South African Capital Structure Decisions: A Survey of Listed Companies

Abstract

This paper explores the factors that influence capital structure decisions in South Africa from the perspective of the Chief Financial Officer (CFO). The results of a survey of 33 CFOs of JSE listed companies find that South African CFOs are equally likely to follow the Pecking Order or Static Trade-Off theories. However, smaller companies are more likely to follow the Pecking Order theory while larger companies are more likely to follow the Static Trade-Off theory. In addition, the results show that South African companies are more likely to follow the Static Trade-Off theory than companies in other emerging countries.

1 Introduction

The capital structure decision has been at the forefront of financial research ever since Modigliani and Miller (1958) suggested that capital structure has no effect on firm performance. Since Modigliani and Miller's seminal paper, there have been three main theories that have attempted to explain how managers make capital structure decisions. These theories are: the Static Trade-Off theory, which posits that capital structure is a trade-off between the tax benefit of debt and cost of bankruptcy (Kraus and Litzenberger, 1973); the Pecking-Order theory, which states that firms seek the most convenient form of finance available (Myers, 1984); the Market Timing Theory, which states that managements effort to time their entry to market shapes the capital structure decision (Baker and Wurgler (2002); and the Agency theory (Jensen and Meckling, 1976), which postulates that in order to achieve its optimal capital structure a firm must mitigate agency conflicts by minimizing the amount of free cash flow available to the managers. However, although these theories have

been tested empirically, all of them have thus far failed to fully explain the capital structure decision (Graham and Leary, 2011).

Hence, this study investigates the capital structure decision among listed South African firms by conducting a survey of chief financial officers (CFO) in order to determine (i) which factors influence their capital structure decisions; (ii) how their responses relate to the theoretical literature; and (iii), how the results obtained compare with the results of international studies. Thus this study is among the first to determine what factors CFOs of listed companies in South Africa take into account when making capital structure decisions. South African listed firms are of interest for three reasons. First, most of the previous surveys studies have focussed on developed markets and thus there is scope to examine capital structure decisions in emerging markets. Second, South Africa has a relatively sophisticated financial market and greater ease of access to capital markets in comparison to other emerging markets (Busetti, 2009). Third, following the country's financial liberalization in 1995, South African companies have integrated into the global economy and thus forms part of global equity markets.

The remainder of the study proceeds as follows: the literature is reviewed in Section 2, starting with a historic overview of the theories that attempt to explain the capital structure decision, and then examining the survey literature before ending with the South African literature. Thereafter, the methodology is briefly explained in Section 3, followed by a discussion of the results in Section 4. The study then concludes with a summary of the key findings and implications in Section 5.

2 Literature Review

In their seminal study, Modigliani and Miller (1958) suggest that the capital structure choice plays no role in determining the cost of capital. Their argument is based on the hypothesis that the cost of equity increases as the firm becomes more leveraged. Hence, the cost benefit due to taking on a cheaper source of capital (debt) is offset by the increased cost of the capital (equity). Modigliani and Miller (1963) further show that the tax advantages of taking on debt are greater than initially proposed because debt payments are tax deductible and thus debt gives the company a tax benefit (the tax shield effect).

However, Miller (1977) argues that the tax benefit is a zero sum game because a lender will demand a higher rate of return to compensate for personal income tax on the return, and this higher rate will be equal to the tax saving made by the borrower. Furthermore, for mature highly cash generative businesses, the tax gains from debt will outweigh the distress costs. In addition to tax effects, there are also bankruptcy and financial distress costs associated with leverage. Kraus and Litzenberger (1973) propose a Static Trade-Off theory, which posits that the capital structure decision is a trade-off between the benefits of debt (tax shield and reduction of agency costs) versus the associated costs (mostly bankruptcy and financial distress related). However, Warner (1977) suggests that bankruptcy costs are quite low for larger firms because these costs do not increase proportionally with firm size.

One would therefore expect that the leverage ratio for mature profitable firms will be relatively high. However, on an empirical level, Graham (2000) reports that mature profitable firms in stable industries tend to have low levels of debt, thus suggesting that in practice these firms elect not to realize their theoretical tax benefit. According to Almeida and Philippon (2007), this paradox can be explained by noting that defaults tend to occur during economic downturns, thus creating a distress risk premium. Consequently, Almeida and Philippon conclude that Miller (1977) does not take into account all the costs associated with high

levels of debt and that the net tax benefit due to high levels of debt is therefore not lucrative enough for these firms.

