months ago (the figures excluded respondents who stated “don’t know”).

TABLE 2.7 – Repayments as a % of income, 1998 versus 1999

<table>
<thead>
<tr>
<th>Repayments as % of income</th>
<th>1998 (%)</th>
<th>1999 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 10</td>
<td>51</td>
<td>69</td>
</tr>
<tr>
<td>11 – 25</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>26 – 50</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>51 – 75</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>76 – 100</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>


The majority of the lower income ranges have debt less than 10%, with around 20% having repayments comprising 11% to 50% of their household income. Repayments of 11-50% of income increased as the income range increased. Repayments of 50% plus of income were flat, at around 5%, across the board. As noted in the Report,

“with their higher disposable incomes, such higher debt levels do not seem imprudent” (pg 19).

The proportion of income allocated to repayments as compared to the income range is shown in Figure 2.18.
In terms of where potential savings are being diverted, the most common form of investment is real estate, with 76% of respondents owning/mortgaging their own home. Superannuation is the next most common form of asset, with 52% of households having superannuation. Direct ownership of shares, bonds and debentures has increased, with 34% of households holding this form of asset. The equivalent figure in 1998 was 32% and 1999 was 24%.

Finally, the Report highlights that:

“The overall picture on debt repayment is reassuring. The strong economy and long expansion is placing households in a strong financial position. There is no evidence, in this survey, that households are, on average, over extended” (pg 19).

However, as argued elsewhere in this thesis, the effect on repayment ability will not be truly known until the business cycle changes significantly, in terms of increased interest rates and unemployment/bankruptcy. The credit risk manager can undertake stress testing – but the ultimate stress test is the actual change in the operating environment.

2.5.3 Customer repayment behaviour

In Australia, there has been a change in customer reaction to repayment difficulties, demonstrated by a larger increase in the number of bankruptcies than would be expected given the benign phase in the underlying economic conditions.
business cycle. The number of new bankruptcies peaked in the first quarter of 1999, rising 56% from 1995 (bankruptcy filings reported by Data Advantage 2000 and ITSA 2000). There was a rise in the proportionate number of female bankruptcies, and the under 30 and 30-30 age groups, according to Data Advantage.

The trends in delinquent or impaired loans were not as clear cut: As shown in Figure 2.19 impaired assets remained at relatively low levels and have not tracked the rise in bankruptcies.


Why might the bankruptcy data have changed in the late1990’s? Firstly, societal expectations changed. The figures suggest the social stigma attached to bankruptcy decreased. Secondly, economic factors could be masked by the use of aggregated/average figures. In particular, the high level of consumer debt highlighted in the previous section could have led to marginal borrowers being more stretched financially. Thirdly, legislative forces can drive the customer’s propensity (as compared to financial ability) to meet repayments. For example, solicitors and company directors cannot practice if they have been declared bankrupt and small businesses are not be able to borrow money to establish a new business venture if they are declared bankrupts. As a result of changes to the Bankruptcy laws, it was easier for a borrower to enter Bankruptcy and subsequently be discharged from bankruptcy. Hence, there would be less impact on a borrower’s future earnings. Fourthly, given the relatively recent changes to bankruptcy laws, borrowers may not have understood the implications of bankruptcy.
on the individual’s long-term borrowing capability. The borrower would find it more difficult to obtain another loan in the future if there was a negative credit bureau listing. Maintaining a “clean” repayment history is not neutral in terms of the borrower’s reputational capital: good credit history improves the probability of obtaining another loan.

Finally, the repayment behaviour also is affected by the capital the borrower has at stake. For example, there is less incentive to make repayments on a loan where there is no security (or the value of the security has devalued to the extent that it is worth less than the loan contract) than there is if the borrower has equity in a security. As the competition in the market led to a reduction in security requirements in the late 1990’s, higher level of defaults could have resulted.

One implication of the trends for credit risk managers was the need to adjust predictions of default and build specific scorecards to take into account bankruptcies. Credit risk managers also needed to take on a more educational role, explaining to borrowers what their commitments were, what the types of costs will be if enforcement actioning was required, and so on.

2.5.4 Structure and usage of loans

There has been a fundamental shift in consumer demand for credit in the 1900s. In the early 1900’s, demand for consumer credit initially burgeoned with the accessibility of the automobile. The return of consumerism following the Second World War fuelled the demand for credit. Most credit was tightly related to a single product (for example, a washing machine). In the 1970’s, the introduction of revolving credit cards dramatically freed up the access to flexible credit. Automated decisioning introduced via credit scoring provided processing efficiencies in meeting the demand.

In Australia over the last decade, the introduction of consolidated home loans (where customers paid for a motor vehicle/home renovations out of the home loan, then paid back this amount over the life of the home loan) meant that some customers had a hard core of debt. Further, there was a significant increase in revolving credit facilities. Neither borrowers nor credit risk managers had to manage this debt in prior cycles. The increase in revolving commitments is shown in Figure 2.20.
FIGURE 2.20 – Personal finance commitments – revolving versus fixed

The chart also highlights the increase in percentage of credit limits used which indicates that borrowers are drawing down the available credit, peaking in 1997/8 at 31%.

In Australia, credit card usage has shown a dramatic increase. For example, from 1989 to 1999, the total credit card advances outstanding increased 348%, with the total credit limits outstanding showing a 276% increase. Table 2.8 highlights the changes.

<table>
<thead>
<tr>
<th>Date</th>
<th>Total advances outstanding ($M)</th>
<th>Total credit limits</th>
<th>Outstandings as % of credit limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 1989</td>
<td>4,040</td>
<td>14,543</td>
<td>28%</td>
</tr>
<tr>
<td>December 1999</td>
<td>14,057</td>
<td>40,134</td>
<td>35%</td>
</tr>
<tr>
<td>Increase %</td>
<td>348%</td>
<td>276%</td>
<td></td>
</tr>
</tbody>
</table>

The changes have been affected by the different transactional patterns to result from the widespread usage of loyalty programs.

2.6 Economic and legislative

There has been a range of legislative changes, in addition to the more cyclical economic trends.
2.6.1 Consumer legislation

In the late 1980’s and through the 1990’s, there was a significant increase in legislation in Australia aimed at protecting the consumers’ rights. Three regulations in particular played a role in affecting the clearing of the lending market.

Firstly, the Privacy Act placed more stringent rules on the type of information an FI could gather from the individual and from other institutions in assessing a borrower, both at the time of application and during the course of the loan. If averaging of the portfolio was undertaken to meet Privacy requirements, the interest rate and non-price benefits for the "good borrowers" were increased to cover the increased losses resulting from decreased ability to segment the market of applicants.

The second regulation, the Uniform Consumer Credit Code, was an initiative designed to make lending conditions transparent to borrowers. In addition to explicitly stating how information had to be provided to borrowers by FIs, the Code stipulated that FIs in all cases needed to determine that the borrower had sufficient capacity to meet repayments. The requirement could mean that some applicants who might have been offered a loan in the past were now refused.

The third regulation was the Bankruptcy Law, highlighted in the previous Section.

2.6.2 Financial systems reform


2.6.3 Legislation – Goods and Services Tax

The effect on the financial position on borrowers of the Goods and Services Tax (“GST”) introduced in Australia in June 2000 remains something of an unknown. It is possible that the GST will have an effect on credit losses through factors such as the decreased re-sale value of securities such as a used motor vehicle.

In addition, the systems resources required to implement the modifications represent an opportunity cost of developmental work on systems. The timing of the introduction of the GST – at the completion of the systems work on the Millennium Bug – was particularly pertinent.
2.6.4 Economic trends

It is of note that deregulation in the 1980’s occurred at the time of a business cycle upturn. Davis (1995) comments that, worldwide, loans were often secured on inflated prices of property or no security at all (in corporate lending, anyway), with over-lending and insufficient experience in credit monitoring. Losses were aggravated when monetary policy was tightened in 1988/9.

The business cycle in the mid to late 1990’s was characterised by both economic growth with low inflation and low interest rates, with less variability in trends. Median house prices, whilst increasing significantly, did not show the dramatic increase they did in the late 1980’s. The trends for CPI, housing loan rate and housing price are shown in Figure 2.21.

FIGURE 2.21 – Economic trends: Inflation (CPI), housing loan rate and median housing price.


Predicting customers' behaviour beyond 2000 is made more complex as borrowers probably will be managing their finances in a comparatively low inflation environment, which they have not had to do in previous cycles. The effect may be exaggerated by the high-risk portfolios held by consumers. Further, the devaluation of real estate security - traditionally seen to be as "safe as houses" - at some stages in this business cycle has forced a focus on the booking of quality business. As pointed out by Scott and Klahr (1992), we can no longer depend on the traditional models and techniques given the growing risks and unfriendly economic circumstances. Further, the effect of low interest rates is
twofold, potentially testing the FIs’ ability to identify and support borrowers rather than simply encouraging refinancing to pay for outstanding payments.

Overall, Thompson (1997) argues that the broader environment had fewer worrying features than in the 1980s. One feature was that aggregate bank credit expanded much less rapidly and inflation rates were down. In addition, the financial position of business borrowers was generally healthy, with debt to equity ratios lower and interest coverage higher. Another moderating effect was that while asset prices were rising, there was no sign of the bubbles of the 1980’s (commercial properties increased only modestly from their low points of 1993).

Finally, the credit risk manager usually took into account somewhat contradictory forces when balancing the risk/reward tradeoff. In the good economic times, higher interest rates reduced the affordability of repayments. In a downturn in the economy, unemployment and bankruptcies similarly reduced the ability to make repayments. The challenge to consumers has always been the effect on loan repayment affordability of an increase in interest rates.

2.7 Focus on customer profitability

As highlighted in the Senior Credit Manager interviews, it has been a strategic imperative for FIs to focus on long term customer profitability to combat the competitive pressures over the long term (retaining sufficient revenue and loss absorption capacity). The focus on customer profitability by FIs is articulated in the KPMG Financial Institutions Performance Survey (1999, pg 9):

“Competition in the financial services market, together with customers’ willingness to use a number of providers for their financial services needs is making it harder for market participants to attract and retain customers. With the cost of attracting new customers being significantly more than the cost of retaining customers, market participants are increasingly focusing their attention on customer management.”

However, a literature search reveals very little writing on the integration of credit risk and marketing strategies over the lifecycle of the customer. Given the criticality of the issue, I have developed a framework of the approach to customer profitability from the perspective of credit risk management.

The framework is based largely on experience gained from working in the industry. An article with the framework was published in the Journal of Lending and Credit Risk Management, the leading journal in credit risk management. Prior to publication, the framework was reviewed by two executives in one of the Big Four Banks and by three Partners/Directors in the credit risk management...
consulting field. Response from practitioners in a number of FIs has been extremely positive, with comments made that the framework encapsulated the key issues and challenges facing the integration of credit and marketing to drive customer profitability. An indicative response from the Senior Executive of a US Bank of roughly $20 billion was:

“the best representation I’ve seen of the issues facing the organization”.

The models for retail lending developed in the article are the first comprehensive suite of which I am aware.

### 2.7.1 The framework

A number of retail lenders in Australia have made fundamental changes to their credit risk and marketing approaches to align them to the corporate objectives. Leading FIs have created the organisational focus to integrate their customer information and credit knowledge with marketing strategies to drive the profitability of customer segments. All aspects of modern credit risk management interact within the retail lending environment must be integrated, as shown in Figure 2.22.

**FIGURE 2.22 - An integrated credit risk management framework**

![Credit Risk Management Framework](image)

Sophistication in the use of credit models and customer information has allowed the automation of the credit decision, including the appropriate terms of the loan (such as the interest rate and the collateral requirements). The life-cycle profitability of the account, and not just the credit loss, is used to
manage the risk-reward tradeoff at an individual account level between increased interest and fee income from increased sales and/or outstanding balances of existing accounts and increased credit losses and credit operating costs. Ideally, credit costs should be managed to equilibrium, where the marginal revenue on interest and fee income equates to marginal credit costs.

Figure 2.23 summarises the change in approach of both the marketing and credit functions towards a focus on customer profitability.

FIGURE 2.23 – Changes in the credit and marketing approach

Traditionally, marketing and/or credit analysts have focused on customer demographics to infer the likely response and approval rates, transactional behaviour and credit performance of customer segments. Using decision support systems, the process is reversed: Actual response and approval rates, transactional behaviour and credit performance of existing customers are used to estimate (using statistical methodologies) the likely behaviour of customer segments. Marketing and credit efforts are targeted accordingly. Figure 2.24 highlights the changes.
The means to develop an integrated credit and marketing infrastructure, consistent with Woolfe (1996), is conceptually straightforward. Firstly, the FI should recognise that not all customers are equal (in the current context, identify customer profitability dynamics). Secondly, the FI should reward the behaviours of staff and customers that support customer profitability.

The two-phased approach reflects the essence of all aspects of credit risk management in a portfolio-based approach. Firstly, there is a need to identify patterns within a data-series. Whether the data are numerical or anecdotal, proven or hypothesised, the objective is to identify underlying patterns and their causes. The patterns of behaviour can be used to identify customer segment. The second phase is the need to establish the programs to measure the behaviours and then provide rewards to either reinforce behaviour or change behaviour. That is, behaviour can be changed through the performance-reward link – people do what they are measured on and rewarded for.

Figure 2.25 summarises how data can be analysed using quantitative techniques to derive customer profitability dimensions.
2.8 Summary of the New Lending Environment …

This Chapter has outlined some of the key changes to the retail lending environment in the business cycle of the late 1990’s in Australia. Many FIs started the decade having to rebuild their balance sheets, with considerable focus and resources allocated to asset recovery. After there was some stability, the credit risk managers shifted their energies to managing the transition to a portfolio-based credit approach (from a transaction based approach). The market pressure forced FIs to be more competitive in terms of lower costs, decreased turnaround times and decreased information requirements. The transition of the “ownership” of credit costs to the line of business and the extent of mergers and acquisitions required a re-alignment of credit cultures within FIs. The widespread innovation and diffusion of new workflow management and decision support systems necessitated a completely new approach to credit risk management and provided increased management control, by enforcing guidelines and standards. The emphasis on well-dimensioned and non-volatile credit costs “moved the goal posts” for credit risk management. Customer profitability was identified as probably the single biggest potential competitive advantage for FIs. Finally, the economic and legislative environment resulted in a significantly different operating environment.

In combination, the factors resulted in the transition to a data-driven, automated, functionally specialised and portfolio-based approach to credit risk management.
This Chapter provides context for the retail lending market in Australia. In the next two Chapters, existing theories and models from a range of academic areas are outlined which can help explain the behaviour and motivation of credit risk professionals.
Chapter 3: Analytical Tools I - Theories of Credit Rationing, Decision Making and Organisational Culture/Climate

As discussed in the Introductory Chapter, the objective of the thesis is to identify the reasons why FIs establish the credit risk attitude across the business cycle and how they manage this throughout the organisation. FIs do not appear to demonstrate behaviours consistent with the neo-classical economics’ assumption that organisations in a competitive environment act in a rational manner to maximise the profit of the organisation. To understand why such behaviour is demonstrated – in the context of the New Lending Environment outlined in Chapter 2 - it has been necessary to examine economic, psychological and sociological constructs developed to explain human behaviour.

Given the breadth of theories examined, there has been no attempt to provide a comprehensive explanation of all of the constructs which could affect decision making of credit professionals in the highly complex and highly uncertain retail lending environment when facing low-probability, high loss hazard events. However, key elements which appeared particularly pertinent have been presented in a relatively high level summary of the existing research.

This Chapter reviews the areas of theories of credit rationing, decision making under uncertainty (primarily Prospect Theory) and organisational culture and climate. The next Chapter focuses on the more practical issues of “credit culture”, the Balanced Scorecard approach, grounded theory and research design which have been applied in this thesis. The implications for the theories in the complex retail lending environment are discussed in association with other research in subsequent Chapters.

3.1 The theory of credit rationing

A summary of the theory of credit rationing is provided in this Section. One theoretical model which appears particularly pertinent, Guttentag and Herring’s (1984) theory of credit rationing and financial disorder, is discussed in greater detail. The theory of credit rationing has been developed in relation to commercial or corporate lending, so the applicability of the underlying constructs to the consumer lending market are discussed at the end of the Section.

3.1.1 Theoretical underpinnings of the theory of credit rationing

There are three main definitions of credit rationing referred to in the literature. Jaffee and Russell state

“Credit rationing occurs when lenders quote an interest rate on loans and then proceed to supply a smaller loan size than demanded by borrowers” (1976, pg 651).
Alternatively, Stiglitz and Weiss state:

“either (a) among some loan applicants who appear to be identical some receive a loan and others do not, and the rejected applicants would not receive a loan even if they offered to pay a higher interest rate; or (b) there are identifiable groups of individuals in the population who, with a given supply of credit, are unable to obtain loans at any interest rate, even though with a larger supply of credit they would” (1981, pg 394-5).

Finally, Bester argues:

“credit rationing is said to occur when some borrowers receive a loan and others do not, although the latter would accept even higher interest payments or an increase in collateral” (1985, pg 850).

In this thesis, credit rationing is assumed to occur when financial institutions do not provide the level of debt required by consumers at the appropriate market cost of funds. This rationing can occur when the FI does not approve an application for a loan made by a potential borrower or the FI does approve an application for a loan but offers the borrower a lower amount than requested. The scenario where the potential borrower is discouraged from applying for a loan because he or she does not expect that the FI will approve their loan application will not be incorporated as “credit rationing”. The focus in this thesis is on credit rationing from the perspective of the FIs, and hence will focus on applications which are actually made to the FIs.

There are two forms of credit rationing - price rationing and quantity rationing.

**Price rationing**

In a world of perfectly competitive markets, there is no rationing of credit. Price, in the form of interest rate charged to the individual borrower, simply determines the quantity of credit which is provided. The rate a borrower is charged varies by the risk of default - a spread or premium s applied to the base rate (which is equivalent to a loan where there is no possibility of default) to reflect the probability that the borrower will default on his/her payments. The risk on the loan can also be affected by the existence of collateral. Once the appropriate interest rate to reflect the risk of the loan is determined, price rationing assumes that the loan rate will be adjusted immediately to reflect the risk.

However, an underlying assumption of price rationing is that it is possible to identify the risk of default for each individual borrower. In reality, the lending contract is complex and cannot be easily
reduced to a price and demand equation. This is primarily because FIs cannot determine the exact probability that a loan will default, as a result of incomplete contracts, imperfect information and uncertainty.

The lending contract is an agreement between the borrower and the lender that the borrower will repay to the lender the principal, interest, fees and charges according to an agreed schedule set in the future. However, this simple concept is not as easy to put into practice as it would appear. Firstly, it is not possible to gauge exactly what the borrowers’ ability and propensity to pay will be in the future. Further, due to incomplete contracts, it also is not possible to specify for each and every possible scenario what the borrower’s behaviour would be and, if there is collateral involved, what its value would be. Thus, in addition to the likelihood of default actually occurring (the frequency), it is necessary to make an estimation of the actual costs/loss to the FI (the magnitude) when it happens. The calculation becomes further complicated as additional costs do not depend only on the borrower but also on variable costs such as the legal costs associated with selling collateral, the costs of bankruptcy, the costs of additional staffing in the FIs remedial management process, and so on. The issue of magnitude is not normally examined in the traditional theory of credit rationing, with the probability (frequency) of a default being the main focus.

Further, price rationing can affect the allocation of credit to borrowers through the interactive effect of the capacity testing process. When approving a loan, FIs typically will analyse the applicants’ ability to service the loan (that is, whether they can afford to make the repayments on the loan). By increasing the interest rate, more marginal borrowers will be forced from the market, as they will not have sufficient income to service the loan.

In summary, price rationing occurs where price in the form of interest rate is increased to reflect the increased risk premium.

**Quantity Rationing**

To maintain the required level of credit quality, FIs can also use the second form of credit rationing, quantity rationing. It occurs when potential borrowers want more credit than lenders are prepared to provide, even if a higher interest rate is charged. Quantity rationing results when lenders do not believe that the lessening of the quality of the portfolio and the resulting credit losses and costs of remedial management will exceed the income the FI will make from charging the higher interest rate and fees associated with the higher risk loans.

Quantity rationing can exist in disequilibrium (temporarily) or equilibrium (permanently). *Disequilibrium (temporary) quantity rationing* occurs when there are factors temporarily (artificially)
preventing full adjustment of the interest rates charged on loans to the level which will clear the market. The primary reasons given are government regulations artificially affecting rates and "sticky rates", where FIs do not immediately shift loan rates. An example of the latter is where legislation dictates that there is a minimum period of notice before rates can be changed. *Equilibrium (permanent) quantity rationing* is largely a function of asymmetric information, which in turn is associated with moral hazard and adverse selection.

*Moral hazard* refers to the propensity of the borrower to undertake actions after the loan has been established which are contrary to the preferences of the lender. If a higher interest rate is charged, borrowers will be encouraged to seek to maximise profits by undertaking higher risk projects which, if they succeed, have a higher payback to the borrower. The riskier projects are not in the interest of the risk-averse lender as, by definition, this type of project is more likely to fail and lead to default. Moral hazard would not be an issue if it was possible for the FI to monitor all actions of the borrower and through complete contracts enforce preferred behaviours during the life of the loan.

*Adverse selection* refers to the disproportionate attraction of high risk borrowers to a lending portfolio. Adverse selection arises as the borrower is more informed about his/her project than the FI and hence knows better the riskiness of the project and the associated probability and magnitude of default. Presuming the cost to the FI of obtaining additional information on loans is sufficiently high, the FI will not know this risk for each individual borrower. Thus, the FI must group together the high and low risk loans and apply a credit risk premium which has been averaged across the portfolio. However, as the interest rate increases due to the credit risk premium, the only borrowers who are prepared to pay the higher rates are those who have riskier projects, as they need the potentially higher returns to compensate for the higher cost of financing the project. The effect is heightened as the lower risk borrowers leave the market and the portfolio is reduced further in quality.

Combining the effects of moral hazard and adverse selection, the FIs' expected profit from the loan pool increases as interest rates increase to a point, as a function of the additional interest and fee income. However, the FIs stop providing loans to some potential borrowers when the FIs believe that the lessening of the quality of the portfolio and the resulting credit losses and costs of remedial management will not exceed the income they will make from charging the higher interest rate and fees associated with the higher risk loans. Quantity rationing occurs even though these individuals/companies are not observationally different from the loans in the existing pool.

There is only limited legislation directly affecting the overall level of credit and interest rate ceilings in Australia. Section 50 of the Banking Act 1959 gives the Reserve Bank, on the approval of the Treasurer, the power to make regulations to control the rate of interest payable to or by FIs.
addition, some of the States have legislation that limits the interest rate applying to any credit contract to which the Uniform Credit Code applies. For example, in Victoria {Consumer Credit (Victoria) Act 1995} and NSW {Consumer Credit (New South Wales) Act 1995}, the maximum interest rate is set at 48% per annum.


Other Factors
Other factors which have been researched in relation to the price and quantity rationing models include loan size (Jaffee and Russell’s, 1976), the use of collateral (Bester, 1985; Besanko and Thakor, 1987; Boot, Thakor and Udell, 1991; Morsman, 1986; Orgler, 1970; Stiglitz and Weiss, 1992; Boot and Thakor, 1991), funding (Hartrop, 1992; Blundell-Wignall and Gizycki, 1994), the effect of ongoing borrowing (Boot and Thakor, 1994) and commitment loans versus non-commitment loans (Berger and Udell, 1992; Morgan, 1991; Duca, 1988; Morgan, 1993).

Whilst the traditional analysis of credit rationing has referred to the likely risk of borrowers due to the borrowers' motivations (for example, Stiglitz and Weiss - 1981), it does not place great emphasis on the forces which are outside of the borrowers' control. It is assumed that borrowers are masters of their own destiny and the economic environment will support them moving between projects of variable riskiness. It is argued that the credit rationing model examines individual borrower's behaviour and as the economic forces will affect all borrowers equally, there is no need to include this explicitly as a variable in the model.

The limited examination of the impact of cyclical economic factors on credit rationing includes: The economy in a recession versus a boom (Stiglitz and Weiss, 1992); Loan demand and agency costs (Blundell-Wignall and Gizycki, 1994); and Periods of financial stability followed by financial crisis (Pryce, 1996).

The impact of competition on credit rationing does not appear to have been widely discussed. Chmura (1992) includes increasing competition in banking as a possible reason for the finding that there was not a significant relationship between risk and return in the commercial loan market (the illiquid nature of commercial loans and the associated lack of historical data being the other two reasons).
The model of credit rationing and financial disorder developed by Guttentag and Herring (1984) will be discussed in more detail in the next section. The model appears particularly pertinent to this thesis as it is the one paper found during the research process which incorporates a number of theories relating to decision making in a lending environment. The main caveat is that the theory is based on a transactional review of loan applications which applies more to the commercial lending market than retail.

3.1.2 Guttentag and Herring’s theory of credit rationing and financial disorder

Guttentag and Herring’s (1984) model of credit rationing and financial disorder draws from two areas. Firstly, the microeconomics of lending decisions in the presence of default risk and moral hazard are examined. Default premiums are related to subjective expectancies of default and the borrower’s capital, and establish when borrowers will be rationed. Secondly, the empirical literature on decision making under uncertainty has been incorporated, to establish hypotheses regarding the way in which lenders form expectations of default. The authors highlight that economic theory offers little guidance as to how expectations are formulated in circumstances characterised by uncertainty.

The model incorporates both a project-specific risk and a distribution of investment returns. It is assumed that the concept of “risk” applies to the project-specific distribution. Subjective probabilities equate to the objective probabilities, either because: Participants have prior knowledge of the process generating investment returns; or, The objective probabilities may be inferred from the frequency distributions of investment outcomes.

However, Guttentag and Herring argue, the likelihood that Nature will draw from a disastrous distribution of investment returns is uncertain. A disastrous distribution reflects the infrequent shocks which, if not anticipated by lenders, can have catastrophic financial consequences that exacerbate the impact of shock on real economic activity. There is “uncertainty” as to the probability that such shocks or disasters can happen in that participants only know that it is a small, but finite, probability that such a shock will happen. A probability distribution cannot be developed.

“Disaster myopia” is said to occur when subjective probabilities fall below actual probabilities during periods in which no major shocks occur. The authors argue that:

“Creditors can lend to borrowers with lower capital positions, permit loans outstanding to rise, or allow their own capital to fall, without increasing the subjective probability of their own insolvency” (pg 1365).
Growing confidence associated with the absence of shocks in a growing economy strengthen the tendency for subjective shock probability to decline merely through the passage of time. Financial crises are associated with a sharp increase in credit rationing following a period when rationing constraints have been loosened. The impact of the next exogenous shock will depend on the vulnerability of the economic system at the time of the shock. If capital positions have been allowed to decline significantly, it is more likely that losses will be incurred. It will not be possible to increase rates in all cases, for the reasons given above. Lenders will attempt to convert their loans to short term debts. The risk premia charged to highly capitalised borrowers will be less than to lowly capitalised borrowers. This further widens the risk premia paid by high risk borrowers - a phenomenon known as "tiering" (Davis, 1995).

According to Guttentag and Herring, the cognitive bias is argued to be associated with the availability effect and the threshold heuristic. The availability heuristic is employed whenever a person

“estimates frequency or probability by the ease with which instances or associations can be brought to mind” (referring to Tversky and Kahneman 1982, pg 164).

Ease of recall is affected by frequency, the emotional experience of and the time elapsed since the last occurrence. The threshold heuristic, based on the work of Herbert Simon, reflects

“At some point after the occurrence of a disaster, the subjective probability of the recurrence of the disaster may become so low that it is treated as if it were zero” (Guttentag and Herring, 1984, pg 1363).

This rule is implicit and determines the way in decision makers allocate their managerial attention. The cognitive bias may be re-enforced by institutional factors such as the performance of the loan officers being evaluated over short periods based on current revenue generated and high job mobility. Low frequency events are especially likely to be disregarded if the Lending Officer will not be held responsible.

Further, Guttentag and Herring refer to the dangers of moral hazard. As it is assumed that it is costly in practice to implement restrictive covenants, creditors will usually be vulnerable to some degree of moral hazard. Moral hazard is defined as:

“the possibility that the borrowers, after obtaining the loan, may act in such a way as to increase the probability of default in an effort to increase the probability of very high returns” (pg 1369).
Guttentag and Herring argue that market forces will not necessarily ensure rationality is applied when allowing for shocks:

“The argument that market discipline will ensure that decision-makers form expectations correctly has little force since the force may occur so infrequently that it may be disregarded with impunity for decades. In deed, under such circumstances, competition may drive prudent creditors from the market because a creditor who attempts to charge an appropriate default premium for a low probability hazard is likely to lose business to creditors who are willing to disregard the hazard” (pg 1362).

Finally, Guttentag and Herring argue that procedures should be developed for both creditors and supervisors to counteract disaster myopia, identify exposures to major hazards and formulate standards for evaluating the appropriateness of particular levels of exposure.

However, there appear to be caveats to the applicability of Guttentag and Herrings’s model to retail lending. The theory is based on a transactional review of loan applications which applies more to the commercial lending market rather than the portfolio-based approach applicable to retail credit. Further, it is hard to estimate with the level of precision assumed (pure “risk”) what is the probability of default, even in retail lending. Retail lending typically does not offer projects of variable riskiness.

3.1.3 Applicability to the consumer credit market

This Section examines the applicability of credit rationing to the consumer credit market in terms of: (a) Corporate versus consumer credit markets; and (b) Evidence of rationing in consumer markets from the literature and regulatory studies.

Corporate versus consumer credit markets

In the literature, the concepts of credit rationing have been applied nearly exclusively to the financing of investment/corporate projects rather than consumer lending. Davis (1995) refers to the consumer credit market and has a chapter in the book on personal financial fragility (which examines personal-sector indebtedness and default in major economies). However, the analysis in his book is fundamentally based on the investment/corporate markets.

In Hillier and Ibrahimo's (1993) review of the literature for asymmetric information, they note that only one paper (Jaffee and Russell, 1979) is related to consumer credit. The authors suggest the reasons why the focus has been on financing investment projects is that in the consumer credit market, banks could more easily segregate borrowers into risk classes, control the use of funds, or impose other terms on customers so as to avoid the issues of moral hazard and adverse selection. They further
state that, in principle, the ideas could be extended to the consumer credit market. Each of the points is addressed below.

Hillier and Ibrahimo's first point, that borrowers are more easily segregated into risk classes, appears to apply to retail lending. In corporate lending, there is a limited sample of repeat observations given the small number of transactions of high dollar value, although a large amount of information is analysed on each transaction. Conversely, the artificial intelligence models such as credit scoring and neural networks which are used in the high volume, small loan size consumer lending area attempt to move the credit decision to the objective "risk" scenario. The objectivity is possible as there are repeat observations of essentially the same input variables and outcomes (that is, good or bad loans) allowing the development of a probability function for losses.

However, the consumer lending area where loan approval decisions are purely judgmental (where there is not an artificial intelligence model) is not as straightforward. The comparatively high volume of transactions, as compared to corporate lending, means that there are additional cases upon which to develop a probability function. A counter argument is that consumer lenders are no more able than corporate lenders to segregate borrowers into risk classes as the lender makes his/her lending decision using significantly less information than does a corporate lender. Further, the consumer acceptance department is quite often separate from the collections department, so the lenders do not necessarily get the feedback on the subsequent default behaviour on the loans that they approved to develop an "informal estimate of default".

Hillier and Ibrahimo’s second point - that consumer markets can more easily control the use of funds - appears to have limited applicability in consumer lending today as FIs are moving more towards decreasing their monitoring costs by not attempting to control funds. This is exemplified by the increasing proportion of the more innovative, flexible loan products such as revolving lines of credit secured by a mortgage and credit cards.

Finally, Hilliard and Ibrahimo's third point, that the consumer credit market can impose other terms on customers so as to avoid the problems of moral hazard and adverse selection, does not appear accurate in the Australian lending environment. The bulk of the consumer credit market operates under standardised terms and conditions, with limited usage of specific covenants. This is re-inforced both by government legislation and the decreased cost of establishing a loan.

**Empirical evidence of credit rationing in the literature**

A few, particularly pertinent studies of commercial lending are discussed briefly, followed by studies of credit rationing in retail lending.
The empirical research into the theory of credit rationing has produced mixed findings, even in the commercial lending area. Blundell-Wignall and Gizycki (1994) review the demand and supply dynamics (at the aggregate level) for business credit in Australia in the period December 1982 to July 1991. They find that the only period in which there has been evidence of credit rationing is the 1983 recession. The authors note that as financial regulation was in place, the rationing was more likely to be of the disequilibrium type associated with the effects of regulations. Following deregulation, there has been no evidence of excess demand. Blundell-Wignall and Gizycki state that business credit is a function of variables which are dependent on expectations about future activity, such as share prices and risk premia. This suggests that price rationing has been in existence, but not quantity credit rationing.

Mixed evidence of credit rationing in the commercial market was found by Berger and Udell (1992), who argue that empirical tests of equilibrium credit rationing have been difficult to conduct due to the paucity of micro data on the contractual terms. The authors conclude that the existence of information-based equilibrium credit rationing cannot be ruled out, but it is difficult to argue that such rationing constitutes an important economic phenomenon.

Finally, in her case-study on 1670 commercial loans granted from July 1992 to December 1992 at a US bank, Chmura (1995), found little evidence for a basic financial relationship between risk and return. It is posited that this is because the commercial loan market does not possess the level of efficiency found in capital markets. Chmura also comments that these results are consistent with the commonly expressed views that banks do not price for risks and that a great deal of variation in loan pricing occurs among banks.

Research into retail lending has been conducted primarily in the United States. From an examination of information collected by the US Federal Reserve in 1983, Perraudin and Sorenson (1992) conclude that 15% of consumers are credit constrained (in that they had been turned down for credit, refused the size of loan they had asked for, or not applied for credit because they thought they would be turned down). In addition, they find that preferences and access to credit depends on demographic factors. The authors highlight that the finding has implications for studies that have used aggregate measures. It should be noted that Perraudin and Sorensen do not include loans for house purchase – which represent a major form of debt to consumers.

Other studies have examined whether the life cycle-permanent income hypothesis is supported. The hypothesis assumes that the consumer is rational and forward looking, maximising their utility function for consumption over their lifetime subject to their expected lifetime income endowments.
The individual will be able to borrow freely over the course of the lifetime, using his or her human wealth (that is, wage earning potential) or non-human wealth as a form of collateral. However, if lending markets are not perfect, consumers may be prohibited from satisfying their desired consumption plans and hence be liquidity constrained (Fissel and Jappelli, 1990). As reported in Shah (1992), a number of studies have found an association between the consumption function and income, indicating credit rationing. There is a consensus, according to Japelli (1990), that approximately 20% of consumers do not behave in accordance with the life-cycle hypothesis (for example, Mariger 1986 and Hubbard and Judd, 1986). This could be due to either credit constraints or simply non-maximising behaviour by consumers. However, after reviewing aggregate consumption data in post-war United States, Shea (1995) concludes that the life cycle hypothesis is not supported.

Further, the measure used to examine whether borrowers are liquidity constrained (the Survey of Consumer Finances and the Michigan Panel Study of Income Dynamics) is affected by both the consumption desired by consumers and the “supply side” effects of the amount of credit made available to the market by FIs (Fissell and Jappelli, 1990). Allowing for this, the authors find that the probability of an individual being liquidity constrained in each period is an endogenous variable, and so both the proportion of the population that is liquidity constrained and the fraction of total income which is controlled by constrained consumers are endogenous.

In addition, the Federal Reserve Board index of availability of consumer credit moves quite closely with the growth rate of consumer credit outstandings (as reported in the Australian newspaper, February 14, 1996). This could mean that a large part of the US credit cycle is turned less by borrowers propensity to take on debt and more by the banks readiness to offer it.

One set of empirical evidence relating to credit cards directly contradicts the theory of credit rationing. Stavins (1996) review of credit card holders finds no support of “rational” behaviour in credit card borrowers. It would be expected that customers who do not pay their balance in full each month (and hence incur an interest charge) would borrow at lower rates than customers who pay their balance in full (and use the credit card as a convenient payment mechanism). The opposite is in evidence – higher interest rates are associated with customers who do not pay their balance in full. However, Stavins notes, the causality is not clear: Customers may ignore the rates in their borrowing decision or banks may choose to approve more risky customers if there is a higher interest rate spread to cover the increased credit losses. Further, Stavins argues that “adverse selection” occurs (although this is a reverse definition of adverse selection as compared to the theory of credit rationing):

“When lowering their rates, banks attract high risk customers who are more likely to default (or their existing risk customers borrow more). Since banks lose income at higher rates…” to
maximise their income is to charge high interest rates but entice their customers with additional perks, which cost banks little and are likely to attract “good” customers with a low probability of defaulting” (pg 52).

Finally, two studies are regularly conducted by US regulatory bodies into the demonstrated credit risk appetite of banks, namely the Office of the Comptroller of the Currency annual survey and the United States Federal Reserve’s Senior Loan Officers survey. The studies are addressed in the Chapter – Individual Research Results.

3.1.4 In summary …

In summary, the theory of credit rationing has been developed in relation to the commercial/corporate lending arena. The literature indicates mixed evidence of its existence and applicability to the retail lending market.

3.2 Theories of Decision Making

This Section focuses on theories relating to decision making at the individual level where research has indicated there are systematic biases in how people make decisions. The topics covered are: The conditions of uncertainty and incomplete information, prospect theory, and related constructs.

3.2.1 Conditions of uncertainty and information for individuals and the organisation

In the credit risk management environment, decisions are made under conditions of incomplete information and uncertainty. Several factors contribute to the extremely high levels of uncertainty and lack of information. Firstly, typically there are long lag times between the decision/behaviour and the outcome. A group of loans which are booked in one financial year may take up to two additional years to default, on average. A lot more lending decisions will need to be made on the portfolio in the interim – with the eventual default rate being an unknown. Secondly, there are many factors external to the individual decision maker which could impact the outcome, including both external economic and market conditions and internal organisational conditions. Finally, the probabilities of losses typically are extremely small on average and there are mixed prospects – most accounts will show excellent credit performance with only a few creating problems.

In this context, a summary of some key factors relating to the level of uncertainty and use of information in organisations provides context for the remainder of this Section.
Uncertainty
An outline of uncertainty starts with Frank J Knight's famous work on risk and uncertainty. Quoting Knight (1921, pg 233):

"The practical difference between the two categories, risk and uncertainty, is that in the former the distribution of the outcome in a group of instances is known (either through calculation a priori or from statistics of past experience), while in the case of uncertainty this is not true, the reason being in general that it is impossible to form a group of instances, because the situation dealt with is in a high degree unique."

Thus, risk is associated with an objective, quantifiable probability of an event occurring, where the probability is calculated using empirical evidence. However, uncertainty is associated with subjectivity and exists when there is insufficient information to formulate any objective estimates of the possible outcomes of a group of instances (Shanmugam, 1988).

Savage (1954) proposed that probability should be seen to be a "degree of belief". It is proposed that even where objective probabilities appears to be possible, this is really illusory. Taking the above example of throwing a die, the assumption that a die is a fair one is a condition of which one could never be objectively certain. This means that decision-makers can never deal in an objective world, but are always acting within the subjective world.

Information
The level of certainty about a likely outcome is a function of the completeness of information a decision-maker holds. If the individual is not confident his or her knowledge is accurate and complete, then he or she will not be confident that estimates of likely outcomes will be accurate.

As outlined by Hirschleifer and Riley (1992), information can be classified in a couple of ways. Firstly, there is "public information" (accessible to all the market) and "private information" (through which an individual can capitalise on his or her unique knowledge). The second classification of information is "produced" versus "emergent" information. Information is "produced" as a result of a conscious effort, and typically there is some cost associated with the development of the information. Emergent information, however, is made available without cost, simply due to the passage of time.

Typically, the decision to search/wait for additional information or to make an immediate decision about the credit controls and disciplines is made many times throughout the business cycle. As each critical stage is reached, input from credit risk managers is required as to the next step.
However, obtaining additional information is subject to costs. The costs can be incurred directly through the information gathering process or indirectly through lost opportunity costs (for example, potentially lost market share as the credit risk manager waits for emergent information to flow through). As Rosegger (1980) comments, the acquisition of such information is itself an economic activity, involving real costs. Decision makers continually have to ask themselves whether marginal improvements in quality of their decisions justify the marginal cost of gathering more data.

**Learning through information must be disseminated throughout the organisation**

In addition to information being required by individual credit risk managers, it must be made available throughout the organisation over time. The style of organisational learning which is pervasive in the FI affects how learning about credit risk management controls and disciplines is either facilitated or discouraged in different organisations.

Successful businesses create the combination of organisational culture/climate that maximises the organisational learning of how to create superior customer value in dynamic and turbulent markets (Slater and Narver, 1993). The ability to learn faster than competitors may be the only source of sustainable competitive advantage. The authors also state that high performing firms competing in complex and dynamic industries must adopt an “organic” form, which is decentralised with fluid and ambiguous job responsibilities and extensive lateral communication processes. Internal and external members of these organisations recognise their interdependence and information is exchanged freely, as the systematic or structural constraints on informational flows are dismantled.

Further, Sinkula (1994) refers to Huber (1991), who describes four organisational learning-related constructs: (i) Knowledge acquisition - the process by which knowledge is obtained; (ii) Information distribution – the process by which information from different sources is shared and thereby leads to new information or understanding; (iii) Information interpretation – the process by which distributed information is given one or more commonly understood interpretations; and (iv) Organisational memory – the means by which information is stored for future use.

Organisational learning, like individual learning, is a function of age and experience, argues Sinkula (1994). It takes time for organisational members to function as a shared cognition system. Similarly, Day (1994) states that:

“collective learning is much more than the cumulative results of what individuals have learned. Some of this collective knowledge is found in systems, procedures, routines, files and data banks. However, the most influential knowledge is likely to be tacit. It is embedded in the decision rules for selecting or rejecting information, the shared mental models for interpreting this information,
and the simplifying assumptions about how the market will respond to actions taken on the basis of the information” (pg 10).

There are factors which act against the transferral of information (Day, 1994) and which are particularly pertinent in the modern lending environment. These included: Management turnover - particularly important in the 1990’s due to organisational downsizing, and rapid rotation and mobility disrupting continuity; Teams being disbanded too quickly without a plan to place team members in positions where they can contribute to new teams; and, Over-reliance on consultants and research agencies.

**Expected utility theory is not sufficient**

Given that the retail lending environment is characterised by incomplete information and uncertainty, it is questionable whether the dominant theory of decision making under risk, expected utility theory, can represent the complexities of the decision environment. Levy (1992, referring to Luce and Raiffa, 1957) states:

“The expected-utility principle asserts that individuals attempt to maximize expected utility in their choices between risky options: they weight the utilities of individual outcomes by their probabilities and choose the option with the highest weighted sum” (pg 173).

The basic assumption of the utility maximizing model is that individuals are rational, and will attempt to maximize utility at each decision point. Quoting from Simon (1955):

"This man is assumed to have knowledge of the relevant aspects of his environment which, if not absolutely complete, is at least impressively clear and voluminous. He is assumed also to have well-organized and stable system of preferences, and a skill in computation that enables him to calculate, for the alternative courses of action that are available to him, which of these will permit him to reach the highest attainable point on his preference scale" (pg 99).

However, the assumptions are not sustainable in the lending environment, as outlined previously. The assumptions include: (i) The possible future state of affairs is known, and all possible choices are presented at the one time (not sequentially); (ii) The individual can accurately calculate the value or utility (s)he associates with each of the possible choices; and (iii) The information is available as to the probability that a particular outcome will actually occur, if it is chosen.
Accordingly, alternate models of decision making have been examined. Prospect theory has emerged as another leading alternative to the theory of expected utility as a theory of decision under risk (Levy, 1992).

### 3.2.2 Prospect Theory

A comparatively high level review of prospect theory is provided in this Section, focusing on only the key concepts related to the thesis’ empirical research. Detailed discussions on the theoretical underpinnings are provided by Tversky and Kahneman (1991, 1992), Kahneman and Tversky (1979), Levy (1992), Fennema and Wakker (1997) and Tversky and Fox (1995).

**Background and underlying constructs**

Prospect theory has been developed by Kahneman and Tversky (1979) in response to perceived shortcomings in the expected utility theory's ability to predict choices in a risk situation. The authors provided several classes of choice problems in which preferences were found to systematically violate the axioms of expected utility theory. In 1992, the authors presented a revised version of prospect theory which incorporated a cumulative functional and extended theory to uncertain outcomes (in addition to risky prospects) with any number of outcomes.

According to Kahneman and Tversky (1992), the theory addresses five major phenomena of choice which violate the expected utility model. Firstly, the framing of options around a reference point which is presented as a gain or a loss yields systematically different preferences. Secondly, nonlinear preferences challenge the principle that the utility of a risky prospect is linear in outcome probabilities. Kahneman and Tversky refer to Allais’ (1953) famous example, whereby the difference between .99 and 1.00 has more impact on preferences than the difference between 0.10 and 0.11. Thirdly, there is source dependence, where people’s willingness to bet on an uncertain event depends on the source as well as the degree of uncertainty. Fourthly, there are risk-seeking choices observed whereby people prefer a small probability of winning a large prize over the expected value of the prospect and when people must choose between a sure loss and a substantial probability of a larger loss. Risk aversion is generally assumed. Finally, there is loss aversion, where losses loom larger than gains.

There are a few key elements of prospect theory which are consistent with the above behaviour (Tversky and Kahneman, 1992; Tversky and Kahneman, 1991; Levy, 1992). Firstly, there is a value function incorporating reference dependence (gains and losses are defined relative to a reference point) which is concave for gains (associated with risk averse behaviour) and convex for losses (associated with risk seeking behaviour). The value function is steeper for losses than gains (a loss-aversion coefficient of about 2 to 1).
Secondly, there is a nonlinear transformation of the probability scale. Diminishing sensitivity means that the impact of a change in probability diminishes with its distance from the boundary and gives rise to the weighting function being concave near 0 and convex near 1. For example, an increase of 0.1 of winning a prize has more impact when it changes the probably of winning from 0.9 to 1.0 or from 0 to 0.1, than when it changes the probability of winning from 0.3 to 0.4 or 0.6 to 0.7. This function overweights small probabilities and underweights moderate and high probabilities.

The weighting function is relatively shallow in the open interval, and not “well-behaved” near the end-points. Very small probabilities can be either greatly overweighted or neglected altogether. The apparent discontinuities at the end points suggest that there is a limit to how small a decision weight can be attached to an event, if it is given any weight at all. At the same time, the simplification of prospects in the editing phase can result in individuals discarding events of extremely low probability and treating events of extremely high probability as if they are certain. Thus, highly unlikely events are either ignored or overweighted, and the difference between highly probable and certain is either neglected or exaggerated.

The weighting function is quite close for gains and losses, although the gains curve is slightly more curved than the loss curve. Risk aversion for gains is more pronounced than risk seeking for losses for moderate and high probabilities. The effect is more pronounced for certainty than for risk – subadditivity is amplified by ambiguity.

The remainder of this Section focuses on some concepts within prospect theory which appear particularly applicable to the decision making of credit risk managers.

**The framing of options**

Variations in the framing of options – whether they are defined as a gain or a loss – yield systematically different preferences (Tversky and Kahneman, 1992) despite the mathematical equivalence of the options. The authors argue that people perceive outcomes as gains or losses from a neutral reference point rather than as final states of wealth or welfare. That is, perceptual apparatus is attuned to the evaluation of changes or differences rather than absolute magnitudes. An often quoted example is the practice of retailers of offering customers a cash discount rather than requiring a credit card surcharge (hence framing the issue as a gain rather than a loss). The differences go against the rational theory of choice which would assume that equivalent formulations of a choice problem will result in the same preference order.

The encoding choice is more subjective when the situation involves a series of successive choices and where there is ambiguity with regards to the status quo, according to Levy (1992). The reference point
can be framed cumulatively in terms of ones asset position at the beginning of the series of choices or with respect to the asset point at each individual choice. A gambler who has sustained a series of losses will be more risk acceptant if he or she adopts the cumulative asset position from the beginning of the gambling session and attempts to recover the losses. However, if the gambler uses current asset levels, then risk aversion is more likely. In comparison, a gambler on a winning streak will be more risk averse if he or she frames the choice in terms of assets at the beginning of the gambling session rather than the total assets at the time of each bet.

**Four-fold pattern of behaviour**

Tversky and Kahneman (1992) argue that the most distinctive implication of prospect theory is the fourfold pattern of risk attitudes. For nonmixed prospects, the shapes of the value and the weighting functions imply risk aversion for gains and risk seeking for losses of moderate or high probability. The shape of the weighting function favours risk-seeking for small probabilities of gains and risk aversion for small probabilities of loss, as long as the outcomes are not extreme. The overweighting of small probabilities can lead to a reversal of risk propensities. The fourfold pattern is shown in Table 3.1.

### TABLE 3.1 – The four-fold pattern of behaviour in prospect theory

<table>
<thead>
<tr>
<th>Probability</th>
<th>Gain</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>C($100,.05) = $14</td>
<td>C(-$100,.05) = -$8</td>
</tr>
<tr>
<td></td>
<td>Risk seeking</td>
<td>Risk aversion</td>
</tr>
<tr>
<td>High</td>
<td>C($100,.95) = $78</td>
<td>C(-$100,.95) = -$84</td>
</tr>
<tr>
<td></td>
<td>Risk aversion</td>
<td>Risk seeking</td>
</tr>
</tbody>
</table>

*Where C is the median certainty equivalent of the prospect

Source: Adapted from Tversky and Fox (1995)

The upper left hand entry in Table 1 demonstrates that the “average” individual is indifferent between receiving $14 for sure and a 5% chance of receiving $100 (or $5). As the expected value of the possible prospect ($5) is less than the certain prospect ($14), this observation reflects risk seeking. Using similar logic, the upper right hand entry demonstrates risk aversion as the individual is indifferent between receiving $8 for sure and a 5% chance of losing $100 (or $5).

**The certainty effect**

As noted previously, choices are affected by whether winning is possible or probable. People will overweight outcomes that are considered certain relative to outcomes which are merely probable. In other words, individuals assign greater value to the elimination of risk as compared to the reduction of risk by a comparative amount (Levy, 1997). The complete elimination of risk is evaluated differently
from the reduction of risk. People are willing to pay far more to reduce the risk of a catastrophic loss from 0.1 to nil than they are to reduce the risk from 0.2 to 0.1. The expected utility is the same.

Another violation of the expected utility model is where the probability of winning is substantial (.9 and .45), people prefer a prospect where winning is more probable. However, where winning is possible but not probable (that is, there is a very low probability of winning such as .001 to .002), most individuals will choose the option with a larger gain.

**The reflection effect**

The preference order is reversed with the reflection of prospects - the preference between negative prospects, where gains are replaced by losses, shows a mirror image of the preferences between positive prospects. The reflection effect indicates that risk aversion in the positive domain is accompanied by risk seeking in the negative domain.

**The endowment effect**

The term “endowment effect” is used to reflect that people often demand much more to give up a good than they would be willing to pay to acquire the good. As argued by (Tversky and Kahneman, 1991):

> “An immediate consequence of loss aversion is that the loss of utility associated with giving up a valued good is greater than the utility gain associated with receiving it” (pg 1041).

An implication is that individuals treat opportunity costs differently from actual costs incurred. In other words, foregone gains are less painful than perceived losses. Kahneman et al (1991) state:

> “In contrast to economic analysis, which does not distinguish losses from foregone gains the standards of fairness draw a sharp distinction between actions that impose losses on others and actions (or failures to act) that do not share benefits. A study of court decisions documented a similar distinction in the treatment of losses and foregone gains; in case of negligence, for example, compensation is more likely to be rewarded for out-of-pocket costs than for unrealised profits” (pg 1056).

As noted by Levy (1992), loss aversion and the endowment effect imply that selling prices should be higher than buying prices. Further, the longer one possesses a good and the harder it was to acquire it, the greater the perceived value (consistent with the theory of cognitive dissonance).

Finally, experimental evidence indicates that individuals accommodate to gains more rapidly than losses, and in fact do so immediately. The instant endowment effect means:
“after a series of gains, an individual will treat the possibility of a subsequent setback as a loss rather than a foregone gain, overweight it, and engage in risk-seeking behaviour to maintain her cumulative gains against that loss. After a series of losses, however, an individual will not accommodate as quickly but instead adopt the cumulative frame and engage in risk-seeking behaviour to eliminate those losses” (Levy, 1997, pg 91).

**Availability heuristic**

In 1973, Tversky and Kahneman examine the judgemental heuristic by which an individual judges the frequency of classes or the probability of events by their availability – that is, the ease with which the relevant instances come to mind.

“A person is said to employ the availability heuristic whenever he estimates frequency or probability by the ease with which instances or associations could be brought to mind” (Tversky and Kahneman, 1973, pg 208).

Repetition increases the associative bonds to aid memory. Availability heuristic exploits the inverse of this, as it uses the strength of association as a basis for the judgement of frequency.

