CHAPTER 8
CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH

8.1 INTRODUCTION

This study has provided a sound theoretical and empirical basis for undertaking a comprehensive analysis on the effects of multiple liberalisations on capital structure of listed non-financial firms in South Africa. The preceding chapter has detailed extensively the results of the static and dynamic models of capital structure. The results generated by these models provide resounding evidence that financial liberalisation in general has significant effects on firm financing behaviour. As a result, there is a need to summarise the material aspects of the theoretical underpinnings of the study and to highlight the empirical findings documented in the previous chapter.

8.1.1 Goal of this chapter

The main goal of this chapter is four-fold; firstly, to summarise by way of concluding remarks the theoretical and empirical significance of the findings. Secondly, to highlight the contribution of this study to the existing body of knowledge on capital structure. Thirdly, to acknowledge some limitations of the study, and finally, to suggest further avenues for future research.

8.1.2 Layout of this chapter

The rest of this chapter is organised as follows: Section 8.2 provides a concise summary of the theoretical conclusions of the study. Section 8.3 highlights the main empirical findings of the study. Section 8.4 outlines the theoretical and methodological contributions of this study. Section 8.5 acknowledges the shortcomings of the study and provides avenues for future studies.

8.2 THE THEORETICAL CONCLUSIONS OF THE STUDY

The main purpose of the extensive literature review on the theory of capital structure and financial liberalisation was two-fold. Firstly, to synthesise the literature and where possible, draw reasonable conclusions from the issues arising out of the various studies. Secondly, to enhance our understanding of firm financial behaviour.

8.2.1 The theoretical determinants of capital structure

The effect of relaxing Modigliani and Miller's (1958: 201) capital structure irrelevance proposition suggests that there are theories of firm specific impediments that cause shifts in firm leverage.

The trade-off theory of Kraus and Litzenberger (1973: 911) hypothesises that firm managers attempt to balance the benefits of the present value of interest tax shields against the potential cost of financial distress. Extensive analysis of the documented literature shows that there is substantial evidence for the main predictions of the trade-off theory.

Jensen and Meckling's (1976: 305) agency cost theory postulates that firm managers will not always act in the firm's shareholders interest. Various empirical methodologies have been used by different researchers to detect the presence of agency costs. Overall, it appears that agency costs affect firm financial choices.

Ross' (1977: 23) signalling theory posits that if managers have inside information, their choice of capital structure will signal information to the market. The intuition is as follows: an issue of debt is seen as a credible signal to the market that the firm is confident about its future cash flows; hence debt issues should increase the market value of firms. On average, the signalling theory seems to hold.

The pecking order theory of Myers and Majluf (1984: 188) hypothesises that an issue of equity is generally perceived negatively by the market. Therefore, in order to avoid the information costs associated with equity, a firm is more likely to issue debt. Overall, the evidence gathered on the pecking order is mixed. There are two main reasons for this. Firstly, financing decisions are subject to a number of factors that may influence capital structure differently. Secondly, the regression results in the empirical studies are dependent on the choice of the methodology.

Myers' (1977: 147) contracting cost theory predicts that firms whose value consists mainly of the present value of intangible investment opportunities will avoid issuing excessive debt. These firms will choose lower debt ratios to minimise the adverse effects of the underinvestment problem. Conversely, large mature firms with fewer investment opportunities will choose high debt ratios because of the lower possibility of financial distress costs. Overall, the evidence on this prediction depends on the choice of methodology. The issues emanating from the theoretical analysis suggests that when the market to book value of assets is used, a negative association is observed. When growth in assets and sales variables are used, a positive association is normally observed.

8.2.2 Factors correlated with firm leverage

From the review of the related literature, a number of factors have been identified to affect the cross-sectional variation in firm leverage. The differences in the capital structure of firms have been attributed to the development of the stock markets and the financial sector. Irrespective of the proxy used, evidence shows consistently that there is a direct relationship between size and leverage. An inverse association between profitability and leverage is observed in most of the studies reviewed. This confirms the predictions of the pecking order hypothesis.

There is resounding evidence that firms in both the developed and developing economies use their asset base as collateral for further borrowing. Although age is

theoretically assumed to represent the reputational capital possessed by firms, the expected sign of the age coefficient is inconsistent in the regressions of the reviewed studies. Hence, no logical conclusion can be inferred by the analysis of literature performed in this study. The literature on the effects of firm growth prospects on leverage shows that the growth coefficient tends to be positive if growth in assets or sales is used. If the market to book value of equity ratio is used, then the opposite sign is observed.