Furthermore, distress costs are not the only factors impacting a company's capital structure decision. According to Jensen and Meckling (1976), most large companies are not owner managed and thus this separation of ownership and management leads to a conflict between the agents (shareholders and managers) associated with the company. Agency costs thus occur as the agents act in their own best interests. Hence, Jensen (1986) argues that an effective method to counter agency costs is to limit the amount of free cash that is available to the management of the firm. This can be achieved by increasing the firm's leverage since the high interest payments will then reduce the free cash flow available to the managers and should dissuade them from investing in marginal investments while also increasing the overall value of the firm.

In contrast to the Static Trade-Off theory of Kraus and Litzenberger (1973) and the Agency theory of Jensen and Meckling (1976), Myers (1984) proposes a 'Pecking Order theory', which advocates a freer capital structure whereby management does not aim for a specific leverage ratio, but instead uses the cheapest source of finance available while maintaining flexibility to expand should the need arise. However, this theory has been criticised on various levels. Myers and Majluf (1984) and Ross (1977) argue that the use of a Pecking Order approach is not benign since it will send a signal to the market. In such a case, the market will assume that management only issues equity if the company is over-valued, and thus the share price will drop. Conversely, if a company takes on more debt, then the market will take it as a sign that management believes it will be able to service that debt, which sends out a positive signal to the market and thus the share price increases accordingly. Baker and Wurgler (2002) argue that management's effort to time the market shapes the firm's capital structure more significantly than a Pecking Order whereby firms that have low

leverage ratios tend to raise equity when their share valuation is low, while the opposite is true for highly leveraged firms. Fama and French (2005) further argue that firms often issue equity when they are actually in a position to issue debt or use internal funds thus suggesting that the pecking order and trade-off theories are not necessarily mutually exclusive because both theories may explain capital structure decisions. In addition, Dittmar and Thakor (2007) posit that companies will issue equity when they believe that investors will agree with the reasoning behind their decision while Alti and Sulaeman (2012) show that managers will more readily issue equity at high valuations when they are confident that they will have institutional buyers for the equity issued.

Despite all of these theories, the empirical findings are mixed. Among the most expansive study is Graham and Harvey (2001) (hereafter GH), who surveyed 392 Chief Financial Officers (CFOs) of Fortune 500 companies. Their survey asked questions relating to the cost of capital and capital structure in order to determine which factors affect the CFOs' decision-making process. The results show that the main factors that influence the debt issue decision are financial flexibility and preserving the firm's credit rating. The prominence of financial flexibility appears to support the Pecking Order theory because, as argued by Myers and Majluf (1984), firms require financial slack if they are to be independent of external funds. Nevertheless, GH argues that the results do not support the Pecking Order theory because the firms that attach importance to financial flexibility in the survey are firms with relatively little information asymmetry. Hence, these firms will have little problem raising equity and therefore also little incentive to maintain financial flexibility according to the classical pecking order premise. The results further show that the main factors that influence the equity decision are potential earnings per share dilution, the amount by which the market over or undervalues the share and recent movements in the share price.

Subsequent studies conducted in other developed markets have reported similar conclusions to GH. These include Bancel and Mittoo (2002), who surveyed 87 CFOs in Europe; Brounen *et al*. (2004), who surveyed 313 CFOs in the United Kingdom, the Netherlands, Germany and France; and Archbold and Lazaridis (2010), who surveyed 107 CFO's in the UK and Greece. In contrast Beattie *et al*. (2006) surveyed 198 CFOs in the United Kingdom, and find that long-run survivability is the most important factor in the debt equity choice. Hence, they conclude that the survey responses do not completely correspond to any of the prevailing capital structure theories. Cohen and Yagil (2007) surveyed 140 CFOs in the USA, the United Kingdom, Germany, Canada and Japan. In contrast to GH they find that project cash flow is the most important consideration when the CFO decided whether to issue debt, which is consistent with the Pecking Order theory. Vasiliou and Daskalakis (2009) surveyed 89 CFOs in Greece using a behavioural finance perspective. Their results find that the signalling theorem of Ross (1977) and Myers and Majluf (1984) is not valid for the Greek market but they find support for the market timing approach of Baker and Wurgler (2002). Lastly, De Jong and Verwijmeren (2010) surveyed 235 CFOs in the USA, United Kingdom, Canada and continental Europe to determine if there is a target debt ratio and thereby distinguish if the companies follow the Static Trade-Off or Pecking Order theory. They find that smaller firms are more likely to follow the Pecking Order theory while larger firms are more likely to follow the Static Trade-Off theory.