There is some evidence that individuals retain some information about the specific occurrences of repeated items (Tversky and Kahneman, 1973). However, there are situations in which occurrences cannot be retrieved, including when the total number of items is large, when their distinctiveness is low, or when the retention interval is long. In such situations, a subject could instead use a more global assessment of the strength of the item-list association. Thus,

“factors which either enhance the recallability of specific occurrences or strengthen the association between item and list should increase the apparent frequency of the item” (pg 221).

Further, at any level of actual frequency, items that were recalled better were judged more frequent.

Memory search may follow rules other than actuarial rules (Tversky and Kahneman, 1973). For example, as attempted suicide is a dramatic and salient event, suicidal patients are more likely to be recalled than depressive patients who did not commit suicide. Hence, a clinician may judge the likelihood of an attempted suicide by the degree of resemblance between these cases and the presenting patient, which can lead to serious biases of overweighting or underweighting. Further, some events are perceived as being so unique that history does not seem relevant to the determination of their likelihood. If there are not reasonable scenarios (stories that lead from the present situation to
the target event), the event is deemed impossible or highly unlikely. If many scenarios come to mind, or there is a particularly compelling scenario, the event in question appears probable. As argued by the authors:

“Availability is an ecologically valid clue for the judgement of frequency because, in general, frequent events are easier to recall or image than infrequent ones. However, availability is also affected by various factors which are unrelated to actual frequency … will affect the frequency of classes and the subjective probability of events” (pg 209).

Further, many events depend on several interrelated factors, making the evaluation of their likelihood more complex. The authors suggest that only the simplest and most available scenarios are likely to be considered in this case. The authors comment that there is much evidence showing that once an uncertain situation has been interpreted in a particular manner, it is difficult to view it any other way. Availability may result in occurrences of extreme (dis)utility appearing more likely than they are.

Also, Tversky and Kahneman (1973) highlight that even though the empirical studies on which the availability heuristic was based had an objective procedure for enumerating instance, this is not the case in many real-life scenarios. Each occurrence of an event such as recession or divorce is essentially unique and the probability cannot be evaluated by a tally of instance. The authors provide a number of examples where the availability heuristic may be applied to evaluate the likelihood of such events.

Finally, as highlighted in Section 3.1.2, Guttentag and Herring (1984) argue that the availability heuristic is one of the cognitive biases leading to disaster myopia (the other heuristic being the threshold heuristic). The ease of recall is affected by frequency and the emotional experience of the last occurrence, along with the time elapsed since the last occurrence.

**Representativeness**

Representativeness applies where an individual compares the probability of an event by comparing its essential features to the structure from which it originates (Tversky and Kahneman, 1973). Thus, one estimates probability by assessing similarity or connotative distance. The frequency of a class is likely to be judged by the availability heuristic if individual instances are emphasised, and by representativeness if generic features are made salient (Tversky and Kahneman, 1973).

**The threshold effect**

The threshold effect (Guttentag and Herring, 1984, referring to Simon 1978) applies when the subjective probability of the recurrence of disaster becomes so low that it will be treated as if it were
zero. This process is carried out implicitly by managers as a way to allocate one of their scarcest resources - managerial time. The effect is also highlighted by Kahneman and Tversky (1979) where:

“the simplification of prospects in the editing phase can lead the individual to discard events of extremely low probability” (pg 282).

**The isolation effect**

The isolation effect applies when individuals disregard the components that choices have in common and only focus on the components that differentiate the choices. The effect can lead to inconsistent preferences, as the components can be viewed differently as common or differentiating.

**Source dependence - competence hypothesis**

It is argued that the finding that people are less sensitive to uncertainty than risk is different from ambiguity aversion, where people prefer to bet on known rather than unknown probabilities (Ellsberg, 1961, quoted in Tversky and Fox (1995). Similarly, Heath and Tversky (1991) find that people will prefer to bet on their beliefs in situations where they feel competent or knowledgeable. For example, people who are knowledgeable about sports but not politics preferred to bet on sports rather than on chance events which the people had judged as equally probable (Heath and Tversky, 1991). The same people prefer to bet on chance events rather than political events that they have judged as being equally probable. People who are knowledgeable about sports but not politics exhibit the opposite pattern. Thus, participants prefer to bet on their uncertain beliefs in the area of their competence rather than on known chance events although the former probability is vague and the latter is clear.

**Status quo bias**

A number of experiments have shown that individuals prefer to retain the status quo (Tversky and Kahneman, 1991). Loss aversion induces a bias that favours the retention of the status quo as compared to other options. However, other factors can induce a status quo bias even in the absence of loss aversion, such as costs of thinking, transaction costs and psychological commitment to prior choices (Samuelson and Zeckhauser, 1988, referred to by Tversky and Kahneman, 1991).

**Mental accounting and disaster myopia**

“Myopic loss aversion” is argued to be a function of loss aversion and mental accounting (Thaler et al, 1997). Mental accounting is the set of cognitive activities undertaken by individuals or households in the same way that accounting serves in an organisation. An investor who frames decisions narrowly (for example, evaluating projects one at a time rather than on an aggregated basis) will tend to make short term choices instead of adopting long-term policies. Further, an investor who frames past outcomes narrowly will evaluate his or her gains and losses frequently. Generally, narrow framing of decisions and narrow framing of outcomes tend to go together.
In combination, the tendencies of myopia and loss aversion define a myopic investor. In experiments, the investors who receive the most frequent (and thus the most overall) feedback take the least risk and earn the least money. Thaler et al (1997) argue that providing myopic loss-averse investors with frequent feedback about their outcomes is likely to increase the tendencies towards myopic loss-aversion. Similarly, narrow framing can induce severe risk aversion in organisations.

**Commercial situations – the impact and generalisability**

The major premises underlying prospect theory have been supported in a number of empirical studies. The major issue with prospect theory in the context of this thesis is its generalisability to decision making within the “real-life” credit organisation – is the experimental evidence applicable to the complex world of the credit organisation? A range of options are evaluated over a period of time where a number of interacting affects are occurring with limited information – which combine to lead a highly uncertain decision making environment.

Similar to the comment by Levy (1997) in relation to foreign policy decision making, where analysis also is conducted under dynamic and interactive conditions of present and future uncertainties:

> “it is extremely difficult for the analyst to determine whether an actor selects a particular option because of framing, loss aversion, the reflection effect, and probability overweighting, or simply because it is more highly valued in terms of a standard cost-benefit calculus based on expected value” (pg 99).

It is argued that loss aversion can complicate negotiations. Referring to experimental evidence, Tversky and Kahneman (1991) argue that negotiators are less likely to achieve agreement when the attributes over which they are negotiating are framed as losses rather than gains. The result is expected if people are more sensitive to marginal changes in the negative domain. Thus,

> “there is a natural asymmetry between the evaluations of the concessions that one makes and the concessions offered by the other party; the latter are normally evaluated as gains, whereas the former are evaluated as losses” (pg 1056).

However, it also is argued that loss aversion is less applicable to commercial situations.

> “Loss aversion is certainly not involved in the exchange of a $4 bill for $5, because the transaction is evaluated by its net outcome. Similarly, reluctance to sell is surely absent in routine commercial transactions, in which goods held for sale have the status of token for
money. However, the present analysis implies that asymmetric evaluations of gains and losses will affect the responses of both buyers and sellers to changes of price or profit, relative to the reference levels established in prior transactions” (Tversky and Kahneman, 1991, pg 1055).

The response is expected to be more intense when the changes are unfavourable than when they are favourable.

The cognitive bias of the threshold heuristic may be reinforced by institutional factors, according to Guttentag and Herring (1984). Factors include the performance of loan officers is evaluated over short periods and on current income rather than future revenues; high job mobility of lending officers; the lending officer will not be personally identified with the outcome. Further, Guttentag and Herring (1984) argue:

“Frequent events are usually easier to recall than infrequent events. But ease of recall also is affected by such factors as the emotional intensity of an experience or the time elapsed since the last occurrence” (pg 1363).

One study has examined the association between organisational risk and return in a commercial environment Fieganbaum (1990). In a study of 85 firms, the author found the importance of a target level (the median industry return) in evaluating risk choices in most industries. Industrial firms performing below the target level showed a negative association between risk and return, indicating the firms were risk seekers. Industrial firms performing above the target level showed a positive association, indicating the firms were risk averters. Finally, the below target risk-return association generally was steeper than the above target, with a medium below to above slope ratio of 3 to 1.

**Is loss aversion irrational?**

The final point of discussion on prospect theory is to query whether loss aversion is, in fact, irrational. As stated by Tversky and Kahneman (1991):

“The value function reflects three basic facts: organisms habituate to steady states, the marginal response to changes is diminishing, and pain is more urgent than pleasure. The asymmetry of pain and pleasure is the ultimate justification of loss aversion in choice. Because of this asymmetry a decision maker who seeks to maximise the experienced utility of outcomes is well advised to assign greater weight to negative than to positive consequences” (pg 1057).

The authors conclude there is no general answer to the question, but the theory provides a way of examining the normative status of these effects in particular cases.
3.2.3 Related constructs

A number of theoretical constructs, which are closely related to the underlying notions of prospect theory and appear particularly pertinent to decisions made by credit risk managers, are outlined briefly in this Section.

Satisficing decision

The notion of “satisficing” (sub-optimisation) can be summarized through a few key researchers who introduced the theories in the 1960s. To obviate the need to work through many options and much uncertainty decision-makers (both individuals and firms) find an "approximate model" which is manageable within a complex choice situation (Simon, 1978, 1955). Based on a simplified model, decision makers determine an aspiration level which defines what is a satisfactory alternative. As information is obtained and evaluated sequentially, following a search by the decision maker, the aspiration level can change and there is always a satisfactory solution. Instead of requiring that a pay-off is maximised, the pay-off is only required to exceed a given amount. Thus, a global maximum (or optimization or best option) may not be achieved, but an acceptable local maximum (or good option) is obtained.

Within the context of the firm, it is argued that rationality be reduced to two assumptions, namely that firms both seek to maximize profits and operate with perfect knowledge (Cyert and March, 1965). Other objectives of firms have been argued to include long run survival, sales subject to a profit constraint and asset growth. A key issue is whether firms aim to maximize anything. Using Simon's argument, firms would simply attempt to make satisfactory profits, based on its evaluation of alternative options. The utility function, in the short term, will essentially have only two values - good enough or not good enough (Cyert and March, 1965). Referring to Winter (1971, pg 245):

“Firms satisfice with respect to decision rules. That is, if existing rules are functioning well, the firm is unlikely to change them...”

Similarly, Liebenstein (1966) highlights that firms do not necessarily attempt to cost-minimise. The unit cost depends on the degree of competitive pressure and other motivational factors. Responses to such pressure can appear in the nature of effort, search or the utilisation of the new information.

Finally, Lo (2002) brings together the principles of evolution with Simon’s notion of satisficing. Lo argues that many of the examples of behaviour which appear economically irrational are actually consistent with an evolutionary model of rational individuals learning to adapt to their environment through satisficing heuristics. We have learnt behavioural rules which allow us to solve problems to
the degree of optimality which is commensurate with the importance of the problem in our daily lives – and finding the globally optimal choice may be irrational if it takes too much effort.

**Cognitive dissonance, escalation and self-justification**

Cognitive dissonance and self-justification refer to the occurrence of self-rationalising behaviours which result if there is negative feedback about prior resource allocation, uncertainty surrounding the likelihood of goal attainment and choice about whether to continue.

In the situation, it is argued that the rationalising or self-justifying side of people comes into play and decision makers are unwilling to admit they have were mistaken in committing to the initially chosen course of action. This provides the means to protect the lenders’ self-esteem when information arises that questions the wisdom of past decisions, leading the lender to ignore the information. As argued by Akerloff and Dickens (1982), people not only are able to exercise some choice about their beliefs given available information, they can also manipulate their beliefs by selecting to incorporate the information which is likely to confirm their “desired beliefs”.

Escalating commitment in individual and group decision making within the prospect theory framework has been examined by Whyte (1993). In escalation situations, costs have been incurred in the pursuit of an objective, however it is unlikely that the objective will be achieved regardless of future efforts. There is a tendency to continue an endeavour, regardless of its merits, after there has been an investment in effort (including time and resources). Thus, individuals often consider sunk costs relevant in decision making, which violates a fundamental tenet of economic rationality.

Further, Whyte (1993) finds that groups in the escalation situation increase the number of errors as compared to individuals. In addition, groups exacerbate the tendencies dominant at the individual level, even if the tendencies were counterproductive. Groups tend to make more extreme decisions than individuals if individuals have a strong preference in one direction or the other when group discussion begins. Magnification is largest in the group decision context, where personal responsibility for sunk costs had been assigned. In addition, it is argued that it is likely the group context will make self-justificatory motives less important, as individuals take less responsibility for the actions of a group than for their own personal behaviour.

The group effect on the individual’s decision making is not clear within prospect theory. Levy (1997) highlights that recent work on group effects supports a “group polarisation” hypothesis, where groups tend to move either towards risk or more cautious policy orientations, depending upon the circumstances. How the framing of the individual’s reference point is influenced by the other group members also is of interest as individuals simultaneously are framing the decisions they make, they
may simultaneously be trying to manipulate how others frame their choice problems. Levy suggests a formal theory of collective choice, based on the microfoundations of prospect theory, is required.

Prospect theory implies that if sunk costs are included in the evaluation of whether to pursue an initially chosen course of action, the individuals will see the choice as being between two losses. The abandonment of the project is a certain loss, where escalation is perceived as possibly increasing losses but with a chance that losses may be avoided. In accordance with prospect theory, individuals will be risk seeking in the arena of losses, and allocate further resources to the project.

Finally, it is argued by Brockner (1992) that escalation is most likely to occur if the culture of the organisation is such that it makes people unwilling to admit failure and/or values consistency in behaviour.

**Risk Aversion**

The underlying trait of the individual decision maker's preference for risk taking also is a factor in decision making. Given the same level of uncertainty and information, individuals will respond differently at a decision point as to whether further information is required or if a decision can be made immediately. Using Hirschleifer and Reilly's (1992, pg 23) definition:

“A person is risk-averse (displays risk aversion) if he strictly prefers a certainty consequence to any risky prospect whose mathematical expectation of consequences equals that certainty”.

A person is classified as a risk preferrer (displays risk preference) if his preferences go the other way. A risk-neutral person is indifferent between the certainty consequence and a risky prospect.

**Overconfidence and optimism**

Individuals are argued to be overconfident in the level of knowledge they hold, with a vast amount of research documenting a systematic bias in subjective confidence levels (Kahaneman and Riepe, 1998). If individuals are not biased in particular ways, they should be able to be a good judge of the percentage of times in which they will be accurate. A typical outcome of studies comparing forecast and actual levels of accuracy, according to the authors, is estimated accuracy of 98% when the level of accuracy is actually more like 80% to 85%.

Another bias which produces asymmetric effects, according to Kahneman and Riepe (1998), is “optimism”. Optimists exaggerate their talents, underestimate the likelihood of bad outcomes which they cannot control, and exaggerate the degree to which control their fate. In combination, overconfidence and optimism can be a “potent brew”.

"Chapter 3: Analytical Tools I - Credit Rationing, Decision Making & Organisation Culture/Climate"
**Regression to the mean**

In his discussion of Prospect Theory, Bernstein (1997) argues that as a result of the cognitive difficulties:

> “we forget about regression to the mean, overstay our positions, and end up in trouble” (pg 24).

Further, Bernstein refers to the English eugenicist, Francis Galton, who found that

> “large sweet peas give birth to smaller sweet peas, and vice versa, performance in any area is unlikely to go on improving or growing worse indefinitely. We swing back and forth in everything we do, continuously regressing toward what will turn out to be our average performance” (1997, pg 24).

**Short-termism**

In her discussion of short-termism, Monkhouse (1995) refers to the tendency to allow short-term rewards or benefits to influence their long term judgement. Further, short-termism is generally perceived as more prevalent where equity finance is the dominant source of external funds in countries such as the UK and the US. Australia also fits within this category.

Fund managers are judged by short-term financial targets which, it is argued, encourage a risk-averse attitude to long-term strategies and a tendency to buy shares in the larger enterprises in which they exercise little control (Brewster, 1993). In turn, the:

> “short-term quarterly performance measurement of fund managers, based on their portfolio performance, is argued to induce a short-term view by corporate management” (pg 90).

**Expectancy theory**

Expectancy theory appears particularly pertinent, as it is a motivation theory which has provided a theoretical framework for examining human motivation in work environments over two decades (Gatewood, 1993). Initially developed by Vroom (1964), expectancy theory examines an individual's overall motivation to choose a particular course of action among a number of options.

Expectancy theory posits that individuals will exert effort to do those things that are expected to lead to outcomes that they value, or find attractive. To determine the effort level (or motivation) for a particular option, the individual will choose amongst options on the basis that performing an act (putting in a certain level of effort) will result in an outcome, and there is a valence, or value, associated with each outcome. People also need to reasonably expect that their efforts to use or
incorporate the action into their job (or other activity) will be successful. Each option will therefore have a motivation level and the individual will choose the option with the highest motivation level. An individual has the highest motivation to put forth the greatest effort if he or she believes the effort will lead to good performance, and the good performance will result in the preferred outcomes.

Whilst expectancy theory has gained widespread acceptance as a theory of motivational process, it also has received criticism. Criticisms of the underlying constructs are provided by Kilduff (1990), Baker et al (1989), Miller and Grush (1988), Snead and Harrell (1994), Ravichandran et al, (1989), Gatewood (1993), Klein (1991), Villere (1990), Davis et al (1989), Eden (1988), Chen and Miller (1993), Mathieu (1987), Harrell and Stahl (1984), Newsom (1990), Tubbs et al (1993), and Stahl and Grigsby (1987). Vroom's model (1964) looked at expectancy as the likelihood that a particular act will be followed by a particular outcome. The model also has been extended by authors such as Lawler (1973) and Jiambalvo (1979).

Even taking the criticisms into account, expectancy theory provides a widely used model of how credit professionals will base their decisions by maximising the valence of their actions. The theory is consistent with an underlying theme of this thesis, namely that people will act in a way that is rewarded. The theory also specifically incorporates the effect of the supervisor and other people of influence. For the purposes of this thesis, a simple representation is that an individual's choice of actions can be taken to be a function of their subjective evaluation of: (i) Expectancy: The relationship between effort and performance - the expectancy that effort will lead to effective performance; (ii) Instrumentality: The relationship between performance and a set of relevant outcomes - the linkage between performing effectively and achieving the desired outcome; and (iii) Valence: The attractiveness of the outcome - that is, the value the individual places on the outcome (reward).

3.2.4 Implications of theories of decision making for this thesis

As Bernstein (1997) comments,

“We don’t like uncertainty. We hate losing even more. Which produces some odd behaviour” (pg 23).

The heuristics and biases outlined in this Section appear particularly pertinent in explaining apparently “irrational” decision making of individuals in retail credit risk management in an environment of incomplete information and uncertainty. However, given the number of possible permutations of the biases, it is difficult to determine which heuristic or bias could be primarily driving a decision-making context. Possible effects in the credit risk management environment, taking into account other
findings from the research undertaken throughout the thesis, are discussed in the Chapter – Integrated Results.

In the next Section, the Research Issues relating to the “group effects” of organisational culture and climate are outlined.

3.3 Organisational Culture and Climate

Organisational climate (“OCLIM”) and organisational culture (“OCULT”) are reviewed in the attempt to identify factors within the organisational (group) context which could drive the economically “irrational” variations in the credit risk appetite across the business cycle. Reasons why the theoretical area appeared particularly relevant include the (unprompted) referral of the managers to the “credit culture” and the interpretation of the credit risk attitude by credit risk officers appears to be heavily influenced by other group members and the organisational environment.

The Section provides a comparatively high level overview of OCULT and OCLIM in terms of their underlying concepts, measurement and process of formation. The focus is on key concepts related to the thesis’ empirical research. A working definition and the approach used in this thesis is provided at the end of the Section.

3.3.1 Definition of organisational climate and culture

There is widespread theoretical confusion surrounding the definitions of the climate and the culture constructs, the appropriate form of description and measurement, and the delineation between the two constructs (for example, Moran and Volkwein, 1992; Denison, 1996; Schneider, 1990; Pettigrew, 1990; McNabb and Sepic, 1995; Al-Shammari, 1992; Marcoulides and Heck, 1993; Rousseau 1990). Some definitions have culture and climate as being synonymous for each other (Moran and Volkwein, 1992). Both constructs examine:

“the internal social psychological environment of organizations and the relationship of that environment to individual meaning and organizational adaptation” (Denison, 1996, pg 625).

Definition of Organisational Climate

This thesis shall focus on the definition provided by Schneider et al (1996). The authors state that the OCLIM is inferred by its members, organised around two issues: a) How the organisation goes about its daily business - for example, whether it is flexible, innovative, or stodgy; and b) What goals the organisation pursues - for example, quantity, cost containment, market share. Schneider et al (1992) state that climate is focused on:

“the practices and procedures (routines) and the behaviours that get rewarded, supported, and expected (rewards) in organizations that send the message that a particular strategic imperative requires employee energies and competencies” (pg 713).

The emphasis on rewards is supported by Jones and James (1979), who refer to Indik (1968) and Jessor and Jessor (1973). The authors argued that characteristics that are more remote from individual experience (such as organisational size) require more numerous and complex linkages to influence perceptions and behaviour than characteristics that are more immediate to experience (such as reward processes). Further, James et al (1990, pg 66) state that:

“The key aspect of perception in this regard is the acquired meaning of the degree to which the work environment is personally beneficial versus damaging to one’s welfare”.

These definitions place a heavy emphasis on rewards, the link between behaviour and rewards, and the individual worker’s self-perceived personal well-being.

**Definition of Organisational Culture**

Whilst it is agreed that culture is an important organisational variable, there is no consensus about its definition and measurement. Discussion on the definition of culture is provided by: Kopelman et al (1990), Schneider et al (1996), Hofstede et al Rousseau (1990), Pettigrew (1990), and Trice and Beyer (1984) and (Deshpande and Webster, 1989).

In his review of the OCULT definitions, Schein (1992) argues that all of the factors mentioned are associated with things the group members share or hold in common, including norms, values, behaviour patterns, rituals, traditions. Two elements culture also incorporates are the structural stability of the group (at a deep level which is less conscious and therefore less tangible and less visible) and the patterning or integration of the elements into a larger paradigm or gestalt that lies at a deeper level and ties together the various elements.

This thesis shall focus on the definitions provided by Schein (1986, 1992) and Allaire and Firsirotu (1984). The definition of culture provided by Schein (1986) is:
“A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to these problems” (pg 9).

The definition provided by Allaire and Firsorotu (1984) incorporates four components. Firstly, there is a sociocultural system, composed of the interworkings of formal structure, strategies, policies and management processes, and all ancillary components of an organisation’s reality and functioning (formal goals and objectives and strategies; authority and power structure and control mechanisms; reward and motivation; process of recruitment, selection, training and education; managerial style and processes). Secondly, there is a cultural system, which embodies the organisation’s expressive and affective dimensions in a system of shared and meaningful symbols manifested in myths, ideology and values and in multiple cultural artefacts (such as rites, metaphors and organisational lore; logos, design, architecture). Thirdly, there are individual actors, with their particular personality and cognitions. They bring knowledge, cultural competence, values, assumptions and expectations, needs, motives and leadership role. They provide their idiosyncratic endowments, experience and personality. They are both recipients of a “prefabricated reality” and also contributors and moulders of the meanings.

Finally, overlaying the above three in Allaire and Firsorotu’s model are: Society (the ambient society’s cultural, social, political and judicial systems), history (the organisation’s genesis, history and transformations, including the founder’s vision and the values of past leaders) and contingency (the technology, economics, competition and regulations that characterise the organisation and its industry).

**Underlying differences between organisational climate and culture**

To understand the differences between the two constructs and how they relate to the models developed subsequently in this thesis, it is useful to review briefly how they have developed over time from different academic bases. As reported by Denison (1996), OCLIM has its roots in Lewin’s studies of experimentally created social climates (Lewin, 1951; Lewin, Lippit & White, 1939) and qualitative observation of natural organisational settings (Likert, 1961). Within the social psychology framework, the emphasis was on the individual’s viewpoint, and the perceptual accuracy and their consequences in cognitive and affective responses (Moran and Volkwein, 1992). Emphasis was placed on the gathering of data and assessing the validity of the construct (Reichers and Schneider, 1990; Pettigrew, 1990). In the early period, focus was on organisational effectiveness.
OCULT developed from anthropological roots, with researchers focusing on the evolution of social systems over time and the collective derivation of social meaning (Denison, 1996; Al-Shammari, 1992; Glick, 1985; Moran and Volkwein, 1992). Organisational behaviour has been analysed by using cultural concepts to understand the observed differences between organisational goals and actual outcomes, and between strategy and implementation (for example, Trice and Beyer 1984). The focus has been on definition, rather than effectiveness. Deshpande and Webster (1989) also note that there has been a major thrust into theoretical modelling and empirical research, with practitioner interest also being evident from the success of books on OCULT (for example, Deal and Kennedy, 1982; Ouchi, 1981; Peters and Waterman, 1982).

The key differences between the two constructs relevant to the empirical research of this thesis are highlighted below, with a summary of each of the features is shown in Figure 3.1

**FIGURE 3.1 – Summary of differences between organisational culture and climate**

A summary of each of the core differences follows.

**Measurement:** Neither OCULT nor OCLIM are easy to measure, given the complexity and multi-faceted nature of the constructs. OCLIM tends to be nomothetic, using quantitative techniques to describe an aspect of the organisation from an external researchers viewpoint (Glick, 1985). It is *etic* in that the research imposes meaning on the data rather than letting the meaning emerge from the members of the groups under study (Reichers and Schneider, 1990). Typically, OCLIM measurement involves survey data, using categorisations developed by the researcher. It tends to be a point-in-time view of the organisation. It is assumed that incumbents’ perceptions and behaviours are connected.
Evidence shows interrater reliability within settings (Moeller, Schneider, Schoorman, and Berney 1988) and validity against external judgements across settings (Schneider and Bowen, 1985).

OCULT research is primarily idiographic and contextualised (Glick, 1985; Denison, 1996). It uses qualitative methods to explain human functioning by either interviewing key members of the organisation or by relying on observation from an external person (Schein, 1984). OCULT research typically utilises in-depth case studies.

However, the areas appear to overlap increasingly, with OCLIM and OCULT researchers moving more towards quantitative methods or a combination of quantitative and qualitative methods (for example, Moran and Volkwein, 1992; and, Denison and Mishra, 1995).

**Level of Analysis:** OCLIM and OCULT also vary in the level of analysis. OCLIM research typically focuses on the articulated, cognitive perceptions of organisation members. OCULT research typically uses multiple levels to describe OCULT, thus representing OCULT as layers of processes (conscious to unconscious, interpretative or behavioural) which vary in depth, accessibility and malleability (Rousseau, 1990). The levels and elements of culture research also are discussed by McNabb and Sepik (1995), Mirvis and Sales (1990), Trice and Beyer (1984), Pettigrew (1979) and Denison (1992, 1996). A seminal model is provided by Schein, with three interacting levels of culture.

**TABLE 3.2 – Levels of organisational culture**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Technology, art, visible and audible behaviour patterns</th>
<th>Visible, but often not decipherable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artifacts and creations</td>
<td>Testable in the physical environment; testable only by social consensus</td>
<td>Greater level of awareness</td>
</tr>
<tr>
<td>Level 2</td>
<td>Relationship to environment; nature of reality, time and space; nature of human nature/activity/relationships</td>
<td>Taken for granted; invisible; preconscious</td>
</tr>
<tr>
<td>Values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic assumptions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Schein (1984; 1986)

Visible artifacts can describe how a group constructs its environment and what behaviour patterns are discernible among members. The underlying logic of why the group behaves the way it does is found by looking at values. This must be inferred, as values are hard to observe directly - they represent accurately only the manifest or espoused values of a culture. To understand a culture appropriately, it is necessary to examine the underlying assumptions which are typically unconscious. The assumptions determine how group members perceive, think and feel.
Units of Analysis. One of the main unresolved issues of OCLIM research is the appropriate level of aggregation of individuals to represent a social unit. As Schneider (1990) notes, it is obvious that individuals’ perceptions are the source of perceptions, but it is not as obvious under what conditions individual’s perceptions should be aggregated to obtain low within group variability and high between group variability. The unit of analysis in OCLIM has been defined in some studies by different physical locations/branches of banks (Pritchard and Karasick, 1973), positions and levels in an organisation (James and Jones, 1974), the functional type of division (James and Jones, 1974), “collective climates” identifying individuals for whom the situation has common stimulus value (Joyce and Slocum, 1984), and different organisational goals or imperatives - such as a climate for safety, a climate for productivity and a climate for service (Schneider et al, 1992).

A major argument has been made that differentiation should be made between climate as an organisational attribute and climate as an individual attribute (James and Jones, 1974). They argue that OCLIM refers to organisational attributes, main effects or stimuli and “psychological climate” should be used to refer to individual attributes. A counterargument to the notion of psychological climate has been forcefully made by Glick (1988, 1985). For further discussion, refer to Al Shammari (1992) and Moran and Volkwein, (1992).

Researchers on OCULT typically have not developed labels for OCULT at the individual level – it is a group construct. Schein (1992) notes that if certain assumptions are shared across all groups of an organisation, then there is an OCULT, even though at the same time there may be a number of discrete subcultures that have their own integrity. It also argued that is possible to have a managerial culture, based on the occupational background of members of the organisation (Schein, 1984). The author argues that:

“The deciphering of a given company’s culture then becomes an empirical matter of locating where the stable social units are, what cultures each of those stable units have developed, and how those separate cultures blend into a whole. The total culture could then be very homogeneous or heterogeneous, according to the degree to which subgroup culture are similar or different” (pg 7).

An issue is whether organisations comprise multiple cultures, or “native views” (Gregory, 1983). Multiple cultures are not simply subcultures, but also may also be national, regional/geographic, or industry cultures that are background context for the organisation, or may be occupational and ethnic cultures that cut across organisations.
Agent versus subject; variable versus metaphor. In OCLIM research, typically it is the perceptions and reactions of the individual workers who are the “subject” of the system - they work within an OCLIM and the social context impacts their perceptions, but the individual workers do not create the OCLIM. The “agents” of the organisation, such as management who create the environment are often assumed but typically not studied directly.

Conversely, OCULT research typically assumes that the individual cannot be separated from the environment, and the members of the organisation are simultaneously agents and subjects. Marcoulides and Heck (1993) comment that the variables which comprise OCULT have been postulated to be under the control of organisational leaders. The primary topic of interest is often the dynamics between the individual and the system, rather than the impact the system has on its members. The OCULT literature is more likely to focus on how social contexts develop out of interaction, and emphasise the importance of a deep understanding of the fundamental, underlying values, beliefs and assumptions of the organisation (Denison, 1996).

A related issue is whether culture is a variable or a metaphor for the organisation. OCULT can be viewed as a property of the group or organisation itself, like structure or technology, or it can be viewed as something which resides in each individual as a function of the cognitive and learning processes by which people attempt to make sense of the organisation (DeCotiis and Koys, 1980). Some see OCULT as an exogenous environmental variable that must be accommodated (that is, it cannot be managed) and others see it as a variable endogenous to the organisation which mediates the way the organisation responds to environmental stimuli and change. Alternatively, OCULT can be seen as both a process and an outcome, as it shapes human interactions and is also the outcome of those interactions. The concept of OCULT as something that an organisation has, rather than is, is closer to the concept of OCLIM (as noted by Reichers and Schneider, 1990).

Temporality. Whereas OCULT is a highly enduring characteristic of an organisation, OCLIM is a relatively enduring characteristic. OCLIM is more shallow in that it both forms more quickly and alters more rapidly. OCLIM is responsive to and mediated by the more short-term fluctuations in both the external and internal environment, such as changes in key staff or budgetary cuts (Moran and Volkwein, 1992). OCLIM does not focus on the process of teaching new employees, nor is there a large emphasis on the organisation values that govern behaviour.

OCULT also can, however, vary over a period of time (Mirvis and Sales, 1990). During “normal” periods, OCULTs are unified and internally consistent, although there is some variation within an OCULT as understood by individual members (as a result of the particular experiences of subpopulations and the individual differences of the individuals). During times of flux, there will be
inconsistencies and variations within and across the three realms of OCULT. OCULT is viewed as a learning process, whereby it is taught to new organisational recruits. The longer individuals live in a given culture, and the older the culture is, the more the OCULT will influence the individual’s perceptions, thoughts and feelings (Denison, 1996; Al-Shammari, 1992).

It is argued that many organisations lack any common beliefs or values as they are new or in transition, and possess no OCULT at all (Al-Shammari, 1992). Thus, not all individuals in an organization experience a culture, whereas they all experience a climate.

**Interface of organisational culture and organisational climate**

Having examined the underlying differences between OCULT and OCLIM, the discussion turns to the interface between the constructs. There are a few key interpretations (for example, Rousseau, 1990; James, James and Ashe, 1990; James et al, 1990; Moran and Volkwein, 1992; Ashforth, 1985). The major interpretations applicable to this thesis are centred on the notion that OCLIM operationalises OCULT, and they operate at different levels of consciousness.

It is posited that OCULT is “the deeply rooted set of values and beliefs that provide norms for behaviour in organizations” (Slater and Narver, 1995) and OCLIM describes how the organisation operationalises its OCULT - the structure, organisational policies, practices and procedures that facilitate the achievement of the desired behaviours (Deshpande and Webster, 1989; Schein, 1990).

Schneider et al (1996) comment that organisations create OCLIM for each of the OCULT dimensions, and OCLIMs communicate what is to be believed and valued. The practices and rewards (OCLIM) make employees believe that management values a certain dimension such as quality or innovation (OCULT). Similarly, Reichers and Schneider (1990, pg 29) conclude that:

“culture exists at a higher level of abstraction than climate, and climate is a manifestation of culture.”

Further, Schneider et al (1996) highlight that:

“Because organizational culture concerns the firmly implanted beliefs and values of organizational members, it resides at a deeper level of people’s psychology than does climate … Whereas climate’s policies, practices, and rewards are observable, the beliefs and values of culture are not so directly visible” (pg 11).
Moran and Volkwein (1992) argue that OCLIM operates at the levels of values and creations of an OCULT; OCULT operates at these levels as well as at the basic assumptions level. OCLIM can be seen as the way in which the deep structures of culture are operationalised in the interplay between situational contingencies, interacting group members, and ultimately the OCULT itself. OCLIM is a collective property, but it can be measured through perceptual data. The construct does allow for the unique characteristics of the individual perceivers’ to be embedded. Conversely, OCULT is so deeply embedded in a kind of collective unconscious that it exists apart from the individual-perceptions in that culture.

Denison (1996) also highlights the levels of consciousness.

“Culture refers to the deep structure of organizations, which is rooted in the values, beliefs, and assumptions held by organizational members. Meaning is established through socialization to a variety of identity groups that converge in the workplace... Climate, in contrast, portrays organizational environments as being rooted in the organization’s values system .. in terms of a fixed (and broadly applicable) set of dimensions. Thus, climate is often considered as relatively temporary, subject to direct control, and largely limited to those aspects of the social environment that are consciously perceived by organizational members” (pg 624).

Finally, temporality is argued by Spurgin (1993) to differentiate OCLIM and OCULT:

“Culture is a collection of beliefs, values, habits, practices and traditions that are shared by people within an organization and learned by new people joining the organization. In other words, it is the way things are done around the place. Climate is the prevailing influence or conditions that characterise a group; that is the mood of the place” (pg 24).

3.3.2 Measurement of organisational climate and culture

Given the above discussion on definitions, it is not surprising that both OCULT and OCLIM literatures highlight the difficulty in specifying appropriate means to measure the constructs. As an overview, Denison (1996) highlights the similarity of the dimensions used by culture and climate researchers in the attempt to make explicit generalisation about the features and dimensions of social contexts.
TABLE 3.3 – Similarity of dimensions used by organisational culture and climate researchers

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>CULTURE RESEARCHERS</th>
<th>CLIMATE RESEARCHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>Authority, stability, conventional culture</td>
<td>structure, centralisation, not applicable</td>
</tr>
<tr>
<td>Support</td>
<td>power distance, respect for people, humanistic culture</td>
<td>support, supportiveness, support</td>
</tr>
<tr>
<td>Risk</td>
<td>security, innovation, avoidance culture</td>
<td>Risk, innovation, innovation</td>
</tr>
<tr>
<td>Cohesiveness</td>
<td>collectivism, teamwork, affiliative cover</td>
<td>identity, peer resolution, cohesion</td>
</tr>
<tr>
<td>Outcome orientation</td>
<td>result orientation, outcome orientation, achievement culture</td>
<td>standards, motivation to achieve, pressure</td>
</tr>
</tbody>
</table>

Source: Denison (1996)


A summary of the dimensions of organisational climate and of organisational culture follow.

**Dimensions of organisational climate**


The focus of this Section will be a study by DeCotiis and Koys (1980) which supported the rationalisation of 54 dimensions identified by early researchers to eight. The dimensions are shown in Table 3.4.
### TABLE 3.4: Summary dimensions of organisational climate

<table>
<thead>
<tr>
<th>Summary dimension and label</th>
<th>Definition of eight dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy: <em>Autonomy, closeness of supervision, individual responsibility</em></td>
<td>The perception of self-determination with respect to work procedures, goals and priorities</td>
</tr>
<tr>
<td>Trust: <em>Intimacy versus aloofness</em></td>
<td>The perception of freedom to communicate openly with members at higher organisational levels about sensitive or personal issues with the expectation that the integrity of such communications will not be violated.</td>
</tr>
<tr>
<td>Cohesiveness: <em>Cohesiveness, universalism, conflict (reversed)</em></td>
<td>The perception of togetherness or sharing within the organisational setting, including the willingness of members to provide material aid.</td>
</tr>
<tr>
<td>Pressure: <em>Job pressure, time span orientation, production emphasis, achievement emphasis</em></td>
<td>The perception of time demands with respect to task completion and performance standards</td>
</tr>
<tr>
<td>Support: <em>Support, consideration</em></td>
<td>The perception of the tolerance of member behaviour by superiors, including the willingness to let members learn from their mistakes without fear of reprisal</td>
</tr>
<tr>
<td>Recognition: <em>Recognition and feedback, reward - punishment relationship</em></td>
<td>The perception that member contributions to the organisation are acknowledged</td>
</tr>
<tr>
<td>Fairness: <em>Promotion clarity, policy clarity</em></td>
<td>The perception that organisational practices are equitable and non-arbitrary or capricious</td>
</tr>
<tr>
<td>Innovation: <em>Innovation, organisational flexibility, impulsive, security versus risk</em></td>
<td>The perception that change and creativity are encouraged, including risk-taking into new areas or areas where the member has little or no prior experience</td>
</tr>
</tbody>
</table>

Source: DeCotiis and Koys (1980)

In addition, DeCotiis and Koys (1980) note that more recent research may have identified a new dimension of climate, which has been labelled stability.

Further to the above dimensions, there is one major factor which this study will also emphasise, namely external, environmental factors. Examples of these factors include: Competitiveness in the market (Verbeke et al, 1996; Schneider et al, 1992); the “contingency” dimension of Allaire and Firsirotu’s model includes the “contingency” dimension; environmental impact (Moran and Volkwein, 1992); and McNabb and Sepic (1995) who define the interface between OCULT, OCLIM, operating policies, performance outcomes and readiness for change, with OCLIM including organisational environment, organisation communication, employee role conflict, supervisory support.
Dimensions of organisational culture

The key issue related to the measurement of OCULT is the appropriate mechanism to access the intrinsically intangible / sub-conscious nature of the construct. Mirvis and Sales (1990) state there is general agreement that studies of OCULT are best conducted through “inside” inquiry, where researchers can develop “thick” descriptions of organisational life through their intimate association with the company. It is assumed that knowledge of a culture is tacit and experiential and emerges in situ through critical observation and clinical interviewing (for example, Schein, 1985), checked against biases and interests of informants and the preconceptions of the researchers themselves. Interactive probing is required to access otherwise inaccessible and unconscious cultural material, and each culture is idiosyncratic and unique and requires standardised assessments (Rousseau, 1990).

Whilst the measurement of OCULT has emphasised qualitative rather than quantitative analysis, a number of dimensions have been identified in various studies. Hofstede et al (1990, reported in Moran and Volkwein, 1992) explored cultures by examining core values, rituals, heroes and symbols. It was found that rituals, heroes and symbols identified organisational practices. There were six independent dimensions of perceived practices: Process-oriented versus results-oriented; Employee-oriented versus job-oriented; Parochial versus professional; Open system versus closed system; Loose control versus tight control; and, Normative versus pragmatic.

However, Rousseau (1990) argues that different layers of culture are amenable to different research methods. As the elements of culture become more conscious (values), behavioural (norms) or observable (artifacts), both standardised and nonstandardised assessment may be used. The author suggests that the strengths of both quantitative and qualitative methodologies can be synthesised through a combination of public (those that can be specified in advance) and private methods (researcher-specific, involving only cognition, judgement and experiences only indirectly communicable to others). While quantitative analysis tends to focus on patterns and generalizability and qualitative research tends to focus on idiosyncrasy and distinctiveness, more comparative qualitative research is necessary to resolve how idiosyncratic cultural elements are to specific organizations. A mixed methodology also is endorsed by Denison and Mishra (1995).

3.3.3 The process by which organisational climates and cultures form and change

This Section examines separately how OCLIMs and OCULTS form and change and then the interactive nature of their change.
**How organisational climates form and change**

OCLIM is a multifaceted, multicaused attribution employees make about what is important in organisations (Schneider et al, 1992, 1996). The authors refer to Katz and Kahn (1978), arguing that a systems perspective is required for OCLIM, whereby the numerous subsystems of organisations require simultaneous management attention to function effectively. For total organisational change to occur, it is necessary to simultaneously effect multiple policies, practices, procedures and rewards, and other features of multiple functions, units and levels of an organisation. It is highlighted by Burns (1996) that one of the critical aspects of understanding and changing OCLIM is to measure the existing climate, and use this as the point of reference for future changes to the OCLIM.

A summary of the literature explaining how OCLIMs form is shown in the following table.

**TABLE 3.5 - Four approaches to how organisational climates form**

<table>
<thead>
<tr>
<th>Approach</th>
<th>Description</th>
<th>Criticism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>OCLIM is regarded as an objective manifestation of the organisation’s structure. It forms because members are exposed to common structural characteristics of an organisation (for example, the organisation’s size, degree of decision making centralisation, the number of levels of hierarchy, the nature of technology employed, and the extent to which formal rules and policies proscribe individual behaviour). As a result of this exposure, the members have similar perceptions. These similar perceptions represent their own OCLIM.</td>
<td>It cannot account for groups within the same organisation forming different climates. Organisational structural characteristics are often inconsistent with the OCLIM. Inadequate consideration of subjective response to structural characteristics. Does not consider the interpretative processes of groups in forming climate.</td>
</tr>
<tr>
<td>Perceptual</td>
<td>The basis for the formation of OCLIM is within the individual. Acknowledges that individuals respond to situational variables in a manner that is psychologically meaningful to them. OCLIM is a psychologically processed description of organisational conditions, which represents structural as well as process characteristics (the latter including communication, influence, leadership and decision-making patterns). OCLIM is moderated by personality, task structure and supervisory style.</td>
<td>By placing the source of climate entirely within the individual perceiver, it denies the possibility of a “composition theory” or explanation for the formation of climate as an organisational property. Assumes that meaning is something individuals bring to and impose on a situation, rather than create interaction with others.</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td><strong>Description</strong></td>
<td><strong>Criticism</strong></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Interactive</td>
<td>The interaction of individuals in responding to their situation brings forth the shared agreement which is the basis of OCLIM. The relationship between the person and situation is one of reciprocal causality in which individuals not only change in response to their situation but one in which they also can and do attempt to alter their environment.</td>
<td>Does not consider the broader context, or the extent to which a shared OCULT influences interaction among group members.</td>
</tr>
<tr>
<td>Cultural</td>
<td>OCLIM is created by a group of interacting individuals who share a common, abstract reference, ie. the organisation’s culture, as they come to terms with situational contingencies. It focuses on the way in which groups interpret, construct and negotiate reality through the creation of an OCULT.</td>
<td>Requires continuing clarification of the relationship between OCULT and OCLIM.</td>
</tr>
</tbody>
</table>

Source: Moran and Volkwein (1992)

*ASA and structuralist view*

When querying how individuals confronted with a vast array of stimuli in the work environment come to have relatively homogeneous perceptions, it has been concluded by (Schneider and Reichers, 1983) that there two primary means by which OCLIMs can form: The structuralist view and the attraction/selection/attrition (“ASA”) framework. The structuralist view is described in the chart above. It provides the consistency in the objective organisational structure or characteristics.

The ASA framework posits that individuals within organizations attract and retain people to whom they are similar (Verbeke et al, 1996). Organisations expend considerable resources to attract the right “types” of people whose attitudes, goals, values and job performance will be consistent with the organisation’s expectations. However, there may be a certain amount of misinformation and misinterpretation at the recruitment phase, so there will be some mismatches, and these people will be the first to quit the organisation. Individuals likewise are attracted to jobs and organisations consistent with their personalities (Schneider and Reichers, 1983).

Consistency in organisational structure (that is, the structuralist approach) and similarities among organisation members (ASA) combine to diminish individual differences and produce OCLIMs, with relatively homogeneous memberships in any one organisation. Climates emerge out of the social interactions that members of a work group have with each other (Schneider and Reichers, 1983). As members of the same work group are more likely to interact with each other than with members of other work groups, different groups in the organisation will generate different climates. Newcomers are acted upon and change their social selves and perceptions of the context, and also contribute to the meanings that arise in the context.
According to Schneider, it is the strategic foci of routines and rewards which determine a setting’s climate. It is the differences in foci which produce different climates. For example, Schneider (1987, pg 403) states:

“… management in organizations makes choices, implicitly or explicitly, to adopt certain practices and procedures and to reward and support certain behaviours such that even implicit goals become clear to the organization’s employees. These practices and procedures and the activities and behaviours that get rewarded and supported play a critical function in organizations - they are the criteria on which employees base their work decisions, and they send a message about what is important to prospective employees as well”.

Symbolic interactionism
A number of OCLIM writers have referred to symbolic interactionism as the means by which ASA and the structuralist view are engrained. For example, Wimbush and Shephard (1994) refer to Mead’s (1934) notion that symbolic interactionism explains how people create shared perceptions through an ongoing, social interactive process of interpreting, defining and evaluating events through symbols. Symbolic interactionism also is referred to by Ashforth (1985), who emphasises newcomer socialisation in particular. Climate is argued to be a joint property of the individual, the group and the organisation. Symbolic interactionism is based on peoples’ fundamental need to know and to control, and is complicated by two affective desires: the desire for social integration and the desire to reduce anxiety.

Expectancy-valence interface
An alternative view on how OCLIM forms is provided by Kopelman et al (1990), who posit that OCLIM is translated into organizational behaviours through cognitive and affective states. There are a number of cognitive models consistent with Bandura’s (1986) assertion that people will both act on their judgements of what they can do and their beliefs about various actions. Kopelman et al argue that the expectancy-valence models in particular support this approach:

“the higher the perceived outcome expectancy and the more valued the outcomes, the greater is the motivation to perform the activity” (pg 302).

Bandura adds that motivation is also attributable to people’s judgements of what they can do - the self efficacy expectations. The three cognitive sources of motivation - outcome expectancy, outcome valence and self-efficacy expectations - are posited as primarily influencing performance behaviours. The expectancy theory has been discussed previously in the Chapter.
How organisational cultures form and change

Given the intangible, enduring nature of the concept, how changes to the OCULT takes place has been subject to various interpretations. Some key, complementary interpretations follow.

Model of OCULT change

Referring to Schein (1984), OCULT is always in the process of formation and change. Further, Schein (1992) argues that culture can form when a group: Has been together long enough to have shared significant problems; Has had opportunities to solve these problems and observe the effects of their solutions; and Has taken in new members, to test whether a given solution is shared and perceived as valid. OCULTs are argued to form to fulfil the human need for anxiety reduction. For example, Schein (1984) notes that:

“cultural elements that are based on anxiety reduction will be more stable than those based on positive problem solving because of the nature of the anxiety-reduction mechanism and the fact that human systems need a certain amount of stability to avoid cognitive and social anxiety” (pg 8).

Assumptions are argued to be learned responses that originated as espoused values, but as a value leads to behaviour, the behaviour begins to solve the problem that caused it in the first place (Schein, 1984, pg 4). The value gradually is transformed into an underlying assumption about how things really are. Assumptions are extremely powerful because they are less debatable and confrontable than espoused values.

Another approach to how cultures change is provided by Louis (1990). The author refers to the processes whereby new members come to appreciate new cultures and climates indigenous to work settings and organizations as acculturation. These sets of meanings are collective situational definitions (Thomas, 1951) or “trustworthy recipes” (Schultz, 1964) which are the culture. By knowing the shared meanings, the individual can be competent as a member of the social group. Louis (1990) refers to seven kinds of activity through which newcomers obtain information about their new work environment. The type of strategy used will depend on factors related to the newcomer personally and the work environment.

A third means by which people form views on OCULT is provided by Bandura’s Social Learning Theory (referred to by Thompson and Luthans, 1990), as previously highlighted in the discussion on OCLIM changes. Thompson and Luthans argue that the theory of behaviourism explains acquired behaviour-consequence associations that may have not been learned through direct experience. People learn through behaviour-consequence experiences, vicarious learning, and antecedent-behaviour
consequences (eg. where the boss or customers are present, one acts in a different way). The authors argue that OCULT is a cognitive construct, but behavioural interactions between people make the culture manifest. To change OCULT, behaviour must be changed. Further, while OCULT is a cognitive construct, it is both built and demonstrated by antecedents, behaviours and consequences. To influence the individual’s perception, one must try to influence the antecedents and consequences relating to behaviours, which behaviourists call “environmental factors”. In addition, while direct behavioural interactions are central to understanding OCULT, the environment plays an important role. Finally, consistency by the influencing agent is central in reinforcing particular cultural norms.

The fourth approach to culture change focuses on the values of the individual. Chatman’s (1991) study of public accounting firms examines culture from the perspective of the fit of the person-organisation values. Person-organisation fit is influenced both by the organisational values existing at the time of joining (associated with the selection process) and by changes in individual values following membership and tenure as the organisation influences an individual’s values over time (the socialisation process).

The final approach refers to Hofstede et al (1990), who argue that the values of founders and key leaders shape OCULT via shared practices. If members’ values depend primarily on their demographics, the way values enter the organisation is via the hiring process, with the subsequent socialisation in the organisation occurring via the learning of the practices - symbols, heroes and rituals.

Is a “strong” culture a good thing?

A final question is whether a “strong” culture is advantageous. The strength or amount of OCULT is defined in terms of the: (a) Homogeneity and stability of group membership, and (b) Length and intensity of shared experiences of the group (Schein, 1984). Strong OCULT has been argued to produce more effective organisations through attributes such as increased productivity and financial performance, increased job satisfaction, useful in mergers and acquisitions, strategic and career planning (for example, Trice and Beyer, 1984; Ouchi, 1981; Peters and Waterman, 1982; Siehl and Martin, 1990); Rousseau, 1990; and Kopelman et al, 1990). Further OCULT is argued to act as a “glue” when a group is forming and growing - a source of identity and strength (Schein, 1984).

However, Kopelman et al (1990) state that the claims are largely speculations, which require systematic investigation. The authors refer to prior researchers’ comments that strong OCULTs may be dysfunctional, as they may lead to short term efficiency but long term organisational performance may be harmed as organisations focus on efficiency and lose the edge in innovativeness. Similarly, Siehl and Martin (1990) claim that the promise of a link between OCULT and financial performance is
not empirically substantiated and that this may be impossible to substantiate. Finally, Schein (1984) comments that one of the toughest strategy decisions is whether the organisation should enhance the diversity to remain flexible in the face of environmental turbulence or to create a more homogeneous strong culture.

**To change organisational culture and climate in the co-existence model**

Authors who posit that OCULT and OCLIM co-exist argue that OCULT and OCLIM must be changed in conjunction for there to be long term, consistent changes within the organisation. For example, Reichers and Schneider (1990) argue that with OCULT existing at a higher level of abstraction than OCLIM, and OCLIM being a manifestation of OCULT, there is substantial overlap between the concepts. The overlap is particularly critical when OCLIM and OCULT are seen as reciprocal processes, with one causing the other in an endless cycle over time. Thus, OCLIM (for example, the rewards structure) is both the manifestation of OCULT (for example, assumptions about worker motivations) and the data on which OCULT comes to be inferred and understood.

Further, Schneider et al (1996) argue that OCULT is not directly manipulable; it can be changed through a focus on OCLIM. OCLIM reflects the tangible factors that produce an OCULT. Only by altering the everyday policies, practices, procedures and routine, thereby impacting the beliefs and values that guide the actions of employees, can organisational change be sustained. “Deeds, not words, are tangible”.

