CHAPTER 3
THE THEORY OF FINANCIAL LIBERALISATION

3.1 INTRODUCTION

McKinnon (1973: 9) and Shaw (1973: 9) have documented the importance of financial liberalisation in relation to economic growth. Ever since then, numerous studies have attempted to document the effects of financial liberalisation on, *inter alia*, economic growth, financing constraints, market integration, capital flows and capital structure. All these economic fundamentals are crucial in influencing firm financing behaviour. As a result, there is a need to synthesise the literature on financial liberalisation and its effects, to unfold the picture that is emerging out of previous studies. This analysis will provide a sound basis for formulating testable hypotheses.

3.1.1 Goal of this chapter

The main goal of this chapter is to discuss the literature on the theory and implications of financial liberalisation. It begins by highlighting the case for financial liberalisation and provides contrasting empirical evidence on the effects of financial liberalisation. Next, the process of financial liberalisation is discussed together with its effects on capital flows, financing constraints and capital structure.

3.1.2 Layout of this chapter

The rest of this chapter is organised as follows: Section 3.2 defines the concept of financial liberalisation. Section 3.3 presents arguments for and against financial liberalisation. Section 3.4 articulates the process of financial liberalisation by highlighting the multifaceted nature of financial reforms. Section 3.5 deals with the effects of financial liberalisation on capital flows, credit constraints and capital structure of firms. Section 3.6 provides an analysis of the dating of financial liberalisation. Section 3.7 concludes the chapter.

3.2 WHAT IS FINANCIAL LIBERALISATION?

Auerbach and Siddiki (2004: 231) define financial liberalisation as the elimination of a series of impediments in the financial sector in order to bring it in line with that of the developed economies. There are principally three types of financial liberalisation. Firstly, this term may be used to describe domestic financial sector reforms such as privatisation and increases in credit extension to the private sector. For example, Gelos and Werner (2002: 1) examine how domestic manufacturing firms in Mexico have responded to these types of reforms.

Secondly, financial liberalisation may be used to refer to stock market liberalisation. In this case, stock market liberalisation occurs when a country opens up its stock markets to foreign investors, at the same time allowing domestic firms' access to international financial markets (Bekaert and Harvey, 2003: 5).

Finally, financial liberalisation may refer to the liberalisation of the capital account. This is a situation where special exchange rates for capital account transactions are relaxed (Loots, 2003: 237), where domestic firms are permitted to borrow funds from abroad (Schmukler and Vesperoni, 2006: 183), and where reserve requirements are lowered (Kaminsky and Schmukler, 2008: 259).

3.3 DOES FINANCIAL LIBERALISATION MATTER?

The concept of financial liberalisation stems back from McKinnon (1973: 9) and Shaw (1973: 9), who attribute economic development in developing countries to financial liberalisation. McKinnon (1973: 9) argues that financial liberalisation is a necessary ingredient in the generation of high saving rates and investment. Shaw (1973: 9) further argues that the subsequent real growth in the financial institutions provides domestic investors with the incentive to borrow and save, thus enabling them to accumulate more equity thereby lowering the cost of borrowing. The same view is echoed by Gibson and Tsakalos (1994: 578) who argue that financial liberalisation is necessary for financial

markets to operate efficiently and to provide new opportunities for financing in the existing economy.

Eichengreen (2001: 342) observes that restrictions on capital mobility shelter the financial institutions from foreign competition and that these capital controls "...vest additional power with bureaucrats who may be even less capable than markets at delivering an efficient allocation of resources ..." However, Gibson and Tsakalos (1994: 579) do not regard all forms of government intervention as financial repression needing to be liberalised. They suggest a better understanding of how financial markets in the developing countries operate, and which aspects of the financial markets are pertinent.

There have been some concerns that have been raised by researchers about the effects of financial liberalisation. For example, Eichengreen and Leblang (2003: 205) utilise data set for 21 countries ranging from 1887 to 1997, and they find weak evidence that financial liberalisation leads to growth. Nyawata and Bird (2004: 289) warn that the liberalisation of domestic interest rates could lead to excessive borrowing, which may jeopardise profitable investment opportunities. Recognising that financial liberalisation has its own limitations, McKinnon (1989: 53) believes that it is still "... the only game in town ..." in the view of achieving economic development.

Lee and Shin (2008: 106) dissect the effects of financial liberalisation into direct and indirect effects. The direct effects are clearly the benefits that arise in terms of the removal of frictions in the markets, thus leading to lower borrowing costs. The indirect effects are the negative impacts leading to crises. Although they find that the probability of crises occurring is two percentage points, the net effect, which combines the direct and indirect effects, leads to positive economic growth.

Given the slower pace of economic transitions, Henry (2007: 891) argues, firstly, that cross-sectional regressions applied by many studies fail to capture the true impact of financial liberalisation on growth. Secondly, in the case of instantaneous integration of markets, cross-sectional regressions designed to test long run growth may not be suited for measuring the short-run changes in market convergence.

Fry (1997: 759) identifies some of the key prerequisites for successful financial liberalisation; these are effective supervision of commercial banks, price stability, fiscal discipline enhanced by sustainable domestic borrowing by governments, adequate competition by commercial banks in a profit-maximising environment and a non-discriminatory tax system on financial intermediaries.

The evidence reviewed thus far suggests that the McKinnon (1973: 9) and Shaw (1973: 9) propositions have been met with mixed empirical evidence. The impact of financial liberalisation on economic growth is mainly conditional. Table 3.1 sums up some of the conditions found in recent studies on the effects of financial liberalisation on economic growth. The next section articulates on the process of financial liberalisation.