While most of the survey literature is specific to developed markets, a selection of studies has been conducted in emerging markets. Anand (2002) surveys 81 CFOs in India, and finds support for the Pecking Order theory. Hernadi and Ormos (2012) combine a panel regression of firm financial leverage data with a survey study of 393 CFOs in Central and Eastern Europe. Their findings similarly support the Pecking Order theory. Maquieira *et al*. (2012) surveyed 290 CFOs in South America. They find that fewer respondents use debt

equity targeting than in developed markets, and that firms prefer internal sources of funding to fund projects. Hence, their results once again support the Pecking Order theory. In addition, their findings correspond to De Jong and Verwijmeren (2010) whereby smaller firms are more likely to support the Pecking Order theory. Lastly, Mutairi (2012) surveys 80 CFOs in Kuwait, and also find that the firms' hierarchies of financing sources are consistent with the Pecking Order theory. Thus the survey literature generally suggests that developed markets tend to favour a range of theories, while emerging markets tend to favour the Pecking Order theory of capital structure choice.

In the case of South Africa, Correia and Cramer (2008) (hereafter CC) surveyed 28 CFOs in all sectors of the JSE. Although they give little attention to the capital structure question (only addressing the target debt equity ratio), they find that most firms have a loose debt-equity target ratio, and that the target debt-equity ratios are lower than predicted by the Static Trade-Off theory. Bargon and Gossel (2011) find empirically that South African firms' behaviour is consistent with the Pecking Order theory and inconsistent with the Static Trade-Off theory. Mans and Erasmus (2011) perform a time-series cross-section regression procedure on JSE listed industrial firms over the period 1989 to 2008, analysing the impact of internal and external factors on firms financing decisions. Although they find support for both the Pecking Order and Static Trade-Off theories, they also report that profitability played a more significant role in the capital structure decision than tax effects. Hence, their results are more consistent with the Pecking Order theory. Gwatidzo and Ojah (2009) use a panel data regression model and similarly find that profitability is major factor in South African firm's financing decision, thus once again supporting the Pecking Order theory.

Hence, the empirical literature suggests that South African capital structure decisions are consistent with those of other emerging markets in supporting the Pecking-Order theory. However, the results are inconclusive as to date there is no in-depth capital structure specific

survey study based on Graham and Harvey (2001) (GH) tailored to the South African context.[1] Thus this study seeks to fill this gap in the literature by conducting such a study.

3 Methodology

This study investigates the capital structure decision among listed South African firms by conducting a survey of chief financial officers (CFO). The target population for this study was all JSE (Johannesburg Stock Exchange) listed companies, excluding holding companies, preference shares, suspended companies, real estate funds and investment instruments. Private companies were also excluded from the study in order to make the results comparable with GH and CC. There are currently 336 listings on the JSE. Of these, 13 are holding companies and 12 are suspended. These 25 listings did not form part of the target population. Of the remaining 311 listings, 46 are real estate funds and 12 are investment instruments. These 58 listings also did not form part of the target population because their capital structure decisions are more of an investment nature and therefore do not correlate to capital structure theory. Hence, the research population for this study is the CFOs of the remaining 253 companies, which is consistent with the research populations of GH and subsequent studies.

Surveys typically suffer from two inherent weaknesses relating to low response rates, and representativeness. In order to be representative of the population and to be comparable with surveys in the literature, this study targeted a response rate above 10%. In addition to response rates, survey studies have the inherent weakness that respondents may state what they believe but not what they actually do in practice, and may misunderstand the question.

[1] Open-ended questions were not included in the survey so as to purposely narrow the research focus and aid efficient analysis.