Similarly, the need for complementary OCULT and OCLIM is highlighted by Day (1994a), Schein (1990) and McNabb and Sepic (1995). It is difficult to develop and sustain appropriate behaviours if the cultural values are not in place, and it is difficult to sustain values if the appropriate incentives and examples do not exist. To assist change, managers should comprehensively review their organisation’s underlying culture and the operating climate created and constantly influenced by that OCULT.

Finally, Spurgin (1993) emphasises the importance of leadership. If the leader does not establish the OCULT and OCLIM, they will evolve and may or may not be what the leader wants. The leader sets the “style” of the organisation.

### 3.3.4 Working definition and approach used in the thesis

It has been necessary to develop a working model of the interface between OCULT and OCLIM in a framework which is useful and sufficient for the practical purposes of the thesis. The framework does not attempt to provide a definitive answer to the ongoing debate between different schools of thought relating to OCULT and OCLIM. This has not been seen to be necessary given the practical orientation
of this thesis and the breadth of issues which have been examined in the thesis. Neither does a definitive answer appear feasible (particularly given the difficulty in conducting “depth” analysis required of OCULT) or highly relevant (given the extensive overlap and commonality of the constructs, as highlighted by Denison).

The framework is an amalgam of the underpinning theory of the more prominent theoretical models described above. It is closely aligned with the approach that OCLIM operationalises OCULT and that they operate at different levels of consciousness. The framework is highlighted in Figure 3.2

FIGURE 3.2 – The organisational culture/climate model assumed in this thesis

The OCULT/OCLIM interface

OCULT is assumed to be a highly enduring, corporate-wide concept. It sets the “style” or “personality” of the organisation, which has evolved since the inception of the FI. OCULT reflects what an organisation “is”. It is relatively impervious to the short-term changes in environmental, market and local organisational factors (such as the style of the current leader of a team, or the current hierarchical structure). OCULT resides at a deep level of consciousness, and is not necessarily recognised consciously by organisation members. However, it affects the FIs credit risk attitude and credit climate by providing the basis of “the way things are done around here”, through which decisions are made and interpreted. As credit is a fundamental reason for the existence of the banking
sector, it is expected that the FIs approach to credit is an integral aspect of the FIs’ “personality”. OCULT is assumed to be constant across functional and geographic areas.

OCLIM is taken to be a more short-term, cyclical concept, which is strongly affected by changes in environmental and organisational factors and the resulting short-term imperatives. It is something the organisation “has”, rather than “is”. OCLIM operationalises OCULT. OCLIM provides a focus on the events, practices and procedures (routines) and the behaviours that get rewarded supported and expected (rewards) in the organisation, which send the message that particular strategic imperatives require employee energies and competencies. OCLIM provides the basis for the interpretation by credit officers of the credit risk attitude of senior managers. It is assumed that there are a number of climates in an organisation, such as safety, service quality and credit risk, which are responsive to changes to environmental, market and “local” factors.

Both OCULT and OCLIM constructs will be a function of the individual perceptions of leaders, the effects of the group dynamics, and the moderating effect on these of the individual’s personality. OCULT provides a “wash” through which any decisions are made and potential solutions are validated in the OCLIM operating environment.

The formation of OCLIM/OCULT
The framework highlights that OCULT informs the operationalisation of OCLIM. However, OCULT and OCLIM also are seen as reciprocal processes, with one causing the other in an endless cycle over time. OCLIM (for example, the rewards structure) is both the manifestation of OCULT (for example, assumptions about worker motivations) and the data on which OCULT comes to be inferred and understood (consistent with Schneider’s works).

The framework emphasises that short-term OCLIM formation (and eventually, long-term OCULT formation) is a result of the foci on routines and practices that get rewarded. The link is explicated through the basic concepts of expectancy theory. The framework takes the core premises of the expectancy theory – that individuals will exert effort to do those things that are expected to lead to outcomes that they value, or find attractive. The approach is compatible with the structuralist, ASA, acculturation and symbolic interactionism approaches to OCLIM and OCULT formation, with the reward / behaviour link explaining how the processes occur.

Levels/overlays
The framework reflects Schein’s (1984, 1986) underlying concept of different levels of culture artifacts/creations, values and basic assumptions. The values level is presumed to straddle OCLIM
and OCULT. The values level must be inferred as the values cannot be observed directly. However, the values level is shown within the OCULT construct in the framework, as this appears to be the primary level at which values would be associated. The OCLIM construct is taken to be much more behavioural.

The framework incorporates Allaire and Firsrogu’s (1984) overlays of culture, namely society, history and contingency. The OCLIM dimension in the thesis’ framework is very closely aligned with Allaire and Firsrogu’s notion of socioculture, as the more behavioural/operational aspects of OCLIM. The society, history and contingency overlays inform both OCULT and OCLIM, as does the effect of the individual actor.

Agents versus subjects and units of analysis

OCLIM is assumed to focus on the perceptions of individuals as to how the organisation affects them. Thus, OCLIM is more relevant at the level of the Lending Officers, who are viewed more as “subjects”. Thus, the perceptions are at the level of the individual.

OCULT is assumed to be associated with an underlying group construct, which is influenced primarily by the senior managers. Thus, the senior managers are the agents who set the tone for the whole organisation.

The focus of the thesis is on the functional or occupational unit of “credit risk”. A number of banks have been examined, rather than analysing a number of sub-cultures or sub-climates existing within the one FI.

Dimensions of OCLIM/OCULT

The dimensions are taken to be consistent with Denison (1996), as shown in Table 3.6.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>Authority, stability, conventional culture, structure, centralization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>Authority, stability, conventional culture, structure, centralization</td>
</tr>
<tr>
<td>Support</td>
<td>power distance, respect for people, humanistic culture, support, supportiveness</td>
</tr>
<tr>
<td>Risk</td>
<td>Security, innovation, avoidance culture, risk</td>
</tr>
<tr>
<td>Cohesiveness</td>
<td>Collectivism, teamwork, affiliative cover, identity, peer resolution, cohesion</td>
</tr>
<tr>
<td>Outcome orientation</td>
<td>result / outcome orientation, achievement culture, standards, motivation to achieve, pressure</td>
</tr>
</tbody>
</table>
There are different interpretations as to whether the OCULT/OCLIM dimensions are the same or complementary. The Schneider school (for example, Schneider, et al 1996) argue that organisations create OCLIM for each of the OCULT dimensions, and OCLIMs communicate what is to be believed and valued. Hence, the underlying dimensions are similar with the means in which they are manifested being the primary difference. Other writers have not made such a direct link, though it is inferred that the dimensions should be complementary.

The appropriate mapping of OCULT and OCLIM dimensions for this thesis will be examined through the research process.

A strong culture
It is assumed that a strong culture is desirable. The assumption is consistent with the credit practitioners’ literature on credit culture, discussed in the next Chapter. The effect of the strong OCULT will not necessarily result from a direct impact on organisational performance, but may be indirect. For example, the establishment of a very strong credit culture may lead to a quality credit risk infrastructure, which will assist in developing well dimensioned and controlled credit losses which, in turn, will assist in diminishing broad, uninformed swings in the credit risk attitude.

Methodological implications
In this thesis, the focus is on using the methodological approach most suited to the individual components of research. A mixed qualitative and quantitative design is the result. The interviews with Senior Credit Managers have been designed for the Managers to be viewed as Agents using individual interview methodology, more in alignment with the traditional OCULT approach. Conversely, the interviews with Lending Officers have been designed for the Officers to be viewed more as Subjects, with more structured questions/a simple two-sentence questionnaire and focus groups. This approach is more in alignment with the traditional OCLIM approach.

Finally, the thesis focuses on the more surface level (artifacts) and intermediate levels (values) of analysis, which can be articulated more readily. There has been not attempt to examine the deeper level “basic assumptions” unique to the organisation.

3.4 In closing ....
Three theoretical areas which could provide some explanation of the behaviour of retail lending organisations are discussed in this Chapter.

The theory of credit rationing provides an economic approach. In this thesis, credit rationing is assumed to occur when financial institutions do not provide the level of debt required by consumers at
the appropriate market cost of funds. The theory of credit rationing has been developed in relation to the commercial/corporate lending arena, and the literature indicates mixed evidence of its existence and applicability to retail lending. There does not appear to be an empirical review of the applicability of the theory of credit rationing to the Australian lending market.

The theories of decision making focus on theories relating to decision making at the individual level where research has indicated there are systematic biases in how people make decisions. The topics covered are: The conditions of uncertainty and incomplete information; Prospect theory, and Related constructs. The heuristics and biases outlined appear particularly pertinent in explaining the apparently “irrational” decision making of individuals in an environment of incomplete information and uncertainty – which typify the retail credit risk management environment.

The theories of organisational culture/climate examine behaviours in a group context. This Chapter provides an overview of the definitions, measurements and processes for formation/change of culture and climate. A working model of how the constructs are incorporated in this thesis has been developed.

The impacts of the constructs examined in this Chapter and the next (which discusses some more practical research issues) in the credit risk management environment are discussed in the Chapter – Integrated Results.
Analytical Tools II: Credit Culture, Balanced Scorecard, Grounded Theory and Research Dimensions

The prior Chapter provides an overview of key psychological/sociological theories which could help explain the apparently ineffective lending strategies of FIs across the business cycle. In this Chapter, more practical research issues are addressed.

“Credit culture” is discussed as it has been referred to by a number of credit risk practitioners, although definitions vary widely. The Balanced Scorecard is included as it provides a performance measurement framework which has been used to integrate the findings from a number of pieces of research. Grounded theory provides the basic model of research used in this thesis. The research dimensions and issues which are applicable to the research conducted in this thesis are highlighted. Initially, more generic research dimensions and design issues are outlined followed by a focus on the design applied in this thesis.

4.1 “Credit culture” from the Practitioners’ Perspective

Given the small amount of academic research which has been conducted into the credit risk appetite in retail banks, the writings of credit risk practitioners offer a particularly valuable source of information. The research issue of primary focus has been “credit culture” – the term the practitioners use to refer to a range of concepts which form the basis of the underlying approach to credit risk. This Section provides an outline of “credit culture” from the credit practitioners’ perspective, followed by three existing models which address credit risk appetite/culture across time. Subsequently, an outline of how credit culture changes over time within an organisation is provided. The Section concludes with a working definition and the approach taken in this thesis.

4.1.1 Background

Whilst the term “credit culture” appears to be commonly used by credit practitioners, there is very limited research of the construct with no commonly agreed definition. A review of the literature identified only one significant source of writing on “credit culture”. Around a dozen articles have appeared in the “Journal of Commercial Lending”, subsequently the “Journal of Lending and Credit Risk Management”, throughout the 1990s. A short book has been developed in 1990 by John McKinley, “How to analyze your bank’s credit culture”. Also, Barrickman and McKinley (1994) provides a comprehensive reference. Other sources used in developing the definitions were my experience gained from working in the retail credit risk industry at an executive level and extensive informal feedback from colleagues who provide leading edge consulting advice to the industry.
In examining the definition and factors affecting changes to credit culture, it became apparent that the importance of the concepts could not be gauged from the frequency of comments. A number of articles have been written by the same authors, who tended to re-iterate their concepts.

Most of the concepts in this Section have been reported from the *Journal of Lending and Credit Risk Management*. Whilst the concepts appear appropriate to retail lending, most of articles have been written for a commercial lending environment. For example, in the monograph written by McKinley, the objective of the journal was given as:

“seeks to fulfil its purpose by providing commercial bankers with programs, products and services they need to increase their proficiency in lending, credit and related areas”.

**Existing definitions of “credit culture”**

The term “credit culture” is used by practitioners to represent a broad spectrum of credit-related issues. A sample of the definitions, taken from extreme viewpoints, follows. One of the broadest definitions is provided by Mueller (1993):

“I define credit culture as everything that relates to risk-taking” (pg 8). Subsequently, Mueller (1994) stated “A credit culture is a universe with many moving parts embracing everything that has to do with credit extension. It is rooted in ideas, traditions, skills, attitudes, philosophies, and standards. A credit culture is developed over time and then communicated and passed on. It is the spirit behind the rules” (pg 30).

A broad definition also is offered by Barr and McWhorter (1992), who argue that:

“A bank's credit culture is, in the broadest sense, the unique combination of policies, practices, experience, and management attitudes that define the lending environment and determine the lending behaviour acceptable to the bank” (pg 29).

A focus on “how we do things around here” is provided by Morsman (1994, pg 17)

“A credit culture is a system of behaviour, beliefs, philosophy, thought, style, and expression relating to the management of the entire credit function… It is felt rather than defined; it is ‘how we do things around here ... Ironically, if an organisation feels the need to define its credit culture, the culture is probably non-existent or needs considerable improvement”

Similarly, McKinley (1990, pg 7) states
Credit culture is often defined as “how we do things around here … A bank’s credit culture influences policies and their administration, communications, incentive systems, lines of business chosen, and the discipline to make systems and controls effective”.

The author notes that two similar banks can have the same systems and controls but widely different credit performances. A bank’s credit culture is intended to shield the bank from administrative shortcomings, training gaps, poorly conceived marketing plans, and exposures to unnecessary risk.

A different perspective is provided by Larr (1994), who argues that credit culture is an overused term. The author notes that there can be more than one culture in a bank. Credit culture:

“means a narrow concept of interrelated asset risk management components that engender safety and soundness” (pg 7).

4.1.2 Existing measures and models of credit culture

There are two models of credit culture/risk appetite over time and one model of credit culture that I uncovered in addition to Guttentag and Herring’s model. The latter model has been discussed in the Chapter – Analytical Tools I.

**McKinley’s measure of credit culture**

As noted earlier, a measure of credit culture has been developed by McKinley (1990) in the monograph “How to analyse your bank’s credit culture”. The model appears to have been based on Mr McKinley’s extensive experience (as the past Senior Executive Vice President of Bank South Corporation), as the document does not indicate a traditional research methodology was used. However, the ensuing model has been reviewed by a panel of Senior Credit Managers. The monograph was ahead of its time in terms of writings on credit culture.

There are two diagnostic tools in the monograph, the Credit Culture Vocabulary and “Elements of a Strong Credit Culture”. The Credit Culture Vocabulary provides a tool to analyse a banks’ credit culture in terms of four possible cultures – values driven, immediate performance driven, market share / production driven and unfocused (current priority driven). A summary is shown in Table 4.1.
TABLE 4.1 – McKinley’s four credit cultures

<table>
<thead>
<tr>
<th>Type of Culture</th>
<th>Values driven</th>
<th>Immediate performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Priority</td>
<td>Long term, consistent performance</td>
<td>Current earnings, stock price</td>
</tr>
<tr>
<td>Driving Force</td>
<td>Corporate values, market consistency</td>
<td>Annual profit plan</td>
</tr>
<tr>
<td>Credit environment</td>
<td>Strong credit organisation with few policy exceptions and excellent communication</td>
<td>Generally strong emphasis on credit quality. Shift in priorities evident during periods of soft loan demand</td>
</tr>
<tr>
<td>Hidden policy</td>
<td>Not a factor</td>
<td>Conflicts with written policy during soft market demand periods</td>
</tr>
<tr>
<td>Success factor</td>
<td>Balance between credit quality and revenue generation. Avoid tendency to over-control lending function</td>
<td>Must resist temptation to overreach in down cycle and credit must be strong enough to influence lending behaviour</td>
</tr>
<tr>
<td>Market share / production culture</td>
<td>Unfocused (current priority)</td>
<td></td>
</tr>
</tbody>
</table>

| Top Priority                         | Market share, loan growth, sales volume                                      | Uncertain. Tends to change with prevailing winds                                       |
| Driving Force                        | Commitment to be largest. Market plan                                        | Varies. Often, search for self (“what do we want to be”) – survival, problem avoidance. Will change as priorities change |
| Credit environment                   | Well-managed market driven banks will have strong systems and controls and good credit leadership. Credit and line management may conflict over priorities | Varies across spectrum. Depends on strength of credit management or on current priorities. Each line unit could have its own unique attitude |
| Hidden policy                        | Generally dominates written credit policy. Lenders understand their primary role is to produce | Lack of consistency and shifting priorities leaves lenders confused. Don’t know what behaviour is desired |
| Success factor                       | Loan approach should be largely controlled by credit. Requires strong credit management that can resist production pressures | Dominant leadership that will provide clear direction. Credit quality may be okay if credit management, policies, systems are strong. |

Source: McKinley (1990)

The staff member completing the diagnostic tool will identify the bank’s culture by choosing the terms most frequently used within the organisation, and assigning a priority to them. The terms are shown in Table 4.2.

TABLE 4.2 – McKinley’s culture vocabulary

<table>
<thead>
<tr>
<th>Values words</th>
<th>Quality</th>
<th>Accountability</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Risk averse</td>
<td>Professionalism</td>
<td>Conservative</td>
</tr>
<tr>
<td></td>
<td>Soundness</td>
<td>Ownership</td>
<td></td>
</tr>
<tr>
<td>Production words</td>
<td>Aggressive</td>
<td>“Do business” attitude</td>
<td>“Doable deal”</td>
</tr>
<tr>
<td></td>
<td>Loan volume</td>
<td>Creative lending</td>
<td>Growth oriented</td>
</tr>
<tr>
<td></td>
<td>Market share</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: McKinley (1990)

McKinley argues that the values and the market share cultures should be easy to identify. Banks with an immediate-performance driven culture will generally have a mixture of culture words. The unfocused bank will be difficult to predict in terms of credit culture vocabulary. The second part of the monograph provides the “Elements of a Strong Credit Culture”. There are argued to be seventeen
elements, with four super-ordinate dimensions, namely: Commitment, incented behaviour, communication and line of business.

McKinley’s model has been taken into consideration when developing a model of credit culture for the retail environment. However, the Vocabulary component is not seen to be directly applicable to this thesis. Firstly, the model has been developed for commercial lending, so the direct application of the constructs to retail credit cannot be assumed. Secondly, the model appears to take a more traditional approach to credit risk management where the objective is to minimise losses, as compared to maximising long-term profitability by pursuing market-share and growth with well-dimensional and managed credit costs. The emotional undertone appears to be that the loss-minimisation end of the spectrum is desirable, as the words represent the values culture. The production culture appears to have negative connotations, with the Vocabulary being aligned with unsubstantiated and unrealistic growth expectations. Thirdly, the differentiation between credit culture, credit climate and credit risk attitude levels are not in evidence. Finally, the model does not incorporate a number of factors raised in the interviewing processes, discussions and literature review conducted throughout the thesis. For example, the production terms focus on the volume of business, without placing as great emphasis on cost cutting (which probably is more of a late 1990s phenomena).

The 17 Elements of Strong Credit Culture have been incorporated in the Balanced Credit Scorecard.

**Mueller’s model of the business cycle**

Mueller’ (1997) argues that cycles – the most dominant being the business cycle – affect credit quality more than any other factor, with management being close behind. The model depicts lender responses across the four stages of the business cycle, as shown in Table 4.3.

**TABLE 4.3 – Mueller’s stages of the business cycle**

<table>
<thead>
<tr>
<th>Stage of the business cycle</th>
<th>Typical lender responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom</td>
<td>Lenders overly aggressive. Mistakes of the past are forgotten</td>
</tr>
<tr>
<td>Bust, and Recession</td>
<td>Lenders defensive, chastened by the negative impact on loan quality</td>
</tr>
<tr>
<td>Recovery</td>
<td>Fresh start on the economy’s potential growth path. Lenders resume new business offensive with gusto. Institutional memories increasingly tested.</td>
</tr>
</tbody>
</table>

Source: Mueller (1997)

**KPMG model of the risk management cycle**

The KPMG model is presented as a diagram in an industry document produced by KPMG (1996). It shows the typical stages of a risk management cycle as moving in association with profit and loss. The lesson highlighted is that if risk management is solely defensively focused, interest and resources generally wane in proportion to the time since the last incident. The stages of the risk management
cycle are shown as: Shock, resolve, myopia, arrogance, shock. The document does not provide definitions or explanations of the stages of the cycle.

4.1.3 Changing the credit culture

Given the interwoven nature of what the credit culture is and how to affect its change, it has been necessary to review briefly how the credit culture is set and will develop.

The credit culture is established by top management

There is universal reporting by the credit practitioners that the credit culture was set “at the top”. For example, McKinley (1990) argues credit culture:

“begins with top management, and permeates the entire organisation. In well-managed organizations it will result from priorities and practices that are thought out and effectively communicated” (pg 7).

Further, Barr Taylor and McWhorter (1992) argue that once the building blocks of a sound and prudent credit culture are in place, continued success depends on a board of directors, senior managers, and stockholders who endorse and enforce this culture. Similarly, Larr (1998, pg 32) states:

“It is not too surprising that asset quality is dependent, in the final analysis, upon executive management’s ability to transmit a vision into a business plan that is executed by capable, informed individuals”

Finally, Mueller (1998, pg 31, 32) states:

“Credit skills are intertwined with a bank’s credit culture, which embraces all the factors that bear on credit extension, credit quality, and recurrent cyclical patterns and sequences. Business, product, industry, regional, and country cycles are among the factors that might be involved … Credit behaviour has its own cycle, ranging from defensive conservatism to irresponsible aggressiveness. Overlying each credit system are a strata of linked attitudes, responses, and behavioural patterns emanating from the chief executive officer (CEO) and infiltrating the organisation”.

The credit culture will develop – regardless of management’s intent

Another aspect which appears to be universally accepted is that the credit culture will evolve, whether or not management intends it to. Further, the credit culture will evolve based on the perceptions of the
credit officers as to what is the actual, underlying organisational imperative – regardless of what the espoused, formal objectives are. For example, when credit culture:

“develops apart from written policies, it does so because the organisation senses that written policies do not reflect management’s true priorities. Unwritten, or “hidden”, policies evolve that attempt to eliminate the confusion of priorities, and eventually they override the bank’s formal policies. At this point, pressure on credit systems makes credit management difficult, and the potential exists for a breakdown of systems if corrective action is not taken” (McKinley, 1990, pg 7).

Similarly, Barr and McWhorter (1992) state that banks can alter their written policies and procedures but also must consider the way credit actually is awarded. In a bank with a strong credit culture, the written and unwritten policies do not differ.

**A strong measurement framework can help modify culture**

A strong focus on measurement has been made by Davis, Rossman and Sissler (1994). They argue that two distinct strategies were required to modify their culture. Firstly, everything must be measured. This is manifested by the saying repeated throughout the organisation - people do what is inspected, not what is expected. Secondly, reward correct behaviour to enhance behavioural change. This can be accomplished by developing incentive programs.

**Consistency between credit and other business objectives**

The transition of a credit culture must be understood within the total organisational context. As argued by Larr (1998), the most powerful influence within a bank is self-interest, in a context of compensation and its impact on asset quality. Larr notes that to be successful, a bank must be one culture, not a credit culture with other cultures. Revenue generation must be integrated with risk management in the bank’s culture. Adverserial organisational structures can lead to a “credit-culture-rather-than-bank-culture syndrome” (pg 32).

Further, Larr (1998) argues, if there is a disconnect between credit priorities, credit strategies and business strategies, there is a sequential negative pressure upon compensation goals, compensation structure, compensation payout and business staffing, which results in less than optimal business results. To the degree possible, compensation of individuals should reflect the tenor of risk sponsored by the individual or individuals on the bank’s balance sheet.

In a similar manner, Howell (in Howell et al, 1998, pg 64) argues that FIs:
“… really need to get an organisation that has the credit culture and the incentive system both supporting the same issues voluntarily”.

The focus on a strong sales culture in alignment with credit is also made by Brown and Hennesy (1998), who argue that a sales culture and customer focus must permeate all parts of the bank, including the credit department. An effective sales culture will serve the dual function of increasing revenues for the bank and promoting behaviour that leads to sound credit decisions. A sales culture will enhance credit quality through effective coordination and integration between the relationship management and credit management functions of the bank. Further, Kisting (in Howell et al (1998, pg 56) comments:

“If you don’t have a strong sales culture, you won’t have a strong credit culture because you can’t afford it. If you have only a sales culture, the bank will be in a mess three years from now, you’ll all be out and someone else will be cleaning up your mess. If credit culture dominates without a strong sales culture, you’ll be running a boutique bank and 75% of you will be gone in three years from now”.

**Critical periods for credit culture**

There is particular pressure on, and in many cases, weaknesses in, credit culture when FIs grow (Barr and McWhorter, 1992). The authors highlight that creating a credit culture is an evolutionary process, requiring periodic review and enforcement.

The 1990s were a critical period for credit culture in Australian FIs. As noted previously, having emerged from the troubled period of the late 1980’s / early 1990s, credit risk management underwent a paradigm shift in the mid- to late- 1990s. The complex and interwoven factors affecting the management of credit risk through this business cycle are discussed further in the final Section of this Chapter.

The fundamentally different way of managing credit risk in retail banking put pressure on FI credit culture to remain not only strong, but relevant and responsive.

**4.1.4 A working definition and implications for this thesis**

As highlighted at the beginning of the Section, there is considerable variance in the notion of “credit culture” - the term that practitioners use to refer to a range of concepts which form the underlying approach to credit risk management. The narrow interpretation of “credit culture” will be taken in this thesis, whereby the emphasis is on “the spirit behind the rules” and “how we do things around here”. This definition is consistent with the definition of organisational culture discussed in the prior Chapter.
The elements of the credit culture as outlined by McKinley (1990) have been included in the Balanced Credit Scorecard. The impact of the economic cycle have been included in this thesis, consistent with Mueller (1997) and KPMG (1996).

The holistic approach required to change credit culture as outlined above is incorporated into this thesis by assuming that credit culture is established by top management, it will develop regardless of management’s intent and there needs to be consistency between credit and other business unit objectives. The evolving nature of the lending environment in the 1990s highlighted the criticality of a closely managed credit culture. The thesis also incorporates the concept that a strong measurement framework is required to manage/change culture. The Balanced Scorecard approach provides such a measurement framework, as outlined in the next Section.

4.2 The Balanced Scorecard Approach

One of the outcomes of this research has been the development of a comprehensive tool for the review of the credit risk management infrastructure within an FI. The Balanced Scorecard (“BSC”) of Kaplan and Norton (1996, 1993, 1991) provides such a performance measurement framework.

4.2.1 Overview of the Balanced Scorecard

The Balanced Scorecard was developed from a year-long research project with 12 companies at the leading edge of performance measurement. The objective was to develop a set of measures which provide a “fast but comprehensive view of the business” (Kaplan and Norton, 1991, pg 64).

Kaplan and Norton’s 1996 book summarises the BSC as translating an organisation’s mission and strategy into a comprehensive set of performance measures which provide the framework for a strategic measurement and management system. An emphasis on achieving financial objectives is retained, but the BSC also includes the performance drivers of these financial objectives. The BSC enables companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they need for future growth. Further, the BSC uses a framework to inform employees about the drivers of current and future success, and hence channel the energies, abilities and specific knowledge of people throughout the organisation to achieve longer term goals.

Initially, the BSC was developed as a performance measurement system, rather than a strategic management system. However, more recently the scorecard has been used as the basis for a new strategic management system, which allows a company to link its long-term strategy with its short-term actions (Kaplan and Norton, 1996).
4.2.2 The perspectives of the BSC

There are four main components, or perspectives, to the BSC, as described by Kaplan and Norton (1996): Customer, financial, business process and learning and growth.

**The customer perspective**

The customer perspective identifies the customer and market segments in which the organisation competes and which will generate the revenue component of the company’s financial objectives. It allows a company to explicitly identify and measure the value proposition, which are the drivers or the lead indicators for the core customer outcome measures. Goals relate to the four categories of customers concerns: Time, quality, performance and service, and cost. Core measures of the customer perspective are shown in Table 4.4.

TABLE 4.4 – Balanced Scorecard measures of customer perspective

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share</td>
<td>The proportion of business in a given market</td>
</tr>
<tr>
<td>Customer acquisition</td>
<td>The rate at which new customers or business is attracted or won</td>
</tr>
<tr>
<td>Customer retention</td>
<td>The rate at which a business unit retains or maintains ongoing relationships with its customers, and customer loyalty</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>The satisfaction level of customer along specific performance criteria within the value proposition</td>
</tr>
<tr>
<td>Customer profitability</td>
<td>The net profit of a customer or a segment, allowing for the unique expenses required to support that customer</td>
</tr>
</tbody>
</table>

Source: Kaplan and Norton (1996)

The generic model of the customer value proposition is:

\[ Value = \text{product or service attributes (functionality, quality, price, time) plus image plus relationship} \]

**Financial perspective**

For each of the three business strategies of growth, sustain and harvest, there are three financial themes that drive the business strategy (Kaplan and Norton, 1996), namely: Revenue growth and mix; Cost reduction / productivity improvement; and Asset utilisation / investment strategy. The interaction is shown in Table 4.5.
TABLE 4.5 – Balanced Scorecard financial themes

<table>
<thead>
<tr>
<th>Business Unit Strategy</th>
<th>Strategic themes</th>
<th>Asset Utilisation</th>
</tr>
</thead>
</table>
| **Revenue Growth and Mix** | Sales growth rate by segment | Revenue / employee | Investment (percentage of sales)  
|                         | Percentage revenue from new product, services and customers | | R&D (percentage of sales) |
| **Growth**              | Cost Reduction/Productivity Improvement | | |
|                         | Cost / competitors | | Working capital ratios (cash to cash cycle)  
|                         | Cost reduction rates | | ROCE by key asset categories |
|                         | Indirect expenses (percentage of sales) | | Asset utilisation rates |
| **Sustain**             | Share of targeted customers and accounts Cross-selling | | |
|                         | Percentage revenues from new applications Customer and product line profitability | | |
| **Harvest**             | Customer and product line profitability Percentage unprofitable customers | | |
|                         | Unit costs (per unit of output, per transaction) | | Payback Throughput |

Source: Kaplan and Norton (1996)

**Business process perspective**

The internal business process perspective reflects the generic value chain model. The steps of the chain are to identify customer needs, to innovate (identify the market and create the product/service offering), to create operations processes (build the products/services and deliver the products/services), to deliver post sales service processes (service the customer) and to satisfy customer needs.

In the early writings of the BSC, the innovation process was separated from the internal-business process perspective of the value creation process. Research and development was seen as a support process. However, the authors came to realise that innovation was a critical internal process. Being effective, efficient and timely in innovation is, for many companies, more important than excellence in day to day operating processes.

**Learning and growth perspective**

The strategic feedback and learning process is the most underdeveloped of the four major management processes. There are three core employment measures (employee satisfaction, retention, productivity) leading to results. Enablers of employee satisfaction with situation specific drivers of learning and growth are shown in Table 4.6.
TABLE 4.6 – Balanced Scorecard learning and growth perspective

<table>
<thead>
<tr>
<th>Staff competencies</th>
<th>Technology infrastructure</th>
<th>Climate for action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic skills</td>
<td>Strategic technologies</td>
<td>Key decision cycle</td>
</tr>
<tr>
<td>Training levels</td>
<td>Strategic databases</td>
<td>Strategic focus</td>
</tr>
<tr>
<td>Skill leverage</td>
<td>Experience capture</td>
<td>Staff empowerment</td>
</tr>
<tr>
<td></td>
<td>Proprietary software</td>
<td>Personal alignment</td>
</tr>
<tr>
<td></td>
<td>Patents, copyrights</td>
<td>Morale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teaming</td>
</tr>
</tbody>
</table>

Source: Kaplan and Norton (1996)

Several companies have defined a strategic information coverage ratio which assesses the availability of information relative to anticipated needs. Examples are percentage of processes with real time quality, cycle time and cost feedback available, and percentage of customer-facing employees having on-line access to information about customers. Similarly, a strategic job coverage ratio could be developed.

An example

Figure 4.1 provides an example of a BSC for Rockwater, a wholly owned subsidiary of Brown and Rott/Halliburton, a global engineering and construction company.

FIGURE 4.1 – Example of a Balanced Scorecard

Source: Kaplan and Norton (1993, pg 75)
4.2.3 Issues with existing performance measures addressed by the BSC

The BSC addresses a number of criticisms which have been levelled against the traditional performance measurement systems. For example, investors gave non-financial measures, on average, one-third of the weight in the decision to buy or sell any given stock (Light, 1998, reporting on Ernst and Young’s Centre for Business Innovation). The report found a statistical correlation between investors’ use of non-financial information and the accuracy of their earnings forecasts. Further, institutional investors rely heavily on management presentations and reports to obtain information on the company’s non-financial performance. The key issues with existing measures which the BSC addresses are outlined in Table 4.7.

TABLE 4.7 – Issues with existing approaches addressed by the Balanced Scorecard approach

<table>
<thead>
<tr>
<th>The changing business environment</th>
<th>“One of the most embedded features of the way in which managers have managed in the past is the prominence of financial controls in their managerial “toolkit”. In a stable, predictable business environment, it is feasible and effective to steer the company on the basis of its past performance; in a rapidly changing world, it is positively dangerous.” (Monkhouse, 1997, pg 118).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results and process measures</td>
<td>Traditional measures focus on the outcome, or result, of the firm’s activities such as profit or return on assets. Process measures, or performance drivers, are also required to track and show the effectiveness of the interlinking processes/tasks/activities which impact on the outcome measures (eg. Meyer, 1994; IMA 1998; Monkhouse, 1997).</td>
</tr>
<tr>
<td>Short-term measures and long-term development of capabilities</td>
<td>“The financial framework worked well as long as financial measures could capture the great majority of value-creating (or value-destroying) activities that occurred during quarterly and annual periods. This framework became less valuable as more and more of an organisation’s activities involved investments in relationships, technologies and capabilities that could not be captured in the historical-cost financial model.” (Kaplan and Norton, 1996, pg 273).</td>
</tr>
</tbody>
</table>
### TABLE 4.7 - Issues with existing approaches addressed by the Balanced Scorecard approach (cont’d)

<table>
<thead>
<tr>
<th>A small number of critical measures</th>
<th>The suggestions for the number of measures varies from fifteen (Meyer, 1994) to two dozen (Kaplan and Norton, 1996). Measures should only be included if they:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>− Are critical to team objectives (like filling an order within 24 hours)</td>
</tr>
<tr>
<td></td>
<td>− Are critical variables required to reach the goal (like having enough skilled personnel to run an order-entry system)</td>
</tr>
<tr>
<td></td>
<td>− Would cause the team to change its behaviour if the measurement changed significantly – and hence must be manageable by the business</td>
</tr>
<tr>
<td></td>
<td>− Have a large effect on whether the business achieves its goals.</td>
</tr>
<tr>
<td>Comprehensive linkage of measures</td>
<td>“A properly constructed Balanced Scorecard articulates the theory of the business. The scorecard should be based on a series of cause-and-effect relationships derived from the strategy, including estimates of the response times and magnitudes of the linkages among the scorecard measures”</td>
</tr>
<tr>
<td></td>
<td>(Kaplan and Norton, 1996, pg 17).</td>
</tr>
<tr>
<td>Sub-optimal behaviour</td>
<td>Traditional measures can encourage behaviour which is not beneficial to the overall and long-term well-being of the organisation:</td>
</tr>
<tr>
<td></td>
<td>“Before we introduced a balanced scorecard approach, we often got behaviour that that we didn’t want, but it was by omission rather than commission. Since managed indicators were set very narrowly, you would have behaviour that simply had not been anticipated, nor desired, but occurred because there was too much singlemindedness in terms of the few objectives that were set in very quantifiable objectives such as expense reduction, more revenue or more customers”</td>
</tr>
<tr>
<td></td>
<td>(Citibank, Bill Ferguson, IMA, 1998, pg 5).</td>
</tr>
<tr>
<td>Exception management</td>
<td>To assist the allocation of scarce supervisory /management time, the performance measurement system should specify the degree of variation from the target which is allowed before the activities associated with the measures are comprehensively reviewed (that is, exception reporting).</td>
</tr>
<tr>
<td>Boundary measures</td>
<td>Stated in negative terms or as minimum standards, boundary measures “establish the rules of the game” (Simons, 1995). They encourage employees to be creative and entrepreneurial, by allowing innovation within clearly defined limits - the measures tells staff what not to do rather than what to do.</td>
</tr>
</tbody>
</table>
TABLE 4.7 - Issues with existing approaches addressed by the Balanced Scorecard approach (cont’d)

| Frequency of review by senior management | To assist the scarce allocation of senior management time, the performance measurement system should highlight the few, key areas which need to be reviewed closely and regularly at the most senior level. Simons (1995) argues that a performance measurement system should incorporate interactive control systems. |
| Beliefs systems | Beliefs systems are used to communicate core values. They typically are considered, value-laden and inspirational. They highlight the key tenets of the business: How the organisation creates value, the level of performance the organisation strives for and how individuals are expected to manage internal and external relationships. |
| Tailored to the organisation | “If, as we have argued, the best scorecards are derived from strategies for breakthrough performance, measures chosen by even excellent companies for their own strategies are unlikely to be appropriate for other organisations that face different competitive environments, with different customers and market segments and in which different technologies and capabilities may be decisive” (Kaplan and Norton, 1996). |

An overview of the benefits and criticisms of the BSC is provided by Monkhouse (1997). The BSC has received widespread acceptance. As Monkhouse (1997, pg 225) comments:

“The Balanced Scorecard has made the rare transition from academic concept (first reported in the Harvard Business Review) to widely used (in the large company sector) and respected management technique. It is perhaps, in its field, in a league with the Boston Consulting Group (BCG) Matrix, or Porter’s Generic Strategies”.

4.2.4 Critical success factors

Critical success factors are the few, key strategic result areas which organisations must get right to achieve their objectives. The critical success factors approach reported in Monkhouse (1997) is based on Beischel and Smith (1991). The critical success factors are

“those issues or factors, which managers perceive to be crucial for the competitive success of their business….They are the competencies at which the company must excel if they are to distinguish themselves from the competition” (Monkhouse, pg 29).
The five generic critical success factors are quality, customer service, resource management, cost and flexibility. However, whilst practical and easily understood, the Critical Success Factors approach loses its distinctive features when compared with, for example, BSC. In my practical experience of implementing and working within BSC performance measurement systems, the identification of critical success factors is treated as one step in constructing a performance measurement framework.

4.2.5 The BSC within risk management

According to Kaplan and Norton (1996), the importance of linking outcome measures to performance drivers is emphasised in an industry such as the insurance industry, where routine decisions are made and the corresponding outcomes occur with a significant time lag. A mixture of leading and lagging measures is vital for motivating and measuring business unit performance. The same argument would apply to lending portfolios.

The BSC can assist in improving better risk and compliance controls - procedures critical to the profitability of any bank. An example is provided by (Bill Ferguson, Citibank, quoted in IMA, pg 33):

“We sometimes found in the past that we were creating serious gaps in our performance, and in our organisational capabilities, by simply concentrating purely on financials. We were finding too many surprises in loss situations, because of lack of control, and lack of compliance with controls. Implementing the balanced scorecard enabled us to focus on these by getting better alignment between the objectives of the organisation and what we were actually doing”.

4.2.6 Implications for this research

In developing the balanced credit scorecard framework for the credit risk organisation, the BSC approach has been followed in principle. However, there are some significant variances from the traditional approach, as detailed in the Chapter – Individual Research Results. Critical success factors are incorporated in the balanced credit scorecard.

In the remainder of this Chapter, focus turns to the methodological approach taken in this thesis. The major qualitative paradigm used in the thesis, grounded theory, is discussed initially. Research dimension and design issues which affect all of the pieces of research are outlined subsequently.
4.3 The major qualitative paradigm used in this Thesis: Grounded theory

In determining the appropriate research approach given the research questions, the first step has been to determine the paradigm within which information would be captured and analysed. Paradigms are basic belief systems, based on the ontological question (“What is the form and nature of reality and, therefore, what is there that can be known about it?”); the epistemological question (what is the nature of the relationship between the knower or would be known and what can be known”); the methodological question (how can the inquirer going about finding out whatever he or she believes can be known?), according to Guba and Lincoln (1994).

The interface between the paradigms is discussed by a number of researchers (for example, Guba and Lincoln, 1994; Janesick, 1994; Miller and Crabtree, 1992; Morse, 1994b) with different emphases and links. The approaches primarily associated with this thesis are phenomenology, symbolic interactionism and grounded theory. Phenomenology examines the lived experience of individuals and their intentions within their “lifeworld”. Investigators “bracket” their own preconceptions, and then enter the individual’s lifeworld and use the self as an interpreter (Miller and Crabtree, 1992). Symbolic interactionism also examines social interactions, with the emphasis on how the interactions are interpreted as symbols by the participants (Miller and Crabtree, 1992). The meanings of a word, action or sign are examined to develop the principle of symbolic interaction.

Grounded theory provides the basic paradigm underlying this thesis. The application of the grounded theory principles of the constant comparative approach, theoretical saturation, and slices of data has assisted in addressing the issues of “reliability, generalisability and validity” (for example, Glaser and Strauss, 1967; Strauss and Corbin, 1994, 1998).

4.3.1 Background of grounded theory

A definition of grounded theory is provided by (Strauss and Corbin, 1994, pg 273):

“Grounded theory is a general methodology for developing theory that is grounded in data systematically gathered and analyzed. Theory evolves during actual research, and it does so though continuous interplay between analysis and data collection.”

Grounded theory has developed from the work of Glaser and Strauss (1967). The authors examined:

“how the discovery of theory from data - systematically obtained and analyzed in social research - can be furthered” (Glaser and Strauss, 1967, pg 2).
Glaser and Strauss (1967) emphasise that:

“Generating a theory involves a process of research. By contrast, the source of certain ideas, or even “models,” can come from sources other than the data….But the generation of theory from such insights must then be brought into relation with the data, or there is great danger that theory and the empirical world will mismatch” (pg 6).

Grounded theory is just one of the interpretive methods that share the philosophy of phenomenology, where methods are used to describe the world of the person or persons under study (Stern, 1994). Grounded theory’s framework is based on symbolic interactionism. The researcher attempts to determine what symbolic meaning the artifacts, clothing, gestures, and words have within groups of interacting people. The researcher hopes to construct what the persons under study see as their social reality. It is assumed that the participants give the researcher information which they consider accurate. The researcher enters the study without preformed theory - the hypotheses are developed by observation and questioning in the field.

4.3.2 Comparative analysis in grounded theory

A central feature of grounded theory is “comparative analysis”. It is a general method, just as experimental and statistical methods are general methods. Comparative analysis is concerned with many hypotheses synthesised at different levels of generality. Comparative analysis cannot be used for both provisional testing and discovering theory. With theoretical sampling, data collected are not extensive enough and, because of theoretical saturation, are not coded extensively enough to provide provisional tests.

According to Glaser and Strauss (1967), there are a number of purposes of comparative analysis, as follow.

Accurate evidence. Facts are replicated with comparative evidence, either internally (within a study) or externally (outside the study) for validation of facts. Conceptual categories or their properties are generated from evidence, and then the evidence from which the category emerged is used to illustrate a concept. The concept will not change, whilst even accurate facts change. Concepts only have their meanings respecified because other theoretical and research purposes have evolved.

Empirical generalisations. Generalisations are used to delimit the theory’s boundaries of applicability and also help broaden the theory leading to greater applicability and greater explanatory and predictive power.
Specifying a concept. Comparative data is used to specify a unit of analysis for a one-case study. This is done in comparison to other studies, to bring out the distinctive nature of the case.

Verifying theory. Comparative data provide the best test of a hypothesis and thereby the relevance of the categories. Typically, the researcher’s focus is on verifying - theory is generated only to modify his or her original theory as a result of the tests. Where theory is generated, its emergence is taken for granted - what is deliberately worked for is the verification of the emergent theory.

Generating theory. The grounded theory researcher’s role is to develop a theory which can account for much of the relevant behaviour, and not to provide a perfect description of the area of interest. The critiques of accurate evidence and verified hypotheses are not key when generating theory.

In addition, Glaser and Strauss (1967) state that there are two elements of theory generated by comparative analysis: (a) Conceptual categories and their properties, and (b) Hypotheses or generalised relations among the categories and their properties. As the categories and properties emerge, develop in abstraction and become related, an integrated central theoretical framework is formed from their accumulating interrelations. The emergent integrating framework encompasses the fullest possible diversity of categories and properties, and is an open ended scheme.

The constant comparisons force the researcher to consider much diversity, as each incident is compared with other incidents, or with properties of a category, in terms of as many similarities or differences as possible. The practice contrasts with other forms of coding, where the coding only indicates whether an incident indicates the (few) properties which are being counted. Constant comparative method is an inductive method of theory development. The author must identify underlying uniformities and diversities and use more abstract concepts to explain differences in the data.

There are four stages of the constant comparative method, from Glaser and Strauss (1967).

Comparing incidents applicable to each category. The researcher codes each incident in the data into as many categories of analysis as possible, as categories emerge or as data emerge that fit into an existing category. The coding of an incident into a category is compared with the previous incidents in the same and different groups coded in the same category.
Integrating categories and their properties. As the coding continues, diverse properties begin to be integrated:

“the constant comparative units change from comparison of incident with incident to comparison of incident with properties of the category that resulted from initial comparisons of incident” (Glaser and Strauss, 1967, pg 109).

Delimiting the theory. Delimiting occurs at two levels - the theory and the categories. The theory becomes more concrete, with less major modifications as the researcher compares the next incidents of a category to its properties. Later modifications focus more on clarifying the logic, removing non-relevant properties, integrating elaborate details of properties into the major outline of interrelated categories, and reduction. Reduction refers to the formulation of theory with a smaller set of high level concepts that the researcher develops from the underlying uniformities in the original set of categories or their properties. Subsequently, the original list of categories for coding are reduced.

Writing theory. The researcher possesses coded data, a series of memos and a theory. All memos on a category are brought together and if necessary, the coded data can be referred to, to validate a suggested point.

Glaser and Strauss highlight that comparative analysis can generate two basic kinds of theory. Substantive theory is that theory developed for a substantive, or empirical, area of sociological inquiry, such as patient care, professional education. Formal theory is that theory developed for a formal, or conceptual, area of sociological enquiry, such as formal organisation. The authors argue that theory must be generated from the data - substantive theory cannot be generated by applying a few ideas from an established formal theory to the substantive area. Rather, the substantive theory must be generated from the data, to develop the relevant categories and hypotheses. It is then possible to see which of diverse formal areas are applicable for furthering additional substantive formulations. A consequence of trying to apply formal theories to substantive areas is often forcing of the data, as well as a neglect of relevant concepts and hypotheses that may emerge.

Finally, according to Strauss and Corbin (1994),

“Researchers can also carry into current studies any theory based on their previous research, providing it seems relevant to use these - but again the matching of theory against data must be rigorously carried out” (pg 273).
4.3.3 Theoretical sampling in grounded theory

Theoretical sampling is a second, core construct of grounded theory. Glaser and Strauss (1967) define theoretical sampling as:

“the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop this theory as it emerges” (pg 45).

Thus, the process of data collection is controlled by the emerging theory. Grounded theory will tend to combine mostly concepts and hypotheses which have emerged from the data and some existing, useful ones. The emerging theory will point to the next steps. The researcher is guided by emerging gaps in the theory and by research questions indicated by previous answers. The basic question is how does the researcher select multiple comparison groups: what groups or subgroups does one turn to next in data collections, and for what theoretical purpose? The criteria for theoretical sampling are meant to be applied in conjunction with ongoing joint collection and analysis of data associated with the generation of theory, they are continually tailored to fit the data.

Glaser and Strauss (1967) note that the sociologist developing either substantive or formal theory can create groups, as long as the researcher remains cognisant that they are an artifact of the research design. For substantive theory, the researcher can select groups regardless of where they are found, as long as they are from the same substantive class. With formal theory, the researcher will select dissimilar, substantive groups from the larger class, while increasing the theory’s scope. The researcher also will compare groups which appear non-comparable at the substantive level, but that are conceptually comparable on the substantive level. Generality can be increased by making comparison of different types of groups within different larger groups (for example, different departments in different agencies) and different regions or nations.

Comparison of groups is more theoretically relevant than comparison of data as: (a) Comparison groups provide control over the two scales of generality - the conceptual level and population scope; and (b) Comparison groups “provide simultaneous maximization or minimization of both the differences and similarities of data that bear on the categories being studied” (Glaser and Strauss, 1967, pg 55).

Given the need for theoretical relevance, determining how many groups should be sampled and the degree one collects data on a single group is driven by the notions of theoretical saturation, “slice of data” and depth of theoretical sampling.
Theoretical saturation provides the criterion for judging when to stop sampling the different groups pertinent to the category.

“Saturation means that no additional data are being found whereby the sociologist can develop properties of the category” (Glauser and Strauss, 1967, pg 61).

The researcher goes out of his or her way to look for groups that stretch diversity of data, to ensure saturation is based on the widest possible range of data on the category. Thus, the criterion for saturation is a function of the empirical limits of the data, the integration and density of the theory, and the analyst’s theoretical sensitivity. Saturation cannot be attained from one group - at best, this will provide some basic categories and a few of their properties.

Slices of data act against the concern that some sociologists have that no data is accurate - there is unbounding relativism of facts when different slices of data are submitted to comparative analysis (Glaser and Strauss, 1967). A proportioned view of the data results as, during comparison, biases of particular people and methods tend to reconcile themselves, as the researcher tries to identify the underlying causes of variation.

The depth of theoretical sampling refers to the amount of data collected on a group and on a category.

“Theoretical sampling, though, does not require the fullest possible coverage on the whole group except at the very beginning of the research, when the main categories are emerging - and these tend to emerge very fast” (Glaser and Strauss, 1967, pg 69).

Generally, categories should be sampled until the researcher is confident of saturation, with the proviso that core theoretical categories should be saturated as completely as possible, possibly at the expense of less relevant categories.

4.3.4 Other comments on grounded theory

Glaser and Strauss (1967) argue that quantitative data is so closely associated with verification that its possibilities for generating theory have been vastly underdeveloped. When discovery “forces” itself upon the researcher, he or she then writes it up the induced hypothesis as if it has been identified before the data were collected, to satisfy the verification issue. However, if the researcher consciously starts out to suggest a plausible theory, rather than testing it provisionally, then the rules for obtaining evidence and verifications can be relaxed. Secondary analysis (where previously collected data are analysed) is another approach.
Further, Strauss and Corbin (1994) argue that grounded theorists accept responsibility for their interpretive roles. That is, it is not sufficient simply to report the viewpoints of the people/group/organisation of study; the further responsibility of interpreting what is observed, heard or read must be undertaken.

4.4 Generic research dimensions and design issues

The basic dimensions and issues which are applicable to all of the units of research conducted in this thesis are outlined in the remainder of this Chapter. This Section outlines more generic research dimensions and design issues and the next Section focuses on the design applied in this thesis.

4.4.1 Exploratory, explanation-testing and control dimension

Scientific enquiry comprises exploratory research (with the aims of identification, description and explanation-generation), explanation-testing and control (Miller and Crabtree, 1992). The authors argue that the aim of identification is one of the most neglected areas of scientific enquiry. This thesis is largely exploratory.

4.4.2 Applied to theoretical dimension

The thesis is at the applied end of the research dimension, working within existing theoretical frameworks. As noted by Monkhouse (1997), applied research does not necessarily fit into a single theoretical framework, except perhaps at a high level of abstraction. With abstraction comes reduction in the “applied” nature of the model.

4.4.3 Depth versus breadth of analysis

The focus in thesis is on providing a comprehensive coverage of issues, rather than great depth within one organisation or within one theoretical framework. There is a tradeoff of combining sufficient depth of analysis to gain a qualitative understanding with a broad enough sample to give some comparative leverage (Denison, 1992). Denison comments that major contributions traditionally have been made using the type of design where a relatively small sample of organisations (three to eight organisations were used in the studies quoted) have been studied with a deep understanding, while trying to develop generalisations that can explain the differences and similarities among the organisations. The breadth versus depth dimension also can be argued to exist in terms of a focus on one theoretical construct versus the integration of more than one theoretical constructs.
4.4.4 Quantitative versus qualitative approaches

The thesis has incorporated quantitative and qualitative approaches, although the far greatest emphasis is on the qualitative approach. The mix reflects the inclusion of both sociological and economic frameworks.

**Background**

There has been extensive debate regarding the relative merits of qualitative versus quantitative methodologies, with commentary provided by authors such as Atkinson and Hammersley (1994), Denzin and Lincoln (1994), Cassell and Simon (1994), Huberman and Miles (1984), Dick (1990), Janesick (1994), King (1994), Guba and Lincoln (1994) and Morse (1994a, 1994b).

The fundamental assumption behind the quantitative approach is that there is one truth, which can be measured and reported accurately. Cassell and Simon (1994) argue that theory is deduced as a result of testing a hypothesis. The key concerns are that the measurement must be reliable, valid and generalisable, with clear predictions of cause and effect.

In contrast, qualitative research is a broad term used generously to cover an extensive range of paradigms and methodologies. Denzin and Lincoln (1994) provide a generic definition of qualitative research:

> “Qualitative research is multi-method in focus, involving an interpretative, naturalistic approach in the subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (pg 2).

The comparative pros and cons of qualitative versus quantitative research will not be detailed in this thesis. In brief, the key factors determining when the qualitative method was appropriate in the individual research components have been the requirements for: Flexibility in the research process, with amendments being made in consequent interviews; Enough sensitivity to allow the detailed analysis of change; A holistic view of the situations or organisations under review; The ability to explore different levels of meaning; Ready acceptance by most participants of the approach; and The need for the researcher to know if the participant really understood the questions asked, by examining the answers to follow-up questions.