Table 3.1: Conditions for positive economic growth

Studies	Conditions for positive effect on growth
Edison, Levine, Ricci and Slok (2002: 749)	Macroeconomic stability
Loayza and Rancière (2002: 1)	Long run economic growth is dependent of the deepening of capital markets
Eichengreen and Leblang (2003: 205)	Well functioning financial markets and competition among financial institutions, which in turn leads to the efficient allocation of resources and faster economic growth
Fratzscher and Bussière (2004: 1)	The quality of domestic political institutions, size and structure of capital inflows
Bonfiglioli and Mendicino (2004: 1)	Institutional development
Klein (2005: 1)	The quality of the domestic financial institutions
Klein and Olivei (2008: 861)	Well developed institutions and sound macroeconomic policies. A thorough understanding of the institutional and macroeconomic environment is required.

3.4 THE PROCESS OF FINANCIAL LIBERALISATION

3.4.1 The multifaceted nature of financial liberalisation

The process of financial liberalisation is a complex one (Demirguc-Kunt & Levine (1996: 292), Bekaert, Harvey & Lumsdaine (2002a: 204) and Bekaert & Harvey, (2003: 5)). This is because financial liberalisation generally occurs in line with other macroeconomic reforms aimed at developing the domestic financial market. Bandiera, Caprio, Honohan and Schiantarelli (2000: 239) acknowledge the multifaceted nature of reforms that occur in line with financial liberalisation. They also point out that, in some cases, the process of financial liberalisation involves reversals in capital inflows.

Henry (2000a: 532) approaches the study of the impact of stock market liberalisation on emerging-market equity prices with caution. Owing to its complexity, he controls for reforms such as trade liberalisation, exchange control relaxation and privatisation. In the South African context, the liberalisation of the financial markets was accompanied by various political and economic developments. Makina and Negash (2005a: 149) note that the negotiations that led to the unbanning of the ANC in February 1990, also led to the first democratic elections in April 1994. They argue that these developments brought anticipation for the full opening of the JSE in March 1995.

According to Kaminsky and Schmukler (2008: 259), complete liberalisation is accomplished when at least two sectors in the domestic economy are fully liberalised, and one sector is partially liberalised. Partial liberalisation occurs when at least two sectors are partly liberalised.

3.4.2 Financial liberalisation and market integration

Bekaert and Harvey (2003: 4) observe that financial liberalisation leads to market integration with the global equity markets. Therefore, assets in the integrated markets should exhibit similar expected returns. However, in practice, markets may not be fully integrated. For example, French and Poterba (1991: 222) and Tesar and Werner (1995: 467) find that the benefits of risk sharing across integrated markets have not been fully exploited, thus leading to a home bias inherent in national investment portfolios. In fact, Bekaert and Harvey (2003: 4) argue that the home asset preference phenomenon has led many economists to believe that even well-developed capital markets are still not fully integrated. The next section discusses the effects of financial liberalisation on capital flows, financial constraints and capital structure.

3.5 THE EFFECTS OF FINANCIAL LIBERALISATION

This section analyses the literature on the various effects of financial liberalisation. Firstly, the effect of financial liberalisation on the evolution of capital flows is reviewed. Secondly, the issue of whether financing constraints are eased by financial liberalisation is documented. Finally, the literature on the effects of financial liberalisation on capital structure is analysed.

3.5.1 Financial liberalisation and capital flows

The removal of restrictions on cross country capital mobility results in increases in capital inflows. Bekaert, Harvey and Lumsdaine (2002b: 297) find that, as investors rebalance their portfolios, net capital inflows increase sharply in the first three years following financial liberalisation. However, they note that these capital inflows level off thereafter. Fernandez-Arias (1996: 414) cites low international interest rates as one of the reasons for the observed sharp increases in capital flows.

Ferreiro, Correa and Gomez (2008: 57) focus on the evolution of private capital inflows to Latin American economies, and they conclude that financial liberalisation alone does not lead to higher sustained capital outflows. The process must be reinforced by other institutional reforms. For example, Levine (2001: 689) maintains that the presence of international banking institutions in the liberalised economy contributes to the overall efficiency of the banking system, thereby boosting economic growth.

3.5.2 Financial liberalisation and financing constraints

A number of studies have examined the effects of financial liberalisation on financing constraints. The evidence is at most mixed, mainly because each sample is uniquely affected by the regulatory and institutional differences in the respective country. Guncavdi *et al.* (1998: 443) assess the impact of financial liberalisation on the dynamics of private investments in Turkey. Their estimate of the Euler equation model suggests that credit constraints were not significantly affected after financial liberalisation. One would expect investment to be more responsive to the reduction in the cost of capital. The authors find this result to be puzzling, citing lack of clarity of the real cost of borrowing in a high inflation environment as a possible reason for this phenomenon.

Habibullah and Smith (1999: 259) extend the Euler equation model to test whether financial liberalisation reduces financing constraints for 10 developing countries in Asia. With the exception of South Korea, they confirm that financial liberalisation does not reduce financial constraints. Harrison, Love and McMillan (2004: 269) provide a possible explanation to these findings. They postulate that incoming foreign investors may borrow excessively in the domestic financial sector, thereby restricting credit constraints further. Gelos and Werner (2002: 1) conduct a firm level analysis on Mexican firms and they find that, as the economy becomes liberalised, smaller firms become less constrained compared to the larger firms. Laeven (2003: 5) draws similar conclusions for a panel of firms from 13 developing countries. Bhadhuri (2005: 704) finds contrasting results for India, where smaller firms were more financially constrained after financial liberalisation. The plausible reason given for this is the withdrawal of participation by the Indian government in resource allocation.