Consequently, the combination of these factors can result in responses that are not representative of the population (Graham and Leary, 2011). Despite these potential weaknesses, survey studies can be useful for assessing the financial decisions of CEOs/CFOs directly (Hoffman and Gopinath, 1994: 626; Biglaiser and Staats, 2010).

The survey itself consisted of two parts. The first part comprised of 5 questions that sought to gather information about the company including annual revenue, industry, long-term debt ratios, existence of target debt ratios, and numerical target debt ratios. The second part made use of Likert scaled questions to address the debt (12 sub-questions) and equity (9 sub-questions) decision respectively in tabular format.

The process of collecting the data started with the development of a database containing the email addresses and telephone numbers of the CFOs. These details were obtained from the company website or by contacting the company telephonically or via email. The final database contained 95 email addresses of CFOs or their personal assistants (PAs).[2] The respondents had the option of completing the survey online or completing it via an attached document. The survey was disseminated electronically twice to the whole population using the survey platform *SelectSurvey.net*.

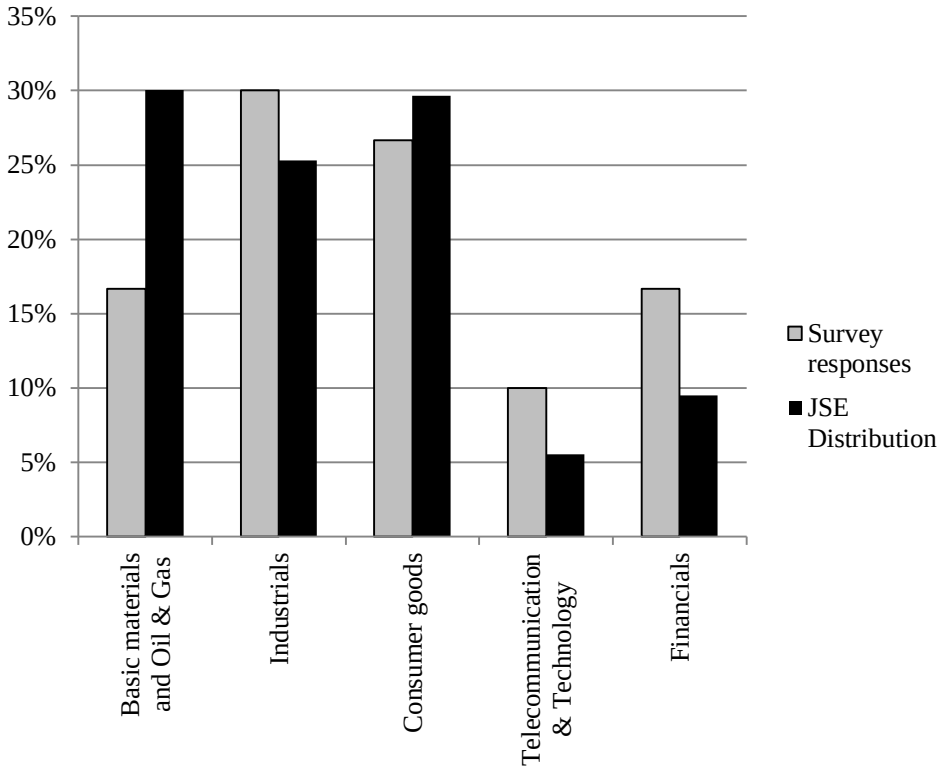
4 Results

With regards to response rate and representativeness, thirty-three complete responses were received, translating to a response rate of 11.8 percent, which is higher than the target response rate of 10 percent and also higher than the rates achieved by CC and GH. To assess the representativeness of the responses, Figure 1 shows the responses per industry sector compared to the JSE distribution.[3] As can be seen the survey results contain a reasonable

[2] The other companies were unwilling to provide CFO contact details or did not respond to subsequent requests.
[3] Some of the JSE sectors were grouped together to protect the anonymity of companies in sparsely populated sectors. The respondents were therefore given a choice of five sectors.

amount of respondents from each sector although the Basic Materials and Oil and Gas sector is relatively under represented while the Telecommunication and Technology and Financial sectors are relatively over represented. However, this distribution is not unexpected as the South African stock exchange is over-concentrated with companies in the Basic Materials and Oil and Gas sector (Kruger and van Rensburg, 2008; Raubenheimer, 2010). Hence, it is assumed that potential selection bias arising from the under-representativeness of the Basic Materials and Oil and Gas sector will be compensated by the relative over-representativeness of the Telecommunication and Technology and Financial sectors.