Attempts to establish the true effect of tax on leverage have yielded inconclusive results. Modigliani and Miller's (1963: 433) prediction that taxes are directly related to leverage is confirmed by some studies. Nonetheless, other studies report a negative association between tax variables and leverage. Likewise, the non-debt tax shield hypothesis of DeAngelo and Masulis (1980: 3) has been strongly confirmed by most of the studies reviewed in this analysis. However, contradictory positive correlations are observed by some studies, especially where non-debt tax shields are highly correlated to asset tangibility.

A number of studies have ignored the impact of dividend payout on firm leverage. Accordingly, the effect of dividend policy on firm leverage has been reviewed from the aspect of its impact on the market value of the firm. The literature reviewed has almost consistently shown that dividend increases are positively correlated to firm value. Hence, a negative association between dividend payout and leverage is implied.

There are notable differences between the corporate finance patterns of firms in the developed and developing economies. The observed differences in the developed world are partly due to methodological differences. The pattern that has emerged from the analysis is that firms in developed countries rely more on internal finance than on debt and equity.

A non-uniform financing pattern is observed for firms in the developing countries. This has mainly been attributed to each firm's unique circumstance and the data definitions.

However, firms in developing countries rely less on internal financing and more on external financing and that firms in African countries exhibit similar levels of leverage to firms in other developing countries.

8.2.3 The theory of financial liberalisation

The McKinnon (1973: 9) and Shaw (1973: 9) postulations of that financial liberalisation promotes economic growth through the deepening of financial markets have attracted considerable attention among economic researchers. From the theoretical analysis of the empirical evidence on financial liberalisation, there are several important issues to be noted. Firstly, it is clear that financial liberalisation impacts on the evolution of capital flows into the liberalised economy. Secondly, most reviewed studies have shown that financial liberalisation leads to the easing of financing constraints, thus increasing the risk of over borrowing, a situation that may be associated with financial crises. Lastly, financial liberalisation affects the capital structure of firms differently. Large firms respond differently to financial liberalisation compared to small firms. Firms with access to international equity are also impacted differently from domestically financed firms. Overall, financial liberalisation causes firms to prefer equity over debt.

8.3 THE EMPRICAL FINDINGS OF THE STUDY

This study was motivated by the evidence provided by empirical studies that financial liberalisation lowers the cost of equity capital, increases portfolio flows and reduces financing constraints. These observations provide a laboratory for testing the effects of these developments on the dynamics of firm financial structures.

This study finds that the lifting of international sanctions and the opening of the JSE to foreign investment lowers the book and market value debt ratios for all firms. The effect is more pronounced for larger firms. This observation is consistent with the Myers and Majluf (1984: 188) assertion that information asymmetries are lower for larger firms.

Therefore, it is not surprising that large firms respond more to financial liberalisation than their smaller counterparts.

Exchange control relaxations have a significant and direct impact on firms' leverage. Again, the impact is more pronounced for larger firms. Because of reputational capital, large firms are more capable of obtaining domestic and foreign debt at lower cost. As firms are permitted to repatriate and borrow funds from abroad, large firms will benefit more since they have the capacity to negotiate debt on more favourable terms.

The size of the stock and the banking sector has a significant impact on firm financial choices. Stock market development is positively related to leverage, and banking sector development is negatively related to leverage. This result is a direct confirmation of Demirguc-Kunt and Maksimovic's (1998: 2107) assertion that the differences in firm capital structures are attributed to the development of the stock market and the banking sector.

The liberalisation of the JSE causes firms to access more long term finance. This finding suggests that the improved corporate governance and transparency laws associated with the development of the capital markets provides more credibility for firms to borrow on a longer term basis.

The regime dummy variable technique reveals that the impact of profitability on the book and market values of leverage shifted in 1993 and 1995. The lifting of international sanctions and stock market liberalisation have the most significant impact on the stability of the regression parameters. Particularly, profitability, growth and taxes are the most affected.

The results of the dynamic model of capital structure provide evidence of transaction costs for firms operating in both regimes. The speed of adjustment to the desired target level of leverage increases dramatically in the period following financial liberalisation.