Ozatay and Sak (2002: 14) find a sluggish adjustment of credit allocation in response to financial sector reforms in Turkey. This is due to the increase in the volatility of interest and exchange rates, thus causing banks to be more cautious in their lending practices. Harrison *et al*. (2004: 269) examine two aspects of global capital flows, viz. foreign direct investment and portfolio investment. They find that foreign direct investment has a significant effect on reducing the host country's credit constraints. These results are significant for non-G7 countries. They find no significant effect of portfolio investment on firm financing constraints. They argue that this finding is justifiable because portfolio flows are short-term and volatile, and they do not necessarily imply a direct injection of foreign funds to the firm.

Hübler *et al.* (2008: 393) study the effects of financial liberalisation on Thai firms and they find that financial liberalisation reduces the cost of borrowing as it lowers interest rate spreads and requirements on loan collateral. These results are not surprising, because at the time of the study, the Thai economy was dominated largely by commercial banks.

If there is a reduction in credit constraints, there is a possibility that in some cases, financial liberalisation may lead to excessive borrowing. As observed by McKinnon and Pill (1997: 189), financial liberalisation may cause excessive foreign borrowing by firms. This may lead to the withdrawal of credit extension by foreign investors thereby increasing the probability of a financial crisis. For example, the authors cite Argentina, Chile and Mexico as victims of financial reforms, which initially increased capital inflows followed by an economic downturn.

Kaminsky and Reinhart (1999: 473) confirm that financial liberalisation fuels capital inflows, and often this precedes banking crises. As observed by Hübler, *et al.* (2008: 339), the ease of access to more debt increases the riskiness of the banking system. Specifically, their study reveals that, after financial liberalisation, bank risk management systems were not upgraded, and less caution was taken by banks in the process of credit allocation. This is a stark contrast to the findings of Ozatay and Sak (2002: 6), who find that banks applied more caution in their lending practices. This is because of the increased risk and volatility of interest and exchange rates.

The problem of excessive debt is further exacerbated by a reversal of net capital inflows after financial liberalisation. As elaborated by Eicher, Turnovsky and Walz (2000: 19), financial market deregulation leads to investment booms at the initial stage. As the economy slows down, capital inflows are offset by rising capital outflows. Eicher and Hull (2004: 443) attribute the high levels of indebtedness to capital flow reversals which are associated with financial liberalisation.

In sum, it appears that the effect of financial liberalisation on financial constraints is dependent on specific factors that are unique to the country being studied. On balance, the evidence points towards a reduction in borrowing constraints. This leads to further borrowing by domestic firms, a situation that may lead to financial crises.

3.5.3 Financial liberalisation and capital structure

The primary motivation for financial liberalisation is documented by Schmukler and Vesperoni (2001: 1) who argue that globalisation of the financial markets develops the financial system, improves transparency, market discipline and financial infrastructure. This creates new investment and financing opportunities for domestic firms. For example, Demirguc-Kunt and Maksimovic (1996: 341) empirically test the association between stock market development and financial structure for 30 countries, including South Africa. They find a substitution of equity for debt financing for developed countries, and the opposite effect for developing nations. In particular, large firms become more leveraged, whereas small firms become relatively unaffected by stock market development.

Gallego and Loayza (2000: 1) examine, among other issues, whether financial liberalisation and stock market development affect the importance of debt over equity for firms in Chile. They find that stock market development leads to an increase in the use of equity relative to debt, whereas a larger size and activity of the banking sector induces a substitution of debt over equity. The more puzzling finding was that access to the international equity markets appears to increase the debt-equity ratio. They argue that this is due to the overall perceived creditworthiness of ADR issuers, thereby creating more room for the further use of debt.

Bhaduri (2000: 413) examines financing choices for Indian firms and finds that financial liberalisation reduces the marginal propensity to debt for all sizes of firms. The decline is, however, more pronounced for large mature firms. This finding suggests that financial liberalisation affects firm financial choices differently. In a cross country analysis, Schmukler and Vesperoni (2006: 186) find that firms with access to foreign debt and equity markets access more long-term debt as compared to firms that rely more on domestic financing. They conclude that financial liberalisation causes a wedge between internationally financed and domestically financed firms.

Flavin and O'Connor (2010: 202) explore the effects of stock market liberalisation on firms' financial structure in 31 emerging markets. They contrast between cross listing on a United States and United Kingdom stock exchange and domestic reforms and corporate governance improvements. They conclude that in both cases, stock market liberalisation lowers the debt to equity ratio.

The advent of the public debt market in South Africa is an additional transition in the financial liberalisation process. Before the Bond Exchange of South Africa (BESA) was introduced, firms had a limited choice in obtaining external finance. Typically, the main two sources were equity and the private debt, especially from banks. Because of this wider choice, Ojah and Pillay (2009: 1215) argue that competition in the capital markets increases, thus affecting the debt and capital structure of South African firms. In their sample of public and non public debt issuing firms, they find that, after issuance, the cost of capital for public debt issuing firms is lower than that of non public debt issuing firms. One would argue that this places public debt issuing firms in a better position to access more external finance.

The evidence reviewed thus far suggests that the choice of financial structure is clearly affected by financial liberalisation. Firm characteristics play a great role in determining the choice of capital structure. For instance, large firms are affected differently from smaller firms, and that firms with access to international equity markets are also affected differently from domestically financed firms. On balance, most of the evidence points towards an increase in the use of equity relative to debt.

3.5.4 Summary of the effects of financial liberalisation

Table 3.2 summarises the effects of financial liberalisation on capital flows, financial constraints and capital structure. The next section deals with the dating of financial liberalisation.