Figure 1: Survey respondents per sector compared to JSE distribution



4.1 Company and Industry Specific Information

The respondents were also asked to state their firm's annual revenue from among five options. The revenue distribution is shown in Table 1 and as can be seen, the majority of the respondents are CFOs of companies with revenues greater than R1 billion (74 percent).[4]

Table 1: The revenue of the respondent companies

Company revenue	Respondents
< 1 R million	7%
1 - 99 R million	7%
100 - 999 R million	13%
1 - 50 R billion	57%
> 50 R billion	17%

4.2 Debt ratios

The respondents were asked to describe their current long-term debt ratio. The results in Table 2 show that the majority of the companies have a current debt ratio of less than 30 percent. This relatively low figure is in line with the results of Fan *et al*. (2011) who found that South African companies have among the lowest debt levels in the world.

Table 2: Debt ratios

Company's current long-term debt ratio	Respondents
0%	17%
1 - 9%	13%
10-19%	10%
20-29%	13%
30-39%	20%
40-49%	10%
>50%	17%

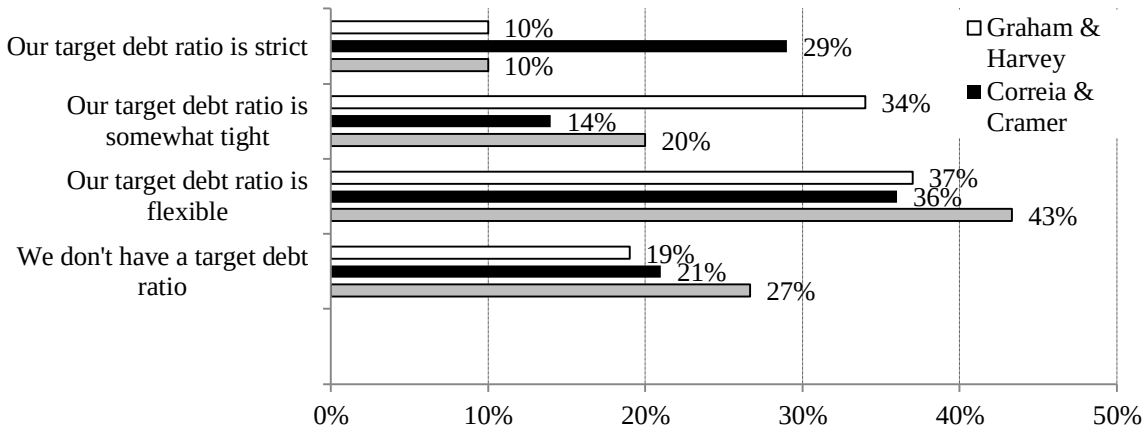
[4] For the purpose of this study, large firms are defined as firms with revenue greater than R1 billion.

The respondents were asked to describe their target debt ratio. They had four options to choose from, ranging from not having a target debt ratio to having a strict target debt ratio. Forty-three percent of respondents state that their target debt ratio is flexible, which roughly accords with GH (37 percent) and CC (36 percent). The number of strict and somewhat strict target debt ratios in this study is however markedly less than in the other two studies. This study therefore indicates a looser target debt policy than the other two studies. DeAngelo and Roll (2014) suggest that industry-median leverage ratios change significantly, even over relatively short time periods. The differences in target debt ratios between the different studies are therefore not unexpected and are possibly due to the recent financial crisis and its aftermath.