This increase in the speed of adjustment may imply fewer barriers to the target levels of leverage.

The dynamic capital structure model employed in this study has documented relationships that support most of the theories of capital structure. There is strong evidence that firms in the post liberalisation regime follow a pecking order in financing investment. The correlations for the growth prospects are dependent on the measure used for leverage. Growth prospects are positively correlated to both measures of the debt to equity ratio and negatively correlated to both measures of the total debt ratio. The negative correlation supports the contracting cost theory.

The asset tangibility and size variables are positively related to leverage. This finding suggests that firms use their assets as collateral for debt, and that larger firms have a better capacity to accumulate more debt. Taxes are negatively related to leverage, thus confirming Negash's (2002: 26) findings for South Africa and contradicting Modigliani and Miller's (1963: 433) proposition that higher taxes encourage firms to borrow more. Dividend payout is negatively correlated to the market value of the debt to equity ratio and to both measures of total leverage. Non-debt tax shields are significantly negatively related to leverage, thereby providing direct support for the DeAngelo and Masulis (1980: 3) hypothesis.

8.4 THE CONTRIBUTIONS OF THE STUDY

8.4.1 The contribution to the knowledge gap

The effects of globalisation on firm financial choices have been studied adequately for emerging markets, but the known empirical studies have mostly excluded South Africa. For example, Galego and Loayza (2000: 28) examine the macroeconomic developments and firm financial structures for Chilean firms. In addition, Bhaduri (2000: 413) examines financial liberalisation and capital structure for firms in India, and

Schmukler and Vesperoni (2006: 186) examine seven emerging economies in East Asia and Latin America.

The notable exception is Demirguc-Kunt and Maksimovic (1996: 341) who study the effects of stock market development on capital structure for firms in 30 countries, including South Africa. However, as their title suggests, their analysis is limited to the impact of stock and banking sector development on capital structure. The emphasis on South Africa closes this knowledge gap, and results are compared to the existing evidence emanating from other studies for emerging economies. Having said this, the evidence provided in this study corroborates well with the findings from other studies, particularly with the effect of the opening up of the stock market on leverage ratios.

The important aspect missing out of most studies on emerging markets is that other elements of financial liberalisation are excluded. As Kaminsky and Schmukler (2008: 253) advise that the focus on a single aspect of the financial market may yield incorrect results. Hence, this study has singled out four significant events that can be attributed to financial liberalisation. These include the lifting of international sanctions, the lowering of reserve requirements, the opening up of the JSE to allow inward and outward investment and the easing of exchange controls.

This disaggregation has provided new insights into the study of financial liberalisation and capital structure. From the analyses provided in this study, it is documented that the lifting of international sanctions causes firms to access the equity market more and the opening up of the stock market to foreign investment lowers the leverage ratio. Exchange controls relaxations cause firms to borrow more. The effect of financial liberalisation is more pronounced for large firms. It is further documented that stock market liberalisation increases the debt maturity structure of listed firms.

The shift from the pre liberalisation to the post liberalisation regime causes significant structural breaks in the firm determinants of capital structure. This suggests that the relationship of the firm determinants on capital structure changes over the period of

financial reforms. The impact of profitability on firm leverage appears to be the most affected relationship.

The dynamic model of capital structure reveals several important facts about the firm financing behaviour in a closed and open economy. Firstly, the study documents evidence of a long run target adjustment to the desired level of leverage. Secondly, a significant reduction in transaction costs is observed for the pre liberalisation regime. Lastly, firms in a liberalised economy adjust to their optimal target of leverage much faster than firms in a constrained economy.

8.4.2 The methodological contribution of this study

Recognising that financial liberalisation is a complex and gradual process, there is no model that can adequately compensate for the dynamic aspects of liberalisation. Where possible, the study has incorporated the gradual aspects of financial liberalisation. The successive lowering of reserve requirements and the gradual easing of exchange controls have been captured through the use of progressive dummies.

The study has investigated the contrasting effects of financial liberalisation on various sets of firms. The firms examined include internationally financed, domestically financed and firms categorised according to size.