Table 3.2: Summary of the effects of financial liberalisation

		Changes in dependent variables		
Authors	**Countries Sampled**	**Capital flows**	**Financial Constraints**	**Capital Structure**
Bekaert, *et al.* (2002a: 297)	20 emerging markets	Increase		
Ferreiro, Correa and Gomez (2008: 57)	Latin America	Does not lead to higher sustained inflows		
Guncavdi, Bleaney and McKay (1998: 443)	Turkey		Not significantly affected	
Habibullah and Smith (1999: 259)	10 Asian countries		Not significantly reduced	
Gelos and Werner (2002: 1)	Mexico		Smaller firms become less constrained	
Laeven (2003: 5)	13 developing countries		Smaller firms become less constrained	
Bhadhuri (2005: 704)	India		Smaller firms become more constrained	

Ozatay and Sak (2002: 14)	Turkey		Sluggish adjustment to credit allocation	
Harrison *et al.* (2004: 269)	Developed and developing countries, including South Africa		Significant reduction in credit constraints attributed to FDI and not portfolio flows	
Hübler, *et al.* (2008: 393)	Thailand		Reduction in borrowing costs	
Demirguc-Kunt and Maksimovic (1996: 341)	30 developed and developing countries, including South Africa			Increase in leverage ratios for firms in developed countries. Decrease in leverage ratios for large firms in developing countries
Gallego and Loayza (2000: 28)	Chile			Increase in equity over debt; Larger size of banking sector induces substitution of debt over equity; Access to international markets lowers

				debt to equity ratio
Bhaduri (2000: 413)				Reduces marginal propensity to debt; Effect more pronounced for larger firms
Schmukler and Vesperoni (2001: 1)	East Asian and Latin American firms			Lowers debt to equity ratio for Latin American firms
Schmukler and Vesperoni (2006: 186)	Seven emerging economies in East Asia and Latin America			Debt maturity increases for firms with access to and equity markets
Flavin and O'Connor (2010: 202)	31 emerging economies			Lowers the debt to equity ratio

3.6 THE DATING OF FINANCIAL LIBERALISATION

The dating of financial liberalisation has not been easy to test, because of several reasons. Firstly, Makina (2005: 76) acknowledges that financial liberalisation can be seen as a gradual process. This is due to leakage of information prior to the announcement date, hence markets respond by anticipating the announcement. For example, the unbanning of the ANC in 1990 spurred anticipation that sanctions on South Africa will be lifted. The sequence of events leading to the first democratic elections in 1994 must have

also brought about some anticipation for the official opening up of the JSE to foreigners in March 1995.

Secondly, Bekaert and Harvey (2003: 8) argue that investment constraints are not binding, as there are ways of circumventing this through country funds or ADRs. Finally, Kaminsky and Schmukler (2008: 257) argue that focusing on one aspect of the financial market may distort the overall picture. This is due to the effect of controls across the various segments of the financial markets.

Having said this, various researchers have approached the issue of the dating of financial liberalisation in a fragmented manner. For example, Demirguc-Kunt and Detragianche (1999: 303) use the liberalisation of domestic interest rates as a measure for domestic financial sector liberalisation. Kaminsky and Schmukler (2008: 259) use the same approach by analysing regulations on deposit and lending rates. In terms of stock market liberalisation, the dominant measure is when foreigners are allowed to buy shares of domestic listed firms.

Frankel and Schmukler (2000: 177) and Edison and Warnock (2003: 83) determine financial integration by observing economic fundamentals in contrast to the existence of government controls. This has largely been made possible by data compiled by the IFC, specifically with information regarding dates of the establishment of country funds and depository receipts. Fuchs-Schundeln and Funke (2003: 730) assess the impact of stock market liberalisation on financial development for 27 countries, and they use official liberalisation dates by policy decree. Their choice of dates is influenced by the study of Bekaert (1995: 98), who also uses regulatory dates.

The choice of the date of financial liberalisation should be influenced by the nature and objective of the study. For example, Makina and Negash (2005b: 64) observe that studies with high-frequency data tend to use dates that indicate early signs of liberalisation while studies that examine real effects on the economy tend to use dates where there is a significant change in the data.

Three different dates have been used by several researchers to date the liberalisation of the JSE. Brooks, Davidson and Faff (1997: 255) use 2 February 1990, the date when the then president F.W. De Klerk made some announcements on dismantling the apartheid regime. They find this date to be appropriate because they were testing the effects of political announcements on the volatility of the JSE.

Fuchs-Schundeln and Funke (2003: 730) examine the effects of stock market liberalisation on macroeconomic development, and they use March 1995, the date when the JSE was officially opened to foreigners. Bekaert, Harvey and Lundbland (2005: 3) study the effects of equity market liberalisations on economic growth and they use 1996, the year after the official liberalisation date of the JSE.

Makina and Negash (2005b: 61) test for structural breaks around the two dates provided by Fuchs-Schundeln and Funke (2003: 730) and Brooks *et al.* (1997: 255). They include 1992 as the third date in their analysis, a date which was formally proposed by Bekaert *et al*. (2001: 465). This date is chosen because by the end of 1992, most economic sanctions on South Africa were lifted. Structural breaks around the three dates are detected by utilising the Chow test and the Broken Trend Stationary (BTS) test formalised by Perron (1989: 1361). They confirm significant structural breaks in stock market data for February 1990 and December 1992.

Ironically, no structural break is detected for March 1995, the official liberalisation date of the JSE. Makina and Negash (2005b: 61) conclude that political and economic policy concerns were significant determinants to stock market liberalisation compared to direct legal barriers. This finding suggests that there was much anticipation for the full opening of the JSE, following major political developments in the early 1990s.

Table 3.3 compares the liberalisation dates for emerging economies used by different researchers. It is evident that the process of financial liberalisation occurs between the late 1980s and early 1990s.