De Jong and Verwijmeren (2010) classify any firm with a target debt ratio, even if that target debt ratio is flexible, as a "Static Trade-Off" firm and only firms with no debt ratio as "Pecking Order" firms. However, according to Myers' (1984) original definition, a firm with a flexible target debt ratio can also be a Pecking Order firm. Thus, for the purpose of this study, firms with a "strict" or "somewhat tight" debt ratio are classified as Static Trade-Off firms while firm with no debt ratio are classified as Pecking Order firms (firms with flexible debt ratios are not able to be classified as they do not adhere to any of the established theories). Using these definitions, the results of this study set out in Figure 2 below find moderate support for both the Static Trade-Off and the Pecking Order theory (about 30 percent each) and are relatively consistent with the findings of CC with the exception of the "strict" target debt ratio. CC finds that 29% of the respondents fall into this category while this study finds only 10% fall into this category. Based on this result, it appears that the firms surveyed by CC were more likely to be following the Static Trade-off theory than the firms surveyed in this study. However, the majority of the respondents in both studies indicate that

their debt ratio is flexible and are therefore not able to be classified, illustrating the difficulty in matching capital structure theory with practice.

Figure 2: The use of target debt ratios - comparison between this study, Correia and Cramer (2008) and Graham and Harvey (2001)



Despite the finding that South African firms appear to support the Static Trade-Off and Pecking Order theories almost equally, Figure 3 shows that there is a disparate target debt ratio between large and small companies. None of the small firms responding to the survey report having a “tight” or “somewhat tight” target debt ratio, with the majority of the small firms having no target debt ratio. In contrast, more than 80 percent of the larger firms have a target debt ratio, with 38 percent having a “tight” or “somewhat tight” target debt ratio. Consequently, in accordance with the literature, this finding suggests that larger South African firms are more likely to follow the Static Trade-Off theory while smaller firms are more likely to follow the Pecking Order theory. According to Pfaffermayr *et al*. (2013) the leverage ratio decreases while the impact of corporate taxation increases with firm age, suggesting that firms tend to exhibit more Static Trade-Off behavior as they mature. Thus, it is possible that the smaller firms follow the Pecking Order theory while the larger firms follow the Static Trade Off theory as a function of their relative age disparity.

Figure 3: The use of target debt ratios - breakdown per company size

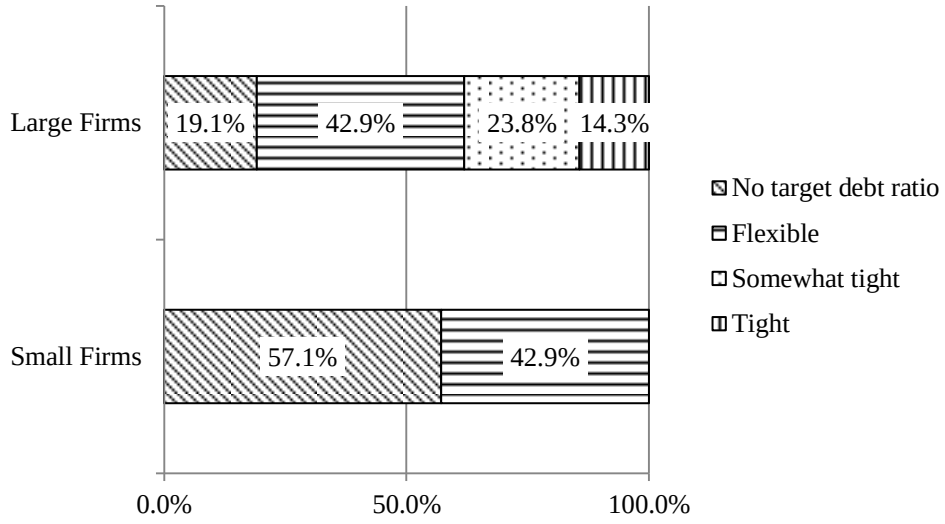


Figure 4 compares the results of this study ("South Africa 2013") with the results of studies in other emerging countries. It can be seen that in Eastern Europe and South America there is strong support for the Pecking Order theory while in India and South Africa (2008) there is a high proportion of flexible target debt ratios with moderate support for both the Pecking Order and Static Trade-Off theory. There are three possible reasons for this disparity. Firstly, numerous countries in South American and Eastern Europe have experienced bouts of hyperinflation, while South Africa and India have not. While higher inflation increases the monetary value of a firm's assets, the higher interest rate and monetary risk normally caused byhigh inflation cause book-debt ratios to decrease. Essentially, companies can borrow against real but not inflationary growth prospects (Booth *et al*., 2001). Secondly, most of the countries in Eastern Europe only became market economies in the early 1990s, and consequently, Eastern European CFOs have less experience with capital market decisions (Matues and Terra, 2013). Finally, company size may also play a role as large companies in countries with active markets tend to have more long-term debt, while small companies in

countries with large banking sectors tend to have longer maturity debt (Demirgüç-Kunt and Maksimovic, 1999).