The key factors driving the use of the quantitative method in one component of the research have been the requirements for reliability and convenience, using existing models/frameworks to develop a standardised instrument. Context stripping therefore was not such an issue. In addition, simple
statistical models allow direct comparison and make it easier to document the process by which conclusions were drawn. Finally, interviewer bias has been eliminated in this process.

Clearly, there are key methodological issues with each approach. Issues with the qualitative approach which were taken into account in designing the research will be highlighted briefly. The issues will not be discussed for the quantitative measures as they have been taken from existing, “proven” research instruments and statistical methodologies.

**Methodological issues related to qualitative studies**

The key methodological issues are associated with the representational crisis and the legitimation crisis (Denzin and Lincoln, 1994). The representational crisis refers to the notion that researchers cannot directly capture lived experience, but such experience is created in the social context written by the researcher (Denzin and Lincoln, 1994). Atkinson and Hammersley (1994) argue that the objective of capturing the *nature* of the social world is limited by:

> “.the accounts produced by researchers are constructions, and as such they reflect the presuppositions and sociohistorical circumstances of their production” (pg 252).

Traditional ethical concerns relating to the interviewee have focused on informed consent, the right to privacy and protection from harm (Fontana and Frey, 1994). More recently, a growing number of researchers feel that most traditional in-depth interviewing is unethical. It has been argued that a hierarchical relationship exists, with the respondent being subordinate to the interviewer (eg. Atkinson and Hammersley, 1994). However, Fontana and Frey reject these “outdated techniques”, arguing that the researcher “come down” to the level of the respondent and engage in a “real” conversation with “give and take” and empathic understanding.

Increasing attention also has been given to the rhetoric of ethnographic accounts (Atkinson and Hammersley, 1994). There is acknowledgement that there is no transparent or neutral way to represent the natural or social world. In a similar vein, Fontana and Frey (1994) state:

> “Traditionally, readers were presented with the researcher’s interpretation of the data, cleaned and streamlined and collapsed in rational, noncontradictory accounts. More recently, sociologists have come to grips with the reflexive, problematic, and, at times, contradictory nature of data and with the tremendous, if unspoken, influence of the researcher as an author” (pg 372).
The legitimation crisis (Denzin and Lincoln, 1994) is associated with the trinity of validity, reliability and generalisability (Janesik, 1994). Leininger (1994) argues the dependence on using quantitative criteria:

“violate the philosophy, purpose, and intent of the qualitative paradigm, which is to discover in-depth meanings, understandings, and quality attributes of phenomena studied, rather than to obtain quantitative measurable outcomes” (pg 97).

There is a double bind, according to Huberman and Miles (1994), whereby studies cannot be verified because researchers do not report on their methodology, and they do not report on their methodology because there are no standards. Further, Leininger (1994, pg 97) comments:

“a major dimension to evaluate qualitative studies has been the absence of specific criteria to determine a standard or a rule on which to make accurate assessments about qualitative research”.

The following criteria from Leininger (1994) provide the six criteria used in this thesis to evaluate the qualitative components of the research: Credibility - the truth, value or believability of the findings; Confirmability - the repeated direct participatory and documented evidence; Meaning in context; Recurrent patterning; Saturation - when the researcher has been fully immersed in the phenomena and knows it as fully, comprehensively and thoroughly as is possible; and Transferability through the similarities of findings.

4.4.5 Methods for enhancing methodological rigour

The research design includes methods specifically designed to enhance methodological rigour (Morse, 1994; King 1994; Templeton, 1994; Huberman and Miles, 1994; Janesick, 1994). The involvement of other people, such as colleagues, interviewees, expert judges, etc, has been obtained for considerations of validity. Verification of the study has been obtained through the use of feedback loops with secondary informants and the interim and resulting model were taken back to some informants. There has been replication of individual and group interviews. I have explicitly recognised my presuppositions and attempting to set these aside when analysing data (called bracketing). There has been a conscious search for contrasts, comparisons, outliers and extreme cases. A pilot study has been conducted prior to interviews.
Finally, triangulation has been used to enhance methodological rigour. Referring to Cassell and Simon (1994),

“The triangulation of data by multi-method approaches is essential to answer many of the most important questions in organizational research, where we are concerned with very complex processes involving a number of actors over time” (pg 4).

Triangulation can refer to the use of several kinds of methods or data, acting as a heuristic tool for the researcher, as outlined in the following table.

<table>
<thead>
<tr>
<th>TABLE 4.8 – Types of methodological triangulation</th>
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<tr>
<td><strong>Data triangulation</strong></td>
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<tr>
<td><strong>Investigator triangulation</strong></td>
</tr>
<tr>
<td><strong>Theory triangulation</strong></td>
</tr>
<tr>
<td><strong>Methodological triangulation</strong></td>
</tr>
<tr>
<td><strong>Interdisciplinary triangulation</strong></td>
</tr>
</tbody>
</table>

Source: Janesick (1994)

Grounded theorists contend that theory generated from “slices of data” from different sources works better than theory generated from one data source (as discussed previously). However, with qualitative research, independent measures never converge fully. With no easy means of resolution, this leads to the need to think about data in a new way.

One argument against triangulation has been put forward by Leininger (1994), who states that some researchers use many methods, different scales or instruments, and often different statistical formulas with triangulation, based on the misconception that ‘more is better’. Such practices violate the integrity, purposes, and epistemic roots of each paradigm, and lead to a misuse of the methods. In this thesis, the logic for the selection of the appropriate unit of research is described, in the attempt to negate the possible effect.

4.4.6 The use of individual and group interviews

A number of factors have been taken into account when determining whether individual or group interviews were appropriate.
**Individual interviews**

The individual interview is the most widely used qualitative method in organisational research. It is a highly flexible method, it can be used almost anywhere, it is capable of producing data of great depth, and most research participants feel comfortable with it (King, 1994). There is historic acceptance of individual interviewing as a research technique.

**Group interviews**


There is a range of definitions of the focus group interview. Morgan (1997) uses a broad definition of focus groups as:

> “a research technique that collects data through group interaction on a topic determined by the researcher” (pg 6).

There are a number of core elements of focus groups identified by Vaughn et al (1996) and Krueger (1994). Firstly, the group is an informal assembly of target persons whose points of view are requested to address a specific topic. Secondly, the group is small with 6 to 12 members (Vaughan et al) or 7 to 10 participants (Krueger). Thirdly, the group is relatively homogeneous, with participants having characteristics in common relating to the topic of the focus group. In addition, a trained moderator with prepared questions and probes sets the stage and induces participants’ responses. Further, the goal is to elicit perceptions, feelings, attitudes, and ideas of participants about a selected topic. Also, focus groups do no generate quantitative information that can be projected to a larger population. Another core element is that the focus group is repeated several times with different groups of people (typically from three groups, up to several dozen groups). This allows trends and patterns in perceptions to be identified. Finally, it is acknowledged that group members do influence each other, by responding to ideas and comments which have been made in the discussion.

Focus groups can be self-contained as the primary means of collecting qualitative data. Alternatively, focus groups can be a supplementary source of data before, after or in conjunction other studies.
Focus groups can provide a rich body of data produced in the interviewees own words and context. One of the major contributions of the focus group format is:

“the opportunity to collect rich, experiential information by using group interactions” (Carey, 1994, pg 235).

However, this produces a corresponding weakness as the group itself may influence the data it produces. This occurs when a participant adjusts his or her own behaviour as a result of personal impressions of other group members and his or her own needs and history (Carey, 1994). According to Stewart and Shamdasani (1990), the primary criticism of focus group research has been based on the perception that it does not yield “hard data” and a concern that it may not be representative of the population.

A summary of the comparative advantages and disadvantages of individual versus focus group interviews is provided in the Appendices.

4.4.7 Models of the research process

There are a number of models which have been proposed as an outline of the research process (for example, Denzin and Lincoln, 1994; Moustakis, 1990; Janesick, 1994; Morse, 1994). The approach taken in this thesis is consistent with Morse (1994): Reflection, planning, entry, productive data collections, withdrawal and writing.

4.5 Research dimensions and design issues applied in this thesis

The remainder of the Chapter provides a shift in focus, from a more general outline of the research dimensions and design issues to their application in this thesis.

4.5.1 The sampling process

“Purposive sampling” has been used in this thesis, which is the most frequently used sampling procedure for qualitative research according to Vaughn et al (1996). The authors argue that these two strategies, combine with maximum variation, lead to a rule of thumb of 6-8 data sources for a homogenous sample and 12 or 20 data sources when looking for disconfirming evidence or trying to achieve maximum variation.

Consistent with grounded theory, sampling has been continued until theoretical saturation is achieved, both to identify the Banks to be included in the analysis and the staff within the Banks who were “credit experts”. I remained cognisant of two main potential problems of purposive sampling, namely
convenience sampling (relying on subjects who are available rather than pre-identified criteria) and generalisability. The research has focused on the major FIs, which represent around 80% of retail market share.

4.5.2 One or more researchers?

In this thesis, the research has been conducted by one researcher, rather than a team of researchers. There are two main reasons. From a practical perspective, I am not aware of other academic researchers looking at the topic. As it was important for the researcher to have a very solid working knowledge of the field, it simply was not possible to identify co-researchers. Secondly, there are a number of disadvantages of using multiple researchers, including: (a) Researchers need the research skill and cultural knowledge of the primary researcher, along with the infrastructure to communicate; (b) Variation in interviewer style leads to a high possibility of observer error; and (c) The primary interrogator has more knowledge and inductive enquiry frequently depends on insight and the process of linking data (Morse, 1994; Tripp-Reimer et al, 1994).

To offset a major disadvantage of the single researcher approach, that ideas cannot not be shared, I communicated extensively with other practitioners in the field. Further, Morse (1994) provides a list of the traits of a good qualitative researchers, which I was cognisant of when developing and conducting the methodological format.

4.5.3 The use of “experts”

One element of the research design has been the need to obtain the opinion of “credit experts”, acknowledging that the experts may not agree on key items. For example, Shanteau (1997) reports that experts in non-financial domains show consensus correlations from .4 to .55; the correlations range from .68 to .83 for financial experts; and there is mixed evidence that increased experience may lead to greater consensus.

However, consistent with Shanteau, the thesis has taken the approach that the objective is to reach a broadly defined goal state, which does not necessarily involve a single best answer. Further, it is acknowledged that to reach the goal state, one must deal with multiple, constantly changing, dynamic factors. In addition, the role has been to identify problems and patterns and find consistencies in a dynamic problem space from discussion with experts. Finally, based on the experts’ insights into the problem, and incorporating my practical experience in the area, it is possible to lay out the options in a comprehensive fashion.
4.5.4 Degree of structure

The individual interviews with Senior Credit Managers and Lending Officers have been conducted in the structured response format. The structured response interview lies between the qualitative and structured interviews, in terms of the degree of imposed structure and the balance of open and closed questions. Questions are set in a structured order, but there is a higher use of open ended questions and there is flexibility in the order in which groups of questions are asked. There is a focus on factual information and general evaluative comments without exploring deeper layers of meaning. It is not structured enough to allow detailed statistical analysis and hypothesis testing, but not flexible and responsive enough to facilitate exploration of anything beyond surface meanings.

The approach provides flexibility and the appropriate depth, given the interviews were reasonably exploratory. The focus was not on testing theory, but generating theory. It was not known the amount and type of information that interviewees could provide, and the nature and range of interviewees opinions about the topic could not be easily quantified (King, 1994).

4.5.5 Data management and analysis

There are four main types of data analysis techniques for qualitative data, which fall along a continuum: Quasi-statistical, templates, editing and immersion/crystallization (Miller and Crabtree 1992; King, 1994). An editing approach has been used primarily in the qualitative aspects of the thesis:

“This style is termed editing because the interpreter enters the text much like an editor searching for meaningful segments, cutting, pasting and rearranging until the reduced summary reveals the interpretive truth in the text” (Miller and Crabtree, 1992, pg 20).

Most editing techniques are cyclical - interpretations emerging from analysis of a particular theme or category are repeatedly compared with the original textual data. Grounded theory is the best known example.

With the editing approach, the text is analysed “naively”, without a template. In this thesis, I have attempted to identify and separate my preconceptions. There also has been an attempt to identify units in the thesis results which both stand on their own and relate to the purpose of the thesis. The units then have been sorted and organised into categories (or codes). The themes and patterns which connect the units of the thesis’ results have been then examined. If necessary, more data has been collected to evaluate the emergent hypotheses.
4.5.6 Summary research implications for this thesis

The objective of the thesis is to develop a holistic model which explains how the credit risk attitude is established and managed throughout the retail lending organisation. The topic is broad, the underlying factors are undoubtedly multi-faceted and complex in an environment of uncertainty and lack of information and the field has not been extensively researched. As a result, the methodological approach as outlined in this Section has been primarily exploratory, focusing on the identification of issues. The research has been conducted at the practical end of the research continuum, rather than the theoretical end. It has focused on direction and trends rather than magnitude. There has been the attempt to combine sufficient depth of analysis to gain a qualitative understanding with a broad enough sample to give some comparative leverage. Overall, though, the focus has been on breadth of issues rather than drilling down into one theoretical area.

The methodology is based on a “grounded theory” framework. The research has integrated a number of theoretical frameworks. The alternative is to develop a single theoretical model at a very high level of abstraction, but abstraction reduces the applied nature of a model. Further, the research has blended quantitative and qualitative methodological approaches. The mix has been highlighted by the simultaneous review of sociological and economic frameworks.

In addition, the research has been conducted across levels within the organisation, integrating feedback from Senior Credit Managers and Lending Officers, which was required to obtain a holistic model. It has been acknowledged that a cultural, attitudinal change is required for the end-to-end credit organisation. Theoretical sampling has been used both to identify the Banks to be included in the analysis, and the staff within the Banks who were “credit experts”. Consistent with the discussions on “validity, generalisability and reliability”, the major stages of theory formulation (including units and categories) have been presented as they evolve. The constant comparison associated with the grounded theory approach, triangulation, pilot studies and expert feedback has been incorporated in an attempt to reduce methodological issues. It has been acknowledged that my predispositions and biases could affect the results, particularly given I had worked in the field at a senior management level. Finally, the research has focused on the major FIs, which represented around 80% of retail market share in Australia during the period studied.

4.6 In closing

The Chapter has addressed the practical research issues associated with “credit culture”, Balanced Scorecard framework, grounded theory and research dimension and design issues applicable to all of the units of research conducted. The next Chapter incorporates the theoretical frameworks and research design issues into four discrete pieces of research.
5 Individual Research Results: Methodology, Analysis & Initial Implications

Based on the theoretical models and methodological approach outlined in the prior two Chapters, this Chapter examines the main units of research conducted. The research units include: Empirical evidence of credit rationing; Interviews with Senior Credit Managers and credit risk attitude models; Credit confidence survey; and Interviews with Lending Officers.

5.1 Empirical evidence of credit rationing

Following from the theory of credit rationing highlighted in the Chapter – Analytical Tools I, evidence of credit rationing in retail lending in Australia is examined in this Section. The analysis addresses the research question: “Can the theory of credit rationing explain the cyclical behaviours demonstrated by retail lenders?” The sets of analysis which have been conducted are outlined in terms of the methodology, analysis and findings for each set of analysis. The discrepancies between the theory and empirical data are then discussed.

5.1.1 Approach, given the absence of key data

To my knowledge, a detailed review of the applicability of the theory of credit rationing to the Australian retail lending industry has not been completed previously.

There are limited micro-level data and no direct measures of credit rationing gathered in Australia (such as the US Federal Reserve Consumer survey, the Office of the Comptroller Survey or the Senior Loan Officers survey). There is no systematic collection of either the level of approvals / declines of loan applicants or the proportion of loan applicants who are offered a lower loan amount than was initially requested. Neither have data been collected on the potential borrowers who are discouraged from applying for a loan because they do not expect that the FIs will approve their loan application. It is possible to compare information aggregated across the economy based on the level of defaults (since 1994) and bankruptcies. However, the impact on individual consumer behaviour can only be inferred.

Other data sources which have been considered for review over a given time horizon includes the number of credit policies tightened versus loosened within an FI, a judgemental review by me of loan applications approved by an FI, and the level of loan provisions held. These have not been viable options, as outlined in the Appendices.
Data which are publicly available and have been examined include: (i) Macro-level government statistics; (ii) Publicly reported FI statistics; (iii) Bank practices in product and pricing; and (iv) Consumer debt levels and repayment behaviours. Each of these sources is examined below.

**Macro-level government statistics: Analysis and findings**

A range of Australian macro-level statistics has been analysed, as shown in the following table.

<table>
<thead>
<tr>
<th>TABLE 5.1 – Data analysed for evidence of credit rationing</th>
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<tbody>
<tr>
<td><strong>Credit outstanding</strong></td>
</tr>
<tr>
<td>Lending to persons</td>
</tr>
<tr>
<td>Total lending commitments</td>
</tr>
<tr>
<td>Housing finance</td>
</tr>
<tr>
<td><strong>Credit performance</strong></td>
</tr>
<tr>
<td>Bankruptcies</td>
</tr>
<tr>
<td>Part Xs</td>
</tr>
<tr>
<td>Past due / impaired / provisions</td>
</tr>
<tr>
<td><strong>Interest rates</strong></td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>30 day bank bills</td>
</tr>
<tr>
<td>90 day bank bills</td>
</tr>
<tr>
<td><strong>Consumption levels</strong></td>
</tr>
<tr>
<td>Saving rate (% disposable income)</td>
</tr>
<tr>
<td>Consumption rate (% disposable income)</td>
</tr>
<tr>
<td><strong>Indicators of private spending and confidence</strong></td>
</tr>
<tr>
<td>Westpac-Melbourne Institute consumer confidence</td>
</tr>
<tr>
<td>Retail trade</td>
</tr>
<tr>
<td>New car registrations</td>
</tr>
<tr>
<td>Dwelling approvals</td>
</tr>
<tr>
<td>New capital expenditure</td>
</tr>
<tr>
<td>Non-residential building approvals – private sector</td>
</tr>
<tr>
<td><strong>Economic growth factors</strong></td>
</tr>
<tr>
<td>Unemployment</td>
</tr>
<tr>
<td>CPI change</td>
</tr>
<tr>
<td>All Ordinaries</td>
</tr>
<tr>
<td>US$ exchange rate</td>
</tr>
<tr>
<td>Balance of payments</td>
</tr>
</tbody>
</table>

Source: Reserve Bank of Australia, the Australian Bureau of Statistics, the Insolvency and the Trustee Service of Australia (a Federal Government department).

The feasibility of conducting statistical analysis has been examined for associations between credit performance and the data series of credit outstanding, interest rates, consumption levels, indicators of private spending and confidence, economic growth factors. However, there are insufficient data points in the credit performance series. Data were gathered from June 1990 to 1994, at which time the RBA’s definition of impaired assets was amended. For the information to be meaningful, the trend series must be available across an entire business cycle. Thus, it is not possible to draw too many conclusions as the data have not been kept across an entire business cycle.

Another caveat on the trend data relates to the fact that interest rate spread - reflecting the difference between the Bank variable home loan rate and the 90 day bank bill rate - is indicative only of the lending rate. The FIs use different funding strategies, with the more traditional banks relying more heavily on their deposit base to fund lending. The actual interest spreads actually have been squeezed.
tighter through “special offers” such as “honeymoon” rates, which are not shown in the Commonwealth Bank variable rate.

With the above caveats in mind, the primary factors – interest rate spread, private credit and impaired assets - have been reviewed and two hypotheses formed. Firstly, it is expected that interest rate spread will have a positive relationship with impaired assets. It is assumed that consumers’ repayment affordability decreases with higher interest rate spreads, which is associated with an increase in credit losses. Secondly, it is expected that there is an inverse relationship between interest rate spread and private credit growth, assuming that consumer repayment affordability increases with lower interest rates and: (a) Banks want to lend more as there are lower credit losses in the portfolio; and (b) Borrowers want to borrow more.

The movement for the interest rate spread, private credit and impaired assets series for June 1990 to June 1994 (when there was a common definition) have been charted to visually review the trends, as shown in Figure 5.1.

FIGURE 5.1 – Spread, private credit and impaired loans

Source: Reserve Bank of Australia Bulletin, 1999

As expected, interest rate spread visually demonstrates a positive relationship with impaired loan assets and an inverse relationship with year on year private credit growth.
The analysis of the association between spread and private credit has been extended to the period 1981 to 1999, as data was available. The trend series is shown in Figure 5.2.

FIGURE 5.2 – Spread and private credit change, 1981 to 1999

Visually, there is an inverse relationship between spread and year on year private credit growth. The exception is the period around early 1988, when year on year private credit growth did not appear to move in negative association with spread. The period represented the lending boom which followed the crash in the share market and the flight of funds to property, along with the intense competitive pressure.

The above charts acted as a prompt for the Senior Credit Manager individual interviews.

Statistical analysis on the data series has been attempted. The statistical analysis has been conducted for spread versus impaired assets as % total assets for the period Q3 1994 to Q4 1999. As shown in Figure 5.3 and Table 5.2, spread versus impaired assets demonstrates a significant positive correlation (correlation co-efficient of 0.7982). A linear regression line has been fitted. However, due to the small sample size, the confidence intervals are very wide, making the regression equation not suitable for predictive purposes. No further analysis has been attempted on this data series.
Statistical analysis of the association between spread and private credit growth has been conducted for the period Q1 1981 to Q4 1999, using the methodology demonstrated in the analysis of spread and impaired assets. A weak inverse relationship between spread and private credit change has been found (correlation coefficient of negative 0.3828). The relationship is not significant enough to fit a regression equation and no further analysis has been attempted on this data series.

Source: Reserve Bank of Australia Bulletin, 1999
Bank specific statistics: Analysis and findings

Another review of the macro-level statistics was attempted from the Australian Financial Institutions Performance Survey conducted by KPMG Assurance and Management Consultancy firm from 1986. Again, there are significant limitations to use of the data for comparison, such as including different variables in different years, with different levels of aggregation, etc. Consequently, it has been decided to review the balance sheets and profit and loss statements from the Annual Reports of the Big Four banks. Whilst there is a possibility that the Big Four banks may not have been representative of all FIs, with around 80% of market share they played a major role in influencing the retail lending industry.

The data review included bad debt, provisioning, assets held, return on assets and share price. Share price was included in the review based on the research in the United States which found that the market remains a leading indicator of future economic performance. In early 1989, US bank stocks began to slide, dropping significantly before the end of the year – well before a number of institutions publicly announced heavy losses and set aside considerable loan loss reserves (Sanborn, 1998). The Dow Jones had fallen 15%, with bank stocks having fallen as much as 30%.

The following table shows the performance of the Big Four banks terms of a few simple growth and credit measures.

| TABLE 5.3 – Growth and credit performance of the Big Four Banks, 1990 to 1998 |
|----------------------------------|------------------|-----------------|----------------|----------------|
| Source: Bank Annual Reports      | National         | Commonwealth    | ANZ            | Westpac        |
| Growth in assets (%)             | 266              | 195             | 150            | 128            |
| Growth in share price (%)        | 416              | 237*            | 227            | 217            |
| Avg. return on equity (OPAT/net equity) | 14.6           | 14.2            | 9.7            | 7.1            |
| Avg. bad debt / loan advances    | 0.7              | 0.8             | 1.1            | 1.2            |
| Avg. bad debt / operating income | 8.7              | 9.8             | 14.3           | 17.8           |
| Worst bad debt / operating income| 18.9             | 24.8            | 42.6           | 28.9           |

* From September 1991

National Australia Bank was the best performing bank in terms of credit risk management, in terms of the bad debt ratios. The two poorer performing banks in terms of credit risk management were ANZ and Westpac, both of which demonstrated negative profit (largely associated with credit losses) in 1992. National Australia Bank showed a 270% increase in total assets between 1990 and 1998, with a fourfold increase in share price. In the same period, ANZ and Westpac’s total assets increased only 130% to 150% with around a doubling of share price.
Bank product and pricing offers: Analysis and findings

The publicly quoted price and product offers provide the basis of the review. My practical experience at an executive level in retail lending also has been incorporated.

For the 1990’s, it is clear that some borrowers were credit rationed by Australian banks, given that not all loan applications were approved and applicants were not given the option of paying an increased interest rate. The use of credit score cards, with pre-determined approve/decline rates, highlighted the practice. However, there was little evidence of rationing where price was varied to reflect the risk premia. The remainder of this Section discusses examples of credit rationing and why the use of risk-based pricing was not more widespread.

Quantity Rationing - Borrowers Who Were Denied Credit

There were some potential applicants who were not offered loans, even with a higher price/interest rate to cover the increased likelihood of default. One factor affecting this was if an FI had a particular experience of incurring losses associated with a particular type of borrower or industry segment, then the FI was reluctant to lend to this industry segment again. Similarly, individual credit officers had their own biases as to the loan applicants they were more likely to approve – although this was more likely to play a significant role in a low volume, corporate-style environment. Further, concentrations within a portfolio segment might be excessive, resulting in the FI declining or offering less attractive conditions on further loan applications in the particular segment.

Another factor causing borrowers to be credit constrained was their financial background. For example, lenders would be reluctant to offer finance to a small businessperson who had recently incurred defaults when attempting a similar venture or who had only been in business for a short period time. In addition, there were legal limitations on who could be offered a loan. For example, people who had recently bankrupted could not be offered finance. Finally, lenders were conscious that by charging a higher interest rate, the borrower’s capacity to make repayments was actually reduced - and the loan becomes a higher risk.

Quantity Rationing- Line Increases or Additional Products

An area in which there was some evidence of credit rationing was the FIs’ practice of offering credit limit increases to existing credit card customers who had not previously defaulted on their loan payments. This did appear to be more closely related to quantity credit rationing - the "good performing" customers might be offered an increase, whereas the defaulting customers were not offered increases. Similarly, customers who requested a credit limit increase or another loan type would be more likely to receive approval if they demonstrated they had made repayments on an existing loan.
**Price Rationing - Interest Rate Differentials**

One area where price differentiation was traditionally practised was the higher rate levied for a mortgage loan of an investment property as compared to a mortgage loan for an owner-occupied property. However, in my practical experience in a number of FIs, the pricing was driven by market practice rather than analysis of credit risk. There was very little evidence that loans for investment purposes had a higher default and credit loss rate than loans for owner-occupiers. Further, the loss rate of less than 10 bp for either owner-occupier or investor properties was much less than the pricing differentials (up to 100 bp). There was limited evidence of the loading for investment properties by FIs in the consumer credit market in the late 1990’s.

Another area where there was evidence of some differentiation within a product portfolio included FIs offering a discounted interest rate to existing customers - which may have reflected the lower credit risk of these borrowers demonstrated over time.

There were areas where pricing differentials existed but appeared to be driven by overall customer profitability rather than risk premia alone. Consumer “packages” were one example, where borrowers were offered preferential interest rates if they took out a number of financial services with the FI (although the pricing appeared to be based more on overall customer profitability rather simply reflecting the inherent credit risk of the product set). A second example was loan size, whereby larger sized loans might be offered a lower interest rate. A third example was occupation - one of the Big Four banks offered a lower interest rate to “Professionals” who had a real estate secured loan if they took out a “package” of financial services.

A clear demonstration of price rationing was offered through interest rate differentials in home loan markets based on the level of security offered by the borrower - where there was a low security coverage and third party loan insurance was required, “special” low interest rates were not offered.

Thus there is limited evidence of “pure” price rationing except for secured versus non-secured loans for the Australia credit market in the 1990’s. Gray (1998) notes that it is not clear that the risk-adjusted pricing for exposures had gone far within the Australian banking system. Some banks used their risk estimates to decline exposures that did not meet the risk / return hurdle. Also, there was a definite move away from the simple “pass / fail” mentality of the past to the view that riskiness was a continuum which should be reflected in pricing.

**Customer level data: Analysis and findings**

Four pieces of publicly available data were evaluated for their ability to support the theory of credit rationing from the perspective of the consumer. The reviews included the Household Expenditure...
Survey, the Household Savings Report, customer repayment behaviour and changed structure/usage of loans. The results of customer repayment behaviour and the changed structure/usage of loans have been discussed in the Chapter – The New Lending Environment. In summary, there has been a fundamental shift in consumer behaviour this economic cycle, with increased consumer sophistication and demand, a lower level of saving, an increase in indebtedness, a higher level of bankruptcies and an increase in revolving commitments. However, it is concluded that households are not, on average, over-extended. Further, there does not appear to be a means to tie the data into the interest rate or level of debt actually offered by FIs.

**Summary of implications of the publicly available data**

An inverse relationship between interest rate spread and private credit growth as evidenced above is consistent with the theory of credit rationing. A positive association between spread and impaired assets would be expected and, hence, a negative association between credit growth and impaired assets. However, the extent to which this is a supply side versus a demand side phenomena is not clear. The effect could be due to credit rationing, as lenders chose to exit the market rather than lend at higher rates, due to fear of adverse selection. Alternatively, as rates rose, less credit was possibly requested by consumers as: (i) Potential borrowers chose not to apply for debt as they did not know if they could afford repayments at the higher rate; and (ii) Borrowers who were struggling to meet existing debt repayments realised they would not be able to obtain further debt due to their poor credit rating.

5.1.2 **Discrepancies between the theory and practices in the consumer credit market**

A series of issues which question the direct applicability of the traditional theory of credit rationing to the retail lending market is discussed in this Section. An overview of the topics for discussion is shown in the Figure 5.4
a) Assumption of the Borrower's Superior Information and Knowledge

A basic assumption of moral hazard and adverse selection is that, due to asymmetrical information, the borrower knows more about the riskiness of his or her project and therefore the relative probability that he or she will default than does the lender. The knowledge is taken to apply both at the time of application and during the life of the loan. Within the retail market this is not necessarily the case for two reasons.

Firstly, the borrower will not always be able to make a more accurate prediction about the level of risk about their project and the probability of defaulting. Borrowers do not want to default and, unless they are in extreme financial distress, they typically will not take out a loan with the expectation they will default. Thus, they will underweight the probability of default. In addition, borrowers do not have as much information as do the FIs regarding the economic variables that are likely to affect the borrower’s capacity to repay, such as movements in the employment and interest rates. Further, experienced lenders see a lot of business ventures/projects and have experience/ benchmarks or (where artificial intelligence models are applied) statistical experience that the FI can provide.

Secondly, it is not just the probability of default but also the loss associated with the default that is pertinent. Particularly where there is collateral involved, the FI tends to have more information about the costs of forced sale, bankruptcy, etc, and hence is in a better position to determine the likely loss in the event of default. There is a tradeoff between the costs to be incurred in enforcing the payments
(both actual costs and reputational capital) and the probability of collecting the outstanding monies. For example, Lawrence and Arshadi (1995) state that a bank will choose a workout option if its expected value is greater than the outcome under a no workout plan.

b) Applicability of the "Project" Concept

It is questionable how directly applicable to retail lending is the notion of a "project". For typical consumer loans, such as either a simple home refinance of $100,000 or a credit card with a limit of $10,000, the money is not being used to fund a project of variable riskiness. Primarily, the funding will be related more to lending for daily consumption or lifestyle choices.

c) The Transferability of Skills and Knowledge

It is assumed that borrowers will be able to readily swap between projects. However, both self-employed and salaried people are likely to have a limited skill and knowledge set which they can use to run a business or find employment. It is difficult to simply swap from one project to another - particularly if there is sunk capital involved.

d) The "Three Cs of Lending"

When granting a loan, a lender will evaluate the borrower’s character, capacity to make repayments and collateral. These are known in the industry as the “Three Cs of Lending”1.

The borrowers’ capacity to make repayments - whilst so fundamental to the process followed by FIs, and a legislative requirement in Australia - is not included in most of the theory of credit rationing models (with exceptions being Shah, 1992; Bencivenga and Smith's, 1993; Jaffee and Russell, 1976). Possibly, this is because it makes the lending process path dependent and therefore difficult to model.

Character (or the propensity to make repayments as compared to the financial ability to do so) typically is not specifically included in the credit rationing models. Characteristics which have been found to be significant in a number of papers are: Marital status, age, race, education, income, sex, wealth (for example, Perraudin and Sorenson, 1992; Shah, 1992). One area in which the “character” component has been included is the notion of honest versus dishonest borrowers. Referring to Shah (1992), the assumption is made that honest borrowers will never default whilst dishonest borrowers will default if defaulting yields greater utility. Anecdotally, the experience of the FIs is that there are so few dishonest borrowers that they can only be seen as a tiny exception to normal practice. In most cases it seems more appropriate to refer to lucky and unlucky borrowers.

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1 The “Three C’s of Lending” is a simplified version, referred to for the sake of economy. The more comprehensive/complex versions include up to ten elements.
Collateral plays a key role, as outlined previously. However, one trend in the retail market which is at variance with the commercial market is the finding that the larger loan sizes in the commercial market have lower collateral requirements/are less risky (Boot, Thakor and Udell, 1991). In the consumer market, typically it is the smaller loans which are unsecured (for example, credit cards, personal loans) and carry a higher loss norm. The larger loans (for example, motor vehicle, housing) are secured and carry a lower loss norm. Further, the proposition by Boot and Thakor (1994) that FIs value collateral more for its incentive effect (as the FIs’ valuation of the collateral is less than the borrower’s valuation) has only limited application in retail lending, in my experience.

e) Life Cycle - Permanent Income Hypothesis

The life cycle hypothesis appears to be an underlying assumption of most of the credit rationing models. However, as noted by Davis (1995), there is difficulty in pledging the present value of the return on human wealth (the future wage earnings) as a security on a loan. Rather, FIs will evaluate the borrowers’ ability to make repayments at the time they apply for a loan. It is difficult to project forward the future earnings stream of the borrower - and hence their ongoing ability to make repayments - due to the uncertainty associated with both the individual’s life-choices and the exogenous economic influences. In Australia, this practice has been enforced by government legislation as the FI may have to prove that they took due care in determining the borrower had the ability to make repayments at the time of taking out the loan. Going forward, the life-cycle potential earnings could play a larger role if FIs move more towards customer relationship pricing.

f) Customer Relationship

The role that the customer relationship plays in establishing the pricing at the customer account level is another factor (for example, Chmura, 1992). In this instance, a loan may be granted to a preferred customer even though the expected return is lower than loans of equal risk when the costs and benefits of an entire customer relationship are taken into account. By maintaining continuing relationships with borrowers over time, FIs are able to obtain considerable knowledge about the borrowers credit outstandings. However, the FIs information still will only be a subset of the information known by the borrower (Blundall-Wignall and Gizycki, 1994).

g) Non-price Features from the Consumer’s Perspective

A further point on the general applicability of the credit rationing model is that it ignores the non-price features that can make a particular loan attractive to either low or high risk borrowers. Some features are relatively easy to quantify (such as fees) but others are intangible (such as the competence of the local Branch staff).
There are instances where a low risk applicant will be attracted by a higher interest rate if the loan product has non-price features which make it more attractive. Non-price features, such as access to a large branch network and greater flexibility in the use of a product may be more attractive. Different fees may be charged, including establishment fees, maintenance fees and early payout penalties. These can effectively increase the stated interest rate. Intangible benefits, such as the status of a “Gold” credit card, are influential. Borrowers may engage in changed spending patterns through the increased usage of credit cards to access "loyalty" programs rather financing ongoing debt. The FI may take advantage of the practice in retail banking of pricing at the product level rather than customer level, with the latter providing the more accurate level of exposure of the FI. Finally, in a revolving credit card situation, the low risk applicants may not be concerned about the rate as they know they will be paying the balance in full each month. Hence it is the high risk borrowers who will actively seek the lower rate.

**h) Pricing for overall costs and customer profitability – and its communication**

The commercial models assume that differences in interest rate reflect the difference in credit risk. However, in the retail environment, the credit cost can be a minor component of the overall cost base. Residentially-secured loans are a prime example where the lifecycle loss rate is very low (at less than 10 basis points, as per the Credit Confidence Survey). In this instance, risk-based pricing is not as critical as managing the other cost lines and the FIs do not necessarily pass this movement on to the consumer. In addition, given the stated desire of a number of FIs to price for overall customer profitability (including factors such as likely attrition rate and cost of sourcing the loan), differences in interest rates are likely to reflect more than just credit risk differential.

Further, risk-based pricing does make more complex the communication with customers. For example, the FI might want to be able to advertise a set rate, or might want the salespeople to have confidence that the rate they are quoting is fixed. In addition, the FIs may not want to be seen in the market place to price differentiate and highlight their good versus their bad customers. An example is provided by a recent report in the Australian Financial Review, where an FI was considering pricing credit cards for risk entitled “CBA risks backlash on radical credit card plan” (March, 2000).

**i) Fixed-interest (repayments) loans**

The offering of loans with fixed interest rate periods, typically up to ten year periods, results in less transparency in interest rate movements.
j) Linear Relationship

Another issue with the credit rationing model is that it assumes there is a linear relationship between interest rate and credit rationing (in terms of both price rationing and quantity rationing). However, there may be a threshold before the effect is seen. For example, the difference between an interest rate of 8% and 9% may not be seen to be significant enough for either adverse selection or moral hazard to play a role. Conversely, the difference between 8% and 19% could be seen to be high enough that consumers ration themselves. In a similar vein, there could be a rate at which no consumer will borrow. Using the notion of moral hazard, there may not be sufficiently attractive projects available to offset extremely high interest rates. Consumers can simply choose, for example, either not to buy a property and continue to rent or not to spend as much money in retail shops via the credit card, until their income stream improves.

k) The Usage of Commitment Loans

The increase in commitment loans could result in a "buffer" partially offsetting the practice of credit rationing, as discussed above. A counter argument to the notion that commitment loans shield borrowers from credit rationing is that when borrowers establish a commitment loan, the credit limit offered by the FI will be based on the borrowers capacity to service the debt. Thus, the size of the line of credit will be bounded. Alternatively, the commitment loans could simply reflect a change in lifestyle choices of consumers and greater demand for flexibility.

l) High Lend Insurance

In the mortgage market, FIs may pass on the risk of loans which have a high ratio between the loan amount and the value of the security to third party insurers. The practice makes it difficult to infer the relative risk of lending practices based only on the quantity of loans.

m) Tax Legislation

The effect of local tax laws could distort the determination of risk on loans. In Australia, for example, prudent investors minimise their collateral when purchasing an investment property, as the tax structure rewards highly geared investment loans. Typically, such an investment decision is made after the borrower has established an owner-occupied residence. On average, such investors are a relatively low risk as they have demonstrated the ability to establish their financial affairs wisely.

n) The FI’s Reputational Capital

The traditional credit rationing model focuses primarily on the behaviour of the borrower in affecting the riskiness of the loan, as noted above. However, the FI can influence this strongly by sending signals to the market as to the “tightness” of its credit policy, both in terms of the initial
approve/decline application decision and the ongoing collection/remedial management practices. FIs also have reputational capital to protect, through prudent lending and provisioning practices. The ultimate loss in reputational capital is for the FI to become insolvent.

o) System constraints

Some inflexible information technology systems do not allow the real-time on-line identification of risk-based interest rate at the customer level (whether for an individual account or a relationship group of accounts). Even if it is possible to identify credit risk at the product or customer level on-line, it may not be possible to convey the information to the staff who are dealing with customers and / or their loan applications “in the field”.

p) Internal acceptance of decision support systems

A common theme of risk managers is the difficulty in introducing more active risk-based pricing within the FI, Gray (1998) argues. The difficulty is in being able to “sell” the idea that an otherwise good exposure should not be accepted because of a “technical” assessment that there is an imbalance between risk and expected return. The message is especially difficult to convey to senior managers when competitive pressures are gaining strength in the market. FIs may not have sufficient confidence in their artificial intelligence (“AI”) models to use the models to assign probabilities of default and hence establish different risk bands, given many AI models have been developed relatively recently.

q) Lack of personal ownership of long-term losses

A number of organisational factors affect the level of credit rationing, primarily due to the lack of personal ownership of the long term impact of poor lending decisions. Some of these factors include: The high turnover of staff; The comparatively short period over which the loan officer’s performance is evaluated; The short term nature of the senior managers strategy whereby managers are rewarded for profits through bonuses but shareholders wear the long term losses (Davis, 1995); The lack of responsibility that lenders have for the collections / remedial management of the applications they approved, given the functionally specialised nature of most retail lending operations where loan origination is separate from Collections ; The use of artificial intelligence models leading to less ownership of individual approve/decline decisions; and The move away from experienced credit lenders in FIs to commissioned salespeople (such as mobile lenders for home loans) leading to less detailed information being used to assess loan applications.

In addition, with the high turnover of staff in FIs and the introduction of managers into senior positions from outside the traditional banking industry, there may not be sufficient corporate experience amongst senior managers to remember the effects of the last systemic credit problem.
r) Impact of the economic and market conditions

The comments of extremely influential figures in the financial sector in the Chapter - Introduction highlights the effect of the economic and market conditions on the relative tightness of credit policy.

Implicit in the credit rationing models is the view that the need to ration loans to borrowers is the primary determinant of interest rate movements. The major reason for the interest rate movements over the last few years appears to have been increased competition and the desire to obtain or retain market share.

s) “Short-termism”

Related to the above factor is “short-termism”. As highlighted in the Chapter – Analytical Tools I, Guttentag and Herring (1984) argue that market forces may not be sufficient to enforce adequate planning for risk. A loan may have to be under priced for losses to be competitive, if the market does not factor in the true long term cost of a low probability event which does not occur for decades.

In summary

The theory of credit rationing provides an economic model of the credit risk appetite of FIs. Empirical analysis of credit rationing in Australia highlights that the theory of credit rationing does not appear to provide significant insight as to the reasons why the credit risk attitude varied across the business cycle in retail lending during the 1908’s and 1990’s. Whilst not statistically rigorous, a review of the available macro-economic data shows both an inverse relationship between private credit growth and impaired loans and a positive relationship between interest spread and impaired assets. The relationships are consistent with the theory of credit rationing. However, the extent to which they were a supply side versus a demand side phenomena is not clear.

Based on bank-produced information, it is difficult to obtain widespread empirical support for credit rationing at the individual borrower level in the consumer lending market. There was limited quantity rationing, in that some borrowers were not offered credit at any interest rate. There did appear to be some price rationing at the product portfolio level. However, there is limited evidence of the use of interest rate as a factor in managing the credit quality of the borrowers within the loan portfolio - certainly not in the sense of the perfectly competitive market.

Figure 5.5 summarises, from the above points, some key reasons why price rationing in particular has not been in evidence in the retail market in Australia during the 1990’s.
Most importantly, the theory of credit rationing places very little importance on the attributes most frequently referred to by credit practitioners and financial sector leaders, as highlighted in the Chapter - Introduction and my practical experience.

5.2 Senior Credit Manager interviews: Methodology, analysis and implications

As noted previously, FIs do not appear to have demonstrated behaviours consistent with the neoclassical economics assumption that organisations in a competitive environment act in a rational manner to maximise the profit of the organisation. To examine the extent to which the theory of credit rationing drove the credit risk attitude in FIs – as compared to other factors – it was decided simply to ask senior credit risk representatives of the major banks for their opinions. The objective of the interviews, supported by the most pertinent elements from the literature relating to credit rationing and decision making under uncertainty, was to address the research question:  "What are the primary drivers of the credit risk attitude and how do they vary across the business cycle?".

The methodology and analysis of the interviews are outlined below. Subsequently, two models of the drivers of credit risk attitude and its variance across the business cycle are shown.

5.2.1 Methodology

The individual interview approach

Individual interviews were chosen as the appropriate method to ask Senior Credit Managers how they determine their financial institutions’ credit risk attitude across the business cycle. The benefits and disadvantages of the individual group interviews are outlined in the Chapter – Analytical Tools II and
the Appendices. The major factors contributing to the appropriateness of individual interviews include: (i) The greater amount of information each participant can share in the individual interview format - it is assumed that participants are both knowledgeable on the topic and have a lot to say about the topic; (ii) Any potential issues with sharing sensitive information with competitors is minimised (a group interview format, for example, may have been more threatening at this stage of the study, where interviewees are asked to provide initial information, rather than comment on a pre-existing model); and (iii) The Senior Credit Managers can be expected to be familiar with this investigative style.

At this phase in the research, I worked for one of the banks included in the interviews. Whilst care has been taken in the interviews to emphasise the anonymity of data gathered and the academic rather than commercial nature of the research, interviewees could have interpreted there was a conflict of interest as I worked for a competitor bank. Hence, interviewees could have been hesitant to impart information on the basis of competitive positioning. However, I did not detect such reluctance to any significant degree.

**The sampling strategy**

The aim of the sampling was to be sufficiently homogeneous to provide a core body of information from FIs and to be sufficiently heterogeneous to provide different individual perspectives. The Senior Credit Managers came from different institutions of different sizes, which had different experiences across prior business cycles.

The study examined the major retail banks in Australia, focusing on the top nine trading and saving banks in terms of assets held. Representatives from eight of these institutions were included in the study. Representation from the “Big Four” banks which held in excess of 75% of bank market share (RBA Bulletin, 1998) and four of the next largest six (“medium sized”) banks were included in the sample. Nine of the ten banks had their Head Office in Australia, with one of the medium-sized banks being based in the United States. During the course of the study, three of the medium-sized banks were subject to merger activity. In total, input from FIs representing in excess of 80% of market share was obtained.

Other financial institutions and credit lending institutions were excluded from the interview population as they did not represent a large percentage of the total share of the retail market. Further, restricting the sample to the bank sector excluded any potential effect of generic differences in organisational cultures and practices which could occur between the smaller credit unions/building societies and the larger bank. Finally, restricting the sample to the Australian domestic market decreased the probable effect of cross-cultural biases in terms of personality/group/work practice interactions.
Prior to commencing this part of the thesis, it was expected that up to 10 banks would be approached. However, after eight interviews had been undertaken, it became apparent that theoretical saturation had been reached. No significant new issues were being raised or significantly divergent opinions were being identified.

Finally, the interviews were undertaken in the end of 1996. The period represented a relatively benign period in the business cycle for credit. Credit losses were comparatively low, profits were comparatively high and economic fundamentals were sound. There could be differences in the responses of Senior Credit Managers if taken across the significantly different periods of the credit / business cycle.

**Timing**
The interviews were held for up to one and a quarter hours.

**Participants**
The criteria for identifying participants for the interviews included: (i) The person held a “senior” credit management role (with no further explanation being given as to what comprised “senior”); (ii) The person had been involved in the credit risk function for at least 12 to 15 years (with the explanation being given that this related to having experience over two business cycles); and (iii) The person was acknowledged by their colleagues as being an “expert” or “credit specialist”.

These criteria were set on the assumption that the Senior Credit Managers were able to influence decision making due to their organisational status and their credibility and hence were able to affect the credit risk attitude. Further, it was assumed the managers were likely to be cognisant of, and regularly thinking about, the implications of current lending policies in the future – which they were able to articulate readily. It was also assumed the managers were cognisant of the organisational context and group dynamics which played a role in establishing credit controls, disciplines and policies.

All participants were male, reflecting the male dominance in senior credit management roles in the large Australian financial institutions.

**Recruitment procedure**
The participants were sourced by contacting the Head of Retail Credit (or a person in an equivalent position). The contacts were extremely helpful and, in seven cases, granted a face-to-face interview with either themselves or a Senior Credit Manager in their organisation. An interview was held over the telephone with the one bank (one of the Big Four banks) which did not offer a face-to-face interview.
To be granted the interviews, the approach was to provide the general outline of the research and to explain that (at the time that the interviews were held) I worked for one of the medium sized banks in a senior credit management role. It was highlighted that the data gathered would remain anonymous and was to be used only in the PhD research.

There were two implications of giving this advice prior to the interviews. Firstly, participants had a chance to think about the topic prior to the interview. Secondly, I was presented as an “expert” conducting research, rather than a neutral interviewer.

**The setting**

The interviews were conducted in the offices of the Senior Credit Managers. The objectives were both to make it as effortless as possible for the Senior Credit Managers to participate in the interviews and to create an environment in which the Senior Credit Managers were comfortable.

**The interview**

A “structured response” interview approach was used (King, 1994). Whilst there was flexibility in the actual wording of the questions and the order in which they were asked, the categories of questions and a prototype of the credit risk attitude model were developed prior to the interviews for discussion with the participants. My preconceptions were included in the study. The material was presented in a format with which the Senior Credit Managers should have been familiar and hence comfortable. The viewpoint of the Senior Credit Manager on the importance of a topic tended to determine the amount of time spent discussing each topic.

The approach provided the degree of structure required to explore the potential commonality and divergence from themes identified prior to the interviews. In addition, the level of structure allowed the flexibility to identify and probe emergent themes. The focus was on reasonably factual information and general evaluative comments, as compared to attempting to explore deep layers of meaning. The approach did not support the statistical analysis of interviewee responses.

A rolling interview guide was used. Topics were identified and broad questions developed prior to the commencement of the interviews. The interview guide evolved slightly during the course of interviews based on the comments, agreements and disagreements made by the participants. The order and the wording of the questions changed within each interview, depending largely on whether the interviewee raised the topic when they were asked the broad question: “What factors do you think affect the level of credit rationing across the business cycle”. The questions addressed the evidence of imprudent
lending, the effect of legislation/consumerism, the level of debt/saving in households and organisational factors.

The interview guide is shown in the Appendices.

Following the argument of Fontana and Frey (1994), the relationship between the researcher and the participant did not fit with the traditional technique of maintaining a “distanced”, objective style of interviewing which implicitly involves a hierarchical relationship. Rather, it attempted to establish a “real conversation … with give and take … empathic understanding” (pg. 373). This approach appeared more realistic, given that the participants knew in advance that I was knowledgeable in the retail credit risk area.

Prior to the interviews, three items were prepared. Firstly, a brief summary of the credit rationing literature review which outlined the factors that, in theory, affected the credit risk appetite of financial institutions. A simple report format was used (refer Appendices). Secondly, charts of the movement of key macro-level economic and credit-related statistics were prepared to act as prompts if interviewees did not freely discuss the key factors affecting the level of credit rationing and the credit risk attitude across the business cycle. The graphs were developed from the statistical analysis conducted previously and are shown in the Appendices. Thirdly, a hypothesised model of credit risk attitude across the business cycle had been developed, based on the literature review of credit rationing, Guttentag and Herrings’ model (1984, as outlined in the Chapter – Analytical Tools I), informal conversations with credit experts and my knowledge from working in the industry. The model was shown to interviewees at the end of the interview for their comments. The model evolved somewhat during the course of interviews based on the comments, agreements, disagreements and enhancements made by the participants.

The format of the interviews was:
1. A brief introduction was held, with an outline of my PhD candidature, a re-iteration that I worked for another bank, an assurance of anonymity and permission to tape the interview
2. The participant was given the one page summary of the credit rationing literature to read
3. If the participant started discussing his view of the summary, I supported this through a general question along the lines of “Tell me more about the factors that you think affect the level of credit rationing across the business cycle” (the exact words varied according to the participant’s initial comments)
4. If the participant appeared somewhat hesitant about discussing the issues or did not immediately offer his opinion, the graphical aid was used to prompt discussion (otherwise, the graphical aid was referred to only briefly during or at the end of the conversation)
5. After the participant-generated comments were completed, I followed up with specific questions where the participant had not provided a view on any of the major topics.

6. The hypothesised model was then shown and feedback requested. This step was placed at the end of the interview in the attempt to decrease potential moderator bias.

7. The participants were asked for any final comments.

8. The interview was closed, with thanks to the participant for assisting me in my personal study endeavours.

The face-to-face interviews were audio-taped.

There was one exception to this process, where the interview was held via telephone. The same questions were addressed but the feedback on the model was not obtained nor were the graphical aids used. This was a shorter interview, lasting about 35 minutes. It was not taped, but extensive notes were taken by me during the telephone conversation.

**Analysis**

The interviews were transcribed by an independent party. Minimal editing was applied by the transcriber.

An “editing” approach has been used to code the data (per Crabtree and Miller, 1992). With the editing approach, the text is analysed “naively”, without a template. I have attempted to identify units of data which stand on their own and which also relate to the purpose of the thesis. All issues raised have been included in the analysis, regardless of the number of times the issue has been mentioned or the apparent emotion attached to the issue by the interviewees. Thus, I have not attempted to assign importance to an issue based on a simple count of the number of times it was mentioned. In addition, I have tried to identify and separate my preconceptions throughout the process.

The units of information have been organised into categories (or codes). The five steps outlined by Vaughn et al (1996) for focus groups - an adaptation of the Constant Comparative Method and naturalistic enquiry – have been referred to, where they applied to individual interviews. First, the “big ideas” are identified:

“The researcher considers the participants words, ideas that occupied the focus group, intensity of participants responses, as well as nonverbal communication, and identifies several big ideas” (Vaughn et al, pg 105).
The big ideas are amended or refined following further data analysis, but they provide the initial framework. Second, the data is unitised. Third, the units are categorised, bringing together the units of data that have similar content. Identifying rules for the various categories is an iterative process — when all of the information unit are exhausted, the categories are reviewed again for overlap and completeness, which may lead to further amendments. Fourth, if there is more than one analyst, the data analysts negotiate and compare strategies (this step is not relevant to this thesis, as there is only one analyst). Fifth, the themes are confirmed by reviewing the big ideas in light of the information units and categories.