Table 3.3: A comparison of liberalisation dates for a sample of emerging economies

Country	**Liberalisation dates and references**				
	Henry (2000b: 301)	Kim/Singal (2000: 45)	Bekaert/ Harvey (2000: 565)	Bekaert *et al.* (2001: 465)	Fuchs Schundeln-Funke (2003: 757)
Argentina	11/89	11/89	11/89	11/89	11/89
Brazil	03/88	05/91	05/91	05/91	05/91
Chile	05/87	10/89	01/92	01/92	01/92
Colombia	12/91	02/91	02/91	02/91	02/91
Egypt				97	
Greece		08/86	12/87	12/87	12/87
India	06/86	11/92	11/92	11/92	11/92
Indonesia		09/89	09/89	09/89	09/89
Jordan		01/78	12/95	12/95	12/95
Korea	06/87	01/92	01/92	01/92	01/92
Malaysia	05/87	Before 12/75	12/88	12/88	12/88
Mexico	05/89	05/89	05/89	05/89	05/89
Morocco					04/94
Nigeria		Still Closed	08/95	08/95	08/95
Pakistan		02/91	02/91	02/91	02/91
Peru					11/91
Philipines	05/86	03/86	06/91	06/91	06/91
Portugal		07/86	07/86	07/86	07/86
South Africa				**92**	**3/95**
Spain				85	5/85
Sri Lanka				92	1990
Taiwan	05/86	01/91	01/91	01/91	01/91

Thailand		08/88	09/87	09/87	09/87
Turkey		08/89	08/89	08/89	08/89
Venezuela	01/90	01/90	01/90	01/90	01/90
Zimbabwe		07/93	06/93	06/93	06/93

Source: Fuchs-Shundeln and Funke (2003: 757).

3.7 CHAPTER SUMMARY

This chapter has discussed the theory and implications of financial liberalisation. It commences with the arguments for and against financial liberalisation. Counter arguments regarding the imperative for financial liberalisation provide conflicting evidence that financial liberalisation leads to economic growth.

In spite of this lack of consistent evidence, several recommendations are made on the conditions for successful financial liberalisation. Some of these recommendations include effective supervision of commercial banks, price stability, fiscal discipline that is enhanced by sustainable domestic borrowing, adequate competition by commercial banks in a profit-maximising environment, institutional development, macroeconomic stability and a non-discriminatory tax system on financial intermediaries.

The effects of financial liberalisation have been discussed with emphasis on capital inflows, financing constraints and capital structure. It has been argued that financial liberalisation leads to an increase in net capital inflows. Pursuant to this, there are certain implications that are inevitable. Firstly, that the capital inflows are not sustainable for periods more than three years, unless they are reinforced by other institutional reforms. Secondly, capital inflows may lead to excessive borrowing thus increasing the probability for financial crises.

The effects of financial liberalisation on credit constraints have been discussed. The general consensus is that financial liberalisation has no significant effect on credit constraints. There are basically two main reasons that have been advanced in respect to this general finding. Firstly, in countries where inflation was high during the period of

assessment, the lack of clarity of the real cost of borrowing has been cited as a possible reason. Secondly, incoming foreign investors may borrow excessively in the domestic financial sector thereby restricting credit constraints further.

Evidence is mixed regarding the effects of financial liberalisation on the capital structure. Despite this, reviewed evidence tends to point towards a substitution of equity for debt, especially for the developing countries. This is because of increased portfolio flows into the previously restricted capital market. It has also been found that large firms access more long-term financing as compared to their smaller counterparts.

This chapter concludes with a discussion on the dates that have been used previously by researchers as a benchmark for testing the effects of financial liberalisation. Because financial liberalisation is a gradual process, the dating may be a difficult issue. Most studies utilise dates of official liberalisation of the stock market by policy decree while other studies use the dates when an event occurred. These dates have also been tested in order to determine whether there was a structural shift in financial time series and February 1990 and December 1992 were confirmed for South Africa. The next chapter focuses on the formulation of research hypotheses.

CHAPTER 4
HYPOTHESIS DEVELOPMENT

4.1 INTRODUCTION

The preceding chapters have detailed the theory and evidence of capital structure and financial liberalisation. The discussions that have emanated from these chapters clearly provide a basis for developing testable hypotheses.

4.1.1 Goal of this chapter

The main goal of this chapter is to formulate testable hypotheses based on the theoretical and empirical issues discussed in the preceding chapters.

4.1.2 Layout of this chapter

The rest of the chapter is organised as follows: Section 4.2 provides a description of the hypothesis development and lists each hypothesis based on the developments of the literature in the preceding chapters. Section 4.3 concludes the chapter.

4.2 HYPOTHESES DEVELOPMENT

The research problem and objectives highlighted in this chapter provide a suitable basis to formulate testable hypotheses. This section provides an extensive analysis of the empirical and practical justification for each hypothesis. The first seven hypotheses focus on the impact of the various aspects of financial liberalisation on the dependent variables. The eighth hypothesis focuses on whether there are structural shifts in equation parameters following financial liberalisation.

4.2.1 Hypothesis one

Hypothesis one is developed based on two main aspects relating to the dynamics of firm leverage. The first aspect is based on the empirical finding that at both the aggregate and firm level, stock market liberalisation lowers the cost of equity capital.[8] This finding has three implications that may suggest a reduction in leverage. Firstly, if the cost of equity capital reduces, then equity prices should increase (Henry, 2000a: 529). Assuming that future cash flows are held constant, leverage ratios should decrease.