Most studies use cross-sectional and static models to test the determinants of capital structure. This study has utilised stronger estimation techniques to compensate for the inadequacy of the cross-sectional and static models. As a result, the study is able to use relevant instruments to control for firm and time specific effects and problems such as endogeneity. The endogeneity problem arises due to, *inter alia*, the problem of misspecification in the observed capital structure relationship. Furthermore, differenced equations are estimated simultaneously with level equations as a “system” to minimise the loss of information in the dynamic capital structure model. This process yields significant efficiency gains in the modelling of capital structure determinants.

8.4.3 Lessons that can be learnt from this study

Most studies on financial liberalisation and firm financial structure have documented that financial liberalisation lowers leverage. However, a closer examination of each aspect of financial liberalisation reveals that leverage is impacted differently by the different financial liberalisation events. This study concurs with the cautionary note put forward by McKinnon and Pill (1997: 189) that financial liberalisation may lead to excessive borrowing, possibly increasing the probability of financial crises. Specifically, capital account liberalisation is shown to increase the capacity of all sets of firms to borrow more.

Furthermore, the dramatic decrease in the adjustment costs for firms in the liberalised economy could exacerbate this problem further, since changes to the desired level of debt are accomplished relatively fast. Therefore, policy makers in South Africa and perhaps those African and other emerging countries that intend to liberalise further their capital accounts should take this into cognizance. It is quite clear that the capital controls that were in place prior to the global financial crisis of 2008 prevented further capital from leaving the South Africa. This helped stabilise the South African economy during this period. The finding that firms in the liberalised economy adjust to their target levels of leverage relatively fast could certainly exacerbate the over borrowing syndrome.

From the stock market liberalisation point of view, it is clear that firms access the equity market more thus lowering their debt ratios. The fears of excessive borrowing do not apply here. Further stock market liberalisations could help mitigate the effects of over borrowing.

A cautionary note needs to be emphasised; the globalisation process causes a wedge between large and smaller firms. It is quite clear that small firms do not benefit from financial liberalisation as much as the large firms. The larger firms seem to respond more to the process of financial liberalisation compared to the smaller firms. Policy

makers need to take this disparity into account and provide incentives for small firms to take advantage of the financial reforms which are intended to benefit all market participants.

8.5 SHORTCOMINGS AND SUGGESTIONS FOR FURTHER RESEARCH

This study was limited to JSE listed non-financial firms that operated prior to and after the period of financial liberalisation. As a result large non listed firms are excluded from the analysis due to the difficulty of obtaining financial statements for unlisted firms. It would be interesting if significant non listed firms are included in future studies to determine how they respond to the process of financial reforms. Furthermore, only 100 firms were examined over the period of 1989 to 2007. Incomplete financial records did not permit for inclusion of more firms. However, the use of panel data compensates for this by increasing the number of observations to 1100.

This study excluded the period of the global financial crisis mainly because the study was performed during this period. Hence, reported financial statements were mostly limited to the year 2007. Given more time, future research should control for this period and assess the dynamics of capital structure accordingly.

It was not possible to obtain several other variables that could have yielded interesting results. For example, data for international debt issues proved difficult to obtain. It was envisaged that firms that issue debt abroad should have a different capital structure from the rest of the firms. Further future analysis can be performed by distinguishing the evolution of public debt from bank borrowings. Data on publicly traded bonds is only available from 1995. It was therefore not possible to test the effects of the lifting of international sanctions, domestic financial sector liberalisation and stock market liberalisation on bonds traded on the BESA. These aspects of financial liberalisation occurred in the early 1990s. The evolution of the BESA was therefore examined descriptively.

Further robustness checks could have been performed on the growth variable owing to the argument put forward by Barclay and Smith (2005: 13) that the strong inverse relationship between firm growth prospects and leverage "... is simply the artificial result of large variations in stock prices ..." The variable that can be used as a substitute for the market to book ratio is R&D divided by sales. The structure of the financial reports generated by the financial database did not allow for this analysis.

The observation that the size of the banking sector is statistically significantly negatively correlated to leverage warrants further attention. Further analysis should be performed to assess the underlying impetus behind the negative correlation. At the moment, it can only be assumed that as the banking sector develops, so does the stock market. Given the significance of the stock market, it is possible that the evolution of private credit could have been mitigated by the size of the stock market. Furthermore, the signalling theory suggests that as firms take on more debt, the markets view this as a credible signal that firm managers are confident about their future cash flows. This has the effect of increasing the market value of equity relative to debt. These conjectures could provide insight into future investigations regarding this caveat.