Finally, the transcripts were reviewed at the end of each interview. In the grounded theory style, amendments were made to the hypothesised model where interviewees suggested an enhancement.

5.2.2 Findings

A high level summary of the themes to emerge follows. Details are provided in the Appendices.

Is there pricing for risk?

The common theme was that, instead of pricing for risk, FIs’ pricing was driven by the desire for volume in a competitive market “awash with liquidity”. An indicative comment was: “We aren’t pricing for risk. We all are just pricing and negotiating for market share. Trying to pick quality. Okay, I’ll back the people and hope nothing will go wrong over here ... There is that sort of competition out there. Does not help you do what the text book says you should do”.

Key quoted reasons why FIs did not price for risk included the effect of mortgage insurance, credit scoring only working over a limited time frame, the uniform credit code legislation, premia too small to be reflected in pricing, the desire to keep loans affordable, rewards systems leading to sub-optimisation, the physical difficulty of differentiated pricing and cross-subsidisation between products.

The only areas where there was differential pricing was “relationship pricing”, for customers who had been with one of the FIs for more than five years.

There was an expressed desire to increase non-price competition, with an indicative comment being: “Would like to find good avenues for non-price competition. The ability to compete strongly on price is relatively narrow. So you have to have a proposition where you will compete strongly on service or other types of things. It is actually quite hard to do .. We’d like to, we’re trying hard to, but you’re ability to sustain competitive advantage is actually quite difficult”.

Chapter 5: Individual Research Results: Methodology, Analysis and Initial Implications
It was highlighted that the pricing / credit cost calculation should incorporate both the tangible and intangible cost of collections. Finally, it was emphasised that it was not only pricing that was being relaxed, but terms and conditions as well (such as covenants and loan-to-security ratios).

**The basics don’t change**

Whilst interviewees reported that there had been significant efforts to improve the management of risk, there was a widely held perception that the basics had not changed. An indicative comment was: “There really has been a strong effort to manage risk better. And that manifests itself in a number of ways. Policies were adjusted. Conscious effort to increase skills in managing credit. Authorities were reduced. In a number of ways – organisationally, functionally, processes, procedures, commitment of resources at board level to manage these things better, different reporting lines”. However, “The “Cs” never change. How (organisationally, systems, skills, staff) respond to it does not change much”.

There was a common perception that policies had not actually changed dramatically, with the credit standards being affected more through the interpretation of policies. However, a significant effect was identified on the marginal cases. Further, interviewees highlighted that whilst formal policies might not have changed, the underlying message that the focus on credit had changed was conveyed through less tangible factors.

Exceptions management was also emphasised, where a process was required to manage the quality loans, given policies could not be broad enough for every loan’s circumstance. Finally, it was argued that FIs standards had been evolving from the Managing Director/Chief Executive Officer level.

**The “power” of credit**

Interviewees took a pragmatic view of the relative “power” of credit across the cycle, in terms of the risk / reward tradeoff. The periods of high visibility of credit losses afforded the credit risk managers opportunities to obtain focused resource on the credit risk infrastructure.

However, it was also emphasised that periods of high visibility of credit losses damaged the credit area’s credibility. An indicative comment was: “Downside of credit losses is that credit loses credibility. Management there are at the time is blamed, so their corporate memory is discounted (even if they still are there)”.

**Lending practices across this cycle**

A number of factors appeared particularly pertinent to this business cycle. The impact of deregulation was noted. An indicative comment was: “Deregulation lifted off the constraints of capital and the
supply/demand thing which had shielded banks all through the history in Australia prior to that”. With competition and other things it had a front row seat in what happened.

A commonly highlighted issue was the effect of the “massive credit losses they were taking” and “fighting for survival” in the early nineties. One interviewee commented that the most recent cycle was markedly different from prior cycles as prior cycles had not been nearly as intense on losses, the effect on profits and capital. The interviewee commented that living through the big losses put the focus on credit; however, this did not continue throughout the business cycle. The interviewee noted that the memory was there, but nobody listened or asked.

Amongst the Banks interviewed, there was a common perception that the other “Top Nine” banks were “busily lowering credit standards to write volumes”. However, none of the Senior Credit Managers felt that their own standards were being eased – “its everyone else”!

There was no common perception as to the effect or extent of the “lenders of last resort” on the industry. Generally, interviewees reported that the stage in the credit cycle (at the time of the interviews - fourth quarter, 1996) was moving towards arrogance/disaster myopia on the credit risk model. An indicative comment was: “Writing volume for volume’ sake ... I have never seen it work. Because credit is a cycle. The wheel will turn again. Very nice to know when...”.

Interviewees reported very limited organisational learning with regards to the credit cycle: “We have short memories” and “Every credit cycle we do the same thing and we are going up the ladder”. The importance of experienced credit managers has been noted earlier in this research.

Another interviewee focused on the importance of experienced credit managers: “We experienced the heartache, the anguish, the people committing suicide, all those things .. and we don’t forgot those sort of things easily. Whereas once we go, that’s when the cycle will turn itself again ... It is up to us who went through the experience”.

It was argued that throughout the latest business cycle of the 1990’s there had been a fundamental change to “the way we do business” in credit with the transition to a portfolio-based approach from a traditional transactional model.

Mortgage insurance was cited by a number of interviewees as changing the dynamics of the secured lending process. The possibility of mortgage insurers coming under pressure from a “run” on insurance claims was also raised:
Banking credit operations

A variety of issues were raised in relation to the Bank’s credit processes. There were variances in responses as to whether the decentralisation of operations had had an effect on the management of credit standards, from “Decentralisation is more difficult for top management to manage” to “You can decentralise as long as you make sure you have a rigorous program of making sure that people are behave in line with their discretions and the policies are being adhered to”. It was argued that the centralisation / decentralisation cycle would happen again.

The need for increased controls was highlighted by a number of interviewees. For example, the abolition of annual reviews (to decrease operating costs) had not been offset by other controls. In addition it was argued that the separation of credit functions required a change to the culture and the way the FIs did business.

The need to have capable credit staff, with a broad base of skills, was emphasised. It was also noted that the traditional form of training – with staff working their way up through the Branch system – no longer applied.

Generally, interviewees reported significant improvements in their ability to manage credit risk. It was stated that more science/technology meant that credit risk managers knew more about portfolio analysis and had the capacity to get stable information through tools. There was a strong reliance on the use of artificial intelligence models, although a dissenting opinion on the impact of new methodologies was made by one of the Regional banks (where less work had been conducted on improving the decision support systems).

A focus on cost cutting was also evident. The need to re-evaluate the borrower over time had been raised: “We need to assess them on an ongoing basis – move to behaviour scoring and customer scoring”.

It was highlighted that the new way of sourcing business, through Branches and Brokers, provided a new set of management issues. “They are not measured on the basis of the branch profit, but the volume of loans written. Driven so much by volume performance, without the balance out there”.

The need to work with marketing and the line unit was raised. In addition, it was reported that there was a challenge with the move to “business ownership” of credit: “People who are supposed to own the products, are really more marketers and advertising. They really do not understand the whole perspective of managing the portfolio”.
It was highlighted that “after-sales service is not looked after properly ... Everything is centralised, and ownership of customers has broken down”.

Credit authorities were raised as a priority: “It’s an ego thing”

The need for consistency was also raised. “Competition is driving people to write deals – they go from one part of the organisation to the next part to get approved”

**Consumerism and legislation**

A number of factors were perceived to be affecting the attitude and behaviour of borrowers.

Interviewee’s responses to the effect of consumerism varied. Whilst the majority of interviewees reported that consumer awareness was heightened by the media and competition, one interviewee stated that consumers were no more knowledgeable: “The average consumer today is still extremely naïve and easily lead” for example, they only look at interest rate and “haven’t got the capacity of actually understanding the long term cost”.

The reporting on the impact of legislative changes was mixed. Most interviewees reported the impact should not be significant, although one interviewee stated: “Consumerism – laws changed, all weighted toward the consumer”.

**Borrowers’ propensity / ability to make repayments and saving**

All respondents reported a change in attitude of borrowers’ to bankruptcy. “Societal change where people instead of taking ownership of their own problems tend to blame other people ... You gave me the money therefore your fault ... Denial of responsibility”. There was mixed reporting on the consumers’ knowledge relating to bankruptcy, or a poor credit history generally.

All interviewees reported that the vast majority of borrowers who defaulted were “unlucky” rather than “dishonest” (as discussed in the Chapter – Analytical Tools I). The key factors driving “unlucky” borrowers were stated to be unemployment / bankruptcy and relationship breakdown – 75% to 80%.

One interviewee placed great emphasis on the FIs’ prudential responsibility only to provide consumers with a level of debt that they were capable of servicing: “People are their own worst enemies. They always believe that they can afford to do more than they actually can and we probably have to be their protectors”. It was argued that the increased availability of credit had not benefited all borrowers. “Made the consumer who should never borrow money able to borrow money. And of course they get themselves into trouble and then turn around and blame the banks”.
Most interviewees reported that consumers were not good at establishing and maintaining savings plans. “People spend what they earn. Definitely unsophisticated – don’t think along lines of good economy and bad economy and should put away more” and “In Australia we live for today and live for tomorrow .. we don’t plan out”

Two interviewees commented that some segments of the population, at certain times, did save. “Certain segments of society do, based on where they came from and their experiences ... As people go through different phases of their life, as they get older these things do start to come under control and it just naturally sorts itself out”. Further, “If people are carrying a lot of debt, it may make it harder to consciously smooth debt. ...The whole market is putting greater temptations in front of people to do a whole range of things - consumerism and materialism”.

It was reported that it was more difficult for people to save and plan in current times. Whilst interviewees commented that the current level of debt was very high, there were mixed responses as to whether borrowers could sustain the payments. One interviewee highlighted that in Australia, where borrowers tended to tie financial accommodation with home ownership, the level of debt was less likely to be a problem.

**Effect of low inflation and interest rates**

Interviewees had a major concern with borrowers’ ability to manage in an environment of low inflation (affecting housing prices and salaries) and/or increasing interest rates: “There is nowhere to hide any more” with a low inflation level and asset growth making it hard for borrowers to clear their debts.

**Consumer demand**

Consumer demand had also been raised as a factor affecting the level of credit in the economy. An interviewee comments “a degree of uncertainty in people’s minds as to whether they wanted to borrow or not .. So, the consumer started to pull back but at the same time the consumer was pulling back you had far more financial institutions coming in and being far more aggressive in their desire to lend money and maximise their return based on their capital base”.

**The future of risk based pricing**

Interviewees argue that the critical factor for the introduction of risk-based pricing was the requirement for a broader-based approach through customer relationship pricing. “If all go the way of customer relationship pricing and customer scoring and so on, which we all say we want to do, part of this is having the ability to price on risk. Everything is driving us back to the only way to compete is on relationship issues and relationship pricing - we can have the same product, more or less. “But we
still have got a whole way to go before people will accept that there is a cost of banking as well as a benefit of banking. If you want the service, you will have to pay for it”.

Another comment was “more of a customer based rational based on customer relationship and the products and services they use within an organisation. We can package and manage the risk better when we have a full relationship. I think that’s when we will move to credit rationing on that basis. I don’t think we will move to it in any other form until we get there”

**Can credit be managed excellently?**

When asked if it was possible to manage credit excellently, a key message from interviewees was that it was important to have a solid portfolio to be able to obtain competitive advantage if competitors were needing to repair their balance sheets. Two interviewees commented that there was a large element of luck in the Big Four Bank which had managed its credit quality well in the late 1980s and early 1990s: “They said they credit rationed their exposure (deliberately) but their ability to lend was severely constrained by funding situation at the time. They just traded off and said where was the most profitable business. Therefore they kept out of the corporates and property developers”. Another comment was: “I still refuse to accept (the CEO) saying ‘I knew it was going to happen’, he just punted on something and was lucky”.

One interviewee commented that he did not think anyone could manage credit superbly over a cycle. He pointed out that one and a half mistakes per hundred were allowed - but it did not take much for this to increase to five and a half mistakes. The interviewee further commented that the FI’s position was associated with its core group of customers and whether they could withstand the economic cycle. The FIs really needed customers who could re-energise and re-profit themselves to take advantage of the cycle - as long as the company survived through the downturn and was not too seriously disadvantaged in terms of economic position.

It was also highlighted that excellent broad-based skills were required to be a good credit risk manager.

Finally, looking forward, FIs were confident of their ability to manage credit risk: “*We actually understand the risk / reward in a much greater sense. If you look at our organisation a decade ago, we were actually very naïve*”.

**Active, counter-cyclical portfolio management**

An interviewee commented that policy had been loosened too late in the past, but not intentionally: “Deep down reason you loosen too late, not because it is a decision to do that, but because your mind
is focusing on other things in the future. ...It’s not planning – it is a focus issue – you are in crisis mode”.

Another interviewee provided an example where an FI had a competitive advantage so that it could be less stringent in its pricing than competitors because it had managed credit well across the cycle.

Further, it is argued that banks took too long to tighten policy: “Too long for the banks to realise they were in trouble .. Lot of hype and some big falls. Even with high interest rates, property prices were just nonsense ... If anyone had really taken the time to stand back and say okay what is holding this thing, what is underpinning this thing, then they would have realised there was no floor there and it was going to come down with a thud ... The banks should have pulled in their horns in about 1988”.

One interviewee argued, however, that Senior Credit Managers should simply aim for consistent standards across the business cycle: “the pendulum does swing ... By the time the crisis has come, its probably past and you don’t need to change your credit policies. Its all over. What you try to do is read that in advance ... You should strive for a consistency of credit over time, which removes much of this mood swing ... If you are consistent in your credit assessment through what you are doing you will take care of the economic cycle by that means. If you try to second guess the cycles, you probably will make more mistakes ... you will always pick the wrong time and end up with problems. The worse thing you can do is be inconsistent and change with a good situation”.

5.2.3 Implications of the Senior Credit Manager interviews – the credit risk models

The interviews with Senior Credit Managers offered a number of reasons why the credit risk attitude varied across the business cycle. The analysis confirmed that the theory of credit rationing provided, at best, a partial reason for the variance in the credit risk appetite in the Senior Credit Managers’ perceptions.

The interview findings have been used primarily to develop two models: The first outlines the cyclical movement of the credit risk appetite across the business cycle and the second highlights the key drivers of the credit risk appetite. The models draw on the theories of decision making under uncertainty, but also incorporate feedback from the credit practitioners literature.

The models are shown in this Section in the format in which they were built and validated in the interviews with Senior Managers. Consistent with the grounded theory approach, the models have been enhanced somewhat as a result of the ongoing research. The final models and their implications, drawing from other data, methodological and theoretical sources, are outlined in the Chapter – Integrated Credit Risk Models.
The drivers and variance of credit risk attitude across the business cycle

Senior managements’ attitude to credit risk is set at the strategic level and is reflected in the credit controls and disciplines by which strategy, policy, and operations are managed.

Credit risk attitude across the business cycle

The first model provides an outline of the "typical" management of credit quality over the business cycle and across periods of high and low levels of non-performing loans. The model hinges on the concept of "credit risk attitude" - the organisation’s weighting of the (credit) risk versus (income) reward tradeoff at different points in time.

The relationship between non-performing loans and credit standards is shown in Figure 5.6.

FIGURE 5.6 – The credit risk attitude across the business cycle

The credit risk attitude moves in association with the level of non-performing loans (positive association) and the business cycle (negative association). Discussions with Senior Credit Managers indicated that the level of non-performing loans provides a more direct measure than profit, as used in the KPMG model discussed in the Chapter – Analytical Tools II. Whilst credit losses typically are a large component of the FIs’ profitability, other costs (such as market risk and operational risk) also can have a very significant, unexpected impact.

The model also highlights the process of “disaster myopia” (per Guttentag and Herring, 1984, as discussed in the Chapter – Analytical Tools I), where FIs appear to continue to repeat excessive
lending in times of economic growth. Disaster myopia is said to occur when subjective probabilities fall below actual probabilities during periods in which no major shocks occur. As highlighted previously:

“Creditors can lend to borrowers with lower capital positions, permit loans outstanding to rise, or allow their own capital to fall, without increasing the subjective probability of their own insolvency” (Guttentag and Herring, 1984, pg 1365).

Subsequently, FIs tighten credit criteria after the downturn in the cycle – arguably, when credit standards should be eased.

The concepts of the availability heuristic and threshold effect, as outlined by Guttentag and Herring, are included. The notions have been reported by interviewees, although they do not use the terms “availability” or “threshold” heuristic. These psychological/sociological factors are argued to bias decisions when facing low-probability, high loss hazard events such as high levels of credit losses.

The availability heuristic refers to the ease with which instances or associations come to mind. Negative credit experiences are more likely to be recalled if they occur frequently, a short period of time has elapsed since the last occurrence, and the severity/emotional intensity of the experience was high. The threshold effect refers to the subjective probability of the recurrence of disaster becomes so low that it is treated as if it were zero. Thus, the possibility of excessive credit losses is ignored if it is perceived that they are unlikely to happen.

Additional heuristics and biases are incorporated into the model in the Chapter – Integrated Credit Risk Models.

Drivers of the credit risk attitude

In association with the model of the credit risk attitude across the business cycle, the second model highlights the primary factors affecting the credit risk attitude, as shown in the following figure:
Consumer demand is not shown in the credit risk attitude model, as the model highlights the activities of the FIs only (the supply side) and the factor was not mentioned frequently.

In summary, mutually re-inforcing factors of the “tightness” of credit standards and the level of non-performing loans appear to move in relation to each other across each business cycle. In strong economic periods, visibility of credit losses tends to be low along with non-performing loans (due to low unemployment, high asset prices, etc), FI profitability is high, consumer demand is high and credit standards are eased. In less benign economic periods, visibility of credit losses and non-performing loans are high (due to unemployment, deflated asset prices, etc), profitability is low, consumer demand is low and credit standards are tightened.

**Feedback on the model**

As the feedback on the credit risk model had been obtained from the Senior Credit Managers throughout the interviewing process, there was a high level of confidence that the key issues had been addressed. Indicative comments were: “You certainly have the key issues there”. However, it isn’t possible to prove it” and “The people who have been through that level of time will look at it and say you are spot on. But your ability to prove it, because the severity of the economic cycle is different each time …. ”.

### 5.2.4 Summary of the Senior Credit Manager interviews and credit risk models

The theory of credit rationing does not appear to explain the level of credit rationing in the retail lending market. The primary factors affecting the relative ease of credit standards and pricing are...
highlighted in the credit risk attitude models. The credit risk attitude is set at the strategic level by senior management and shows the organisation’s weighting of the (credit) risk versus (income) reward tradeoff at a point in time.

A key theme to emerge from the Senior Credit Manager interviews was the need to pro-actively, and counter-cyclically, manage credit across the business cycle. One phenomenon which has not been raised explicitly in the credit rationing literature (although perhaps it is implicit) is that FIs have demonstrated an excessive tightening of credit policy as a result of crisis due to exogenous shock. According to interviewees, sometimes FIs took too long to react to signals from the business/economic markets, but when they did take action, they actually overreacted. Thus, not only are FIs reactive to the business cycle, they over-react to the exogenous shock and tighten their credit policies more than the long-term probability function would indicate is necessary.

However, it is questionable whether prior learnings should be applied directly in determining the appropriate strategy to take in setting credit policy. The rational expectations model implies that the level of credit rationing should be set at the mean risk level across the business cycle, based on prior business cycles. However, it is difficult to determine if the mean risk level actually is the “correct” level for the existing and future business cycles, given the fundamental structural change to the retail lending market since de-regulation, and the (unknown) effect this will have borrowers in the longer term. In addition, borrowers’ could learn – perhaps with a lag – so history could be incorporated over time.

Throughout the interviews, another key trend was Banks’ self-reports that they had made considerable improvements in their end-to-end management of credit risk. In general, FIs have a much better understanding of credit risk management techniques, are actively monitoring their portfolios and will have the tools and processes to detect if there are deteriorating trends and act quickly. However, of particular note was the finding that the Banks universally reported that other FIs were lowering their credit standards – whilst the incumbent Bank was not. The finding indicates that Credit Managers may be unrealistically complacent and/or positive about how credit standards are being maintained throughout their own organisation.

Given the interviews highlighted inconsistency about the Senior Credit Managers’ perceptions, it was decided that further analysis was required of the relative “tightness” of credit standards across the industry. The Credit Confidence Survey provided this analysis, as follows.

Chapter 5: Individual Research Results: Methodology, Analysis and Initial Implications  Page 190
5.3 Credit Confidence Survey

This Section provides the rationale for development, methodology and analysis of the Credit Confidence Survey which was issued to Senior Credit Managers in major Australian FIs. The Credit Confidence Survey addressed the research question: “What are the credit standards currently being applied in Australian FIs?”

5.3.1 Rationale for development

The Credit Confidence Survey was developed to obtain a definitive measure of the tightening or otherwise of credit standards in major segments of the Australia domestic market. The survey provided a systematic means to obtain the information relating to credit standards which could not be gleaned from traditional financial indicators. The Survey was largely based on the “Senior Loan Officers Opinion Survey” issued in the United States by the Federal Reserve. Whilst developed by me, the Survey was issued through the KPMG Risk Management Office in Australia.

The Survey was developed at this phase in the research for a number of reasons. Firstly, the topic appeared to be particularly pertinent to Senior Credit Managers given the considerable swings in perception concerning the availability and pricing of credit reported in the press in the twelve months prior to the development and subsequent issuance of the survey (December 1998 / January 1999).

For example, in 1997 there was media coverage of pricing for risk being mis-calculated across FIs portfolios (not restricted to the consumer portfolios). The CEO of National Australia Bank Ltd claimed that pricing for risk was being neglected, with some traditional lending covenants being relaxed to the extent that if something did go wrong there would be “some fragility there”. He stated:

“There is a sense of deja vu of the ‘80s starting to appear” (Australian Financial Review, Ian Rogers, Feb. 24, 1997).

Another example was provided by the Chairman of the United States Federal Reserve Board, Dr Alan Greenspan. He commented that financial markets generally “may be overestimating returns or mispricing risk”, such as by loosening credit standards on the assumption that the business cycle had been repealed (Editorial, Australian Financial Review, March 4, 1997). Within twelve months of these comments, reports were being made of exactly the opposite behaviour. The Australian media reported a “credit crunch” occurring in overseas markets for commercial/corporate borrowers.

Secondly, the Survey appeared timely as it could be issued through KPMG (where I was employed as Director, Risk Management Consulting). Issuing the Survey under the auspices of KPMG provided
recipients with a high level of assurance that the data would remain anonymous and be analysed using industry-accepted standards. Previously there was a potential conflict of interest in gathering such data as I had worked for a competitor bank.

In addition, the late 1990s demonstrated a heightened level of interest within the Australian financial services industry for analysing portfolio dynamics using commonly applied performance measurement techniques and definitions within the last couple of years. For example, there was an increasing number of credit risk management conferences held within the industry. The trend followed the interest in the United States on the appropriate level of capital held.

Finally, the Survey was timely given there appeared to be a higher propensity within the industry to share information in the late 1990s. An example was the preparedness of Westpac, one of the Big Four Banks, to publish an article on the default rates and loss in the event of default within its portfolio (Eales and Bosworth, 1998). Previously, this type of data was not made available, as it was seen to provide a competitive advantage.

5.3.2 Methodology for the Credit Confidence Survey

The survey approach

The survey approach was chosen as the most appropriate methodology for this unit of research for a number of reasons. There were existing instruments on which to base the Survey, namely the “Senior Loan Officers Opinion Survey” issued by the Federal Reserve Board of the United States and the Office of the Comptrollers’ Survey. Hence, the research was not exploratory and reliance could be placed on the existing instruments. Further, trend monitoring was required, rather than the in-depth analysis associated with the other components of the research. The objective was to identify a point-in-time position held by FIs, rather than exploring in-depth the underlying reasons for why the position existed.

In addition, as a comparison between FIs was required, a quantitative approach was appropriate. One of the original hypotheses of the study was that the issues affecting FIs were reasonably similar, although there could be a different emphasis on certain aspects as the Top Nine Banks generally had a higher level of sophistication in the area of credit risk management. Finally, coverage of the largest FIs in Australia could be obtained more readily using the Survey approach.

Development of the Survey

As noted above, the Survey was based primarily upon the “Senior Loan Officers Opinion Survey” issued by the Federal Reserve Board of the United States. The Office of the Comptrollers’ Survey had
been reviewed for completeness. As the Survey was based on existing instruments issued by such credible authorities in the US, the format of the Survey is not discussed in detail.

A small Pilot Study was conducted. The first draft was reviewed by four Partners/Senior Consultants of KPMG working within financial services and two University of Sydney Professor/Doctors. Alterations were made based on their feedback. The revised Survey was checked for clarity and usefulness by obtaining feedback from two Senior Credit Managers within the Top Nine Banks. The additional, comparatively minor revisions were incorporated in the final Survey. The Survey is shown in the Appendices.

**Survey format**

The Survey comprised a covering letter, an overview of the Survey with instructions on how to complete the Survey and the Questionnaire. The areas of questions are shown in Table 5.4.

**TABLE 5.4 – Questions included in the Credit Confidence Survey**

<table>
<thead>
<tr>
<th>PORTFOLIO SEGMENTS</th>
<th>TOPICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Corporate / institutional and commercial loans</td>
<td>▪ Credit standards (policy and operations)</td>
</tr>
<tr>
<td>▪ Real estate (commercial loans and consumer loans)</td>
<td>▪ Terms and conditions</td>
</tr>
<tr>
<td>▪ Consumer loans (credit cards and other consumer loans)</td>
<td>▪ Demand</td>
</tr>
<tr>
<td></td>
<td>▪ Exposure to a period of economic weakness</td>
</tr>
<tr>
<td></td>
<td>▪ Reasons for tightening or easing of credit standards</td>
</tr>
<tr>
<td>▪ Total portfolio</td>
<td>▪ Exposure to a period of economic weakness</td>
</tr>
<tr>
<td></td>
<td>▪ Reasons for changes in exposure</td>
</tr>
<tr>
<td></td>
<td>▪ Issues over the next twelve months</td>
</tr>
</tbody>
</table>

Most questions were evaluated along a five-point scale, with “basically the same” as the middle category, “somewhat” changed as the interim categories, and “substantially” or “considerably” changed as the extreme categories. These scales were similar to those used in the Senior Loan Officers Opinion Survey. Feedback from the industry specialists also indicated that the five point scale provided the appropriate level of discrimination.

In addition, respondents were asked to provide the average figures for the effective interest spread between cost of funds and the customer rate, and the delinquency/loss position for each of the portfolios. Respondents were also asked for the definitions applied for each of the portfolios in terms of the types of loans and borrowers. Finally, respondents were asked to list the main issues relating to credit risk and its management across the total loan portfolio over the next twelve months (1999).
As noted, the Survey included questions relating to both the retail and non-retail portfolios. A corporate-wide approach was adopted to retain consistency with the US surveys. In addition, the pilot surveys indicated that the credit risk approach to the FIs total lending portfolio needed to be analysed. Credit managers who were actively managing their total portfolio performance did not look at the retail/non-retail components in isolation. Rather, the Survey needed to encapsulate the whole risk profile. The format separated the questions relating to the management of the total lending portfolio and the different portfolio segments, to allow independent analysis of the retail portfolio segment.

**The Survey sample, recruitment and distribution**

The Survey was issued to FIs in Australia with total assets in excess of $1 billion (KPMG Financial Institutions Performance Survey, 1998). Money market institutions were excluded.

A segmented approach was taken in the distribution and follow-up of the Survey. The focus was on obtaining completed surveys from the “Top Nine Banks”, to retain consistency with the overall research project. The process followed for each of the segments was:

*The “Top Nine” banks* - the largest nine FIs (all of which are banks), with total assets in excess of $5 billion. These FIs represented in excess of 80% of total assets. The Senior Credit Officer was identified through contacts within the financial services industry. The covering letter stated that I would call the Senior Credit Officer to arrange a time to help him or her to complete the Survey. The objective was to encourage the Bank to complete the Survey by offering assistance and providing a concrete deadline. In all cases, there was an existing relationship between the Senior Credit Officer and the KPMG partner.

*“The Medium Sized Financial Institutions”* - the 38 financial institutions with total assets between $1 billion and $5 billion. The Survey was sent to the Officer who was the normal recipient of the annual KPMG Financial Institutions Performance Survey. The Officer was telephoned as a follow up after the due date if he or she had not returned the Survey.

**Survey timeframe**

The Survey was issued in late 1998/early 1999. Respondents were asked to consider changes in the prior 12 months (that is, 1998) and the next 12 months (that is, 1999).

**Factors relating to generalisability, validity and reliability of the Survey**

The Survey comprised primarily subjective or interpretive questions requiring little analysis of financial information. The nature of credit risk is that it is a subjective area, where small variations in policy and practice can have a marked difference on credit quality. Further, the questions could be answered comparatively quickly by respondents.
However, responses could be affected by the interpretation of the respondent. Some examples where the Senior Credit Managers’ interpretation could affect their responses included: (i) The counterbalances (for example, compliance) which were applied if a credit policy was changed; (ii) The extent to which additional information made available through the improved risk management systems was able to offset any increased risk; and (iii) Whether the removal of a loan condition actually changed the risk profile if the loan condition historically had been found to be of little benefit.

The steps taken to manage the impact of the subjective nature of most questions included the informal piloting of the Survey with two industry experts from the Top Nine Banks. In addition, the instructions emphasised to the respondents the subjective nature of the questions and that the trends over time were the key issue. Some examples of responses had been provided where the informal Pilot indicated that the question could be interpreted in more than one way. It was also possible that some respondents did not want to report on a negative trend within their organisation to an external party, particularly as the responses had been provided in writing. The emphasis on anonymity provided by a neutral, highly responsible (as one of the “Big Five” accounting firms) third party such as KPMG had been promised, in an attempt to decrease the possible impact. The possibility that respondents would provide a “neutral” answer (for example, “basically the same”) if they had insufficient information to be confident in their response appeared to be an acceptable risk. Finally, the FIs had been asked to provide the definitions they applied as there were known discrepancies in the definitions used by the different FIs. The analysis indicated that the definitions were not so different as to affect the overall trends in responses.

Initially, it was envisaged that a Credit Managers Forum would be held with Survey respondents. The objective was to discuss with respondents both the results of the Survey and key trends/issues associated with credit risk and its management, generally. However, in follow-up phone calls made by me, respondents indicated they prefer to simply receive the Survey Results. The respondents subsequently were advised that the Credit Managers’ Forum would not be held.

Analysis of survey results

Descriptive statistics have been used to compare the Survey responses. The Top Nine banks and the medium-sized FIs have been analysed separately to capture potential differences in approach between the larger FIs, who generally have a more sophisticated credit risk management infrastructure and the smaller FIs. The approach also assists consistency with the overall research project which has focused on the Top Nine banks. Multivariate analysis has not been used as there are insufficient data-points.
5.3.3 Analysis

A summary of the analysis from the Survey follows. A detailed review of the results is provided only for the questions relating to the total portfolio, consumer loans (credit cards and other consumer loans) and home loan real estate. Full details for all of the portfolios are provided in the Appendices.

Response rate

The overall response rate was high at 51%, with responses received from eight of the Top Nine banks and 16 of the 38 Medium Sized FIs. The respondents encompassed close to 80% of total assets held in the market. The respondent sample appeared to provide a solid basis for discussion about the retail lending market participants in general, given that the bulk of the retail lending market was represented in the sample.

Overall Survey Results Summary

A summary of the overall Survey results which relate to the total FI portfolios (that is, corporate and consumer) follows in Table 5.5
### TABLE 5.5 – Overall summary of results from the Credit Confidence Survey

<table>
<thead>
<tr>
<th></th>
<th>There was some divergence in the responses from the Top Nine Banks as compared to the Medium FIs, as highlighted in the remaining points</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The main external issues relating to credit risk and its management across the total portfolio over the next twelve months (1999) were:</td>
</tr>
<tr>
<td></td>
<td>− Economic factors (in terms of Asia and the emerging market crisis, the Australian economy and movement in the Australian dollar) were highlighted by all respondents</td>
</tr>
<tr>
<td></td>
<td>− Increasing sophistication of risk management techniques and optimisation of the risk/reward trade-off were reported primarily by the Top Nine Banks</td>
</tr>
<tr>
<td></td>
<td>− Concerns about customer ability to make repayments were highlighted by all respondents</td>
</tr>
<tr>
<td></td>
<td>− Sectoral weakness was highlighted by the Top Nine Banks (including geographic, property and industry sectors)</td>
</tr>
<tr>
<td>3</td>
<td>There was a clear message from the Top Nine Banks that their portfolios were in good shape to weather potential economic adversity – all reported exposure of the portfolio to a period of economic weakness had improved either significantly or somewhat. Medium FIs did not report the same trend</td>
</tr>
<tr>
<td>4</td>
<td>The confidence in total portfolio exposure demonstrated by the Top Nine Banks coincided with much greater emphasis on more sophisticated risk/reward tools such as RAROC and on more active portfolio management in terms of:</td>
</tr>
<tr>
<td></td>
<td>− A shift in the credit risk profile of the credit base owing to changes in credit standards</td>
</tr>
<tr>
<td></td>
<td>− A change in the mix of the portfolio</td>
</tr>
<tr>
<td></td>
<td>− Steps taken to diversify risks</td>
</tr>
<tr>
<td></td>
<td>− Measuring and monitoring of portfolio risk</td>
</tr>
<tr>
<td></td>
<td>− Increased use of objective/automated decisioning (for example, risk grading, credit scoring)</td>
</tr>
<tr>
<td></td>
<td>Medium FIs reported these factors, but with much less emphasis.</td>
</tr>
</tbody>
</table>

Source: Fagg and Nicol (1999)

**Responses for the retail portfolios**

A summary of the responses for the retail portfolios follows, where responses have been highlighted if around 40% or more of the respondents reported a change.
### TABLE 5.6 – Summary of responses for the retail portfolios from the Credit Confidence Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Responses</th>
</tr>
</thead>
</table>
| **Credit Standards**                          | - Home Loan Real Estate showed a tightening of credit operations by the Top Nine Banks  
  (Policy and Operations)                      | - Credit Cards were largely reported as being unchanged, although the Top Nine Banks reported a tightening in credit operations  
  - The Medium Sized FIs reported a tightening in Consumer Other Loans’ credit policy |
| **Terms and Conditions**                      | - The primary means by which terms and conditions had been tightened or eased, regardless of portfolio, were interest fees and spreads and maximum size of credit line  
  - For Home Loan Real Estate, Medium FIs reported an easing in fixed rates terms and the Top Nine Banks reported an easing in interest spreads and fees  
  - Credit Cards were reported by the Top Nine Banks as demonstrating some tightening through interest fees and spreads. The Medium Sized FIs reported an easing of credit limits  
  - For Consumer Other Loans, interest spreads and fees were cited as the primary means for easing by the Top Nine Banks |
| **Exposure to a Period of Economic Weakness** | - There was very little reported change to the Real Estate Home Loan’s exposure  
  - 40% of the Top Nine Banks reported the Credit Cards’ exposure had worsened. This was the only portfolio in the survey to have shown a decline  
  - For the Consumer Other Loans, 65% of the Top Nine Banks reported an improvement in exposure |
| **Demand**                                    | - The majority of the Top Nine Banks and the Medium FIs were experiencing greater demand from Home Loan customers  
  - Demand for Consumer Loans was reported by most of the Top Nine Banks as being stronger, with the Medium FIs being split between stronger and unchanged |
| **Reasons for Tightening/Easing of Standards**| - The reasons for the tightening of Home Loan Real Estate credit standards were given much more emphasis by the Top Nine Banks generally, with the major issue being deterioration in geographic segments. Other issues were economic factors (capital, domestic economy, Asian economy, volatility in financial markets), more restrictive legal/regulatory and decreased tolerance for risk. Competition and the use of intermediaries were also highlighted. The Medium FIs referred to increased competition easing standards  
  - The key factors affecting the tightening of Consumer (Cards and Other Loans) credit standards by Top Nine Banks were availability of capital, the domestic economy and intermediaries. Medium FIs reported a decreased tolerance for risk. The only major reason given for the easing of credit standards, by Medium FIs, was competition. |

Source: Fagg and Nicol (1999)

It should be noted that the reasons for tightening/easing of real estate credit standards included commercial and residential home loan real estate. Feedback from the pilot groups indicated that this was difficult to separate.
Summary of Key Issues over the Next Twelve Months (1999)

Responses to “What do you expect to be the main issues relating to credit risk and its management across the total loan portfolio over the next twelve months?” (representing 1999) are shown below.

TABLE 5.7 – The main credit risk issues in the next 12 months from the Credit Confidence Survey

<table>
<thead>
<tr>
<th>Area</th>
<th>Issue</th>
<th>Reported by:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Top 9 (8 possible responses)</td>
</tr>
<tr>
<td>Economic</td>
<td>Asia and emerging market crisis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Downturn in Australian economy</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Impact of rising Australian $</td>
<td>1</td>
</tr>
<tr>
<td>Risk management tools</td>
<td>Enhancing risk / reward performance measurement tools (eg. RAROC, risk grading systems) and portfolio monitoring capability</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Credit trading / derivative capabilities</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Reduction in absolute risk concentrations (ie diversification)</td>
<td>1</td>
</tr>
<tr>
<td>Optimisation of the risk/reward tradeoff in all processes</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Customer ability to make repayments</td>
<td>Interest rate rises</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Rising borrower indebtedness</td>
<td>1</td>
</tr>
<tr>
<td>Sectoral weakness</td>
<td>Geographic, property and industry sectors</td>
<td>5</td>
</tr>
<tr>
<td>Scoring / automation</td>
<td>Implementing automated decision making, based on credit scoring or rule-based models</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>System enhancements</td>
<td>1</td>
</tr>
<tr>
<td>Staff and organisation</td>
<td>Upskilling / training credit staff</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Line of business reporting to discrete but linked credit / portfolio management</td>
<td>1</td>
</tr>
<tr>
<td>Intense competition leading to pressure on lending standards</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
Area | Issue | Reported by:
--- | --- | ---
 | | Top 9 (8 possible responses) | Medium FIs (16 possible responses)
Legislation – GST | - | 2
Product and channel | Shift towards revolving / evergreen product | - | 1
Increased reliance on intermediaries | - | 1

Source: Fagg and Nicol (1999)

The “Key Issues” showed two core underlying trends. Firstly, there was a blend of the more traditional credit issues based around the borrowers’ ability to make repayments, including economic factors, ability to make repayments and sectoral weakness (with items mentioned 31 times). Secondly, there was a focus on enhanced risk management performance, including risk management tools, optimisation of the risk/reward tradeoff in all process and scoring / automation (with items mentioned 20 times). In addition, inclusion of the Asia and emerging market crisis in the “Key Issues over the Next 12 Months” reflects that the Survey was conducted at the time of the Asian economic and financial crisis. Although those FIs with exposures in Asia were affected, by their own accounts the net impact was benign on their Australian domestic lending portfolio, which is the focus of this thesis.

**Responses to portfolio dynamics**

Only fifteen responses provided responses to the portfolio dynamics queries, to varying degrees of completeness, for varying products. To assure anonymity, the responses by Top Nine Banks and the Medium Sized FIs to the questions on interest rates and default rates are reported in aggregate. It is not appropriate to conduct detailed statistical analysis of the results, given the incompleteness of the data. Table 5.8 shows the extreme values which have been reported.

**TABLE 5.8 – Portfolio comparisons from the Credit Confidence Survey**

<table>
<thead>
<tr>
<th>Area</th>
<th>Interest %</th>
<th>Non-accrual %</th>
<th>General provision %</th>
<th>Specific provision %</th>
<th>Write-off %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate – investment</td>
<td>0.4 – 2.2</td>
<td>0 – 5.2</td>
<td>0 – 1.2</td>
<td>0 – 2.6</td>
<td>0 – 0.2</td>
</tr>
<tr>
<td>Corporate – subinvest.</td>
<td>0.9 – 3.0</td>
<td>0 – 8.4</td>
<td>0 – 1.0</td>
<td>0 – 3.6</td>
<td>0 – 0.4</td>
</tr>
<tr>
<td>Commercial</td>
<td>1.2 – 3.8</td>
<td>0 – 7.6</td>
<td>0 – 1.0</td>
<td>0 – 2.5</td>
<td>0 – 0.4</td>
</tr>
<tr>
<td>Home mortgage</td>
<td>1.0 – 3.1</td>
<td>0 – 0.3</td>
<td>0 – 0.5</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Credit Card</td>
<td>5.5 – 7.6</td>
<td>0 – 2.5</td>
<td>0.3 – 4.4</td>
<td>0 – 2.7</td>
<td>0.1 – 3.0</td>
</tr>
<tr>
<td>Consumer</td>
<td>2.0 – 7.2</td>
<td>0 – 0.7</td>
<td>&lt; 0.1 – 2.0</td>
<td>0 – 1.0</td>
<td>&lt; 0.1 – 1.0</td>
</tr>
<tr>
<td>Total</td>
<td>1.8 – 3.6</td>
<td>0 – 4.1</td>
<td>&lt; 0.1 – 1.6</td>
<td>0 – 0.7</td>
<td>0 – 0.3</td>
</tr>
</tbody>
</table>

Source: Fagg and Nicol (1999)
As an overview: Corporate (investment quality) interest rates were reported as varying typically from a low of 40 basis points (“bp”) to around 200 bp; Consumer rates (excluding mortgages) typically were reported in the 400 bp to 700 bp range; and Home mortgage rates typically were reported in the 100bp to 200 bp range. Non-accrual rates varied significantly in all products, possibly reflecting differing treatments applied to the non-accrual status. General provisions varied significantly - one of the major Banks applied a flat general provision rate across its portfolio while the remaining institutions differed by product, with some portfolios not having a general provision. There was more consistency in the specific provisioning. Write-off trends tended to reflect the credit risk of the portfolios and were comparatively low, as expected given the benign economic environment.

The results highlight the significantly greater spreads experienced in retail banking as compared to Corporate/Commercial. The trends in the bad debt figures are not as consistent.

5.3.4 Implications of the Credit Confidence Survey

In summary, the Credit Confidence Survey indicated: (i) Some wariness about economic conditions amongst the Top Nine Banks; (ii) High correspondence from respondents from the Top Nine Banks about the condition of their portfolios and their ability to weather a downturn, which was in part attributable to more sophisticated credit management techniques; and (iii) Continual strong demand for housing loans which was fuelled by more competitive pricing.

The findings are consistent with my expectations prior to commencing the Survey. The findings indicate that the Surveys employed in the United States can be successfully adapted for the Australian market. The association between the higher level of confidence in the portfolio quality and the emphasis on risk management tools within the Top Nine Banks is consistent with the initial hypotheses. The emphasis on the sophistication of existing and planned risk management techniques probably reflected both the competitive advantage afforded to the Top Nine Banks of economies of scale in developing the methodologies and the more extensive customer base from which to gather data. However, the divergence in responses associated with risk management capability probably led to the greater than expected difference in response between the Top Nine Banks and the medium FIs.

The factors identified in the Credit Confidence Survey have been included in the Balanced Credit Scorecard. The reasons for the change in credit risk attitude and perceptions as to the portfolios’ ability to weather a period of economic weakness were of particular note.
5.4 Interviews with Lending Officers: Methodology and Analysis

This Section provides details of the individual and focus group interviews conducted with Lending Officers. The results have been used largely to address the research question: “How is the credit risk attitude operationalised throughout the lending organisation?”. The methodology is summarised initially, followed by the analysis and findings. The comparisons of the results from the individual and group interview formats are then discussed. The detailed responses of the Lending Officers are included in the next Chapter on the Balanced Credit Scorecard.

5.4.1 Objectives

The key question addressed in the thesis – how the FIs establish the credit risk appetite and manage it throughout the organisation across the business cycle – has been discussed to an extent by credit practitioners in senior management positions. I have not, however, been able to find any studies which have sought, in a structured manner, the perceptions of Lending Officers.

However, it is a basic tenet of this thesis that the perceptions of the Lending Officers are critical in managing the overall credit standards. Whilst the Senior Credit Managers set the overall credit risk attitude for the Bank, its practical implementation throughout the Bank is driven by the Lending Officers’ perceptions and interpretations of both the policy and their required behaviours. The degree to which the credit risk attitude is interpreted and put into place in the manner intended by the Senior Credit Managers by the Lending Officers therefore has a large impact on the actual credit standards employed throughout the FI.

The objective of the interviews with the Lending Officers was to examine how the credit risk attitude established by Senior Credit Managers was perceived by the Lending Officers and operationalised in the controls and disciplines throughout the lending organisation. The interviews focused on two critical aspects. The first issue was: What are the key aspects of credit risk management, relating to both policies and operational practices, which must be in place to build a good quality loan portfolio? There has been no attempt to identify how well the factors were being applied within the FI at the time of the interviews. The objective was to identify all of the pertinent issues, not their current level of application. The second issue addressed was: What are the key indicators of the Bank’s credit risk attitude - that is, the focus on credit risk as compared to other areas such as sales growth?

For a number of reasons, there has been no attempt to match the Lending Officers’ perceptions of the credit risk attitude directly to the Credit Confidence Survey or Senior Manager interviews within a FI. Firstly, the objective of the thesis is to look for completeness of the key factors rather than commonality of opinion between the two groups – Managers and Officers. The question “what is the
credit risk attitude now” was intended to provide context and to highlight that there actually had been changes. Secondly, the Lending Officer Interviews and Senior Credit Manager interviews were conducted 18 to 24 months apart. Thirdly, participants were assured anonymity, with no “right or wrong” answers. If the results were to be compared to Senior Credit Managers’ input, participants could be concerned that either of these commitments would be violated. Finally, one Senior Credit Managers’ comments might not reflect the FI overall. The Senior Manager results had to be aggregated for “theoretical saturation”. The thesis is not looking for agreement within an organisation, but for overall agreement between the functional specialists.

5.4.2 Methodological approach

A mixed interview methodology was applied.

The decision to use interviews

A totally different set of dynamics is involved when examining the interpretation of the credit risk attitude by the Lending Officers as compared to the Senior Credit Managers. The Lending Officers can be expected to have limited ability to influence decision making as to the appropriate level of credit risk due to their organisational status. Rather, their role is more of interpretation. Further, the Lending Officers cannot be expected to be particularly experienced in articulating their perceptions in an interview format, and it may take them time in an interview to become familiar with this role. Also, the Lending Officers cannot be expected to be regularly thinking of and planning for the implications of the current lending policies in the future – although they can be expected to be cognisant of the issue. Finally, I have not been able to identify any studies that provide a basis to address the question directly with Lending Officers.

The implication of these factors for examining Lending Officers’ perceptions is that an exploratory qualitative analysis, without a priori categorisation, was required. A model could not be developed in advance. Further, a detailed interview guide could not be developed in advance. Prior to the interviews, a list of expected issues was established from my knowledge of the FIs’ credit organisation and the literature review of organisational culture/climate. The purpose was to assist me in understanding issues if they were raised in the interviews. I did not have enough familiarity with the respondents’ own words and context to develop detailed questions in the participants’ language. Consequently, I had to play a more objective, less interactive role in the interviews.

Of the qualitative methods, the interview approaches appeared the most appropriate. The benefits of the individual interview and focus group methodologies are outlined in the Chapter – Analytical Tools II and the Appendices. In particular, the focus group interview appeared the most likely to obtain the depth of information required in a parsimonious fashion. For this thesis, the primary benefit of the
focus group interview was that it allowed the differences and similarities between the different participants to be made visible, as well as the dynamics between perspectives on the issue. Further, respondents could react to and build upon responses of other group members, which might lead to the uncovering of new ideas which could not be generated in an individual interview.

The interaction is particularly important because the Lending Officers form their perception of the credit risk attitude within the organisational context provided by their immediate working group and the wider organisation, in association with the Lending Officers’ prior experiences and personal influences. As the organisational (or group) effects could be expected to play a large role in formulating the perception of the credit risk attitude, a research design which explicitly incorporated an examination of the group influences appeared appropriate.

Another reason why the group interview format seemed appropriate was the participants were not particularly familiar with the formal, individual interview scenario. Further, it was not expected that Lending Officers had a large number of pre-existing perceptions about the topic to be conveyed in the interview. It was not part of the Lending Officer’s role (in the highly process and rule-based decision making operational process of retail banking) to examine the long term portfolio-effects of current credit lending policies and practices. Further, participants could not be expected to be particularly experienced in passing on this information to others. Hence, the potential limitation of the focus group format, that participants did not have enough “air time”, was less likely to be an issue. Neither was it expected that the groups were so emotionally charged or sensitive as to make the group process inappropriate. In addition, the group format was appropriate when the participants did not have a lot to discuss. This was likely since the credit climate would not be expected to be an explicitly, frequently discussed topic. Finally, the Lending Officer could obtain a sense of moral support from colleagues, particularly if the Officer’s responses were negative.

However, there are concerns with relying on focus groups to provide the information as highlighted in the Chapter – Analytical Tools II. Given these concerns, it was decided explicitly to integrate the factors into the design methodology.

**Mixed interview framework**

A mixed interview framework incorporating focus group and individual interviews across a sample of Banks provided a broad control for the issue of group effects. The framework also provided methodological triangulation, by approaching the same question using different techniques. Further, the mixed framework allowed a direct comparison between the findings of the individual interviews and the focus group interviews, where both sets of interviews were conducted within a Bank. The
objective was to determine if a focus group could parsimoniously obtain information equivalent to, or over and above, the information obtained through individual interviews.

In establishing the mixed method approach, one of the key issues considered was whether to conduct the individual interviews after the focus group interviews (where the benefit would be in clarifying and extending issues raised in the focus group) or to conduct the individual interviews first (where the benefit would be in identifying the key issues to be raised in the group format). Another key issue was the number of participants. The “control group” should have ten individual interviews and two focus groups, to be consistent with the study by Fern (1982). A further query was whether to conduct the two different types of interviews within one organisation (to obtain a standard base of comparison) or whether the different styles of interview should be kept separate (given the time commitment required of the FI’s credit staff). Finally, there were major resource implications in this mixed design approach in terms of the amount of time spent by Lending Officers. The potential willingness of Lending Officers and Banks was a factor in the research design.

Given the considerable time and resource implications of the mixed methodology, it was decided to trial the full mixed design (that is, two focus group and ten individual interviews) with the first FI (“Bank A”), to determine whether the full set of interviews needed to be incorporated into the design methodology for the subsequent interviews. The objective was to confirm whether largely the same information will be obtained regardless of interview approach. Confirmation was not sought in a statistical sense. Instead, the edited results of the focus group and individual interview results were compared for “reasonableness”. If a high level of congruity was obtained, the interview format could then be driven by the preference of the Bank.

Throughout the interviews the primary objective was to identify all of the pertinent data with the comparison of the methodological approaches being a secondary consideration.

5.4.3 Interview format – common interview and focus group issues

Sampling strategy
The major factors driving the number of Banks and number of participants within the Banks represented in the theoretical sampling included: (i) There needed to be a sufficient number of Banks to allow for the stratification sampling and to have representation in terms of the “Big Four” banks and the Medium Sized Banks; (ii) There had to be sufficient interviewees within at least the first Bank and potentially the remaining Banks to accommodate individual and focus group interview formats; (iii) Banks needed to be prepared to support the study - the number and type of interviews were affected by both the Bank’s preferences for focus group versus individual interviews; (iv) There had to be multiple
groups to balance the idiosyncracies of the individual groups (Krueger, 1994); (v) The ability to achieve repetition of results up to theoretical saturation had to be achieved (that is, no significant additional information was being obtained from successive interviews); and (vi) It was expected that the relative homogeneity of the participants meant that a large number of groups was not required. A possible counter balance to the last point was that the relatively unstructured nature of the focus groups could result in a greater divergence of opinions offered and hence a larger number of groups to explore the areas.

In addition, there had to be sufficient interviewees within the Banks to allow a representation of Unsecured and Secured Lending Officers. Differences in opinion could be expected, associated with the degree to which the Lending Officers could influence the credit standards within the formal policies and operational practices. The degree of influence could vary in association with the level of automation. Mortgage lending is a comparatively transactional operating environment as compared to the Unsecured lending environment with a strong usage of artificial intelligence models. Another factor could be the degree of specificity in policy and procedures. An environment with more rigidly specified rules, as expected in an Unsecured environment, would decrease the level of interpretation. Further, the degree of control / audit in adhering to policy and procedure, with disciplinary action for non-compliance could be an influencing factor. An environment focusing on control was expected to result in more conservative interpretation and closer adoption of the rules.

Differences in the Secured and Unsecured scenarios could also be expected due to the experience/knowledge of Lending Officers, with more experienced and knowledgeable Lending Officers typically being found in Secured lending. The inherent complexity of the portfolio is associated with this - portfolios which are inherently more complex and less homogeneous in terms of product functionality and the customer base require more judgemental review of loans. Finally, external factors differentially affect the portfolios. An example is the level of competition within the market and the desire to grow market share.