Secondly, because of the reduction in the cost of equity capital, firms' investment in projects should increase (Henry, 2000b: 301), particularly because some of the projects with a negative net present value will be accepted due to the lower cost of capital. The expected increase in the investment should be financed by, *inter alia*, an increase in equity issues. This dynamic shift in financing should affect the capital structure of listed firms on the JSE.

Finally, because of the lower cost of equity capital, domestic firms should have more access to the equity market (Bhaduri, 2000: 413). Because of these implications, it is expected that leverage ratios should decrease following financial liberalisation.

The second aspect is based on the widening and deepening of the private and public debt markets. The opening of the public debt market and the increase in the participation of foreign banks provided a viable alternative for firm financing. Before the opening up of the BESA and the JSE, the choice of financing was limited mainly to private debt and equity. Because of this wider choice, Ojah and Pillay (2009: 1215) have argued that competition in the capital markets increases, thus affecting the debt and capital structure of South African firms. In their sample of public and non-public debt issuing firms, they find that, after issuance, the cost of capital for public debt issuing firms is lower than that of non-public debt issuing firms. If this is the case, we should expect firms to have more access to debt.

[8] See Stapleton and Subrahmanyam (1977: 307), Stulz (1990: 3), Henry (2000a: 529), Bekaert and Harvey (2003: 3), and Makina and Negash (2005a: 154).

Hübler, *et al*. (2008: 393) find that following financial liberalisation, interest rate spreads reduce, thus indicating lower borrowing costs. If a reduction in credit constraints is experienced, there is a possibility that in some cases, financial liberalisation may lead to excessive borrowing. McKinnon and Pill (1997: 189) caution that financial liberalisation may cause excessive foreign borrowing by firms. If this is the case then it is expected that the debt proportion for listed firms should increase.

One would argue that the presence of an active public debt market contributes to higher levels of leverage. Therefore, the expected reduction in borrowing constraints, coupled with a growing private and public debt market, should contribute to the increase in domestic firms' debt levels. Based on the aforementioned facts, the null (H_O) and alternative hypotheses (H_a) can be stated as follows:

H_O = ***Stock market liberalisation has no significant impact on the book and market value leverage ratios for all sets of listed firms.***

H_a = ***Stock market liberalisation has a significant impact on the book and market value leverage ratios for all sets of listed firms***

4.2.2 Hypothesis two

Hypothesis two is formulated on the assumption that direct legal barriers are not the only factors impacting on firms' choice of debt. To capture the effect of some other prominent economic and political influences on the capital structure of firms, the lifting of international sanctions on South Africa is considered as a possible influence on firm financing choices. Bekaert *et al*. (2001: 465) and Makina and Negash (2005a: 150) use the end of 1992 to capture the effects of the lifting of economic sanctions on the JSE. It is envisaged that the lifting of international sanctions reduces the country-specific risk. Investors will therefore require a lower rate of return on equities. From these arguments, it is hypothesised that the re-integration of the economy with the world markets lowers the cost of equity capital and subsequently increases equity prices. To this effect, debt ratios should reduce following the lifting of international sanctions. From the preceding observations, hypothesis two can be stated as follows:

H_O = The lifting of international sanctions has no significant impact on the book and market value leverage ratios of all sets of listed firms.

H_a = The lifting of international sanctions has a significant impact on the book and market value of leverage ratios of all sets of listed firms

4.2.3 Hypothesis three

Hypothesis three is formulated on the presupposition that the easing of exchange controls allows domestic firms to repatriate more funds abroad for investments and the purchase of foreign assets. As a result, domestic firms are expected to finance these repatriations from a variety of sources. However, given the fact that the series of exchange control relaxations occurred after 1995, a period in which the stock and banking sector was well developed, more financing options were available. It can be hypothesised that exchange control relaxations cause domestic firms to acquire external financing to finance repatriations. The source of the financing could principally be debt or equity. From the aforementioned arguments, it is hypothesised that:

H_O = Exchange control relaxations have no significant impact on the book and market values of leverage ratios of all sets of listed firms.

H_a = Exchange control relaxations have a significant impact on the book and market value leverage ratios of all sets of listed firms.

4.2.4 Hypothesis four

Domestic financial sector liberalisation takes on many forms, including the removal of controls on interest rates, direct lending provisions and the lowering of reserve requirements. In the case of reserve requirements, a series of steps were undertaken to lower reserve requirements in the 1990s (Nel, 2002: 70). Holding all other things constant, the lowering of reserve requirements could have provided financial institutions with more funds at their disposal. The possible effect would be an increase in domestic lending to the

private sector. As a result, the null (H_O) and alternative hypotheses (H_a) are stated as follows:

H_O = Domestic financial sector liberalisation has no significant impact on the book and market value leverage ratios of all sets of listed firms.

H_a = Domestic financial sector liberalisation has a significant impact on the book and market value leverage ratios of all sets of listed firms

4.2.5 Hypothesis five

Hypothesis five is posited based on the effect of financial liberalisation on firm debt maturities. Smaller firms are more likely to have shorter debt maturities compared to larger firms. This, according to Gupta (1969: 526) is due to smaller firms' inability to access longer term finance. However, Demirguc-Kunt and Levine (1996: 224) argue that the stock market develops simultaneously with the domestic financial institutions. This increases competition in the financial markets thereby lowering the cost of debt. The lower cost of finance should increase smaller firms' access to debt with longer maturities. In contrast, Schmukler and Vesperoni (2006: 183) find that the average firm's debt maturity shifts from long term to short term debt. They observe that this shift is prominent in countries where the domestic financial system is less developed.