Figure 4: The use of target debt ratios - comparison between this study and other emerging market studies

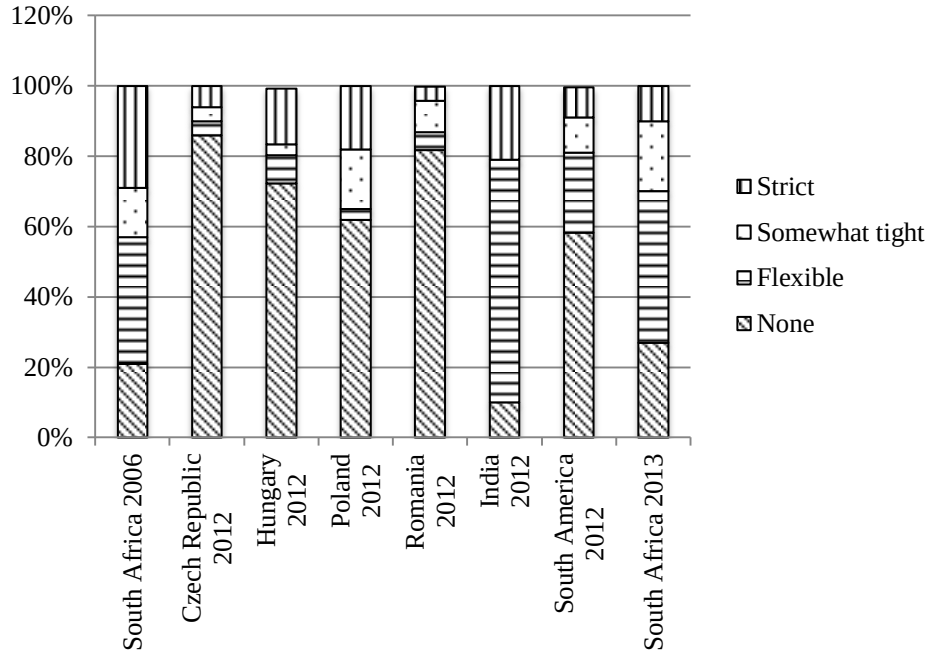


Figure 5 shows how the target debt ratios vary across the different sectors. It can be seen that two of the sectors (Basic materials, Oil and Gas, and Telecommunication and Technology) have more flexible debt ratios than the other three sectors, indicating that these sectors are more likely to support the Pecking Order theory. These two sectors typically involve long-term investments, and are thus possibly less impacted by short-term changes in interest rates.