This thesis provides a broad-brush control by including participants from both ends of the retail spectrum – Credit Card and Real-estate Secured Mortgage with the expected effects shown in Table 5.9.
TABLE 5.9 – Potential sampling effects of interviewees from (un)secured business units

<table>
<thead>
<tr>
<th>Experience of Lending Officers</th>
<th>Level of automated decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage Lending Officers</td>
<td>High</td>
</tr>
<tr>
<td>Cards Lending Officers</td>
<td>Low</td>
</tr>
</tbody>
</table>

The strategy for identifying Banks for potential inclusion in the sample is outlined above in the Section - Senior Credit Manager Interviews. The only major difference was that the “Top 10” Banks had become the “Top Nine” Banks, following an acquisition of one Bank. Of the Top Nine Banks, care had to be taken to include representatives of both the Big Four Banks and the next five largest banks. The objective was to retain consistency with samples between the Senior Manager interviews, the Lending Officer interviews and the Credit Confidence Survey.

Initially, five Banks had been approached. It appeared likely, and proved to be the case, that theoretical saturation would be achieved with only a sub-set of the Banks. Thus, care was taken to intersperse the Big Four and the Medium Sized Banks. Four Banks agreed to be in the sample – two Big Four and two Medium Sized Banks. Eventually, Lending Officers from only three Banks were required – one Big Bank and two Medium Sized Banks.

Finally, a key issue associated with the reliability, validity and generalisation of results had been whether to include Lending Officers from the credit origination area only or also credit servicing and collections. It was decided only to include credit origination staff as most of the emphasis in the literature had been on the application of lending standards at loan origination and limitations imposed by sample size.

**Format of the interviews**

**Format of the first set of interviews – Bank A**

In Bank A, two focus groups and ten individual interviews were conducted. Given the sample stratification, effectively there were two sets of interviews within Bank A: Five individual interviews were held with Lending Officers from a Credit Card unit, followed by a focus group with eight Cards participants. Subsequently, the format was repeated with Lending Officers from the Mortgage Unit.

The format allowed me to obtain an understanding of the key issues/local jargon by conducting the individual interviews prior to the focus groups and determining the effectiveness of the key questions. Within each of the product groupings, the first couple of interviews had been at the exploratory end of
the spectrum. The remaining interviews were focused more on validation and probing for further information of points raised in the preceding interviews.

The format allowed confirmation, based on the “editing” approach rather than a statistically robust sense, that similar information was being gathered in the different formats. The results are shown subsequently. Given a high level of confidence that a reasonable level of congruency was obtained between the individual and focus group interviews in Bank, the remaining Banks were asked to nominate the format that suited them.

Format of the second set of interviews – Bank B
In Bank B, an individual interview was held with a Manager of the Lending Officers to obtain some context of the key business issues affecting the unit and confirm some of the local jargon. Two focus groups were held subsequently with joint groups of Unsecured and Secured Lending Officers. The format meant that any differences in responses due to a mixture of Lending Officers in the same focus group were incorporated within at least one Bank.

Format of the third set of interviews – Bank C
In Bank C, four individual interviews were held with Unsecured Lending Officers. Commonality of responses proved to be extremely high. Hence a fifth interview which had been initially planned, was not required. With the Mortgage Lending Officers, an individual interview were held, followed by a focus group interview with eight participants, followed by another individual interview. The format allowed me to prepare for the focus group and also provided a chance to clarify some issues from the focus group in the individual interview.

Summary of the format
In total, 55 Lending Officers were interviewed. A summary of the formats is shown in the following table.
TABLE 5.10 – Interview format for Lending Officers

<table>
<thead>
<tr>
<th>Bank</th>
<th># Focus Groups</th>
<th># Individual Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Big Four Bank A</strong></td>
<td>Mortgage: 1 group (8 participants)</td>
<td>Mortgage: 5</td>
</tr>
<tr>
<td></td>
<td>Cards: 1 group (8 participants)</td>
<td>Cards: 5</td>
</tr>
<tr>
<td><strong>Medium Sized Bank (b)</strong></td>
<td>Mixed Mortgage / Cards: 2 groups, (7 and 8 participants)</td>
<td>Mortgage: 1, as a “pilot”</td>
</tr>
<tr>
<td><strong>Medium Sized Bank (c)</strong></td>
<td>Mortgage: 1 group (8 participants)</td>
<td>Mortgage: 2</td>
</tr>
<tr>
<td></td>
<td>Cards: Nil</td>
<td>Cards: 4</td>
</tr>
<tr>
<td><strong>Total number of interviewees</strong></td>
<td>39</td>
<td>17</td>
</tr>
</tbody>
</table>

**Participants’ characteristics**

Theoretical sampling of participants from each of the Banks was utilised. Interviewees were relatively homogeneous. The selection criteria were designed largely to ensure sufficient experience within both the Bank and the credit function to be able to comment on the credit risk attitude across the business cycle. The criteria for the inclusion of Lending Officers in the interviews provided to the Senior Managers in the Banks is shown in the Table 5.11.
TABLE 5.11 – Criteria for participation by Lending Officers

<table>
<thead>
<tr>
<th>The criteria for Lending Officer interview participation</th>
</tr>
</thead>
</table>

**The interview participant:**

- Currently is acting as a loan origination officer, assessing new loan applications for retail products (such as home loans, personal loans and credit cards)
- Is a highly experienced Lending Officer, possibly in a supervisory position
- Has at least five years experience with the organisation in a credit related role
- Preferably, has experience in a number of credit roles
- Is capable of and prepared to articulate his or her opinions

**The interview sample** should, where possible:

- Include representatives from different work groups (such as Mortgage and Unsecured) rather than representing only one work group
- Include representatives with different backgrounds / experiences in the credit function

**The focus group interview sample** should not:

- Include any Lending Officers who have a direct reporting line to supervisors who are included in the focus group

**Recruitment procedure**

Recruitment of Lending Officer interviewees was performed through Senior Credit Managers or their delegates. They were asked to nominate interviewees whom they perceived met the criteria outlined. Care was taken to avoid providing too much detail on the topic, to decrease the likelihood of participants being able to prepare for the interview. As highlighted by Templeton (1994), participants could review what they know about the topic and determine which of their feelings would be most socially pleasing. However, the Lending Officers could have talked about the issues between and prior to interviews, as they all worked within the same units.
Monetary incentives were not provided. Generally, interviews were held during working hours, with some overlap into the Lending Officers’ lunch or after work time.

**The setting**
The interviews were held on Bank premises. They provided a professional, office-based setting and minimised disruption to the Lending Officers’ working day. It was not possible to hold the interviews away from the Banks Offices (which would have had the advantage of providing an atmosphere to engender openness) for logistical reasons. Food and non-alcoholic beverages were provided to participants in the focus group interviews, both to offer a more congenial environment and minimise disruption to the Banks’ scheduling. The interviews were tape recorded and subsequently transcribed by an independent party.

**Semi-structured interviews**
A semi-structured interview format was used. With the semi-structured approach it was possible to examine issues to a greater level of detail where there appeared to be a discrepancy or an emerging issue. At the same time, the format was sufficiently standardised for a level of commonality to enable some comparison of results between Unsecured and Secured lending areas, and between Banks. In addition, the Senior Credit Managers were told prior to the interviews that they would receive a high-level report of the major issues emerging, as part of the justification for obtaining access to interviewees. Hence, the broad spectrum of issues had to be represented in each interview set to ensure the core factors were addressed.

**5.4.4 Interview format – focus groups**
The format relating specifically to the focus group interviews is outlined in this sub-section.

**Number of participants in focus groups**
The focus group interviews comprised eight participants. This is at the upper limit of a small group and the lower limit of a large group (Templeton, 1994). There were no overwhelming reasons to favour a small or large group format.

**Timing**
The focus groups were designed to last for one hour, although participants were told that they would last for up to one and one quarter hours. The time was relatively limited, as participants either attended the focus group interview in their lunch break at work (which typically was a one hour period in Australian banks) or during work hours.
The interview format

The general approach

Using Stewart and Shamdasani’s (1990) terminology, the interview standardisation is more flexible than predetermined. A funnel approach was designed, where broad questions (to emphasise free discussion) were followed by a more structured approach with narrow/specific questions. As noted by the authors, this is appropriate where interviewees are quite knowledgeable but need time to express themselves before probing can be effective. Easy and non-threatening question(s) were asked initially, followed by more personal question(s). The more important questions were asked earlier in the focus group. The number of questions could be restricted as the groups were relatively homogeneous with regards to the topic and the topic was reasonably technical. A rolling interview guide was used, where the broad questions/topics of interest were reviewed after each successive interview.

Again using Stewart and Shamdasani’s terminology, moderator involvement occurred at the end of the spectrum which “allows comparatively free participation”, rather than at the controlling end. The study placed more emphasis on evocation rather than control (Templeton, 1994).

Following Morgan (1997), participants were asked for their input on experiences and perspectives, rather than relying on the identification of attitudes and opinions.

In the attempt to decrease the effect of moderator bias the groups were encouraged to self-moderate (Morgan, 1997), with the researcher legitimating the participants’ responsibility for managing the discussion (Morgan, 1997). In addition, Merton, Fiske and Kendall’s (1990) suggestions to minimise the effect of the negative aspects were taken into account, namely: Retrospection, depth, range, specificity, personal and context.

The format of the interview was consistent with Vaughn et al (1996).

The introduction

The introduction included a welcome, a statement of the purpose of the interview, and guidelines to follow during the interview. The self-moderating guidelines suggested by Morgan (1997) were highlighted. The key terms were clarified. It was emphasised that the objective in most instances was to develop ideas rather than attempt to achieve consensus.
TABLE 5.12 – Primary and related secondary questions in Lending Officer interviews

<table>
<thead>
<tr>
<th>Primary Question</th>
<th>Secondary Questions</th>
</tr>
</thead>
</table>
| 1. “The key aspects of credit risk management (relating to both policies and operational practices) which must be in place to build a good quality loan portfolio include …” | - Do these basic factors change across the business cycle, or is it how they are interpreted that changes?  
- Rank the importance of the factors. |
| 2. “The key indicators of the Bank’s credit risk attitude (that is, the focus on credit risk as compared to other areas such as sales growth) include …” | - Do you think the credit risk appetite changes over time?  
- What do you think drives the tightening or easing of credit standards?  
- How do you know what Senior Manager’s credit risk attitude is at a point in time, based on actual, observable behaviours?  
- What reward structures / measures are in place to tell you what you should be doing?  
- State of the credit risk attitude – now |

Focus group participants were asked to rank as low, medium or high importance the elements relating to a quality credit process as a means of confirming that the important issues had been identified and giving participants another opportunity in the discussion to raise issues. The question was asked at the end of the interviews to minimise effect on the flow of the focus group. A comparison of the summary issues to emerge from the ranking process and the issues raised throughout the discussion shows that slightly different emphasises did emerge during the re-iteration of the issues. The differences were not fundamental, but related more to the groupings and the priority given to a concept.

The questions were asked as per the Interview Guide, as shown in the Appendices.

Finally, within the focus group interviews, the group effect was analysed in two ways. Firstly, interviewees were asked to note down their initial reactions to the two primary questions (elements of a quality credit process and what drives the credit risk attitude) which had been written on a piece of paper. Interviewees were told that these would be collected at the end of the session. Secondly, in Bank A, at the completion of the interviews, interviewees were asked if their ideas had changed. Interviewees looked at each other for collaboration before responding, hesitantly, to the question. The
question was not repeated in subsequent Banks, as the response did not appear to add value and the time could be more effectively utilised asking more probing questions.

The close

Two questions were considered for inclusion: (a) An additional question “If you were sitting where I am sitting, what would you have asked”; and, (b) A summary interpretation question “If you had the job of summarising how the whole group feels about this topic, what do you think you would say” (Templeton, 1994).

Question (b) was used in first set of interviews with Bank A staff. However, the question was not continued in later interviews as the responses did not appear to add value. The emphasis was not different from what had become apparent during the course of the interviews. Further, the interviewees appeared to be uncomfortable answering the question and the question took up “air time” in which more important questions could be asked. Question (a) was not used.

5.4.5 Interview Format: Individual interviews

The format relating specifically to the individual interviews is outlined in this sub-Section.

Timing

The focus groups were designed to last for up to one hour.

The interview

The approach to the individual interviews was similar to that taken for the focus groups in terms of the questions asked and the logic of their presentation. The interview guide was essentially the same. The key differences were related to the process. There was a greater need to establish a “warm rapport”, as the Lending Officers did not appear particularly comfortable in the one-on-one format. Further, there was greater emphasis on the anonymity of the interviews and the interviewees’ option of leaving the interview at any time if they were too uncomfortable. Also, the “rules” relating to self-moderation of the group were not applicable. In addition, in the first few individual interviews in Bank A, the Lending Officers were asked to complete the two-item questionnaire which all focus group attendees had also been asked to complete. However, as the Lending Officers appeared very awkward in completing the task (typically asking if they could just talk about the questions), the subsequent interviewees were not asked to complete the form.

Another process difference related to the fact that in the initial set of individual interviews in Bank A, interviewees were asked either to rank the key aspects of credit risk management which must be in place to build a good quality loan portfolio or to summarise what were the key points to come out of
the discussion. However, as the participants appeared uncomfortable in responding to the questions and they did not appear to add additional insights into the elements already identified, the questions were not asked in subsequent interviews. Finally, there was an attempt to maintain moderator involvement towards “comparatively free participation”, rather than at the controlling end. However, if the individual interviewee was hesitant in responding to the questions, a more interactive role was required of the interviewer.

5.4.6 Analysis

The interviews were transcribed by an independent party. Minimal editing was applied by the transcriber.

The analysis of the Lending Officer Interviews followed the same editing approach used for the Senior Credit Manager interviews, detailed in this Chapter – 5.2.1 – Methodology – Analysis.

In addition, there were two aspects which related to the Lending Officer interviews in particular.

Firstly, within each Bank, the various types of interviews (Unsecured individual, Unsecured focus group, Secured individual and Secured focus group) were coded separately initially. This approach was taken as the Senior Credit Managers were told they would be provided with a precis of the key issues, so a comprehensive set of information was required for each work group. In addition, the approach facilitated the comparison between the Secured and Unsecured Lending Officers, between individual interviews across groups and between FI's.

Secondly, a simple count of the frequency of mention of an issue was completed, to assist comparison between the Banks, Secured/Unsecured interviewees and individual/focus group interviews. However, similar to the Senior Credit Manager interviews, I did not attempt to assign relative importance based on the simple count of the frequency of mention. One person could mention a single topic multiple times, which could be a personal concern not shared by the others. In addition, an issue could be mentioned once, but with a lot of emphasis and not require further discussion by the Group as the impact was self-evident. It was assumed that an issue which had been mentioned by one interviewee reflected the wider group of Lending Officers.

Examples of the detailed categories and the count of times that data units were raised can be found in the Appendices: (a) Detailed Comparison of Individual vs. Focus Group Interviews; and (b) Edited and Categorised Responses from Each of the Banks showing Interview and Focus Group Interviews.
Finally, the major decision in the report-writing phase was determining the trade-off between the summarisation of the focus groups and quotes which provided more of a direct presentation of the participants’ discussion. A summary approach was the basis of the report, with quotations being used only where necessary to amplify the meaning of the summary.

5.4.7 Results: Comparisons between interview formats

This sub-Section focuses on comparisons of the effect of the methodology. The responses to the questions relating to credit risk attitude follow, in summary format. The detailed comments relating to the components of a “quality credit risk management process” are incorporated into the next Chapter on the Balanced Credit Scorecard. A summary of each of the interviews, which was sent to each of the Banks, is shown in the Appendices.

The comparisons highlighted in this Section are: (i) Between the individual and focus groups within Bank A for the Unsecured and Secured product sets; (ii) Between the different organisations, to identify whether there were idiosyncratic issues; and (ii) Within a focus group interview, comparing initial notes and output.

Bank A comparison of interview types and lending groups

The comparison of results of focus group versus individual interviews is based on the interviews within Bank A. There were differences in responses to question “What drives the credit risk attitude”. Overall, the responses appeared to be reasonably consistent across the interview formats and the Secured/Unsecured portfolio types.

Responses to the questions “How do you know what the credit risk attitude is at a point in time? What are you meant to do?” and “What actually changes when the credit risk attitude changes” were analysed in combination. The responses were combined as it became apparent during the interviews that the questions were not clearly differentiated. The difficulty appeared to result from the term “credit risk attitude” being unfamiliar to interviewees and from interviewees being asked to interpret the underlying reasons for behaviour (rather than simply reporting on what they see). However, as the objective was to identify the key underlying issues rather than maintaining mutual exclusivity of questions, the responses appeared to be valid. The same topics were raised, even though they came up in response to a different question.

Overall, the differences in responses appeared to be based more on the Secured/Unsecured portfolio stratification rather than differences in the interviewing format. The Unsecured interviewees focused on the more tangible factors such as changes to policies and the scoring system. The Secured
interviewees emphasised more intangible factors such as interpretation and feedback from higher authorities on the more marginal applications.

There were some differences in responses to question “What is the state of the credit risk attitude now?”. The Mortgage individual and focus groups interviewees were unanimous in arguing that policies were looser, with a focus on volumes-processed and growing the market share. “We’re here to write business, not knock it back” was an indicative comment. The Cards responses were not unanimous, although the majority of interviewees reported that policies had eased. The focus group vehemently stated that the focus was on quantity not quality, speed of processing, and excessive amount of credit offered. The individual interviews generally stated that policies and practices were less stringent, although one interviewee was at the opposite end of the spectrum: “We’re not being pressured so we’re being very strict on them. We’re sticking to policy. So there’s not a lot of flexibility there”.

There were more differences in responses to the question: “The key aspects of credit risk management (relating to both policies and operational practices) the Bank must have in place to book good quality loan applications include…” The differences in responses between the group format and the portfolio types appeared to have been largely a function of more feedback being obtained from individual interviewees. There did not appear to be an underlying trend of differences in the interview format.

Summary
Overall, the comparison between the responses to the individual versus the focus group interviews indicated that the issues raised were not fundamentally different, but reflected three key factors. Firstly, idiosyncrasies of the individual and focus group participants (partly as a result of the sampling process) and the discussions were reflected, as expected in any qualitative research. Secondly, perceptions of Unsecured versus Secured Lending Officers had an impact, which was highly associated with both the nature of the work environment and the individual Lending Officers’ experience and longevity with the Bank. Thirdly, my biases when coding the responses as to what was “important” or what was the meaning behind some of the words may have affected measures.

In addition, the issues raised often were related to what Lending Officers perceived were shortfalls in their own work environment, rather than general comments on the best approach to credit risk management.
Between-organisation comparison

Initially, the editing approach was applied to each bank individually. In most cases, the categories represented a summary of a number of items. The summary of the comparison, along with the more detailed comments, presented to each of the Banks is shown in the Appendices.

Overall, it appeared that the more important issues were reflected in the categories in that they were mentioned by all of the Banks and with such frequency or emotion that they comprised a category label. The issues are shown in Table 5.13. Issues emerging in only one Bank are shown in Table 5.14.

TABLE 5.13 – Categories emerging between organisations in the Lending Officer interviews

- Balanced credit/marketing
- Policies and procedures: Clear, consistent, comprehensive (and so on…) policies and procedures
- Sales (Branch) management; well informed mobile lenders. For example, it was estimated in one focus group that 25% to 95% of Branch-submitted applications contain errors (varying from an incorrect interpretation of what the customer said when reading financials to Branch staff deliberately falsifying data). Lending Officers felt that a 10% error rate was acceptable. However, that the high error rate was likely to be a somewhat exaggerated number, as only the “bad deals” were referred by the system
- Good system. The system should be available, reflect current policies, incorporate information from all Bank products and systems, be user-friendly (and so on). An interviewee commented “the system has got to be able to take all that information and consider it all. So that the assessors can trust, which I think is an important word, trust the information that’s coming in”
- Credit scoring (particularly for Unsecured)
- Customer focus; customer interface; customer retention versus new sales
- Good communication amongst all areas of the Bank
- Credit staff: Training / experience / demonstrate sound credit skills / personal development

TABLE 5.14 – Categories emerging within the one bank only in the Lending Officer interviews

- End to end review of loans
- Mortgage was low risk lending
- Feedback on lending quality
- Sell the right product
- Override process
- Standardised process
- Tools/empowerment to do the job
- Number of staff – statistics and volume
- Career paths
- Flexible working conditions
- Performance management
- Integrity/morality
- Interaction between Lending Officers and with Senior Lending Officers
- Support and communication among Lending Officers
Subsequently, it was decided to re-code the transcripts, to develop categories based on the conglomerate of data units from all Banks rather than coding them separately for each of the Banks and each of the interview formats. One major reason was to ensure that all of the items which were “important” had been identified. The objective was to identify the issues that might not have been seen as important enough within one Bank to warrant a separate category. However, if the issues had been mentioned in a number of Banks, in aggregation they might warrant a separate category. The other major reason was to identify the issues which emerged in one Bank at the category level and were mentioned by other Banks in the more detailed level of editing. The process attempted to reduce the possible effect of the coding process in determining whether an issue was seen as important in a number of Banks.

The major issues, over and above those identified in the prior coding process, are shown in Figure 5.15. The issues which remained as being important within one Bank only are shown in Table 5.16.

**TABLE 5.15 – Additional issue identified in re-coding the Lending Officer interviews**

- Market focus/benchmarking
- Exceptions management and overriding prior decisions
- Feedback on loans the Lending Officers have written
- Performance management
- Process in place to overcome the lack of relationship with borrower.

**TABLE 5.16 - Issues confirmed as being important within one Bank only after re-coding**

- Sell the right product
- End-to-end review of loans
- Tools/empowerment to do the job
- Flexible working conditions
- Consumer credit code.
- Mortgage is low risk lending
- Centralisation.

The first three issues tended to reflect the “big ideas” rather than being mentioned in true isolation in one Bank. The issues were more topical, related to recent changes in credit processes within the Banks. However, the issues were highlighted as they appeared to be the important idiosyncratic issues for the Bank in that they had been mentioned in more than one interview (and typically multiple times in the same interview), appeared to be emotionally charged, and emerged from both “editing” summaries. The reference to flexible working conditions was raised in three interviews in Bank C. The other issues appeared to be more passing comments made by an individual interviewee only. The issues which appeared to be particularly important to the individual Banks, and the reasons why, are outlined in the Appendices.
Summary

Overall, the comparison between the responses provided by the three Banks indicated that the issues raised were not fundamentally different. There were some idiosyncratic elements of the Banks lending processes, probably related to more recent changes to policies, processes and staffing flexibility.

As with the comparison of interview formats shown in the prior Section, another key factor appeared to be idiosyncrasies of the individual and focus group participants (partly as a result of the sampling process) and the discussions, expected in any qualitative research. In addition, my biases when coding the responses as to what was “important” or what was the meaning behind some of the words played a role.

Finally, a summary of the key categories raised in each of the five focus groups is shown in the Appendices. The summaries provide an overview of the issues and their relative importance.

5.4.8 Detailed responses to the questions on credit risk attitude

The questions examining the credit risk attitude asked:

1. What drives the easing or tightening of credit standards?
2. What actually changes when the credit risk attitude changes? How do you know what the credit risk attitude is at a point in time and what you are meant to be approving/declining?
3. Compared to other points in time in the credit cycle, what is the credit risk attitude at the moment?
4. Would current lending practices result in losses which were “as bad as the late 1980’s”.

Question: “What drives the easing or tightening of credit standards”

a) Drive for new business

In all instances, competition and the drive for new business were given as the primary factor driving the relative “tightness” of credit standards. Factors included: Fighting for new sales to increase market share; Push for new business, which could be processed faster than existing customer business; and Prominence /dependence on the introducer channel for new business. An indicative comment is “The introducers run the bank”.

Significant comments were made as to policies being changed to increase the acquisition of accounts through the campaigns or advertising promotions.

Prevailing conditions in the market were highlighted, with an indicative comment being: “... we encourage them to see what the opposition is offering. That way, you know what the market trend is, and we don’t want to be at the top of the market, we don’t want to be at the bottom. So we try and keep ourselves in the middle.”
b) Sales force – associated with the drive for new business

The focus on sales, with reference to the performance reward structure of the sales force, was a prominent factor. Indicative comments are: “Yeah well you get paid for that, and their boss gets paid on what they do. And I presume that he gets pressure from his boss.” and peer pressure from Branches, whose “performance related solely now on sales”.

The conflict between sales and credit administration was highlighted. An indicative comment was: “It does really feel sometimes, that it’s a major battle, when it really shouldn’t be at all”.

c) Productivity / volumes

Another dominant reason given for the perceived change in credit standards was productivity and the need for large volumes of applications to be processed. An indicative comment was “Mostly volumes because the quality is difficult to monitor”.

The Lending Officers’ performance were reported to be based on volumes of loan applications written with expectations on turnaround times. The emphasis in Unsecured was on the “strike rate” without including the quality of lending (with the credit scoring system playing a major role).

d) Losses

Another reason given for the changing of credit standards was the level of bad debts or accounts “hitting collections”. Portfolio segments were identified as being potentially problematic. An example was employment areas such as computing where loan applicants were employed largely on a contract basis.

e) Financial position

Financial conditions within the Bank were argued to affect the credit risk attitude, such as extra funds. The focus on shareholder value, with shareholders demanding high returns, was also highlighted.

f) Customer expectations

Lending Officers mentioned an increased focus by the Bank on meeting customer expectations, with emphasis placed on feedback from customers.

g) Other factors

Other factors mentioned, but without as great emphasis, included: (i) The Bank has “… grown as an organisation, and are trying to compete on level footing with the major players”; (ii) Peer pressure - “sort of an attitude within the Centre” (iii) The Consumer Credit Code. It was argued that it was
initially hard to define “what is reasonable”, but lenders get better with experience; (iv) Changes in borrowers behaviour with an indicative comment being “you look at the style of living nowadays, there’s more marriage breakups, there’s more bankruptcies, it seems to be the trend”.

Question: “What actually changes when the credit risk attitude changes? How do you know what the credit risk attitude is at a point in time and what you are meant to be approving/declining?”

a) Policy changes

Policy changes were given as the primary means by which the Lending Officers interpreted the relative ease or tightness of the credit risk attitude. Policy changes included formal and informal aspects. Formal policy change mechanisms included: Policy changes as advised through written policies and memos; The requirement for separate, up to date policy and procedure documents. Until they were available, “there’s, you know, there’s bits of information that get sent out to the lenders by PC, on their emails, just saying watch out for this, or watch out for that; Policy changes advised verbally from management, through team meetings; Changes of emphasis, or subtle changes of rules, within the policy; The loosening of credit policy exceptions; The credit management meeting held between Product, Group Credit and Head of Retail; and Feedback from the Collections manager (repossessions), group credit, product management, etc.

Indicative comments relating to the change of the formal factors in the competitive environment included: “suddenly a major sales drive, and suddenly all the tight, clear and concise controls are suddenly put aside and it’s all sales orientated” and “Change in the policy to get numbers through the door.”

Less formal policy changes were indicated through both the requirement for all applications which had been declined be subject to “hindsighting” and the proportion of approvals to declinals. In addition, interpretation of verbal messages from management relating to policy provided an informal indication, with team meetings being the main forum. There was a strong emphasis on the interpretation of managers comments’ by the Lending Officers (as compared to specific wording of formal documents). “They’re not going to say it straight out. But, yes, okay, we’ll have another look and see if we can help you. So you become more flexible in your attitude towards that”.

Lending Officers also commented on less formal, intangible factors not specifically related to policy. There was “pressure from up top” (passed on through the line managers) and pressure from sales staff. An indicative comment was: “But instead we get the attitude, or feeling perhaps alright fine, the rules have been laid down in black and white, now we’ll just suit ourselves and try and manoeuvre around it. And I think that culture has always been within this organisation” and “when they meet
their targets, it comes down from everywhere, it doesn’t matter, just process it quickly, might get heaps more done, you might do one bad one, but…”.

In addition, feedback on how policy was being interpreted by senior credit authorities was obtained when loans were referred for a higher approval – “what is coming through the door by way of referrals” – and when a query regarding policy, or the interpretation thereof, was made “up the line”.

b) Changes to the scoring system
In the Unsecured area, the feedback on the relative ease or tightness of policies was primarily based on perceived changes to the credit scoring model. The changes in the system / scorecard reflected the desire to approve a higher percentage of loan applications. An indicative comment was: “Credit scores .., sometimes they’re a little bit stricter, sometimes, then like customers may get approved on a situation where, you might think, oh that’s gone through, I don’t know about that.”

In the Secured areas which were automated, the “system” or the rules by which the system processes loans were reported to show whether management was tightening or easing credit standards.

c) External factors/ well-being of the economy
Staff mentioned that their own perception of external factors, primarily the “general well-being of the Australian economy”, affected their predisposition to approve or decline a loan.

d) Performance measures
The performance measures also gave an indication as to what was important to Senior Management. In the Secured areas, some interviewees reported the measures/benchmarks covered both volume (productivity) and the quality of decisions. Other interviewees reported that they were measured nearly solely on volume.

In the Unsecured area, the focus in one Bank was on the number of calls a Lending Officer takes and how many calls were converted into a sale. An indicative comment was: “the main thing is the strike rate, where we hang out for the figures of the strike rate”. In the other Banks, the focus was on volumes processed.

The focus on the need to process high volumes of loan applications as compared to a focus on quality was also highlighted. There was very little mention made of formal performance management contracts – rather the daily or monthly MIS was the focus.
e) Approval rate
There was a comment that the “Credit manager said we should “open up”, with the concern expressed that Lending Officers should not be target driven.

f) The emphasis changes
It was suggested that the policies and related issues stay the same, with the emphasis on them changing. An indicative comment was: “I think the aspects stay the same, but the emphasis on each one may vary depending on the different prevailing things at the time. But on a whole, the criteria stays the same. You may add a few little things here and there, but on a whole, it stays the same.”

Question: “Compared to other points in time in the credit cycle, what is the credit risk attitude at the moment?”
a) Policies looser
Most interviewees from all three Banks stated strongly that policies were looser and the Banks were aggressively chasing market share. Indicative comments included: The Bank “has moved from a very tight credit policy, to very much a looser credit policy to achieve market share”; “Policy has loosened, basically to get numbers in”; “We want to do the deal all the time, and rather than try and find the reason for declining it, they’re finding a reason to approve it. Or help the loan through”; “they’ve also relaxed the guidelines and you see some tragedies getting through” and “…we’re here to write business and not to knock it back. Now unless it’s a dead duck, for whatever reasons, we should be trying to find a way to manipulate, for want of a better word, that application into something that we can”; Obvious dominance of the salesforce”, and “99.9% of the time sales will win if they keep pushing”; “Somebody made the point not so long ago that we’re writing all this business now, and the system has become more automated, well out job is ultimately, we will be transferred from assessment into collections”.

There also was perception that policies were “looser” to accommodate increased volumes of Loans reviewed per Lending Officer. Indicative comments included “emphasis on the need to process applications and process them quickly too... We reduce our quality and so on” and “I guess from a new business perspective, yeah, it’s push, push, push, to get, I guess, it approved quickly. If possible to get it settled, to get it on the books, as soon as possible. Yeah, and I guess I’m taking, I’m cutting some corners.”.

A couple of respondents from one of the Banks argued that the Bank was being strict on applicants with high lending standards, with Cards being perceived to be “a bit tighter than a few years ago” and the introduction of capacity income testing (although it was reported to be the weakest capacity testing of any of the banks).
In another Bank, an interviewee commented that the environment was “watchful”, in terms of interest rates, aggressive builder developers, more rubbish deals, and extensive use of originators. Another interviewee commented that credit providers generally were “being pushed into doing the loans that are marginal”, noting that the larger banks are “big enough to be able to survive that sort of thing.”

b) Existing customers disadvantaged
There was a strong perception that policies were too tight for existing customers in one Bank. It was argued that this reflected the new sales orientation, rather than the servicing of existing customers.

c) Focus on volume versus profit
It was reported that there was a focus on volume versus profit, with no understanding of what profitable business was.

d) Concerns with quality of business
There appeared to be concerns with the quality of new business, with indicative comments being: “big push to get business through the door, not having the best business coming through the door” and “It’s campaign based, but they’re not using their target market as a base for the campaign. They’re simply going out to the general public”.

Reference was also made to poor quality securities, with a comment that valuers for one of the Banks had indicated that the Bank was writing business in areas other institutions would not.

Effect of a downturn in the economy
There was a mixed reaction to the question whether current lending practices were “as bad as the 1980’s excesses”. Arguments against the same problems re-occurring, based on mitigating factors, included: Decentralisation was seen to provide a greater level of control with a representative comment being: “Centralisation has lead to consistency; before you had the branch managers out and they were doing their own thing”; The experience of the problems in the early eighties led to learnings which should help prevent problems of the same magnitude recurring; A benchmark rate was now used to guard against interest rate shock, liabilities, and so on; Means and measures of looking at income were more sophisticated, for example, using gross income less tax, taking into account negative gearing, living allowance and overtime policy, etc.; The Bank was more aware of possible issues, having learnt from the prior period, with an indicative comment relating to inner city apartments being: “Say if the similar situation happened 10 years ago ... they would just go bang and lend against it at a higher rate, now you’re probably a bit more aware that there could be a possible
problem somewhere.”; The Consumer Credit Code had had a good effect; and The sales force was reasonably sophisticated.

Conversely, the arguments as to why the current lending practices could lead to a situation as bad as the 1980s included the chasing of market share. Indicative comments included: “now I think we’re in a pre 87 mode, I believe all banks are obviously trying to maintain their market share. So they’re maybe diluting their credit requirements so they’ve got to maintain a balance, but obviously for the running figures, your market share, your bonuses, whatever it is, of course things have been put on you to change.” and “it only needs a couple of players in the field that, because they’re not getting the cream of the business, they’ll chase the risky. So it just creates a domino effect.”

Another reason given for a similar situation as the late 1980s included the loss of experienced Senior Credit Managers, with an indicative comment being “with the Banks’ program of restructuring or retrenching, .. there’s not many of them around”. In addition, it was argued that whilst policies had been put in place to protect against excessive lending, the policies might not be sufficient. For example, the benchmark rate was argued to be too low because it was driven by the market as compared to prudential internal standards. Further, participants commented that people had borrowed up to the hilt due to the increased availability of credit. Finally, one participant commented “But, yeah, as I say, we’re now making the same mistakes, we’re lending to people while the interest rate’s low. We have loosened the terms of credit…. while we’re writing all this business now, and the system has become more automated, well our job is ultimately, we will be transferred from assessment into collections.”

5.4.9 Other Comparisons

Some final comparisons highlighting the effects of the interview methodology are shown in this Section.

Individual’s preliminary notes with focus group outcomes

Interviewees written responses to the two key questions (relating to a quality credit process and the drivers of the credit risk attitude) were compared with the issues raised during the interview process. There was some interpretation on my part, as some of the interviewees’ notes were fairly cryptic.

A lot more issues were raised during the discussions than were listed on the interviewees’ notes. Interviewees spent only five minutes at the beginning of the interviews writing down their thoughts, whilst the group discussions lasted for nearly an hour. Further, a number of interviewees did not list many items under the query “What drives credit risk attitude”. Whether new ideas were generated
from the group format or there was simply more time to clarify terms, think and talk about the issues cannot be proven categorically.

The majority of items listed on the notes related to the detailed level of the credit basics of assessing a loan (such as capacity testing, consumer credit code, etc). Discrepancies between written notes and the focus group summary appeared to be mainly a function of the difficulty in interpreting what the Lending Officers meant, as the responses were cryptic. At the least, the points were highly associated (and in many cases implicit in that the issues that were discussed in the focus group interviews) and highlighted in other interviews.

**Between Bank comparisons of interview formats**

It is not valid to make between-Bank comparisons of individual versus focus group interviews, as the research format differed between Banks. Further, it does not appear appropriate to compare the results of the Big Four Banks versus the two Medium Sized Banks given the variations in format and that the responses of the single Big Four Bank could have been idiosyncratic.

However, the general trends in responses indicated the issues raised were very similar regardless of size of Bank. The major variations appeared to be mainly a function of the level of centralisation and automation within the Secured versus Unsecured products, in turn associated with the experience level and expectations of the Lending Officers.

**Amount and type of feedback from individual versus focus groups**

Given the variance in the interview formats between Banks and the portfolio types, it was not possible to do a statistical comparison of the amount of information raised in the various interviews. However, as indicated in the summary of the coding shown in the Appendices, the individual interviews generally produced more information than the focus group interviews. For example, the Bank A individual interviews produced about 50% more data units than the equivalent focus group interview for both Secured and Unsecured products. However, the Bank C individual interviews for Unsecured products were an exception, where a lot fewer data units were obtained (even taking into account that only four interviews were conducted as theoretical saturation had been achieved).

The increased amount of information obtained from the individual interviews could simply have been a result of the additional air-time allocated to the individual interviews (five lots of 45 minute interviews as compared to one hour in total for the focus group). From the Banks’ perspective, the individual interviews were actually more effective – to obtain similar information, individual interviews required 225 minutes of Lending Officers’ time whereas focus group interviews required 480 minutes.
However, the number of units was not the only factor. With the caveat that there was not a statistical comparison, the individual interviews tended to both raise issues which were not necessarily core to the group (but a reflection of the individual’s situation) and produced more data units around a similar theme, as the individual interviewee was more likely to get “bogged down” in his or her individual issue.

In comparison, the group effect appeared to ensure that the key issues, according to the group as a whole, were addressed. Thus, there could be a higher level of confidence that the issues identified within a focus group were the primary issues to be addressed in the work group environment. There could be difficulty in determining what were the key issues through individual interviews.

The reasons for the better identification of the key issues in the focus group included: If an interviewee did get “bogged down” with a particular issue, the group tended to self-moderate; It was easier for the researcher to move the person on to the next topic in the focus group, as there was nearly always someone else to raise another issue; The researcher could be extremely conscious of sharing the air time between group participants, and not allow one person to focus on issues in which the rest of the group was not participating; and, In one-on-one interviews, it was hard to move onto the next topic if the individual was totally focused on his or her “big issue”.

Thus, for future research, the results of this thesis indicate that individual interviews should be used to examine an issue in depth. The focus group interview provides a parsimonious means to identify the major issues.

One final finding to be highlighted was the greater emphasis on more “personal” issues being raised in the individual interviews. Once again, whilst not a statistical “proof”, factors relating to the individual’s performance measurement and to good staff management appeared to be arise more frequently in the individual interviews. It appeared that interviewees were more comfortable talking about these more personal aspects of their jobs in the more intimate one-on-one environment.

**The moderator / interpretation effect**

I found that greater influence was exerted by the moderator in the individual interviews. As noted previously, the focus groups tended to self-moderate. The group situation also appeared to bolster the interviewees’ confidence in raising issues.

Conversely, in the individual interviews, the interviewer had more involvement and effectively led the discussion if the interviewee appeared awkward in discussing the issues. There appeared to be more...
influence of the interviewee trying to find the “right” answer for the researcher in the more intimate individual interviews.

5.4.10 Some final points and implications from the Lending Officer interviews

It has been found that, overall, the key issues raised between types of interviews, types of portfolios and verbal versus written notes were similar. The issues which received much more emphasis in one Bank as compared to the other Banks were generally related to idiosyncrasies within the Banks’ work practices (both current and the recent past).

It was nearly universally agreed that the credit risk attitude had moved towards an easing of policies. The primary forces were the level of competition driving a push for new business, increased productivity/volume focus and the comparatively low level of credit losses. The major ways in which the credit risk attitude was reflected throughout the Bank were related to formal policies, less tangible interpretations of policies and changes to scoring systems. There had been mixed feedback as to whether the current lending practices would lead to problems as severe as those experienced as a result of the excesses of the late 1980s.

Across all interviews, there was a strong message that the Bank needed to get the basics – the “Three Cs of credit” - right through an appropriate credit risk infrastructure to allow Lending Officers to do their job.

There appeared to be three major reasons for variations in the interview responses: The level of centralisation/automation and the Lending Officers’ experience within the Secured versus Unsecured products; Idiosyncrasies of the individual and focus group participants (partly as a result of the sampling process); Biases of the researcher when coding. The primary difference in the individual versus focus group interview format appeared to be that the individual interviews produced more and greater depth of data units, with the focus group interviews parsimoniously identifying the key issues to the overall group. In addition, individual interviewees tended to divulge more “personal” information.

Finally, it should be re-iterated that the key issues raised and the assessment of current lending practices could vary as a function of the stage in the business cycle. These interviews have been conducted in the mid to late 1990s - a particularly benign period in the Australian economy, where several years of recovery followed the harsh credit losses experienced by FIs in the early 1990s. Hence, it could be expected that the credit standards would be relaxed when contrasted with the “disaster” part of the credit cycle, when the focus was on re-building the quality of the asset portfolio and managing write-offs.
5.5 In closing …

This Chapter has outlined the methodology, analysis and initial implications of four key pieces of research in the thesis, namely the empirical analysis of credit rationing, interviews with Senior Credit Managers, the credit confidence survey and interviews with Lending Officers.

The next Chapter provides integrated credit risk models which incorporate the findings of the theoretical and empirical analysis of the thesis. As initially hypothesised in the research questions, an integrated approach and set of management tools is required to reflect the process to operationalise credit risk throughout the lending organisation.
Integrated Credit Risk Models

This Chapter addresses the research question: “How do the various elements of research form an integrated whole for decision making in credit risk management?”. The models which depend on theory/research across a number of areas or which have evolved throughout the thesis as a result new information are shown in this Chapter. The integrated models reflect the data, theory and methodological triangulation to emerge throughout the research, consistent with grounded theory. The theoretical and research elements which are self-contained within a Chapter are discussed only in terms of how they add to the overall picture.

The credit risk models outlined are: The revised models of credit risk attitude; the Balanced Credit Scorecard; and the model of “Credit Culture”. The key drivers of credit risk management in the 1990s are compared to prior cycles. Finally, an integrated framework of all of the models developed in this thesis is outlined.

6.1 The models of credit risk attitude – drivers and variance across the cycle

This Section highlights how the two credit risk models initially developed from the Senior Credit Manager interviews evolved throughout the research as more information became available. The revised models reflect both the results of the interviews with the Senior Credit Managers and the pertinent elements from the theory of decision making under uncertainty. The models address the research question: “What are the primary drivers of the credit risk attitude and how do they vary across the business cycle?”.

6.1.1 The revised models of credit risk attitude

The first model highlights the cyclical focus on credit risk management which typically occurs at different times in the business cycle. The model hinges on the concept of "credit risk attitude" - the organisation’s weighting of the (credit) risk versus (income) reward tradeoff at different points in time. The first model follows.
The second model examines the reasons for the cyclical nature of the credit risk attitude in terms of: Revenue growth factors, typically with a focus in the short term; Visibility of credit losses, typically in the longer term; and A range of organisational factors and individual biases which affect the decision making process differentially across FIs. The model is shown in Figure 6.2.
The models incorporate the concept of “disaster myopia” as posited by Guttentag and Herring (1984), whereby subjective probabilities fall below actual probabilities during periods in which no major shocks occur. As Guttentag and Herring (1984) argue, lenders can decrease their credit standards or allow their own capital to fall, without increasing the subjective probability of their own insolvency.

6.1.2 **Comparison with the prior models of credit risk attitude across the cycle**

Both models have been enhanced.

*The model of credit risk attitude across the business cycle*

The representativeness heuristic has been added to the model of the credit risk attitude across the business cycle, over and above the two biases incorporated by Guttentag and Herring (1984), namely the availability heuristic and the threshold heuristic. Consistent with Kahneman and Tversky (1979) and associated writers, the evaluation of the probability of the re-occurrence of a credit crisis is taken to be a function of the “recallability” of prior credit crises. In turn, the judgement of frequency is taken in this thesis to be primarily a function of three key heuristics. The availability heuristic specifies that the time since, frequency of and severity of the last credit problems affect the evaluation of the probability of the event occurring again. The threshold heuristic specifies that events with a very low probability of disaster are treated as having a zero probability of re-occurrence. The
The representativeness heuristic specifies that an individual estimates the probability of an event by comparing its essential features to the structure from which it originates. Thus, one estimates probability by assessing similarity or connotative distance.

**The model of the drivers of credit risk attitude**

A second enhancement to the model has been the revision from the “level of non-performing loans” to the “visibility of credit losses”. The level of non-performing loans is the most direct link with credit standards and the primary determinant of the visibility of losses and can nearly be used interchangeably. However, the visibility of credit losses appears more appropriate as the concept can reflect relativity. Firstly, a high level of non-performing loans, as compared to industry standards, may be acceptable if the profit model reflects the level of credit loss (that is, the credit costs are within budget). The scenario is particularly relevant if attention is on cutting operating costs rather than credit losses, due to differential reporting and accounting treatments. Secondly, if the costs are only a relatively insignificant proportion of the total product costs, other operating costs will demand management attention. Thirdly, a comparatively minor increase in problem loans, even if the absolute level is low, is likely to be highly visible and demand attention if an FI is in the shock/remorse or cautious optimism phase of the credit cycle. Finally, in a poor economic climate, standards may be eased somewhat if an institution has excess funds available for lending and a portfolio is demonstrating sound credit fundamentals.

The second model of credit risk attitude also has been amended to reflect the structural differences in external/internal conditions. One reason is that in the free format section for additional comments in the Credit Confidence survey, the respondents placed heavy emphasis on scoring, process and control improvements.

### 6.1.3 Additional heuristics, biases and motivations from the theories of decision making

The credit risk attitude models across the business cycle developed in this thesis are based on the premise that Credit Managers operate under a series of heuristics or biases when making decisions in an environment of incomplete information and uncertainty. The constructs of decision making under uncertainty are particularly pertinent in the retail lending context for a number of reasons.

Firstly, the environment of incomplete information and uncertainty is emphasised as typically there are long lag times between the decision/behaviour and the outcome (anywhere from 9 to 24 months, in my practical experience). Further, there are many factors external to the individual decision maker which could impact the outcome. Also, the probabilities of losses typically are extremely small and there are mixed prospects. Finally, there typically are opposing objectives in organisational
structures. Assuming a simple, bipolar approach, traditionally the performance management structure has rewarded greater risk aversion in Credit Managers (and a desire for tight credit standards) than Sales Managers, rather than a united goal of long-term profitable growth.

Another key assumption is that Credit Managers and Lending Officers act in a way in which they obtain the most value. Several key concepts from theories of decision making under uncertainty appear particularly pertinent in explaining the biases, largely related to Prospect Theory (Tversky and Kahneman, 1979 and 1992). The underlying factors affecting motivation towards a particular option also appear particularly relevant. The key, inter-related implications of the heuristics/biases for credit risk management are outlined below.

**Framing affects whether options are viewed as gains or losses**

The presentation of information as a gain or a loss impacts how organisational members (referred to in this Section as “managers”) react to the information. Managers want to protect gains and are risk-seeking with losses. They are more sensitive to decreases in their wealth than increases. The endowment effect means that managers do not want to give up opportunities they already have. Managers demand more as compensation to give up a good than they are willing to pay to acquire it. The status quo bias indicates that managers prefer to retain the status quo. Finally, whether a gain or loss is presented cumulatively or as a single decision may affect a manager’s response.

The implication is that information should be presented as a net gain over the life-cycle of the product (customer) segment. For example, the effects of increasing the cutoff for a credit score (which will improve credit quality but decrease revenue volume) can be presented separately as a reduction in both revenue and credit costs. However, this is a mixed prospect involving a loss in the short-term. The more attractive alternative to decision makers is to present the effect as a gain by showing the long-term net position.

**Do not expect Managers to “rationally” assess the probability and value of an option**

Deviations from “rational” analysis can be expected when estimating the probability and value of an option, as outlined in Sections 3.2.2 (prospect theory) and 3.2.3 (related constructs). A summary is provided in Table 6.1.
TABLE 6.1: Reasons why individuals do not “rationally” assess the probability and value of an option

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting of certainty, small and moderate/high probabilities</td>
<td>The certainty effect means that individuals can be expected to overweight outcomes which are certain relative to outcomes which are merely probable. The difference between very highly probable and certain is either neglected or exaggerated. In addition, individuals can be expected to be irrational around very small probabilities, either overweighting them or neglecting them completely (the threshold effect). However, individuals can be expected to underweight both moderate and relatively high probabilities.</td>
</tr>
<tr>
<td>Gain or loss</td>
<td>For non-mixed prospects, there is risk aversion for gains and risk seeking for losses of moderate or high probability. There is risk-seeking for small probabilities of gains and risk aversion for small probabilities of loss, as long as the outcomes are not extreme. Conversely, risk seeking is prevalent when people must choose between a sure loss and a substantial probability of a larger loss.</td>
</tr>
<tr>
<td>Isolation effect</td>
<td>The isolation effect indicates that individuals will only focus on the components that differentiate choices, resulting in inconsistent preferences.</td>
</tr>
<tr>
<td>Inherent risk orientation</td>
<td>Individuals can be expected to react differently to presenting information in association with their inherent approach to risk (whether they are risk seeking, neutral or averse).</td>
</tr>
<tr>
<td>Source dependence</td>
<td>The source dependence – competence hypothesis means that individuals prefer to gamble on their beliefs in situations where they are knowledgeable and on chance in situations where they are not.</td>
</tr>
<tr>
<td>Overconfidence</td>
<td>Individuals tend to be overconfident in their assessment of the level of knowledge they hold, and be excessively optimistic in terms of their talents, the likelihood of bad outcomes and the degree to which they can control their own fate.</td>
</tr>
<tr>
<td>Risk vs. uncertainty</td>
<td>More rational behaviour can be expected as the level of information increases, and the decision context moves from uncertainty towards risk.</td>
</tr>
</tbody>
</table>

There are a number of implications of these heuristics in the credit risk management arena. Often, decisions are made in the realm where it is certain that there will be a credit loss and the credit loss is likely to be small to moderate. Hence, with a twist to the traditional way of thinking about gains and losses, Credit Managers are likely to view a small/moderate, planned credit loss as being in the positive domain (and a large, unplanned credit loss as being in the negative domain). The interest and fee income generated by the retail loans should be significantly greater in size than the associated credit losses (or else the business venture should not be undertaken) - but the expected income may not eventuate, due to market forces in the future. However, in my experience, once retail loans have been booked, credit losses will inexorably follow. Hence, whilst it is relatively certain that credit losses of some magnitude will eventuate, it may not be as certain what will be the amount of marginal income generated by the portfolio of loans.

In this mixed-prospects context, the Credit Managers are more likely to overweight the importance of outcomes which are certain. They are likely to demonstrate risk averse preferences, choosing to have conservative/restrictive credit policies to maintain the planned, smaller credit losses. This also could
be viewed as underweighting the moderate probability of a larger loss, that is, a larger reduction in interest and fee income.

However, in the region of very small, extreme probabilities in which credit decisions sometimes can be made, these assumptions may be invalid. The threshold effect and the impact of marginal value means that the low probabilities (such as a substantial credit loss due to a “shock” to the economy) may be either discounted completely or exaggerated.

There also may be systematic differences in opinions between credit and sales. Credit Managers tend to deal in – and have their performance reward structure based on – the domain of credit costs. Sales Managers tend to deal in – and have their performance reward structure based on - the domain of revenue gains. Further, according to the source dependence-competence hypothesis, Credit Managers can be expected to be confident in their area of competence (that is, forecasting credit costs), leaving areas in which they are not competent (such as revenue growth) to chance. Conversely, Sales Managers can be expected to be confident in their area of competence (that is, revenue growth), leaving to chance areas in which they are not competent (such as credit cost management). The tendency towards over-confidence means that these effects may be exaggerated.

In addition, the isolation effect means that Credit Managers may focus on the components that differentiate choices in terms of potential credit losses (and not correctly take into account the value of potential revenue gains). Conversely, Sales Managers may focus on the components of revenue growth in isolation, essentially ignoring the credit costs.

Further, Credit Managers can be expected, on average, to be more inherently risk averse than sales managers.

In combination, these effects could exaggerate the propensity of each group to take contradictory positions in managing the risk/reward tradeoff.

Thus, Credit and Sales Managers can be expected to view information on a marketing campaign or a credit policy change quite differently – and both “irrationally”. Sales Managers can be expected to favour a credit policy which they interpret as being associated with a high probability option of increased revenue and possible large credit costs over nearly certain smaller revenue and possible smaller credit costs. Conversely, Credit Managers can be expected to interpret the same credit policy quite differently and favour the high probability option of reduced credit costs and possible large reduction in revenue.
By increasing the level of certainty (or decreasing the level of ambiguity) through additional information, the effects of biases or heuristics should be decreased. By improving the data and analytics (outlined in Section 2.3.4) and customer profitability (outlined in Section 2.7), Credit and Sales Managers can be expected to make more rational decisions.

Finally, greater congruence in decision making also can be obtained by aligning the way in which losses are viewed – by setting credit and sales managers the common goal of maximising long-term, risk-adjusted profit.