Although this finding suggests otherwise, the growth in financial institutions and the subsequent lower cost of funding in South Africa is a plausible assumption that the average firm should be less constrained. An examination of figures 4.1 and 4.2 reveals that there is a minimal reduction in the average short term debt ratio for both the smaller firms and the average South African listed firm. This provides us with an indication of a marginal shift to the access of longer term finance. On balance, two issues are emerging out of this preliminary assessment. Firstly, smaller firms are expected to access more long term debt. Secondly, the average firm's debt maturity structure shifts from short term to long term. Based on these observations, the null (H_O) and alternative (H_a) hypotheses can be stated as follows:

H_O =Financial liberalisation has no significant impact on the debt maturity structure of all sets of firms

H_a = Financial liberalisation has a significant impact on the debt maturity structure of all sets of firms

Figure 4.1: The debt maturity structure for small firms

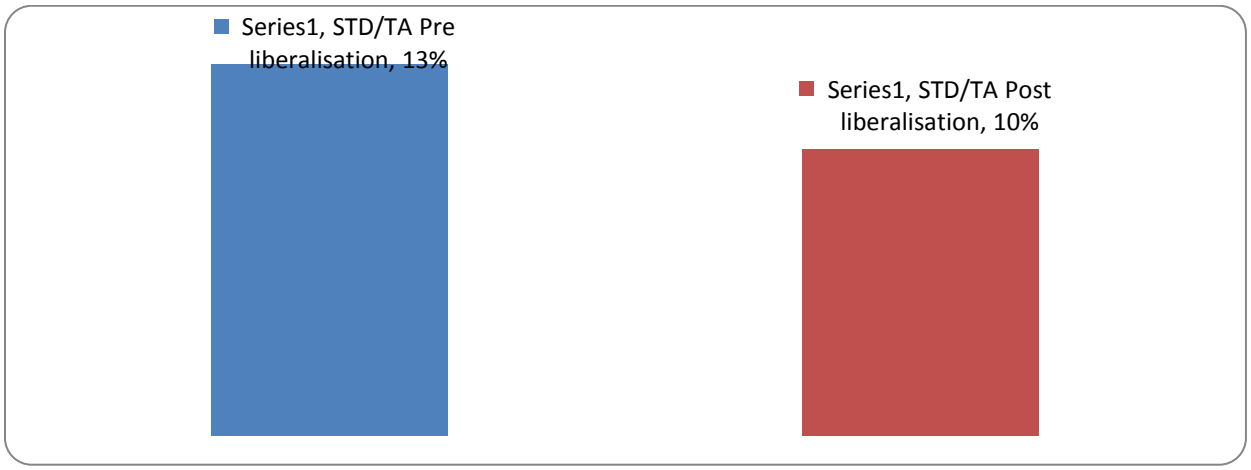
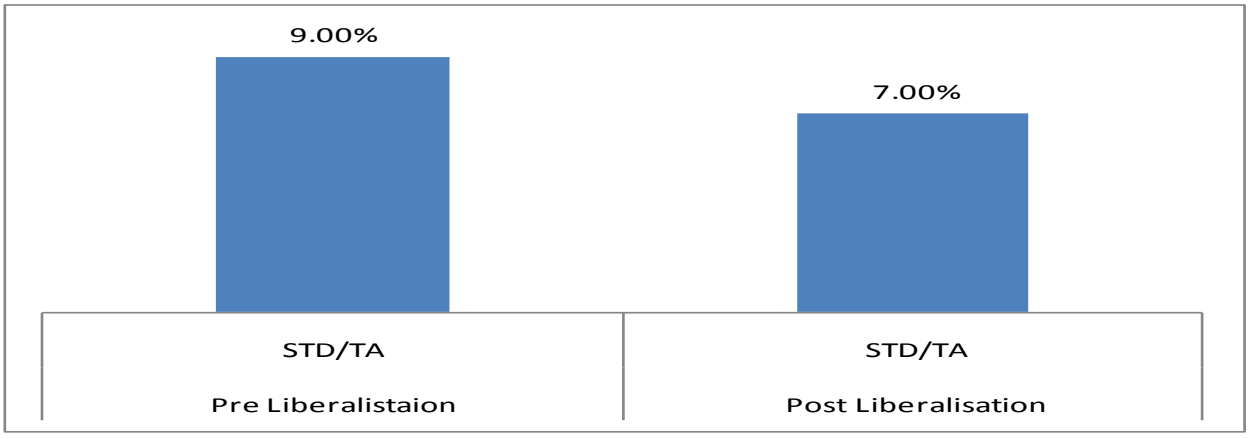


Figure 4.2: The debt maturity structure for the average firm



4.2.6 Hypothesis six

The sixth hypothesis relates to the importance of retained earnings. Despite the less developed nature of markets in the developing countries, empirical evidence suggests that firms in developing countries rely less on retained earnings and more on external finance

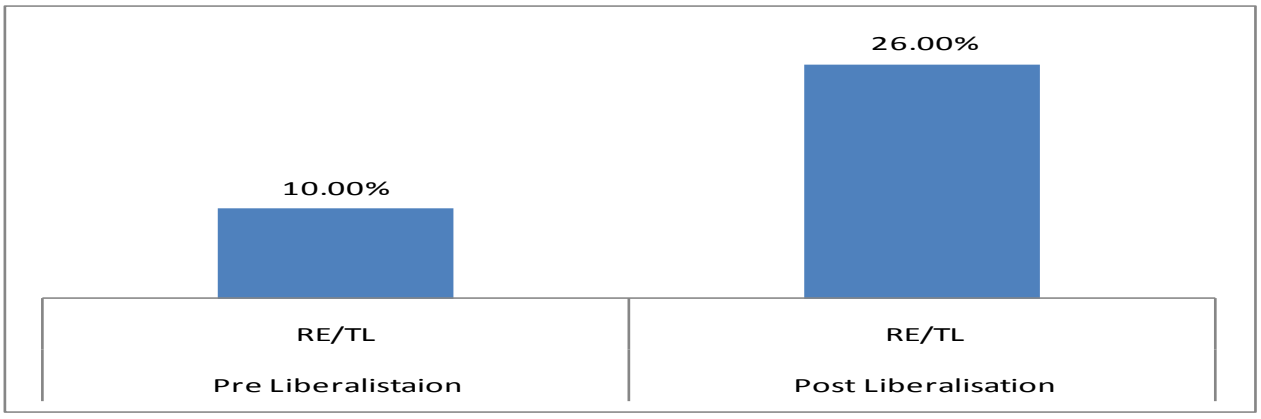
(See section 2.5.2). As the economy is liberalised, the domestic financial sector develops while improving the market infrastructure, thus creating more competition in the financial markets. This competition lowers the cost of external financing thereby improving the profitability of firms. This improved profitability may induce firms to retain more profits.

Furthermore, as the domestic financial market becomes more integrated with the international financial markets, firms in the domestic economy may begin to exhibit similar financing characteristics to their counterparts in the developed economies. The documented evidence regarding retentions is that firms in the developing economies rely more on retentions than firms in the less developed economies[9]. Figure 4.3 shows an increase in average retentions for South African firms after financial liberalisation, suggesting that firms in the post liberalisation regime may be associated with larger amounts of retentions. In this case, the null (H_O) and alternative hypotheses (H_a) can be stated as follows:

H_O = Financial liberalisation has no significant impact on the importance of internal financing for all sets of firms.

H_a = Financial liberalisation has a significant impact on the importance of internal financing for all sets of firms.

Figure 4.3: Average retained earnings ratio for the pre and post liberalisation



[9] See section 2.5.1 for a discussion on the differences between firms' use of internal finance in developing and developed countries.

4.2.7 Hypothesis seven

The development of the stock and banking sector is the basis for raising hypothesis seven. The significance of the stock market and banking sector is an important feature in the choice of capital structure. Dermiguc-Kunt and Maksimovic (1996: 361) empirically test the effect of financial market development on firm financing choices, and they find banking sector development to be positively related to debt. The relationship is more significant for long term debt than for short term debt. The coefficient of stock market indicators is largely positive and significant for the developing countries. This relationship is prominent for large firms. This finding suggests that in economies where the stock market is developing, further development leads to more domestic borrowing. Based on these arguments the null (H_O) and alternate hypotheses (H_a) are stated as follows:

H_O = Stock and banking sector development has no significant impact on the book and market value leverage for all sets of firms.

H_a = Stock and banking sector development has a significant positive impact on the book and market value leverage for all sets of firms

4.2.8 Hypothesis eight

The eighth hypothesis is formulated based on the stability of the parameters during the period of financial liberalisation. There are two principle dates where it is suspected that a structural shift in the coefficients is present. These dates include the years 1993 and 1995. Most of the economic sanctions were lifted by the end of 1992; hence 1993 is a suitable date to test for a shift in the regression parameters. The year 1995 is well recognised by the opening up of the JSE to foreign investment. Furthermore, it is envisaged that the capital account liberalisation and domestic financial sector liberalisation should have a significant impact on the regression coefficients. Based on these arguments the null (H_O) and alternative hypotheses (H_a) are stated as follows:

H_O = ***There is no structural shift in the regression coefficients during the period of financial reforms.***

H_a = ***There is a structural shift in the regression coefficients during the period of financial reforms.***

4.3 CHAPTER SUMMARY

This chapter has elaborated on the unresolved issues relating to the association between financial liberalisation and firm financing choices. In sum, there are eight hypotheses that need to be empirically tested. The first hypothesis is formulated based on the two opposing effects of stock market liberalisation. Firstly, the empirical evidence suggesting that stock market liberalisation lowers the cost of equity capital leads to the hypothesis that stock market liberalisation is negatively associated with leverage. Secondly, another set of circumstances based on the development of an active private and public debt market could sway the prediction in another direction, in that stock market liberalisation increases leverage ratios. In sum, the null and alternate hypotheses are formulated based on these arguments.

The second hypothesis has been developed based on the lifting of international sanctions. Prior empirical evidence suggests a lowering of the cost of equity capital for the period following the lifting of international sanctions on South Africa. Therefore, the lifting of the various economic sanctions could have lowered the leverage ratios for all sets of firms. The third hypothesis suggests that exchange control relaxations could have an impact on firm financing behaviour. The fourth hypothesis posits that domestic financial sector liberalisation could have a significant impact on the capital structure of firms.

The fifth hypothesis suggests that, following financial liberalisation, the debt maturity of both small and large listed firms could increase. The sixth hypothesis is formulated on the importance of retained earnings in financing investment. Following the observation that retained earnings increased after financial liberalisation, it is possible that there may be a significant increase in the use of retained earnings following financial liberalisation.

The seventh hypothesis emphasises on the association between the importance of the stock and the banking sector and firm leverage. Empirical evidence from emerging market studies suggests that there may be is a positive association between leverage and the size of the bank sector.

The eighth hypothesis focuses on the equality of the slope parameters. The conjecture is that there may be a structural break in the parameter estimates for the firm specific determinants of capital structure. This structural shift in the parameter estimates is envisaged for 1993 (lifting of international sanctions), 1995 (stock market liberalisation), domestic financial sector liberalisation and capital account liberalisation.

The next two chapters prepare the ground for hypothesis testing. Chapter 5 resolves some of the outstanding methodological issues relating to this study and Chapter 6 develops the econometric models to be used to test the hypotheses.