The “recallability” of events affects the judgement of their frequency
The availability heuristic means that the ease with which instances or associations come to mind influence present behaviour. Negative credit experiences are more likely to be recalled if they occur frequently, a short period of time has elapsed since the last occurrence, and the severity/emotional intensity of the last experience was high. This is likely to be much greater if the existing senior management have experienced prior, sizeable crises.

The representativeness effect means that an option will be assessed with respect to its similarity to prior occurrence(s). Changes in environmental factors or organisational policies and practices which have occurred since the last crisis will change the expected effect “this time around”.

In this thesis, it is assumed the availability and representativeness heuristics both play a role, rather than one or other playing a primary role. Hence, Credit Managers will make decisions based both on how readily the comparable prior situation comes to mind and how similar the current organisational and market environment is to the prior situation.

Finally, providing myopic, loss averse managers/colleagues with narrowly framed, frequent feedback about their outcomes can induce risk aversion in organisations. A practical example, in my experience, is provided by Senior Managements’ propensity to over-react to volatility in weekly delinquency statistics in an unsecured retail portfolio. The volatility can be driven by a simple dynamic such as the number of working days in the week. Rather than changing the number of collectors or collections strategies to address the volatile figures, the best option can be to wait for the month end statistics where the volatility experienced weekly is “averaged” out.

Organisational/ group dynamics can affect perceptions and induce short-termism
The group polarisation hypothesis implies that group effects exaggerate manager’s risk seeking or risk averting tendencies – even if the tendencies are counterproductive. Further, individuals take less responsibility for the actions of a group than for their own personal behaviour. In addition, short-
termism indicates that managers will allow short-term benefits to influence their long-term judgement. Also, “satisficing” indicates that managers within organisations attempt to achieve satisfactory results, rather than outright maxima. For example, if actual credit costs are no greater than Budget, the Credit Manager typically will be assessed as having performed well – even though the actual costs could have been smaller if the Credit Manager had more aggressively pursued technological innovations.

The effects can be taken into account through a formal performance reward structure which measures and rewards the long-term risk adjusted profit. Risk-adjusted performance measures (refer Section 2.3.2) are employed by some FIs in Australia - although, in my experience, there is debate around the accuracy of the methodologies used to forecast risk. In addition, the reward structure, cascaded from the CEO to the Lending Officer, can support desired organisational behaviours. All of the Top Nine banks have formal performance management processes in place in my experience, although they vary considerably in the level of support provided through strong career, training and developmental opportunities. Finally, the diligent application of credit authorities and the subsequent performance measurement of all credit staff – from Senior Credit Manager to Junior Lending Officer - can reinforce the individual’s responsibility for the credit decision (refer Section 6.2.3).

**Information and organisational learning is crucial**

An environment encouraging the use of information and ongoing organisational learning supports the long-term optimisation of FIs profits. Knowledge must not only be acquired but also distributed throughout the organisation with a common interpretation and then stored as organisational memory for future use. Good information also is needed as managers are more comfortable “gambling” in a situation in which they have competence – and information helps build the level of competence.

The level of information available to the decision maker should be viewed as a strategic variable. Acquiring additional information is subject to costs – but there may be an opportunity cost of not acquiring the information and moving the decision options towards less uncertainty. Credit Managers can be expected to have somewhat restricted access to information. One reason is the unavailability of reasonably priced benchmarking mechanism to compare the relative effectiveness of the credit lending practices and effects of competitors. In addition, there is uncertainty of the future economic inputs. If the information is available, there is the associated difficulty of combining the existing information into a predictive model. Finally, the information relating to credit-related issues appears to be more difficult to disperse than some other functional areas, as credit remains a relatively specialised area which is learnt primarily through experience.
Motivation: People will do what they are rewarded for – if they value the rewards

There has been a recurring theme throughout the thesis that organisational members will do what they are rewarded for if they value the reward, such as job security or a promotion. Adapted from Vroom’s (1964) Expectancy Theory, changing the behaviour of organisational members can best be achieved by making explicit the link between “expectancy” (the expectancy that the effort will lead to effective performance), “instrumentality” (the linkage between performing effectively and the desired outcome) and “valence” (the value the individual places on the outcome).

Key in managing this aspect of organisational behaviour is the performance management process, as highlighted previously in this Section.

6.1.4 Pro-active, counter-cyclical lending

A key theme to emerge from the Senior Credit Manager interviews and the practitioner’s literature has been the need to pro-actively and counter-cyclically manage credit across the business cycle.

From the discussion with credit specialists, one phenomenon which has not been raised explicitly in the credit rationing literature is that FIs have demonstrated an excessive tightening of credit policy as a result of crisis due to exogenous shock. It appears that sometimes FIs take too long to react to signals from the business/economic markets, but when they do take action they actually overreact and tighten credit policies more than the long term probability function indicates is necessary.

However, prior learnings should not be applied unquestioningly in determining the appropriate credit strategy. Simply maintaining a constant level of credit quality throughout the credit cycle may not be the most effective means to maximise the risk/reward tradeoff. Across the business cycle, the FI can optimise its risk / reward tradeoff if it can correctly gauge the phase of the business cycle and implement counter-cyclical lending through constantly reviewed lending policies and practices. It is too late to tighten credit after the downturn already has taken effect. Conversely, the credit criteria should be loosened sometime before the next upturn takes place.

However, such active, counter-cyclical lending can be a difficult strategy to follow for a number of reasons. Firstly, credit managers need to analyse the business cycle sufficiently to know what phase the cycle is in and when it is likely to move to the next phase. This is extremely difficult, given the role that highly infrequent (hence difficult to predict) exogenous shocks have played in prior business cycles. Secondly, there is the difficulty in being able to predict what will be the future outcome of current credit standards, given credit losses generally will take nine to twenty-four months to become evident, even in a stable economic environment.
Another reason for the challenge of counter-cyclical lending is the need for credit risk managers to identify the existing credit culture and disciplines throughout all levels of the organisation and maintain the rigour of constant, intensive review of lending policies and credit quality. The resourcing of the function can be made more difficult by the cost-cutting pressure under which FIs in Australia are operating. In addition, the credit risk manager must be able to tighten credit policies in the "good times" in preparation for the forthcoming downturn. This can be difficult as revenue cuts immediately will be evidenced whilst a reduction in losses may only occur in the following year, particularly if existing senior management does not have experience of the effect of prior business cycles. “The problem is recognising that and fighting and arguing with the marketing people”.

The ability to implement counter-cyclical lending also is impacted by issues outlined in the Chapter – The New Lending Environment. The key related issues include Section 2.5 – Customer (customer sophistication/profile, level of consumer debt, customer repayment behaviour and usage of loans) and Section 2.3.4 - Data and Analytics (uses and limitations).

### 6.1.5 Summary and conclusions of the models of credit risk attitude

The credit risk attitude is set at the strategic level by senior management and shows the FIs weighting of the (credit) risk versus (income) reward tradeoff at a point in time. A number of mutually reinforcing factors appear to move in relation to each other across the business cycle, namely: The “tightness” of credit standards, the level of non-performing loans (associated with the FI’s profitability), the visibility of credit losses, economic growth and consumer demand. In strong economic periods, visibility of credit losses tends to be low along with non-performing loans (due to low unemployment, high asset prices, etc), FI profitability is high, consumer demand is high, and credit standards are eased. In less benign economic periods, visibility of credit losses and non-performing loans are high (due to unemployment, deflated asset prices, etc), profitability is low consumer demand is low, and credit standards are tightened – potentially too late.

Figure 6.3 summarises the relationships between the impact on credit standards (that is, the credit risk attitude) and the key influencing factors which vary across the business cycle.
The models of decision making under uncertainty highlight that a range of apparently irrational behaviours can be expected in the credit risk management of retail lending portfolios. Given the number of possible permutations, it is difficult to determine which heuristic or bias could be evident in a decision-making context. However, by being aware of the potential drivers of decision making, Senior Credit Managers may bring more “rationality” into the decision making process of themselves.

In terms of the existing theories, the models are consistent with components of the models of prior researchers. The models: Expand upon the work of Guttentag and Herring (1984) using heuristics and biases from Kahneman and Tversky (1992) and Vroom (1964); Are consistent with Mueller’s (1998) model depicting lender responses across the stages of the business cycle; and Modify the KPMG (1996) model in terms of terminology and the use of “visibility of credit losses” as compared to profit.

No models have been identified which pull together the various components in a holistic view of the behavioural manifestations and the underlying reasons. This gives an opportunity for the next Section of the thesis.

6.2 The Balanced Credit Scorecard framework

This Section addresses the research question: “Is there an integrated framework for managing the credit risk attitude throughout the lending organisation?”. As initially hypothesised, research has not identified an existing management “toolkit”, that is, an integrated approach and set of management tools to operationalise credit risk throughout the lending organisation.
In this thesis, a Balanced Credit Scorecard has been developed with the intent of providing a comprehensive credit risk diagnostic framework. It is based on the performance measurement methodology of the Balanced Scorecard of Kaplan and Norton (1996) discussed in Chapter 4 – Analytical Tools II. The Balanced Credit Scorecard provides a comprehensive, integrated list of dimensions and underlying attributes which can be tailored by the FI to suit the individual credit risk context. The objective has been to identify the key factors which an FI could use to develop an organisation-specific scorecard, drawing from all units of thesis research.

The modification of the traditional Balanced Scorecard approach is discussed initially. Next, an overview of the six credit risk dimensions and details of each is provided. Reasons for variances from the credit practitioners’ literature is discussed. Examples of Balanced Credit Scorecards are then highlighted, along with an example of “how it can go wrong”. Finally, options as a diagnostic tool are highlighted.

6.2.1 **Modification of the Balanced Scorecard approach**

The Balanced Credit Scorecard has been developed as a credit risk diagnostic framework. The Balanced Scorecard developed by Kaplan and Norton (1996) has been followed in principle, although the approach used in this thesis varies from the standard format in two key ways.

Firstly, a Balanced Scorecard typically is developed within one organisation, whether for the entire organisation or an operational unit. However, the approach taken in this thesis has been to establish a Balanced Scorecard for the credit risk function.

The Balanced Credit Scorecard developed here lists most of the key measurement areas which an organisation can choose from in tailoring their own credit scorecard. I have made no attempt to identify the few key dimensions and their related targets, as these need to be tailored for each organisation. A simple listing of the factors, without prioritisation, is provided given the consistent feedback from the interviewees and the credit practitioners’ literature that all factors must be in place for the credit process to be effective – “the chain is only as strong as the weakest link”. Thus, rather than focus on trying to identify a few critical measures, nearly all issues identified throughout the research are included. The approach acknowledges that individual organisations and units have to tailor their own measures, choosing measures which are concise, comprehensive and reflect the organisational context. Further, individual units have different emphases, and only some of the dimensions may apply to individual units, with weightings reflecting the importance of an issue.
The Balanced Credit Scorecard framework is established as six dimensions with a number of attributes within each dimension. The dimensions emerged from the “editing” approach, as described in the Chapter – Analytical Tools II. There has been no attempt to give a format of measurements and targets for each of the dimensions or attributes. There is some duplication amongst the attributes, where an issue was seen to be particularly important in a couple of dimensions. The objective has been to establish a base from which credit managers could isolate, for their organisation, the most important features and ascribe measures and targets to these.

Critical success factors are included within the Balanced Credit Scorecard framework. In my practical experience working with and implementing a number of Balanced Scorecards, the critical success factors provide a “guiding light” from which the measures within the Balanced Credit Scorecard can flow.

The Balanced Credit Scorecard framework has been established at a high level for the end-to-end credit risk management function. A series of Balanced Scorecards would cascade down from this, relating to each of the functional units within the credit risk organisation, such as assessment and collections.

The Balanced Credit Scorecard framework incorporates the relevant information gathered throughout the thesis from the literature reviews, the Senior Credit Manager interviews, the Lending Officer interviews, discussions with leading-edge credit risk consultants and my practical experience. The authors primarily reflected include: Barr and McWhorter (1992), Collins and Raeber (1999), Howell et al (1998), McKinley (1990, 1998), Morsman (1994) and Mueller (1993, 1994c, 1998).

6.2.2 The Six Dimensions

In summary, there are six key, interrelated dimensions required for a robust credit risk culture and framework, as summarised in Table 6.2 (following page). For each of the six dimensions, the primary underlying factors are detailed in the remainder of Section 6.2. The factors are presented as a list, or catalogue, of items. The formatting reflects that the Balanced Credit Scorecard is designed as a comprehensive, integrated list of dimensions which can be tailored by the FI to suit the individual credit risk context.
### TABLE 6.2: The dimensions of the Balanced Credit Scorecard

<table>
<thead>
<tr>
<th>CREDIT PRINCIPLES</th>
<th><strong>The underlying credit principles support the growth of long-term profitable lending portfolios.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Credit quality is a strategic objective, with balanced credit/asset growth and operating cost objectives</td>
</tr>
<tr>
<td>2.</td>
<td>There is a visible commitment to credit quality from the CEO and Senior managers</td>
</tr>
<tr>
<td>3.</td>
<td>Accountability exists at all levels, with roles and responsibilities clearly articulated</td>
</tr>
<tr>
<td>4.</td>
<td>The communication of credit risk appetite, strategy and policy is open, honest and active</td>
</tr>
<tr>
<td>5.</td>
<td>Meaningful information is used to constantly improve and control the credit cycle</td>
</tr>
<tr>
<td>6.</td>
<td>Credit risk management is customer-oriented and responsive</td>
</tr>
<tr>
<td>7.</td>
<td>Credit authorities are carefully delegated</td>
</tr>
<tr>
<td>8.</td>
<td>There is an appropriate segregation of duties, with independence of the credit function</td>
</tr>
<tr>
<td>9.</td>
<td>Credit policy is managed centrally and applied consistently</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CREDIT POLICY</th>
<th><strong>Credit policy which reflects the credit philosophy and risk attitude is consistently managed across the FI.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Credit policies reflect the strategic risk appetite</td>
</tr>
<tr>
<td>2.</td>
<td>Exceptions are carefully managed</td>
</tr>
<tr>
<td>3.</td>
<td>Credit policy is well documented and communicated</td>
</tr>
<tr>
<td>4.</td>
<td>There is stability, consistency and ongoing review of credit policy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PORTFOLIO RISK MANAGEMENT</th>
<th><strong>Portfolio dynamics are well-dimensional and managed to achieve consistency and predictability of credit losses and credit operating costs.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Data and analytics assist in optimising portfolio risk measurement and management</td>
</tr>
<tr>
<td>2.</td>
<td>Data integrity is pro-actively managed</td>
</tr>
<tr>
<td>3.</td>
<td>The loan evaluation models are appropriate for the asset class</td>
</tr>
<tr>
<td>4.</td>
<td>Portfolio analysis enables counter-cyclical lending</td>
</tr>
<tr>
<td>5.</td>
<td>There is diversification of risk</td>
</tr>
<tr>
<td>6.</td>
<td>There is active management of provisioning and capital allocation, with non-volatile and predictable losses</td>
</tr>
<tr>
<td>7.</td>
<td>Constant testing provides early detection of factors which could affect portfolio and practice integrity</td>
</tr>
<tr>
<td>8.</td>
<td>End-to-end product (or customer) profit models exist and reflect lifecycle profitability</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CREDIT PROCESS &amp; SYSTEMS</th>
<th><strong>The credit processes and systems are cost-effective and meet customer expectations for timely, consistent servicing.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Systems and workflows are clearly defined and integrated</td>
</tr>
<tr>
<td>2.</td>
<td>The levels of automation, task completion and empowerment are appropriate</td>
</tr>
<tr>
<td>3.</td>
<td>Service standards are clearly defined, measured and communicated</td>
</tr>
<tr>
<td>4.</td>
<td>There is respect for the credit basics</td>
</tr>
<tr>
<td>5.</td>
<td>Appropriate physical infrastructure / tools are in place</td>
</tr>
<tr>
<td>6.</td>
<td>Distribution channels, including third party service providers, are actively managed</td>
</tr>
<tr>
<td>7.</td>
<td>Contracts are enforceable, meeting regulatory and Insurer’s requirements</td>
</tr>
<tr>
<td>8.</td>
<td>Data and analytics assist in optimising the effectiveness of credit operations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAFFING &amp; ORGANISATION</th>
<th><strong>The organisation structure and performance rewards support the retention of sufficient capable and motivated staff.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The roles of the various individuals and committees comprising the end-to-end credit risk management organisation are clearly articulated and empowered</td>
</tr>
<tr>
<td>2.</td>
<td>The organisation status/reward structure reflects the importance of the credit roles</td>
</tr>
<tr>
<td>3.</td>
<td>The performance measurement / reward structure reflects credit quality</td>
</tr>
<tr>
<td>4.</td>
<td>Capable credit staff are recruited, trained and retained</td>
</tr>
<tr>
<td>5.</td>
<td>The staffing levels are adequate</td>
</tr>
<tr>
<td>6.</td>
<td>The changed requirements for Credit officers roles have been managed</td>
</tr>
<tr>
<td>7.</td>
<td>Flexible working conditions are in place</td>
</tr>
<tr>
<td>8.</td>
<td>The FIs credit policies and practices support the Credit Officers’ sense of integrity/morality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTROLS</th>
<th><strong>Controls prevent unexpected strategy and practice failures, whilst allowing flexibility of day-to-day management.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>An independent auditing unit reviews operational and portfolio practices</td>
</tr>
<tr>
<td>2.</td>
<td>An independent asset review unit tests the Business Plan assumptions affecting credit risk</td>
</tr>
<tr>
<td>3.</td>
<td>Controls are managed actively for day-to-day practices of internal operations and third party services</td>
</tr>
</tbody>
</table>
6.2.3 Dimension one - credit principles

<table>
<thead>
<tr>
<th>CREDIT PRINCIPLES</th>
<th>The underlying credit principles support the growth of long-term profitable lending portfolios.</th>
</tr>
</thead>
</table>

1. Credit quality is a strategic objective, with balanced credit/asset growth and operating cost objectives
2. There is a visible commitment to credit quality from the CEO and Senior managers
3. Accountability exists at all levels, with roles and responsibilities clearly articulated
4. The communication of credit risk appetite, strategy and policy is open, honest and active
5. Meaningful information is used to constantly improve and control the credit cycle
6. Credit risk management is customer-oriented and responsive
7. Credit authorities are carefully delegated
8. There is an appropriate segregation of duties, with independence of the credit function
9. Credit policy is managed centrally and applied consistently

1. Credit quality is a strategic objective in business planning, with balanced credit/asset growth and operating cost objectives
   - Balanced credit quality and asset growth objectives exist
     a) The business plan reflects an appropriate balance between credit quality and asset growth.
     b) There is a long term as well as a short term perspective in business planning. Quality business that could take a long period to earn is pursued. Long-term relationships with solid customers that provide 80% of profits are sought. There is total consistency in the financial institution’s search for customers.
     c) There is regular review of the appropriateness of business plans. Effort is redirected if expectations for product and business lines are not being achieved.
     d) There is independent judgment, rather than “following the herd”.
     e) Credit quality is included as a strategic objective.
   - Balanced credit quality and cost cutting objectives exist
     a) The business plan reflects an appropriate balance between credit quality and cost objectives.
     b) A cost-cutting focus does not result in a breakdown in controls or practice standards, which may only be evidenced in the longer-term.
   - There is an institution versus profit centre profit orientation
     a) Perspective and proportion is clearly demonstrated, with institutional concerns being placed ahead of profit centre concerns.
     b) Business planning and implementation is based on cross functional input.
     c) Common drivers (measures and rewards) exist between areas, such that credit policy, marketing, systems and operations work together.
The financial institution demonstrates knowledge of its core capabilities

a) The institution understands its core capabilities in terms of the inherent portfolio credit risk (the underlying risk associated with the nature of the product) and transactional credit risk (the review of the individual credit transactions and the systemic risk associated with portfolio management of the credit process infrastructure).
b) The FI knows and can articulate its proper business and lending areas, control its growth, maintain objectivity in evaluating risk and not over react to transient phenomena.
c) The FI manages effectively the risk/reward dynamics of each asset class. There is a thorough understanding of a product’s or target markets’ risk profile and consistency with business strategies prior to launch. Credit staff are an integral part of the planning processes.
d) There is scrutiny of the business and of the competitive environment in which the bank finds itself. The examination is the basis for gathering market data and formulating strategy to fit institutional priorities, standards, resources and competence. Acceptable borrowers and risk acceptance criteria are defined, and market and product priorities are set.

The credit culture provides a philosophical framework to achieve the FI’s risk tolerance

a) The FI provides a philosophical framework for day-to-day decision making, above the procedural level. It demonstrates a sound value system that will cope with change.
b) Managers evaluate the credit culture and develop programs to improve and strengthen the credit culture.
c) New lenders receive extensive indoctrination as to “how we do things around here”. Discussions are explicitly held on the underlying credit principles, the loan policy, the importance of loan quality and so on.
d) There is constant mindfulness of the FI’s risk taking parameters, which have been formally dimensioned and communicated.
e) Processes are in place to confirm that the Senior Credit Managers’ current credit risk attitude is reflected in credit standards and practices in the business units. Thus, there is alignment between the Lending Officers perceptions of the credit risk attitude and the Senior Credit Managers’. The rigour of constant, intensive review of lending policies and credit quality is maintained.
f) There is a preparedness to tighten credit policies in the "good times" at the expense of short term revenue or operating cost, in preparation for the inevitable downturn. Thus, the FI demonstrates counter-cyclical lending.
g) There are “credit heroes” in the Bank. The best credit people are held as role models or examples of successful performers.

The financial institution learns from experience

a) The financial institution explicitly aims to learn from prior experiences related to asset growth, cost cutting and credit quality.
b) To decrease the incidence of “short memories”, organisational learnings from prior business cycles are documented and communicated, management controls are specified and the longevity of capable credit people is supported.
Pricing for risk is maintained across the business cycle
   a) Loans are priced differentially to reflect credit risk.
   b) The ability to price for risk is established: “If all go the way of customer relationship pricing and customer scoring and so on, which we all say we want to do, part of this is having the ability to price on risk” (Senior Credit Managers interviews).
   c) Competitive benchmarking is conducted, but the FI does not “blindly follow the pack”. The FI is prepared to exit a portfolio segment if forecasts indicate that the competitive market makes the segment appear unprofitable in the longer term.
   d) The FI only offers products or services that customers want and that can be delivered with excellence and at a profit. The FI may not always on the cutting edge, but what is sold, works.

2. There is a visible commitment to credit quality from the CEO and Senior Managers
   a) The credit culture is given the visible, wholehearted support of the CEO. The commitment to credit principles and disciplines stands out clearly and is unquestioned, reinforcing the strategic objectives through behaviours. The CEO demonstrates awareness that the avoidance of institutional loss is his or her mandate. The commitment to credit quality is defined anew each time that management and the CEO act on a loan request that requires the highest level of approval.
   b) The CEO oversees all areas affecting credit, including strategic business planning and target marketing, taking a role in risk approval and ensuring the FI’s resources are wisely allocated.
   c) The CEO rewards quality and substance, which are evidenced in company heroes.

3. Accountability exists at all levels, with roles and responsibilities clearly articulated
   a) Staff are personally responsible for their lending decisions
      i) Personal responsibility is critical. Staff at all levels across the FI are accountable for ensuring their thoroughness in identifying, controlling and managing risk.
      ii) Each credit officers understands what the FI expects and the reasons behind its policies, what risks are acceptable, why they are acceptable, how they should be structured and priced.
      iii) Where exceptions require referral to a higher authority, Credit Officers participate in the credit decision. The Lending Officer personally recommends a loan for approval, based on his or her belief that risk and reward are properly balanced.
      iv) Performance measures reflect the specific accountability of each credit role for quality.
   b) Accountability within and between organisational units is clear
      i) Line management takes responsibility for managing long-run credit losses and operating costs, regardless of organisational structure.
      ii) Where responsibility for credit risk management has been largely assigned to the Line of Business, accountabilities between Line of Business and centralised credit risk management are clearly articulated and documented.
      iii) Roles and responsibilities of each person in the credit risk organisation – and their interactions - are clearly articulated.
4. The communication of credit risk appetite, strategy and policy is open, honest and active

- A clearly written credit strategy, appetite and policy exists, has been approved by the Board and is consistently, comprehensively and frequently communicated.
- The rationale for policy changes is clearly understood and documented.
- Lenders, managers, auditors and customers can articulate the FI’s lending philosophy. There is good communication of a common credit language, to the extent that the same vocabulary is used, at every level. The most junior Credit Officer in the most remote location knows the credit language and what is expected (that is, what risks are acceptable with what loan structure at what price).
- There is two-way communication, with Credit Officers providing input into the credit strategy, policy, process and procedures.
- Communication to Credit Officers includes the intent of the policy, showing its fit within the “big picture”.
- There are group discussions on referred loan applications. Lenders understand what type of loans the FI wants, so that any referrals are an open, cooperative, educational effort.
- The communication between units offsets the cessation of the end-to-end ownership of the borrower (due to functional specialisation within different departments), so that communication encompasses the entire credit cycle.
- The credit culture, risk appetite and credit practices are deliberately managed through formal mechanisms (such as credit policy statements and key performance indicators) and informal mechanisms (such as Credit Managers’ emphasis on quantity versus quality of actioning and the hindsighting of declined applications for subsequent approval).

5. Meaningful information is used to constantly improve and control the credit cycle

- All aspects of the credit cycle (strategy, policy, portfolio, credit process and systems, controls, staffing and organisation) are constantly tested to identify opportunities for enhancement based on ongoing portfolio and process review.
- Information sharing between organisational units (within / between credit and line of business units) is co-operative and transparent.
- Resources are allocated to obtaining comprehensive, timely and accurate data.
- There is a belief – or passion - that information is a critical component to drive a modern, statistically driven, high-volume credit risk portfolio.

6. Credit risk management is customer-oriented and responsive

- Credit risk management is responsive to customer expectations
  a) The credit organisation supports the requirements of customers for flexible service and competitive product offers.
  b) Existing customers receive service and product offers which encourage the customers’ retention, over and above the offerings made to new customers.
  c) Processes are in place to overcome the lack of the traditional relationship with the borrower, in terms of offering the borrower the level of service and convenience the customers require.
- Credit risk management is responsive to other units in the FI
  a) Credit risk provides a responsive service to other units within the FI. The issue has become more important as the responsibility for credit increasingly has moved to the Line of Business, with centralised credit providing more of an advisory role.
7. **Credit authorities are carefully delegated**

- The Officer’s professional reputation, personal credibility and status in the reward structure are heavily dependent on the appropriate use of the delegated credit authority.
- Delegations are granted to proven, experienced individuals based on their personal attributes and knowledge (such as character, judgement, skills, experience, education, training) and proven skills, rather than title or position.
- Each Credit Officer uses independent judgement and is accountable for decisions.
- Delegated credit signatories are clearly defined and documented.
- There are limited single approval delegations, with most approvals requiring two or more signatures. The practice increases the quality of credit decisioning through both the strength in the combination of skills and experience and the decreased probability of negligence or fraud.
- Delegated approval levels are appropriate for business requirements, given the risk profile of the asset class.

8. **There is an appropriate segregation of duties, with independence of the credit function**

- There is segregation of duties within the credit function
  a) Credit policy (including risk assessment/rating programs) is established and reviewed by an authority independent of the lending operational roles.
  b) Duties within the credit operational areas are kept separate (for example, the person approving a loan application is not able to approve the disbursement of funds).
  c) Changes to credit decision systems (such as scorecards) are maintained independently of credit operations.
- There is independence of the credit function
  a) A Senior Credit Officer has been appointed, with a direct reporting line to the CEO (rather than through line management).
  b) Credit policy (including risk assessment / rating programs) is established by an authority independent of marketing roles.

9. **Credit policy is managed centrally and applied consistently**

- Credit policy is centralised to act as a “credit conscience” and provide an organisation-wide approach to credit risk.
- There is consistent, clear cut commitment to high credit standards and performance (the financial institution does not “blow hot and cold”) which provides consistency and stability between business units and across the business cycle. “... If you are consistent in your credit assessment through what you are doing, you will take care of the economic cycle by that means.” (Senior Credit Manager interviews).
- There is an appropriate level of centralisation or decentralisation of operations according to organisational imperatives. Offsetting controls are in place if there is considerable decentralisation of credit operations.
6.2.4 Dimension two - credit policy

<table>
<thead>
<tr>
<th>CREDIT POLICY</th>
<th>Credit policy which reflects the credit philosophy and risk attitude is consistently managed across the FI.</th>
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</thead>
</table>

1. **Credit policies reflect the strategic risk appetite**
   - The credit strategies and policies reflect the FI’s assessment of acceptable levels of transactional and portfolio credit risk.
   - Policies reflect the appropriate tightness or ease of credit policy for the portfolio and clearly define the type of risk asset in terms of credit risk assessment guidelines, loan structure/pricing, target market and product, promotion and delivery.
   - There is a clear picture of the credit strategy driving the use of the portfolio-based methodologies. Controls are established to ensure the strategic direction is encapsulated in policies and practices. For example, when implementing a credit score, ongoing management of the scorecard ensures consistency with the FI’s credit risk appetite.

2. **Exceptions are carefully managed**
   - Exceptions to policy are infrequent, properly justified, carefully documented and monitored for their subsequent credit performance.
   - Exceptions are dealt with flexibility, but not looseness.
   - If there are a high level of policy exceptions, the policy is reviewed to determine whether a change to policy or other actions are required.

3. **Credit policy is well documented and communicated**
   - Any changes to credit policy are fully researched and documented, with the expected portfolio and organisational effects being identified, measured, managed and monitored.
   - Credit policies are communicated throughout the FI, aligning both the formal and informal mechanisms.

4. **There is stability, consistency and ongoing review of credit policy**
   - A uniform approach to risk-taking is applied, which provides stability and consistency.
   - Credit strategy and policies are constantly tested to identify opportunities for enhancement based on ongoing portfolio and process review.
   - There is consistency of approach between areas. Credit policy ensures that all products held by one customer (that is, the total lending exposure) are taken into account when making the lending decision.
6.2.5 Dimension three - portfolio risk measurement and management

<table>
<thead>
<tr>
<th>PORTFOLIO RISK MANAGEMENT</th>
<th>Portfolio dynamics are well-dimensional and managed to achieve consistency and predictability of credit losses and credit operating costs</th>
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</table>
1. Data and analytics assist in optimising portfolio risk measurement and management |
2. Data integrity is pro-actively managed |
3. The loan evaluation models are appropriate for the asset class |
4. Portfolio analysis enables counter-cyclical lending |
5. There is diversification of risk |
6. There is active management of provisioning and capital allocation, with non-volatile and predictable losses |
7. Constant testing provides early detection of factors which could affect portfolio and practice integrity |
8. End-to-end product (or customer) profit models exist and reflect lifecycle profitability |

1. Data and analytics assist in optimising portfolio risk measurement and management

- The management information system affords effective identification, measurement, management and monitoring of the risk profile of the transactional and inherent portfolio risk for the major portfolio segments.
- Data analysis is seen as a critical success factor for the FI’s success. Decisions are based on comprehensive data gathering and analysis are a requirement for major portfolio decisions.
- Regular monitoring and reporting of key indicators exists for internal and regulatory purposes.

2. Data integrity is pro-actively managed

- The integrity of demographic, credit performance and transaction data capture is managed through a rigorous, documented process. Resources are immediately allocated if any deviations in data integrity (both accurate data capture and reporting) are detected.
- The accuracy of reporting of credit-related data to regulators and internal management is closely monitored.

3. The loan evaluation models are appropriate for the asset class

- Rigorous, independent loan evaluation models have been developed, including:
  a) Credit scoring systems or an equivalent for retail loans
  b) An objective risk rating systems for small business loans (where they overlap the retail segment)
- The loan evaluation models are appropriate given:
  a) Portfolio risk profile
  b) Volume and average size of loans
  c) Homogeneity of product structure and customer type
  d) Experience and competence of credit officers
  e) Availability of information
- The loan evaluation models are subject to ongoing review to test their accuracy and identify opportunities for enhancement.
- Credit Officers understand the underlying logic of the loan evaluation models and can articulate this to customers.
4. **Portfolio analysis enables counter-cyclical lending**
   - The portfolio analytics support non-cyclical lending.
   - The organisation is structured to react pro-actively to early warning signals, changing credit policy and practice where required.

5. **There is diversification of risk**
   - Diversification is actively managed to avoid excesses and decrease the likelihood that a single event or series of events can jeopardise the soundness of the FI or its ability to function normally.
   - Changing conditions are anticipated and exposure is reduced ahead of negative factors taking effect.
   - Acceptable and predictable levels of credit losses and loss volatility are maintained.

6. **There is active management of portfolio provisioning and capital allocation, with non-volatile and predictable losses**
   - The FI has a thorough, documented and constantly reviewed process for estimating loss in the portfolio (segments) using advanced portfolio techniques. The entire process can be readily defended. Fagg (2001) provides an overview of key portfolio methodologies in retail lending.
   - The FI’s ability to absorb losses and the minimum expected return acceptable for a specific level of risk are actively managed for each portfolio segment.
   - The capital the FI is willing to allocate to any risk concentration is appropriate.
   - Appropriate reserves are held against loans made.

7. **Constant testing provides early detection of external and internal factors which could affect portfolio and practice integrity**
   - Attention is focused on factors affecting profit-at-risk within the portfolio:
     a) The priority of attention is driven by the size and volatility of portfolio dollars at risk, both currently and forecast changes. Particular attention is given to rapidly growing portfolios with high inherent risk.
     b) Major trends in environmental factors which could have a material effect on the portfolio are incorporated into the analysis, including: Economic, market, socio-demographics, ethical, geo-political and legal/regulatory, particularly credit legislation.
     c) Concentrations and significant changes in the mix of the portfolio composition are identified, such as rapid growth/decline in outstandings, changes in credit score profiles.
     d) Changes in loss absorption capacity are tracked, including decreased margins/fee income, impaired assets and credit losses.
     e) Significant changes in marketing/product management strategy are monitored, including target market, product features, pricing, promotion, product delivery/servicing.
     f) Significant changes in credit risk management strategy are monitored, including the implementation of risk grading systems or scoring techniques and changes in the structure and conditions of loans.
     g) Significant changes in credit risk management practices are monitored, such as changes in the level of automation, changed staff performance measures, changes in the quality review process and changes in the number and capability of credit staffing.
     h) Formal processes allow concerns to be identified and raised by external parties (auditors or regulators) and senior management.
   - There is constant testing of portfolio management assumptions
     a) The methods used to identify portfolio parameters, their interactions and parameters are constantly tested and enhanced.
8. **End to end product (or customer) profit models exist and reflect life cycle profitability**

- Product and/or customer pricing models accurately dimension the revenue generated and operational and credit costs - including collections - over the life cycle of the product/customer.
- Pricing information is available to Lending and Sales officers for individual transactions.
- The FI is aggressive in pruning out customers if they do not appear to be profitable in the longer term.
- Good avenues for non-price competition are sought. “*Everything is driving us back to the only way to compete is on relationship issues and relationship pricing - we can have the same product, more or less*” (Senior Credit Manager interviews).
- The cutoff scores for credit, application and customer scores are calculated to ensure that the marginal profit of the loans which are approved will be positive.
- Customers are offered value-added products, rather than “harassed with cross-sell”.
- Customers are sold the product which best meets their needs rather than the product which is rewarded through the FI’s performance reward structure. For example, an interviewee argued that mobile lenders were selling revolving credit mortgages rather than the more appropriate principal and interest mortgages because the former were paid a higher commission.
- Integrated credit and marketing objectives and methodologies support the acquisition and retention of long-term profitable customers (Fagg, 1999).
6.2.6 Dimension four – credit process & systems (assessment/servicing/collections)

<table>
<thead>
<tr>
<th>CREDIT PROCESS &amp; SYSTEMS</th>
<th>The credit processes and systems are cost-effective and meet customer expectations for timely, consistent servicing</th>
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<tr>
<td>1. Systems and workflows are clearly defined and integrated</td>
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<td>2. The levels of automation, task completion and empowerment are appropriate</td>
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<td>3. Service standards are clearly defined, measured and communicated</td>
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<td>4. There is respect for the credit basics</td>
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<td>5. Appropriate physical infrastructure / tools are in place</td>
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<tr>
<td>6. Distribution channels, including third party service providers, are actively managed</td>
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<td>7. Contracts are enforceable, meeting regulatory and Insurer’s requirements</td>
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<tr>
<td>8. Data and analytics assist in optimising the effectiveness of credit operations</td>
<td></td>
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</tbody>
</table>

1. Systems and workflows are clearly defined and integrated

- Systems and workflows support the credit process offering customer service, cost-effectiveness of operations, business development opportunities and risk control and standardisation (the benefits are outlined in detail in the Chapter – Trends).
- Sound lending policies are supported by formalised and documented procedures.
- A quality review process ensures compliance of practices with policies and standards.
- The FI’s credit process is complete. The necessary “work-arounds” are in place to compensate for any gaps or deficiencies in the total process.
- Decentralisation is closely managed: “You can decentralise as long as you make sure you have a rigorous program of making sure that people behave in line with their discretions and the policies are being adhered to” (Senior Credit Manager interviews).
- Automated workflow management systems and decision support systems are appropriate for the asset class and volumes of accounts.

2. The levels of automation, task completion and empowerment are appropriate for the volumes and complexity of business

- The level of automation of processes is appropriate for origination, servicing, and collections given the portfolio dynamics, largely associated with the
  a) Volume and average size of loans
  b) Nature of the work - repetitive / administrative / complex credit decisioning
  c) Homogeneity of product structure and customer type
- The level of task completion (with the extremes being end to end ownership of a process through to functional specialisation) is appropriate for the task.
- Administrative procedures are appropriate given both the risk profile of the lending activity and the experience level of staff.
- Roles and responsibilities are clearly defined, with an appropriate level of empowerment.
- Credit Officers have the right to override the scoring system or policy rules on a judgemental basis for a small percentage of applications. The exceptions are be tracked for subsequent credit performance.
3. **Servicing standards are clearly defined, measured and communicated**

- Standards for credit approval, variations and collections actioning are established.
- The amount of information required for credit approval and variations are established and communicated with customers.
- Customer expectations and perceptions of value are continuously monitored. Criteria for evaluating performance include:
  a) Consistency in credit origination criteria
  b) Turnaround time for loan origination and variation
  c) Responsiveness to customer queries and problems
  d) Understanding of the business and industry
  e) Fit between the solution and customer’s needs (Brown and Hennesy, 1998)

4. **There is respect for the credit basics**

- There is a respect for the credit basics. The “Three Cs” are important and loan craftsmanship is demanded. For a discussion of the “credit basics” refer to the *Journal of Lending and Credit Risk Management* publication on the Credit Cycle, particularly Dorfman (1998), and Mueller (1998).
- Accurate and objective investigation and evaluation are conducted for each loan application.
- Only credit proposals which both are consistent with the portfolio credit risk profile and are the most suitable financing structure for the borrower are considered.
- There is an understanding of the reasons why the “average” borrower defaults:
  a) Unemployment/bankruptcy
  b) Ill health
  c) Relationship breakup
- In the event of default, financial counselling and adjusted repayment plans are offered. The issue is particularly pertinent given the limited flexibility in payment restructuring in some securitised portfolios.
- The calculation of affordability incorporates a tolerance for adverse effects on interest repayments (such as an increase in interest rate or loss of rental). The FI’s prudential responsibility is thus catered for, acknowledging that the consumers “on average” are not good at financial planning.
- Appropriate levels of accurate information are obtained to:
  a) Offset the removal of face-to-face contact, whereby the Branch Manager traditionally interviewed every loan applicant and obtained full financial information and insights. The junior Sales Consultant, who may or may not interview the applicant, is unlikely to be an expert on the customer.
  b) Ensure the FIs prudential obligations are maintained by taking “reasonable care” in calculating affordability and offering new and existing borrowers a level of debt which, in the FIs experience, is appropriate given the borrowers’ income and lifecycle position.
  c) Make prudential, informed decisions to “protect customers from themselves” and offer a loan which appears to be affordable, based on the borrowers’ income and lifecycle position.

5. **Appropriate physical infrastructure and tools are in place**

- The physical infrastructure (such as computer equipment, workstations, stationary, telephones, electronic connections, etc) supports the requirements of the credit operation
- The physical infrastructure for credit is of quality comparable with other functional areas, emphasising the importance of credit risk management.
6. **Distribution channels, including third party service providers, are actively managed**

- Direct distribution channels (including Branch network and mobile lenders) are carefully managed, with performance measures and rewards being structured to avoid sub-optimisation.
- Third party sources of business, including Introducers/Brokers are carefully managed
  a) with performance measures and rewards being structured to avoid sub-optimisation
  b) Comprehensive service standards (or service level agreements) are established and monitored regularly for third party service providers such as valuers, mercantile agents and legal firms.
  c) Allocation of work to third party service providers is based on a comprehensive comparison of their performance compared with that of their competitors (for example, the recovery rates of mercantile agents).
  d) There is not a reliance on one service provider for a particular service. Healthy competition is used to improve service and pricing to the FI.
- Profit models accurately reflect the cost of attracting, servicing and retaining customers through the various distribution channels.

7. **Customer contracts are enforceable, meeting regulatory and Insurers’ requirements**

- The legal documentation ensures the loan contracts are enforceable, from both a legal and a third party insurer’s perspective. Of particular importance in the Australian retail lending environment is the Uniform Consumer Credit Code.
- The business process ensures the loan contracts are enforceable, from both a legal and a third party insurer’s perspective.

8. **Data and analytics assist in optimising the effectiveness of credit operations**

- The management information system affords effective identification, dimensioning, management and monitoring of transactional (operational) risk at the levels of the work group and the individual credit officer. The most visible risks and the possible risks are likely to be identified.
- The management information system affords effective identification, dimensioning, management and monitoring of inherent portfolio risk.
- Data analysis is seen as a critical success factor for the financial institution’s success.
- Operational effectiveness monitoring assists smooth credit process by tracking: Volumes; Productivity; Effectiveness; Customer service; and Financials.
## Dimension five - staffing and organisation

<table>
<thead>
<tr>
<th>STAFFING &amp; ORGANISATION</th>
<th>The organisation structure and performance rewards support the retention of sufficient capable and motivated staff</th>
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</table>

1. **The roles of the various individuals and committees comprising the end-to-end credit risk management organisation are clearly articulated and empowered**
   - The roles of the various individuals and committees in the end-to-end credit risk management organisation (as shown in Section 2.4.3, Table 2.4) are clearly articulated and empowered
   - The possible effect of riskier decision making due to the group-effect is acknowledged. As Morsman (in Howell et al, 1998, pg 57) comments "One of the least-evaluated lending processes is loan approval, in particular, the credit committee. There is some empirical evidence to suggest that committees make riskier decisions than individuals who are fully responsible for their results”.

2. **The organisation status/reward structure reflects the importance of the credit roles**
   - Credit experts are positioned at the most senior levels in the organisational hierarchy.
   - There is an observable career path and personal development for credit people.
   - Credit is seen as a prestigious position that attracts good people, where important skills and experience are acquired. Experience in the credit area is a pre-condition for senior management roles.
   - There is job security for credit staff.
   - Senior managers allocate a significant and appropriate amount of time allocated to reviewing credit-related issues.
   - The remuneration packages for credit staff reflect the importance the FI places on credit quality, as compared both to others in the FI and to credit officers in the industry.
   - The resources allocated to credit staffing, premises, systems and projects are appropriate compared with other functional areas.
3. **The Credit performance measurement / reward structure reflects credit quality**
   - The rewards for success and implications for failure to comply with credit policy and procedures is well articulated and consistently applied in the support of credit quality.
   - Credit quality measures, which reflect credit culture objectives, are included as a major factor in Credit Managers’ and Lending Officers’ performance evaluation and position descriptions. Key performance indicators include default and loss targets for the individual Lending Officers’ portfolios and risk-adjusted returns on outstandings.
   - Incentive compensation plans, based on objective appraisals, reinforce credit culture objectives.
   - The performance contract specifies the level of detail of analysis required and “absolves” Lending Officers of responsibility for poor outcomes if the decisions are made within the rules (both the written rules and the intent of the rules). Credit Officers should be able to learn from experience without punishment.

4. **Capable credit officers and managers are recruited, trained and retained**
   - “Top tier” credit staff are recruited and retained. In particular, the excessive loss of experienced Senior Credit Managers is avoided.
   - On average, Lending Officers have a large number of years experience in the credit area.
   - Managers have the skills and knowledge to provide leadership to credit staff.
   - Managers are accessible to discuss loan applications with customers.
   - Managers spend a considerable time in developing staff as well as in the lending process.
   - Excellent credit training programs exist for all levels of credit staff. Measurement of the institutional commitment to credit training is maintained through such statistics as the number of credit courses available and the number of hours of credit training attended.
   - Training is a continuous process, from entry level through all phases of the credit career. There are frequent updates on changing standards and practices, and with inclusion of important credit issues (credit analysis and financial monitoring and control techniques).
   - The following guidelines for training are provided (Morsman, 1994):
     a) Trainees are hired regardless of economic cycles or profits
     b) Considerable budget and excellent people are allocated to training
     c) Well thought-out, structured and consistent training programs exist
     d) Executive management is visible during the training process
     e) Training ability is part of the manager’s performance appraisal
     f) Training and development are a “lifelong part of career development”
     g) The commitment to development is such that most promotions are from within
     h) Managers are trained in loan administration as well as credit skills
   - Staff are able to interact with other Lending Officers and Senior Credit Managers to compare ideas and approaches to individual Lending files. This is particularly important given that the traditional form of training – with staff working their way up through the Branch system – typically does not apply anymore.
   - The “buddy system” can offer a good training mechanism at the entry-level, followed by a “mentor-system” for more experienced Credit Officers.

6. **The staffing levels are adequate**
   - A formal capacity planning process is conducted to determine the appropriate levels of staff of specific skill types.
   - Levels of capable, trained staff are adequate given the current and projected levels of credit activity.
   - Managers acknowledge the tradeoff between the quality of lending decision and quantity (volume) of processing.
7. The changed requirements for Credit Officer roles have been managed

- The decreased skill levels of many retail Credit Officers resulting from the increased standardisation of rules and automation is reflected in job descriptions and recruitment policies.
- The job satisfaction and expectations of the more traditional-style Credit Officers are managed. An indicative comment was: “I’ve just fallen into the slot that (the Bank) wants me to sit in, and from there you just don’t deviate too much. So it’s a bit battery hennish in that regard”.
- A sufficient number of experienced Lending Officers are retained to:
  a) Establish the credit strategy and risk management infrastructure
  b) Review the complex loan applications and the policy exceptions which are part of the ongoing credit process
  c) Train the less experienced staff in lending and collections, which is particularly important in times of economic downturn
  d) Remember the lessons learnt in the prior economic cycle

8. Flexible working conditions are in place

- Working conditions are flexible, particularly for the repetitious, comparatively lowly skilled roles implicit in a highly automated lending environment.
- Working hours allow Credit Officers to contact (in the case of Collections) or respond to (in the case of Servicing) customers outside of standard working hours.

9. Credit policy/practices support the Credit Officers’ sense of integrity / morality

- Credit policies and practices allow Credit Officers to take pride in their work, particularly in the quality of their lending decision. An indicative comment from a Lending Officer was: “Because you just have this loyalty to the bank, well I do, I wouldn’t want to just make a sale and know that that money was going to be spent and never repaid.”
**6.2.8 Dimension 6: Controls**

<table>
<thead>
<tr>
<th>CONTROLS</th>
<th>Controls prevent unexpected strategy and practice failures, whilst allowing flexibility of day-to-day management</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>An independent auditing unit reviews operational and portfolio practices</strong></td>
</tr>
<tr>
<td>2.</td>
<td><strong>An independent asset review unit tests the Business Plan assumptions affecting credit risk</strong></td>
</tr>
<tr>
<td>3.</td>
<td><strong>Controls are managed actively for day-to-day practices of internal operations and third parties</strong></td>
</tr>
</tbody>
</table>

1. **An independent auditing unit reviews operational and portfolio practices**
   - Audit (compliance) is an independent unit which has a direct reporting line to the CEO.
   - Audit has a formal plan for a comprehensive, timely, consistent and accurate review of compliance of operational practices to: Credit and business strategies and policies; Internal credit processes and procedures and practices; Data integrity and reporting; Security documentation; and Services provided by external agents (for example, legal and real estate appraisal). The review is conducted on a sample basis every month / quarter / year.
   - There is a specified and consistent tolerance for error in credit analysis and administration.
   - In the automated environments, ongoing reviews ensure the artificial intelligence models:
     a) Are sufficiently discriminatory between different levels of risk
     b) Are put into production in workflow management systems appropriately
     c) Have accurate data input into the system
   - The credit review function can promote a single credit process among all lending units, thereby improving consistency.

2. **An independent asset review team tests the Business Plan assumptions affecting credit, with regular monitoring providing an early warning mechanism.**
   - An asset review team has a formal plan for a comprehensive, timely, consistent and accurate review of the high priority (in terms of value at risk) portfolio.
   - An independent asset review team examines the strength of the assumptions in the Business Plans from the credit risk perspective. The focus is on the loss absorption capacity of the portfolio, given the existing and possible scenarios (both within the institution and within the economic/market environments) in which the portfolio will be operating.
   - An independent team reviews high-level early warning indicators.

3. **Controls are managed actively for day-to-day practices and third party service providers**
   - Internal practices have comprehensive control mechanisms
     a) On a daily basis, quality assurance reviews monitor adherence of practices to policies and procedures.
     b) Trends in quality assurance reviews are monitored to highlight areas of exceptions. Necessary action required could include training, disciplinary action, revision to policy, etc. Actions are undertaken promptly.
   - Introducers and third party service providers are actively managed
     a) Due diligence is undertaken in the initial approval and annual review of third party service providers. Particular emphasis is placed on the service providers experience in the business, legality and moral ethics of operation and financial strength.
     b) Controls are in place to prevent collusion between third parties to the detriment of the FI (for example, a Mortgage Originator colluding with a real-estate valuer).
     c) Bank policies are equivalent to third party policies, so sales staff don’t “play one off against the other” (in the case of Mortgage Insurers).
6.2.9 The dimensions compared to the credit practitioners’ literature

The six dimensions of the Balanced Credit Scorecard – credit principles, policy, risk management methodology, credit processes and systems, staffing and organisation and controls – are consistent with the credit practitioner’s literature.

The significant variations to the credit practitioner’s literature exist at the level of attributes beneath the dimensions. The primary additions are “the use of information/MIS”, “responsiveness”, “process controls” and “systems”. There are also amendments to the attributes of accountability and relationship with the customer. The issues have been highlighted in the credit practitioner’s articles on a quality credit culture, but with significantly less emphasis or with a different approach, as discussed below.

Information

The importance of information has been widely discussed in the literature in relation to portfolio management techniques and pricing for risk. However, the heavy emphasis on its usage to establish performance reward structures, operational practice effectiveness and decision support systems is not widely documented.

Responsiveness

Responsiveness has been raised by McKinley (1998) as a key challenge for credit risk management. It was not prominent in other writings, most of which were made in the early 1990s.

Process Controls

Process controls have been raised extensively, however more in the context of reviewing individual credit transactions, rather than programmed reviews for high volume, statistically driven, automated processes. Controls probably play a more important role in retail lending than ever before. Compare this with the comment made by McKinley (1998, pg 29), apparently relating more to commercial lending:

“Banks with weak cultures rely too much on credit systems and controls to insure adequate lending discipline. There is less need for extensive and costly controls, and loan decisions centralised and individual authorities limited, when everyone understands the priority and practices. Lenders and line managers take responsibility for ensuring actions are consistent with guidance”.
Systems

Systems (both decision support systems and workflow management systems) have become even more critical with the move to a standardised, automated environment. One consideration is whether systems and business processes should be shown separately or combined as one dimension. There does not appear to be a “single truth”. In my practical experience, a number of models show systems separately. In the current model, business processes and systems have been combined, as they are so intricately linked in the provision of cost-effective credit cycle operations. Further, Kaplan and Norton (1996) highlight that the learning and growth perspective was the most underdeveloped of the perspectives. Commercial lending, which is based more on a transactional approach, does not have such dependence on systems.

Accountability

Accountability takes on a different role, in terms of which part of the FI “owns” the credit losses and the setting of the credit risk appetite. Traditionally, accountability has not been such an issue for credit as long as the credit delegations and processes were clearly defined. However, the responsibility for credit costs can be somewhat fuzzy as many FIs move from the organisation structure where credit was the sole keeper of credit operations and credit losses to ownership by the Line of Business. Credit has taken on more of a policing and advisory role. There can be an issue with either too much or too little of the credit knowledge being retained in the credit organisation and not being transferred to the Line of Business. As there is some duplication in the model, there also can be a shortage of strategic-oriented credit risk managers.

Another reason for the variation from the credit practitioner’s literature is the high level of mobility in the retail market, both with Senior Credit Managers leaving the industry and with the move towards non-bankers in senior management positions. Finally, reward structures are not established to reward long-term behaviour, with CEOs (and lower levels) having a shorter average tenure in which to institute their changes.

Customer relationship

In the commercial arena, emphasis is placed on the relationship of the lender with the customer, obtaining complete financial information and providing sage advice. In retail lending, a number of processes are required to offset the absence of face-to-face contact and financial information. Thus, the detailed understanding of the customers’ financial position is not included in the Balanced Credit Scorecard, whereas the need for an offsetting mechanism is highlighted.

The variations on the credit practitioner’s literature probably reflect that most of the literature has been written by credit practitioners writing about commercial lending, where individual transactions
are managed rather than programmed credits. The amendments also reflect the paradigm shift in credit risk management which has occurred in many Australian retail lenders through the 1990s from a transactional approach to a portfolio-based approach. The focus on data and analytics, over and above credit scoring requirements, has come to the fore reasonably recently in Australia (in the mid to late 1990s). However, credit managers have had access to significant levels of information for a decade or two. It could have been used more extensively for identifying the drivers of customer-profitability, rather than its primary use in the “gatekeeper” function. In addition, the competitive market makes it hard to retain credit standards and pricing to reflect risk.

Further, there has been a widespread changing of distribution channel management in the mid to late 1990s. There is no longer an individual who “owns” the customer, such as the Branch Manager who managed the client end-to-end (origination, servicing and collections) and was responsible for the performance of the lending portfolio. With functional specialisation, the need for process information increases.

6.2.10 **Examples of Balanced Credit Scorecards and implications**

Typically, a Balanced Credit Scorecard is established for the credit risk function as a whole. Balanced Credit Scorecards for each of the credit functional areas (for example, credit policy, portfolio management, origination, servicing, collections, audit) then cascade down from this scorecard. An example of a Balanced Credit Scorecard for the entire credit organisation is shown in Figure 6.4, followed by examples for the functional areas of credit assessment (Figure 6.5) and collections (Figure 6.6). The critical success factors are similar – the variations relate more to the operational factors.
FIGURE 6.4: Balanced Credit Scorecard for the end-to-end management - example

FIGURE 6.5: Loan processing Balanced Credit Scorecard - example
The key points of comparison of these example Balanced Scorecards with the theory outlined in Chapter – Analytical Tools II and Chapter - New Lending Environment follow.

**Both results and process measures** are included. The results measures are largely associated with portfolio/financial measures.

The **cause and effect relationships**, at a very high level, are demonstrated by the arrows.

The **financial perspective** has been split into financial and portfolio, reflecting the importance of achieving portfolio goals in the credit risk arena.

“Systems” has been transferred from the innovation/learning perspective to the business process perspective. As mentioned earlier, Kaplan and Norton state innovation/learning is the least developed perspective. Further, systems are absolutely integral to the success of business processes, which the current format reflects.

The **dimensions** are relatively closely **aligned with the Balanced Scorecard**. The only measure not specifically captured is the innovation measure. This is the same measure that Kaplan and Norton highlight is the least understood.
There is not a separate “customer” perspective in Collections, where the focus is on protecting the banks’ assets rather than extending the relationship.

**Short term and long-term measures** are included. For example, the Collections portfolio measures are point in time (credit losses), early warning indicators in the short term (30 days plus defaults) and potential impending issues (slippage through delinquency ranges).

A **small number of critical measures** have been shown. In reality, additional measures would be included if there were some urgent issues requiring attention (such as, if turnaround times were an issue in the loan processing area).

The measures may not prevent **sub-optimisation** of behaviour - the potential for sub-optimisation is very organisation-specific.

The tolerance levels for **“exception” management** have not been shown. These should be established based on the organisational focus.

**Boundary measures**, which are stated in negative terms or as minimum standards of what staff should not do, have not been incorporated.

The **frequency of review** could be highlighted in an accompanying document. The frequency is likely to be comparatively low, and the tolerance relatively high, if there are no particular concerns with the credit risk area at the time.

The “**objective**”, which is an amalgam of mission and vision type statements, represents a “beliefs” system. It communicates the core values of the functional area.

The sample scorecards are shown as a **standalone document**, not as part of an overall strategic plan. In practice, the scorecards would fill just one part of an overall plan.

**Critical success factors** have been shown separately.

The dimensions could reflect the **“resource-based value”** approach in establishing the dimensions, measures and targets. The scorecards would have to be validated for reasonableness and importance against both customer and organisation expectations. The measures would reflect both the company’s internal capabilities (what it does well) and the external industry factors (identifying what is important to customers and benchmarking against the competitors’ offerings).
The implementation plan for the Balanced Scorecards would be based upon the “ten golden rules” of the Nolan Norton Institute outlined previously.

6.2.11 An example of how it can go wrong

Clearly, the dimensions and attributes of the Balanced Credit Scorecard are interdependent and overlapping. The Balanced Credit Scorecard framework is intended to provide a means to increase confidence that the critical aspects of a quality credit process are in place. The counterbalances traditionally applied through the transactional approach are no longer available, whereby the Lending Officers/Senior Credit Managers could apply “gut feel” and their knowledge of individual transactions. The absence puts greater pressure on each element of the credit cycle to be functioning well.

Figure 6.7 highlights “how it can go wrong” if just one critical element - management information - is inadequate. This is one example – there are any number of possible permutations.

FIGURE 6.7: “How it can go wrong” if even one factor of the Balanced Credit Scorecard is lacking

- Management don’t know they are focusing on the wrong things or the extent of the problem on long term profitability
- Impact of not managing the long-term not dimensioned statistically
- Credit Managers with memories of long-term impact on prior cycles cannot prove it will happen again and may well be branded as “cheeky penny”
- Thus, there is no defensible argument to break the short-termism until disaster strikes
- When disaster strikes, there are too few, inexperienced staff to deal with the issues
6.2.12 Options as a diagnostic tool

The Balanced Credit Scorecard can readily be transformed into a questionnaire. The FI could either ask broad questions based on the dimension headings, or go into greater detail in areas where there are known issues. Options for response scales, if a questionnaire was to be designed, include:

“To what extent do the following statements apply within your financial institution?”

<table>
<thead>
<tr>
<th>5 point scale</th>
<th>Always; In most cases; About half the time; Seldom; Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 point scale</td>
<td>Nearly always; About half the time; Rarely</td>
</tr>
</tbody>
</table>

The use of the Balanced Credit Scorecard in this way does not offer a methodological approach which has been exhaustively examined for validity, generalisability and reliability. This has not been the intent in developing the Balanced Credit Scorecard. However, it can provide a comparison point for analysis, communication and identifying discrepancies between Lending Officer and Senior Credit Manager perceptions.

6.2.13 Conclusions and implications of the Balanced Credit Scorecard

The Balanced Credit Scorecard framework offers credit risk managers a base from which to measure the credit risk controls and disciplines throughout the lending organisation. I am not aware of any other such comprehensive frameworks for retail lending.

6.3 Interface of credit culture with organisational culture and climate

The objective of this Section is to combine the models of organisational culture (“OCULT”) and organisational climate (“OCLIM”) with the constructs and dimensions of credit culture and credit risk attitude described in the Chapter – Analytical Tools I. The framework addresses the final research question: “How do the various elements of research form an integrated whole to assist credit risk managers?”.

6.3.1 Approach taken in this thesis: “Best fit” model

There is no easy answer as to which is the “best” model of fit between credit culture and OCULT/OCLIM. As Shanteau’s (1997) discussion of “experts” notes, a number of experts could quite plausibly choose different models. Further, the models are quite similar conceptually with the variations occurring at the very intangible and difficult to prove levels of the constructs. In addition, the constructs are overlapping and intertwined - decades of detailed research into OCULT and OCLIM alone have not resolved many fundamental issues. Also, the credit practitioner’s literature
and ongoing discussion with credit experts provide little direct application, in that the credit experts are not familiar with the OCULT and OCLIM theories.

Another reason why a “best fit” model is not appropriate is that substantive theory (an empirical area of sociological enquiry, such as the Balanced Credit Scorecard dimensions) and formal theory (that is, conceptual theory such as the theoretical framework of organisational culture/climate) have been developed in conjunction in this thesis. Consistent with grounded theory, there has been more focus on the development of substantive theory. However, the fact that the theories have been developed in conjunction is not consistent with Glaser and Strauss’ recommendation that formal theory only be incorporated at the end of the development of the substantive theory. Nonetheless, care has been taken only to apply formal theory where there appears to be an extremely logical fit, without the need to force the fit.

Finally, also consistent with grounded theory, the core objective of the thesis has been to identify the critical elements of a quality credit risk management rather than focus on exact magnitude or causality.

Thus, it is unlikely that the “one truth” of causal relationships can be found. The levels and the dimensions identified from the Balanced Credit Scorecard have been incorporated as the best fit based on “what made sense” when aligning the theoretical and empirical work. In a practical sense, as long as all of the core dimensions are in place within a quality credit risk infrastructure, the actual causality is of less importance.

### 6.3.2 The working model of OCULT/OCLIM

The starting point is the working model of OCULT/OCLIM summarised in Figure 3.2 in the Chapter – Analytical Tools I. Figure 6.8 is a duplication of Figure 3.2.
OCULT is assumed to be a highly enduring, corporate-wide concept. It sets the “style” or “personality” of the organisation which has evolved since the inception of the FI. OCULT reflects what an organisation “is”, at a deep level of consciousness. It is relatively impervious to the short-term changes in environmental, market and local organisational factors (such as the style of the current leader of a team, or the current hierarchical structure). As credit is a fundamental reason for the existence of the banking sector, it is expected that the FI’s approach to credit is an integral aspect of the FI’s “personality”. OCULT is taken to be constant across functional and geographic areas.

OCLIM is taken to be a more short-term, cyclical concept that is strongly affected by changes in environmental and organisational factors and the resulting short-term imperatives. It is something the organisation “has” rather than “is”.

OCLIM operationalises OCULT. OCLIM provides a focus on the events, practices and procedures (“routines”) and the behaviours that are rewarded, supported and expected (“rewards”) in the organisation, which send the message that particular strategic imperatives require employee energies and competencies. OCLIM provides the basis for the interpretation by Lending Officers of the credit risk attitude of senior managers. It is assumed that there are a number of climates in an organisation, such as safety, service quality and credit risk, which are responsive to changes to environmental, market and “local” factors.
Both OCULT and OCLIM constructs are taken to be a function of the individual perceptions of leaders, the effects of the group dynamics, and the moderating effect on these of the individual’s personality.

The concepts of credit risk attitude (shown previously in this Chapter) and credit culture (as referred to in the Senior Credit Manager interviews and the literature) must be incorporated into this base model of organisational culture and organisation climate.

6.3.3 Integrated organisational culture/climate and credit culture model

Relationship of dimensions of organisational/credit culture & organisational/credit climate

As highlighted in the Chapter – Analytical Tools I, a key query is: Should the dimensions between organisational culture and climate be essentially the same or different?

The same dimensions could exist for OCLIM as OCULT (for example, Schneider et al, 1996), with the difference being based on the level of behaviour/consciousness. That is, the credit or organisational culture dimensions provide the underlying meaning for the behavioural manifestation at the credit climate level. The following figure shows the relationship.

FIGURE 6.9 – The dimensions of culture and climate vary only at the level of manifestation

Alternatively, the dimensions of credit culture could be shown as the underlying “credit principles”, distinct from the more tangible dimensions. The dimensions of credit climate could be shown as the behavioural, more operational dimensions (at the level of manifested behaviours within the organisation). The dimensions would be consistent, but not align exactly. The behavioural level
dimensions are likely to align with infrastructural issues such as policies, systems and staffing. The interface is shown in the following Figure.

FIGURE 6.10 – The dimensions of culture and climate are different

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension 1 Dimension 2 Dimension 3 Dimension 4 Dimension 5 Dimension &quot;n&quot;</td>
<td>Short-term focus on risk vs. reward - the &quot;mood&quot;</td>
</tr>
</tbody>
</table>

Credit Risk Attitude

<table>
<thead>
<tr>
<th>Dimension a Dimension b Dimension c Dimension d Dimension &quot;z&quot;</th>
<th>Values, assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation/Credit Culture: The Credit Principles</td>
<td>Underlying credit principles. Credit function’s “how we do things around here”</td>
</tr>
</tbody>
</table>

To determine which offers the best fit, reference has been made to the use of the term “credit culture” by Senior Credit Managers in the interviews and in the literature of credit practitioners. At its broadest use, “credit culture” captured both OCULT and OCLIM. However, overall, the term “credit culture” appears to be largely captured in the dimension of credit principles, as shown in previously in Figure 6.11.

In addition, I attempted to match Denison’s dimensions of organisational culture with the six dimensions of the Balanced Credit Scorecard to see if this provided a good fit (as per Figure 6.11). There was not a clear match compared with the fit which emerged quickly between the organisational culture dimensions and the credit principles’ attributes. Thus, the option has been discarded.

The resulting alignment between the underlying organisational culture (using the dimensions outlined by Denison, 1996) and the credit culture (based on the dimension of credit principles from the Balanced Credit Scorecard) is shown in Table 6.3.
TABLE 6.3: Alignment between organisational culture and credit culture

<table>
<thead>
<tr>
<th>Organisational culture</th>
<th>Credit culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk taking</td>
<td>Balanced credit/growth objectives</td>
</tr>
<tr>
<td>Support</td>
<td>Visible commitment</td>
</tr>
<tr>
<td>Cohesiveness</td>
<td>Open/honest communication</td>
</tr>
<tr>
<td></td>
<td>Responsiveness</td>
</tr>
<tr>
<td>Outcome orientation</td>
<td>Accountability</td>
</tr>
<tr>
<td></td>
<td>Use of information</td>
</tr>
<tr>
<td>Structure</td>
<td>Segmented duties</td>
</tr>
<tr>
<td></td>
<td>Credit delegations</td>
</tr>
<tr>
<td></td>
<td>Centralised, consistent policy</td>
</tr>
</tbody>
</table>

The remaining dimensions from the Balanced Credit Scorecard, of credit policy, risk management methodology, business process/systems, organisation/staff and controls reside at the more behavioural level of organisation/credit climate.

*Are organisational and credit culture separate constructs?*

After determining the OCULT/credit principles interface, a key query which emerges is: Should the model reflect separate constructs of organisational culture and credit culture (with organisational culture informing credit culture) or are the two concepts interchangeable?

Figure 6.11 shows one option, where credit culture and organisational culture are the same construct with organisational culture effectively re-named credit culture.
Credit culture now becomes the organisation culture. Organisation/credit climate operationalises credit culture. Credit risk attitude is shown separately as the short-term “mood” of the organisation. It is not an underlying construct, but an interpretation of more temporal factors. In relationship to Schein’s (1992, 1990, 1986) model, credit climate reflects the artefacts/creations level. The values level is astride credit climate and credit culture, but probably represents more underlying issues and so is shown in credit culture. The basic assumptions level is shown in credit culture.

Alternatively, credit culture and organisational culture can be represented as separate constructs, as shown in Figure 6.12.
The model shows the same interface between credit culture, credit risk attitude and organisation/credit climate. However, OCULT is shown as a separate construct, which informs credit culture. The model highlights that OCULT resides at the most fundamental, subconscious level of the organisational members and establishes the FI’s basic approach to its business. OCULT is presumed to incorporate the five dimensions highlighted by Denison (1996) of risk-taking, support, cohesiveness, outcome orientation and structure. OCULT is related to organisation-wide attributes. OCULT informs the approach to credit culture and helps explain why basically the same infrastructure can exist in different FIs, but be associated with very different credit cultures.

In this framework, the credit culture represents the credit values, or underlying credit principles. This is the credit function’s interpretation of the overall OCULT in the domain of credit risk, or “the way things are done around here” in the credit function. The credit principles are broadly associated with the less tangible, more sub-conscious construct of values/assumptions in Schein’s terminology.

In turn, the credit risk attitude sets the temporal focus on credit risk versus revenue reward. The behaviours of the FI are demonstrated through the organisation/credit climate, which is the operationalisation of the credit culture. Using this model, there are a number of other cultures, such as service culture and safety culture, and their associated climates.
This interpretation, where organisational culture informs credit culture, emphasises that credit culture is just one of several cultures which could exist within an organisation and is informed by the organisational culture. Whilst not a major issue for examination within this thesis, it appears that other cultures could exist within the FI relating to the several critical functions the FI performs. Traditionally, credit has been the dominant force in FIs - to the extent that the credit culture probably has been reasonably equivalent to the total organisational culture. As credit remains a fundamental reason for the existence of the banking sector, it can be expected that the FIs’ approach to credit is an integral aspect of the FIs’ “personality”. However, as FIs move into the marketing era, other cultures probably have emerged as being important, with the primary one being the service culture.

How do organisational climate, credit climate and credit risk attitude interface?

There has been nothing to indicate that the initial assumption regarding the concept of credit risk attitude was inappropriate. Hence, credit risk attitude is taken to be the mediating variable reflecting the transient “balance of power” between credit risk costs (credit losses and operating costs) and revenue growth/cost reduction. An alternative term to “credit risk attitude” is “loss appetite”. It is the senior managements’ attitude to credit risk which is set at the strategic level and is reflected in the credit controls and disciplines within the FI.

There are two aspects to take into account. Firstly, the absolute level of the focus on credit risk compared with reward may vary across FIs, regardless of the phase of the business cycle. Secondly, there is the relative change in the focus on credit within an FI across the cycle.

The next question is how the remaining five dimensions identified in the Balanced Scorecard fit into the “climate” construct. Based on the notion that climate operationalises culture, the dimensions should be roughly equivalent to the credit climate dimensions lying at a higher level of behaviouralism. However, the attempt to match the credit culture/principles with the remaining five dimensions did not result in a “sensible” fit. This could indicate that the dimensions between organisational culture and organisational climate, conceptually, do not necessarily align. The matching between dimensions in effect has been done already between organisational culture (the underlying risk and other cultural orientations) and the credit culture (which still provides “the way we do things around here” but at a more behavioural level). Alternatively, this could indicate that the term “credit culture” applied in this model is really equivalent to “credit climate” in the theoretical literature. The remaining five dimensions of the credit infrastructure could provide a very concrete example of the behavioural overlay, in effect being too concrete for theory.
Consequently, the organisational/credit climate has been taken to represent the remaining five dimensions of the Balanced Credit Scorecard, namely, credit policy, risk management methodologies, business process and systems, credit staffing and controls. The dimensions reside at the very behavioural level and reflect the Lending Officers’ interpretation of the policies and practices which are being rewarded. The five dimensions send the message to Lending Officers that particular strategic imperatives require their energies and competencies.

Organisational/credit climate have not emerged as separate constructs from the research (as have organisational and credit culture). Using the “best fit” approach, there has been no reason to separate the two. The term “credit climate” could apply as a description of the mediating factor between the credit risk attitude set by Senior Credit Managers and the interpretation by Lending Officers which are derived from the credit infrastructure. Thus, the credit climate is not an independent construct but provides a “filter” through which the credit infrastructure elements are drawn. Further, incorporating the term “credit climate” increases the complexity of the model, without adding much information and so has been excluded from the final model.

An alternative to the term “credit climate” has been sought to categorise the five dimensions of the Balanced Credit Scorecard. The need for a term different from that used in the working model in Chapter 3 – Analytical Tools I emerged during the research process, consistent with the grounded theory approach. Credit climate is not a term which is familiar to credit risk practitioners and they did not appear comfortable with the term when I used it in the interviews. Further, the common usage of the term “climate” appears to be more aligned with the temporal aspect associated with credit risk attitude. For example, according to the Everyday Oxford Dictionary, climate is “a general attitude or feeling, an atmosphere”.

The term “credit infrastructure” appears to be more appropriate than “climate”. Credit practitioners appeared both familiar and comfortable with the term “infrastructure” when I have used it in interviews and when I have obtained informal feedback on the credit culture models. According to the Everyday Oxford Dictionary, infrastructure is defined as “the subordinate parts and installations etc. that form the basis of an enterprise”. Hence, the credit principles provide the overarching authority of credit culture, with credit infrastructure working under their “control” or “authority”.

There is a variety of formal and informal mechanisms by which the credit principles and credit risk attitude can affect the interpretation of the current approach to the risk / reward tradeoff, as perceived by Lending Officers. It is assumed that the Credit Officers’ interpretation takes place through the organisational climate process nominated by Schneider et al (1996), namely: (a) the policies, practices, procedures and events; and (b) the behaviours that are rewarded, supported, and expected.
The Schneider school notions of the mechanisms driving a change in organisational climate – the structural aspects, attraction-selection-attrition framework, and symbolic interactionism – are taken to be the primary forces driving credit climate.

**Contextual factors**
Three of the remaining elements are drawn from Allaire and Firsirotu’s (1984) model, namely society, history and contingency. The individual effects elements reflects the perceptions and biases of the individuals which impact their interpretations and decision making, as discussed in the Chapter – Analytical Tools I.

**The final model**
The final model is shown in Figure 6.13.

**FIGURE 6.13: The “Credit Culture” model**

There are four final points.

*Schein’s model.* The three levels of culture as explicated by Schein are incorporated in the model, with OCULT reflecting “basic assumptions”, credit culture reflecting “values” and organisation/credit climate reflecting “artefacts/creations”.

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**Chapter 6: Integrated Credit Risk Models**
Alignment. The credit risk attitude and the credit climate do not necessarily align, particularly if the formal and informal communication mechanisms are giving inconsistent messages.

Two levels of decision making/behaviour. Thirdly, the results support the initial hypothesis that the credit risk attitude set by Managers and its interpretation by Lending Officers reside at two levels in retail lending.

All players affect the credit risk attitude. The model shows that Senior Credit Managers set the credit risk attitude. This is not to suggest that managers/supervisors/more junior organisational members do not have input to the decisions made regarding the credit risk attitude. Through the standard formal and informal communication channels they will provide information to assist the decision making. The process is made even more critical by the trend towards functional specialisation and different reporting lines. Thus, it is only at the level of the senior managers that the information is summarised and combined into organisation-wide strategies.

6.3.4 Interface between credit culture and theories of decision making

As highlighted in the models, OCLIM is a group construct. However, the OCLIM research focuses on how the staff member personally perceives the group, or organisation, environment. The perceptions of the Lending Officers are based on what they see and feel in the short-term, daily practices and routines. Thus, in the working world of the Lending Officers, there is a relatively high level of certainty and information related to decision-making. Further, there is comparatively immediate feedback in terms of the behaviour/reward link.

The theories of decision making under uncertainty (including Prospect Theory) apply to a limited degree to Lending Officers given there is some uncertainty, lack of information and the need for interpretation. However, the theory of OCLIM is taken to play the more critical role, given the Lending Officers are working within, and can be expected to be heavily influenced by, the (group) credit organisation.

Conversely, the Senior Credit Manager decision making process in setting the credit risk attitude and establishing the credit risk process appears to be linked more closely with Prospect Theory than OCLIM. In establishing the credit risk attitude and influencing credit culture over the longer term, Senior Credit Managers are operating in an environment where behaviour and rewards have a significant time lag - a number of years - there is high uncertainty and lack of information. Further, the causal effect between behaviour (the credit strategies put in place by the Senior Credit Manager) and rewards (the growth in profit over a period of years) is affected by a range of issues over the
period. A number of these issues are outside the Managers’ control. Hence, the link between behaviour and rewards is not as direct in the uncertain environment.

Another theory of decision making outlined previously, Expectancy Theory (Vroom, 1964) affects both Lending Officers and Senior Credit Managers. It explains the link perceived by all organisation members between behaviour and reward. Individuals are motivated to certain actions as a result of the individual’s perceptions of: The relationship between effort and performance (expectancy); The relationship between performance and a set of outcomes (instrumentalities); and The attractiveness of the outcomes to the person (valences).

Finally, in all of the models, the more behavioural construct of OCLIM is assumed to be informed and operationalised by the OCULT. Because individuals are motivated through the link between rewards and behaviours (which exists at the level of OCLIM), OCLIM is used to change OCULT over time. Thus, OCLIM reflects the mood (credit risk attitude) and the underlying culture, but it also feeds back reciprocally.

6.3.5 Conclusions and implications of organisational culture/climate and credit culture

The discussion in this Chapter highlights that a number of models can be developed to represent the interface between OCULT, OCLIM, credit culture, credit climate and credit risk attitude. Given the inherently intangible nature of the constructs and the level of uncertainty surrounding them in the literature, it has been decided to take a practical approach in establishing a “best fit” model. The models integrated concepts from a number of authors and as such built upon, rather than contradicted, existing work. A primary implication of the research has been the need consciously to manage and align all elements of the models.

6.4 The factors which appear each cycle versus the emerging issues

The interviews with Senior Credit Managers and Lending Officers, when examined in combination, highlight that a number of factors re-appear each credit cycle, although there have been a number to emerge during the latest Australian business cycle of the 1990s. A summary is shown in Figure 6.14, with details provided in the Appendices.
6.5 The integrated framework

The thesis has examined a number of constructs from the areas of economics, psychology and sociology. Figure 6.15 demonstrates how the factors come together to assist the understanding of credit risk attitude and its management across the business cycle.
Overall, the models have been developed to be complementary with existing models and the research units. Where there has been discrepancy between the individual units of research, the more common view to emerge from the various sources has been used. The discrepancies are highlighted in Table 6.4.
TABLE 6.4 – Data discrepancies between the units of research

<table>
<thead>
<tr>
<th>Competitor</th>
<th>Data discrepancies between the units of research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition</td>
<td>Competition is the factor most frequently mentioned in the easing of credit standards, although it is not mentioned in all cases. Commentary from the credit practitioners’ writings and Senior Credit Managers’ interviews (referring to all other banks) indicates competition is the primary force affecting credit risk attitude. The credit risk attitude model places great importance on competition. Either the Senior Credit Managers do not sufficiently acknowledge the influence of competition, or the credit practitioners’ commentary is overly simplistic.</td>
</tr>
<tr>
<td>Level of performing loans</td>
<td>The Credit Confidence Survey does not highlight the current level of non-performing loans in driving the reasons for tightening/easing real estate credit standards. The question has not been specifically included in the Survey, both because the Survey is based on the Senior Loan Officers Opinion Survey and the feedback from the Pilot indicates the question could be extremely sensitive. The issue has not been mentioned by any respondents in the free format section for additional comments. The relatively high frequency of mention of the “tolerance for risk” item could reflect the level on non-performing loans. However, the “tolerance for risk” item has been included to be consistent with the existing Survey instruments and it is not possible to identify the underlying factors driving the tolerance for risk.</td>
</tr>
<tr>
<td>Intermediaries</td>
<td>The credit risk attitude models do not specifically highlight the role of intermediaries, as identified within the Credit Confidence Survey. In the credit risk attitude model, intermediaries would be subsumed under the dimensions of desire for volume/competition.</td>
</tr>
<tr>
<td>Self-acceptance of aggressive lending</td>
<td>One key finding has been that whilst most Senior Credit Managers report competition is a primary driver of easing of interest rates, not all did. The trend continues the disconnect between self-reported standards and the fact that “everyone else but else” has been reported to be easing standards.</td>
</tr>
</tbody>
</table>

6.6 In closing …

The credit risk models which integrate information from a range of sources are presented in this Chapter, namely: The models of credit risk attitude; The Balanced Credit Scorecard; The credit culture model; Similar/different aspects of credit risk management in the 1990s versus prior cycles, and An integrated framework. In all cases, the models have evolved throughout the research process, consistent with the grounded theory approach.

The next, and final, Chapter provides conclusions from the research process.
7 Research Conclusions
The research analysis and findings presented in this thesis have addressed the key question:

How have retail banks in Australia established the credit risk attitude and managed its application in loan origination across the business cycle, focusing on the period 1996-1999?

The purpose of this final Chapter is briefly to re-cap the research process and provide a summary of the potential usage of the models/frameworks which have been developed. Potential future research is discussed also. The final two Sections outline some key implications for credit risk management in terms of overarching drivers of a quality credit culture and the changing role of credit.

7.1 Re-cap of the research process

The neo-classical economics school posits that organisations in a competitive environment act in a rational manner to maximise the long-term profit of the organisation. However, the poor history of FIs in managing credit losses across a series of business cycles is not consistent with the premise. FIs do not appear to learn from their mistakes in prior cycles. Further, whilst similar factors affect the credit risk attitude of the various FIs, there are differences in both the timing and the severity of the reaction of FIs over the business cycle. As the indicators are reasonably similar for FIs, it is not obvious why each FI reacts differently to the presenting information. The research process has not identified any existing theories which explain these apparently “irrational” behaviours which retail lenders demonstrate.

In addition, the retail lending environment in Australia changed greatly through the 1990s and FIs had to respond to this. New tools to describe the risk taking and decision-making behaviours in the credit risk management organisational context also emerged or were significantly developed during this period. These include the theories of organisational culture/climate and Prospect Theory from psychologists and sociologists, as well as the Balanced Scorecard performance measurement and writings on “credit culture” from the practitioners.

The research of this thesis collected data using the methodology of grounded theory, informed by these emerging theories/models, to study how changes have affected, and can affect, the lenders in the changing retail lending environment. In addition, an existing economic theory which relates to commercial/corporate lending – the theory of credit rationing - was examined for its applicability to retail lending.
A series of research questions/hypotheses were addressed, namely: (i) Are there factors in the late 1990’s operating environment which made retail credit risk management fundamentally different?; (ii) Can the theory of credit rationing explain the cyclical behaviours demonstrated by retail lenders during this period?; (iii) What were the primary influences of the credit risk attitude and how did they vary?; (iii) What are the credit standards being applied in Australian FIs in the late 1990s?; (iv) Is there an integrated framework for managing the credit risk attitude throughout the lending organisation?; (v) Do individual and focus groups generate similar information?; and (vii) How do the various elements of research form an integrated whole of decision making in credit risk management?

The focus of the thesis has been on theory generation rather than proving pre-existing constructs relating to retail lending. The thesis has a practical orientation - as long as all of the core dimensions are in place within a quality credit risk infrastructure, issues such as direct versus indirect causality are of less importance. My experience working at an executive level in the retail credit risk industry has been incorporated into the development of models. The models which emerged through the research process integrate concepts from a number of other authors and as such have built upon, rather than contradicted, existing work.

Figure 7.1 provides a summary of the research process (the figure is replicated from the Chapter – Introduction). The top half of the figure highlights the existing models/literature, with the bottom half summarising the analysis and models developed through the research process.
A model of the relationship of the emergent models related to each other and the underlying theories is shown in Figure 7.2 (the figure is replicated from Chapter 6 – Integrated Research Models).
7.2 Usage of the credit risk models/frameworks

In combination, the models/framework developed in this thesis can assist credit professionals erect defences against the re-occurrence of “irrational” behaviours evidenced in prior cycles.

By understanding the underlying reasons and the behavioural manifestations of disaster myopia and related biases, Senior Credit Managers may become aware of their own perceptual biases which may lead to an inaccurate assessment of the issues. Thus, the models may help credit professionals to recognise when a particular error in judgement is likely, intuition cannot necessarily be trusted, and more critical or analytical thinking is required (adapted from Kahneman and Riepe, 1998).

In addition, the credit risk models can be used to support communication throughout the FIs to move towards a more holistic approach to credit risk management. The models can also provide educational material for line managers who are not experienced in credit risk management. In addition, the models have proven useful in helping Senior Credit Managers communicate the current
status of their institution’s and the industry’s credit standards. Further, the models can assist Senior Credit Managers in obtaining focus and resources on the credit cost line to avoid excesses.

Possible usages of the individual models/frameworks by credit risk managers are outlined. All models are discussed in the Chapters – Individual Research Results and Integrated Credit Risk models, except for the New Lending Environment. Potential usage of the models for more theoretical research is outlined in Section 7.3.

7.2.1 The new lending environment and differences in this cycle

The discussion on the lending environment of the late 1990s (in the Chapter 2 - the New Lending Environment) provides managers with an overview of the reasons behind changes in Australian retail credit over the last decade of the twentieth century, and likely influences going into the new century.

In addition, the overview of the factors driving credit risk management in the 1990s compared with prior cycles (in the Chapter 6 – Integrated Credit Risk Models) re-emphasises the point that credit risk managers need to manage both the old influences and the new drivers. The new drivers can be particularly challenging, given there are few “tried and true” measures with which to manage them.

7.2.2 The theory of credit rationing

The review of empirical evidence of credit rationing in the Australian retail lending market in the 1990s provided: (a) A summary of evidence for credit rationing along with reasons why the theory of credit rationing did not conceptually apply to retail lending; and (ii) A summary of reasons why price rationing was not exhibited.

The absence of price rationing has implications in pricing policy for credit risk managers attempting to set interest rates and fees for retail products – such as credit cards – according to risk.

7.2.3 The models of the credit risk attitude across the business cycle

The models of the key drivers of credit risk attitude and its variance across the business cycle supported by a listing of heuristics/biases provided: (a) A framework to analyse apparently anomalous behaviour in the market; and (b) A means to guard against cyclical, excessive credit losses by acknowledging the underlying reasons and the behavioural manifestations of the losses.

The models of decision making under uncertainty highlighted the observation that a range of apparently irrational behaviours could be expected in the credit risk management of retail lending portfolios. Given the number of possible permutations, it was difficult to determine which heuristic
or bias could be evident in a decision-making context. However, by being aware of the potential
drivers of decision making and perceptual biases, it may be possible for Senior Credit Managers to re-
assess and more deliberately manage issues in the future.

7.2.4 The Credit Confidence Survey

The Credit Confidence Survey was used to: (a) Monitor trends in credit standards based on self-
report by Senior Credit Managers in the Top Nine banks and medium-sized FIs; (b) Identify factors
associated with changes in credit standards; and (c) Identify the key issues forecast for the 12 month
period after the Survey.

The Credit Confidence Survey was been administered to Senior Credit Managers on a one-off basis.
To identify trends in credit standards within or between FIs, the Survey could be applied annually. In
addition, the Survey could assist the credit risk manager in communicating the credit standards for an
incumbent bank and the finance industry. Overall, the Survey provided a useful piece of research not
previously available in the Australian market, as evidenced by the 51% response rate (representing
more than 80% of total Australian lending assets).

In combination with the Balanced Credit Scorecard in a questionnaire format, the Credit Confidence
Survey can also assist to determine the alignment between the Senior Credit Managers’ view of the
credit risk attitude and Lending Officers’ interpretation of this.

7.2.5 The Balanced Credit Scorecard

The Balanced Credit Scorecard provides a comprehensive, integrated list of dimensions and
underlying attributes which can be tailored by FIs to suit their credit risk organisation. There are six
dimensions - credit principles, credit policy, risk management methodologies, business processes and
systems, credit staffing and controls.

The Balanced Credit Scorecard can provide a performance measurement methodology which is a
“toolkit” for managing the FIs’ capability in operationalising the credit risk controls and disciplines
throughout the lending organisation. With the inclusion of the appropriate measures, the Balanced
Credit Scorecard can act as a practical means for measuring the FIs’ capability in the credit process at
the behavioural level, particularly if converted into a questionnaire format. It can also provide the
basis of a performance measurement and management framework that incorporates a series of targets
as a basis for managing the performance of Senior Credit Managers and Lending Officers’.
The Balanced Credit Scorecard can also be used to compare the perceptions of both Senior Credit Managers and Lending Officers of the elements of the credit culture and credit risk infrastructure. As noted above, the Credit Confidence Survey can be used in conjunction with the Balanced Credit Scorecard to obtain greater breadth of information. Although the Lending Officers may not know the reasons for the changes, their responses can identify if attention is required to increase the congruence between the Lending Officers’ perceptions and the Senior Credit Managers’ intentions. The responses can also help generally to develop communications for the Lending Officers. In addition, the tools provide a basis for benchmarking where the FI “is at” prior to a program of organisational change.

7.2.6 Interface of “credit culture” with organisational culture and climate

The credit culture model provides a snapshot of the integration of theory and practice. Given the inherently intangible nature of the constructs and the level of uncertainty surrounding them in the literature, it was decided to take a practical approach in establishing a “best fit”. The credit culture model incorporates the interface between OCULT, OCLIM, credit culture, credit climate and credit risk attitude. It also reflects the dimensions identified from the Balanced Credit Scorecard.

The credit culture model provides a framework for conscious management of the credit risk function by Senior Credit Managers. The model shows how different levels of the credit risk process apply: Credit principles and credit infrastructure operate at different levels; and The credit risk attitude set by Managers and interpreted by Lending Officers are at different levels. The models emphasise that Senior Credit Managers need to manage the credit culture and infrastructure levels pro-actively as the credit culture will form from formal and informal messages regardless of supervisor attention. Thus, the model highlights that credit risk attitude and the credit climate do not necessarily align, particularly if the formal and informal communication mechanisms give inconsistent messages.

7.2.7 The comparison of individual versus focus group methodologies

A comparison of the responses to the individual and the focus group interviews made by Lending Officers revealed implications for future research. The comparison indicated that the issues raised were not fundamentally different between individual and focus groups. The issues reflected more potential biases in: (i) Sampling - for example, Unsecured versus Secured Lending Officers responses were highly associated with both the nature of the work environment and the individual Lending Officers’ experience and longevity; (ii) Editing by the researcher; and (iii) Idiosyncratic responses of interviewees, rather than general comments on the best approach to credit risk management. These points, which are well documented elsewhere and common to qualitative research, re-inforce the need to be cautious in drawing conclusions.
One slight variation in the individual/group responses which has not been commonly described is the finding that the focus groups tended to identify parsimoniously the key issues which were important to the group as a whole. The individual interviews tended to: (a) Raise issues which were not necessarily core to the group but were a reflection of the individual’s situation; and (b) Produce more data units around a similar theme - the individual interviewee was more likely to get “bogged down” in his or her individual issue and additional data units did not necessarily increase the understanding of the category-level issue. In addition, the individual interviewees tended to provide more personal information, or self-disclosure.

7.3 Future research

The thesis has had an exploratory and a practical orientation, focusing on developing models and frameworks to help evaluate behaviours related to retail credit risk within an FI. Additional research which could be undertaken includes extending the statistical rigour of analysis and validating the models and frameworks through application in a number of FIs. In addition, the analysis could be extended to Line of Business managers (this thesis focused on credit staff only) to examine more broadly the organisational imperatives and reward structure. Further, the perceptions of Senior Credit Managers could be obtained at different points in the business cycle. The research in this thesis was conducted in a comparatively benign economic period. Also, the Credit Confidence Survey and/or the Balanced Credit Scorecard (in a questionnaire format) could be completed by both Senior Credit Managers and Lending Officers across FIs to determine commonality of perceptions within and between FIs.

Another potential area of future research is a review of the effect of the enhanced risk management methodologies after the downturn in this business cycle. In addition, the value of excellent credit risk management on share price could be examined - anecdotally, 25% percent is the discount on Bank’s share prices due to excessive volatility.

Further research options could include a determination of the inherent risk aversion of credit staff as compared to Line of Business staff. Alternatively, the analysis could be extended to other risk management professionals, including those working with operational and market risk, across FIs. Also, other functional credit areas of analysis could be included, such as servicing and collections.

In addition, research could extend the analysis of behaviours into the commercial lending arena (in contrast to the retail lending examined in this thesis). My research has shown that the theory of credit rationing – developed for commercial lending – does not provide a complete explanation of the
underlying reasons for the decisions made by credit risk managers. Further, the theory of credit rationing provides neither a “map” of how the credit risk attitude can be operationalised throughout the lending organisation nor a diagnostic tool for the credit risk managers on which to base an analysis of the operational discipline within the credit risk management organisation.

Finally, the analysis of the efficacy of individual versus focus group interviews could be enhanced through more specific analysis, compared with that of the research questions used in this thesis.

7.4 How to maintain a quality credit culture

In this Section, “the basics” on how to maintain a quality credit culture are discussed, followed by the implications of the basics as we move into the new millennium.

7.4.1 The basics

The reason why it can “all go so wrong” in credit risk management appears conceptually fairly straightforward. There is a breakdown in the credit principles/culture, which means that the credit infrastructure and management of long-term losses receive insufficient focus. There is sub-optimisation due to the behaviours that are rewarded, associated with short-termism (or “greed”, as several interviewees and practitioners parsimoniously commented). The balance between risk and reward is pushed too far towards reward, as managers’ performance/reward structure is based on the next, say, 12 months revenue to costs ratio - and credit costs can take up to 24 months to emerge.

To counteract the effect, a quality credit culture and infrastructure requires that management: (a) Identify what they want to happen over the life-cycle of the product, that is, set the strategy; (b) Establish the infrastructure to allow the strategy be implemented - returning to the premise that people will do what they are rewarded for, measures and rewards should be structured to reinforce the desired behaviours to drive long-term customer profitability; (c) Establish the monitoring to ensure the strategy actually is enacted through organisational policies and practices; and (d) Embed the organisational knowledge to ensure the behaviours continue.

In other words, FI management needs to work out the long term behaviours/strategies which are desired, and reward the organisational pursuit of these.

The question of how to achieve this optimisation of strategy given the organisational context is not straightforward. The consistent feedback from all of the research models is that there are two primary factors which make the objective of pursuing long-term profitable lending difficult to execute. The
first is lack of information within the organisation and the second is short-termism across the lending market.

**Information**

Information is a scarce resource. It is difficult to make a “rational” decision in an environment of insufficient information and extreme uncertainty due to the long lag between a causal credit policy decision and the resultant portfolio quality effect becoming apparent. The effect is exaggerated by the rapidly changing retail lending market.

Further, even if the information is available, it must be used wisely within the organisation. As noted previously, knowledge must be acquired, distributed, interpreted, and then stored in organisational memory for future use (Sinkula, 1994). There needs to be transparency in the use and sharing of information, to increase both confidence in decision making and establish early warning indicators if there are emerging issues. The information must be accessible to all FI members at each contact point with the customer. The transference of information into organisational memory becomes more important as FIs have a high level of turnover within Senior Management ranks and accountability transfers between organisational units.

**Short-termism**

Another argument is that management from the Chief Executive Officer down does display rational behaviour, in that it is measured and rewarded over a short term horizon by the value shareholders place on stock. Further, even if the FI has the information available to make informed decisions, there may be a number of “irrational” players who do not factor credit risk into their pricing, and focus on short-term profits. For example, quoting Guttentag and Herring (1984):

> “The argument that market discipline will ensure that decision-makers form expectations correctly has little force since the force may occur so infrequently that it may be disregarded with impunity for decades. Indeed, under such circumstances, competition may drive prudent creditors from the market because a creditor who attempts to charge an appropriate default premium for a low probability hazard is likely to lose business to creditors who are willing to disregard the hazard” (pg 1362).

On a more positive note, a recurring theme throughout the research is that as long as the FIs get the basics right, they are less likely to encounter serious credit risk problems. Information once again plays a significant role. Increasing the information to decrease uncertainty means that at least
decisions will be made knowingly – even if there are short-term apparently irrational effects due to competitors in the market.

7.4.2 Implications of the basics in the late 1990s

As highlighted in the Chapter – The New Lending Environment, the Australian FIs most negatively affected by imprudent lending in the late 1980s spent the first half of the 1990s in “crisis” and “react” mode as they re-built their balance sheets. Once there was some stability, the credit risk managers shifted their energies to managing the transition to a portfolio-based credit approach from a transaction-based approach. The market pressure forced FIs to become more competitive in terms of lower costs, decreased turnaround times, and decreased information requirements. The shift of the “ownership” of credit costs to the Line of Business and the extent of mergers and acquisitions has required credit cultures to be re-aligned within FIs. The widespread innovation and diffusion of new workflow management and decision support systems has necessitated a completely new approach to credit risk management. Further, the economic and legislative environment has resulted in a significantly different operating environment.

Through the 1990s, Australian banks greatly improved their technical credit risk measurement capabilities in addition to the broader systems to track and report on credit exposures (Gray, 1998). Similarly, Thompson (1997) states that the Reserve Bank formed the general impression that banks had a better grasp of their credit risks than they did ten years ago.

The breadth and depth of improvements in risk management methodologies across the 1990s reflects they ways Senior Credit Managers have built on the opportunity when the risk/reward pendulum moved in their favour. The periods following highly visible credit losses afforded the credit risk managers opportunities to obtain focused resources to build the credit risk infrastructure. During the credit crisis, the focus was on short-term tactical solutions and, as the business cycle moved on, the focus moved to revenue growth and, during the 1990s, cutting operational costs.

Leading FIs created the organisational focus to integrate their customer information and credit knowledge with marketing strategies to drive the profitability of customer segments. Sophistication in the use of credit models and customer information allowed them to automate the credit decision, including the appropriate terms of the loan. The life-cycle profitability of the account, and not just the credit loss, was used to manage the risk-reward trade-off. Further, as FIs obtained more complete information on different portfolios, they were able to manage the pricing and other dynamics of different products at the customer level in a much more sophisticated and strategic manner.
Strong arguments have been made that the enhanced risk management capabilities implemented through the 1990s will protect the FIs from unacceptable credit losses in the next downturn in the economy. The use of more sophisticated risk assessment tools in all aspects of portfolio analysis and customer remedial management processes means that through the next business cycle FIs should have a better understanding of credit risk management techniques, should more actively monitor their portfolios, and thus more quickly identify and respond to early warnings of deteriorating credit trends.

However, the prediction of credit costs tends to have a high margin for error due to the environment of uncertainty and incomplete information in which decisions are made. There have been contradictory reports as to how FIs applied their credit standards in the new world of retail lending in the 1990s, as discussed in relation to the Credit Confidence Survey (Chapter – Individual Research Results). Further, according to the Senior Credit Managers, the industry - or the other industry players, anyway! – may be moving towards the disaster myopia phase. It appears that the pain of the early 1990s has receded from memory, and growth-oriented and cost-cutting organisational imperatives have taken precedence.

Whilst the economic fundamentals appeared relatively sound in the late 1990s in Australia compared with those of the late 1980s, economic history indicates that a downturn in the economy is inevitable. It will not be until the next economic downturn that we know how well retail lenders managed their portfolios, through customers’ ability and propensity to make repayments. As noted by McKinley (1998), at the top of the cycle many banks looked similar when using traditional measures whereas at the bottom of the cycle, large credit performance differences became evident only after it was too late for corrective action. In addition, the magnitude of change in the credit performance of retail portfolios will probably be highly associated with the size of the downturn in the economy - particularly the effect on asset prices, unemployment and interest rates - all of which are outside of the FIs’ direct control. The effect is likely to be heightened if there is a sizeable external shock (as in most prior cycles), affecting both the timing of the shock and its effect on credit losses.

Finally, at the end of the next business cycle, it will be of particular note to compare the FIs which performed poorly in the last business cycle with the better performers. One argument is that the better performing FIs in the last business cycle will have the strong credit culture to sustain them across cycles. This strength will be enhanced because these FIs will not have to take time to repair their balance sheets. A counter-argument is that the pressure on the under-performing FIs has provided the impetus for the allocation of resources into the improvement of risk management systems. In addition, the very sizeable, public, and (for some) nearly terminal nature of the credit crisis may
provide the under-performing FIs with the corporate memory, and hence the corporate will-power, to manage credit losses more diligently the next time around.

7.5 The changing role of credit

A key message from the research is that credit risk management’s role in Australian retail lending has fundamentally changed. The competitive pressure, technology innovations, risk management methodology enhancements, focus on operational effectiveness, economic/legislative changes and higher customer expectations have put pressure on credit risk to remain not only strong, but relevant and responsive. Credit risk managers can no longer play a traditional “gatekeeper” role: No longer does “conservative” loss minimisation equal good performance. Rather, credit must add value to the end-to-end business strategy by optimising the risk-adjusted return on assets – but still be able to say “no” when required for prudential reasons.

Further, credit must move from a traditional transaction-based approach to lending to a portfolio-based approach, being prepared to rely on information-based (often statistically derived) decisions to dimension and manage non-volatile credit operations and losses.

As we move into the new millennium, the objective of credit risk management for retail lending portfolios emerging from this research is:

To establish the credit culture and infrastructure to maximise the risk-adjusted return on assets within the FI’s loss appetite. This requires:

a) Well-dimensioned and non-volatile credit losses

b) Sophisticated risk management methodologies and strategies to support pro-active segment-based profitability management and provide early warning indicators of potential portfolio segment deterioration

c) Cost effective operational practices (credit policy, staffing, business process and systems, controls) driven by constantly tested and enhanced decision support systems and automated workflow management systems

One implication is that the role of the credit manager must be carefully managed, so the credit professional does not become an “endangered species”. Embedding credit knowledge within decision support systems provides critical benefits, such as decreasing the need for credit staffing, increasing standardisation and control and decreasing turnaround times. However, sufficient experienced credit professionals must be trained and retained to: (a) Establish the credit strategy and risk management infrastructure; (b) Review the complex loan applications and the policy exceptions which are part of
the ongoing credit process; (c) Train the less experienced staff in lending and collections, which is particularly important in times of economic downturn; and (d) Remember the lessons learnt in the prior economic cycles.

Another important implication for the modern credit risk manager is that an end-to-end change management process is required to implement credit strategy and policy. For example, Gray (1998) argues that:

“A useful trend also observed in the market is the recognition … that improving risk management within banks is as much about changing attitudes in a bank as it is about introducing complex technical models. It is important to avoid the temptation to view the issue of improved risk management as essentially technical in nature” (pg 12).

One key element is ensuring that the credit risk attitude set by Senior Credit Managers is actually translated throughout the lending organisation. The alignment is not easy, as Lending Officers interpret the formal as well as the informal messages. An example is:

“The economy was beginning to weaken, the annual budget of a bank in the Northeast called for a 12% increase in average loans. When anticipated maturities were considered, this bank's growth in new loans had to be 20%. Regardless of how much jawboning management gave to credit quality, the lenders heard only the call for more loan growth” (Barr Taylor and McWhorter, 1992, pg 31).

Further, Senior Credit Managers cannot assume that the applications they are seeing (which are referred for a higher credit signatory) reflect other applications. As noted by a Lending Officer: “We have to refer it to retail lending and they have a look at it. They virtually go through the loans with a fine tooth comb, whereas in direct, we’re just basically checking the phone number is correct”.

The optimum strategy of pro-active, counter-cyclical and precisely controlled credit management as outlined previously clearly is difficult to achieve. One interviewee commented that he did not think anyone could manage credit superbly over a cycle. He pointed out that one and a half mistakes per hundred were allowed - but it did not take much for this to increase to five and a half mistakes. Reference to the fine-balancing of credit risk across the business cycle has also been made by Greenspan (1994), commenting on US Federal Reserve observations on corporate lending:
“Banks are in the business of taking risks, and such risks inevitably translate into some losses; if that did not occur, banks would not be performing their economic function…Unfortunately, bankers and sometimes their supervisors tend to forget that point and other lessons of the past, as memories fade and conditions change… We need to achieve a proper balance to prevent excessive risk-taking, while not discouraging banks from taking risks in responding to legitimate needs of their customers.” (pg 985).

However, it is critical that FIs manage credit well, to allow the FIs to meet their prudential responsibility to customers and financial obligations to shareholders and employees. In addition, excellence in credit management is one advantage FIs have over non-traditional rivals in today’s competitive market place.

By being aware of the factors which affect the credit risk attitude at a senior management level and the means by which this permeates throughout the organisation, FIs should be able to make more informed risk/reward trade-off decisions. To achieve this, given that uncertainty and incomplete information are inherently part of the credit risk environment, FIs must maximise their use of the enhanced credit risk management techniques. Further, FIs must be prepared to maintain their understanding of the existing credit controls and disciplines throughout all levels of the organisation. In addition, FIs must ensure the rigour of constant, intensive review of portfolio quality, credit policy and practices, being particularly aware of any changes in the economic fundamentals which are associated with credit quality.

To make more informed risk-reward tradeoff decisions, FIs must also be prepared to react quickly to early warning indicators, thereby potentially giving up short-term income and increasing credit costs. They must retain sufficient levels of capable credit staff. Finally, FIs must be prepared to implement a totally new system of controls to offset the effects of automation, functional specialisation, empowerment and cost-cutting initiatives. Credit risk is an interdependent system – if lending standards or practices are eased in one area, a compensating control should be established elsewhere.

7.6 In closing…

This final Chapter has highlighted the usage and implications of the key research issues and models developed throughout the research process, incorporating the data, theory and methodological triangulation. These models mark the major contribution of this thesis to the credit risk management function. I do not claim to have found the “one truth” in relation to the organisation culture/climate and credit culture. However, the input from theoretical literature, the practitioners’ literature, and the Senior Credit Manager / Lending Officer interviews combine in a model which is consistent, at least
in intent, with the basic tenets of each of these sources. I am not aware of prior research which has pulled together the various components in a holistic view of the behavioural manifestations and the underlying reasons for decision-making of retail lenders.

Potential future research is also summarised in the Chapter. Further, the Chapter highlights that the role of the credit risk manager has fundamentally changed in the 1990s, from the traditional “gatekeeper” minimising losses to a responsive role using advanced portfolio management techniques to focus on customer profitability. Some of “the basics” required to maintain a “quality credit culture” are also discussed in the chapter, particularly in the context of the late 1990s in Australia.

The late 1990s was a time of potentially high reward but also high risk, as we appeared to move towards the end of the positive economic growth. Traditionally, the period has been the most dangerous time in the business cycle for FIs – when prudence gives way to “disaster myopia” and the chasing of market share. However, we will only know how well credit risk has been managed when the industry moves through the next downturn in the cycle.