Figure 5: The use of target debt ratios - breakdown per sector

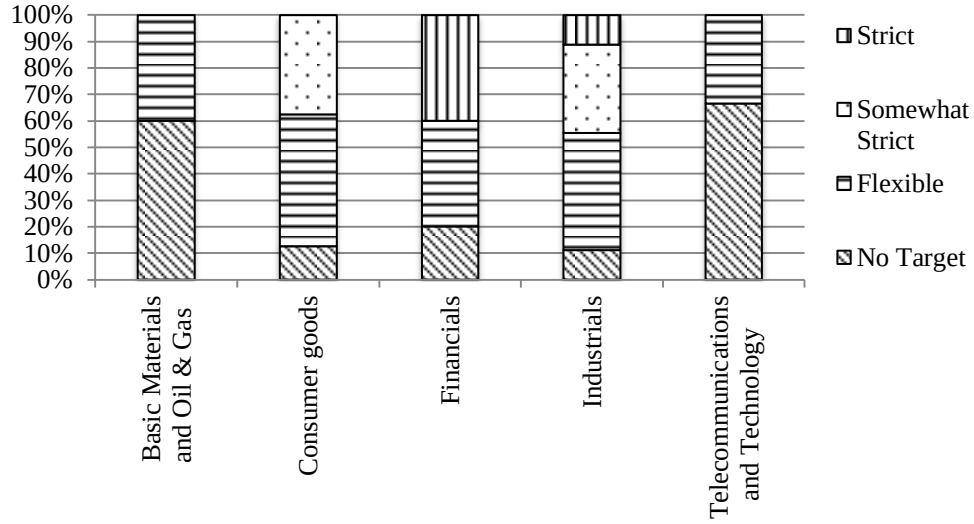
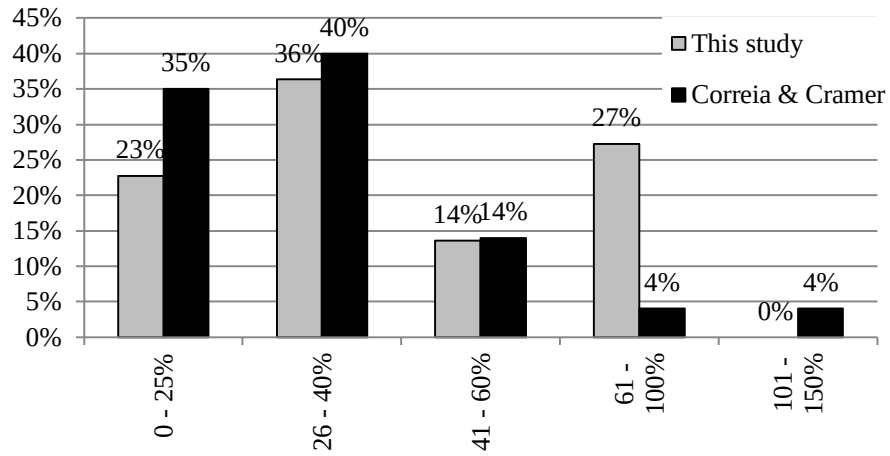


Figure 6 shows the companies' target debt ratios. The respondents to this survey have higher target debt ratios than CC (GH does not show target debt ratios). The debt ratios are still low compared to international standards (Fan *et al*., 2011). The increase in target debt ratios might be due to the historically low interest rates currently available to the JSE companies.

Figure 6: The target debt ratios



4.3 Factors influencing debt decisions

The respondents were asked to indicate how important certain factors are in their choice of an appropriate amount of debt for the respective firms. The results presented in Table 3 show a comparison per target debt ratio, industry sector and firm size. Overall, the results fall into three groups. The first group consists of the three factors that have average scores greater than 4.0 and are factors that considered “often” or “always” by more than 75 percent of the respondents when making debt decisions. The second group consists of the three factors that have average scores between 3.3 and 3.6 and are considered “often” or “always” by more than 50 percent of the respondents. The last group consists of the four factors that achieved low average scores and a low percentage of “often” or “always” responses.

Table 3: Factors influencing debt decisions

	All Respondents		Target debt ratio breakdown				Industry sector breakdown					Firm size breakdown	
	Average response	Percentage that considers the factor regularly (score 4&5)	No Target debt ratio	Flexible	Somewhat strict	Strict	Basic materials and Oil & gas	Consumer goods	Financial	Industrials	Telecommunication and Technology	Large Firms	Small Firms
The level of forecasted cashflows from the investment projects that the debt will be used to fund	4.27	77%	3.4	4.3	5.0	4.3	3.2	3.6	5.0	4.3	4.3	4.4	3.6
The volatility of our earnings and cash flow	4.23	80%	4.0	4.2	4.3	4.7	3.8	4.4	4.0	4.2	4.7	4.2	4.4
Financial Flexibility (We restrict borrowing so we have enough internal funds available to pursue new projects when they come along	4.03	77%	4.3	3.9	3.7	4.7	3.6	4.4	4.6	3.4	4.3	4.1	3.9
The tax advantage of interest deductibility	3.6	57%	3.5	3.5	3.8	4.0	3.2	3.6	3.2	3.7	4.7	3.6	3.6
The potential cost of bankruptcy, near bankruptcy or financial distress	3.5	53%	3.4	3.2	4.0	4.0	3.2	2.2	4.0	3.9	4.0	3.3	4.4
Credit rating (as assigned by rating agencies)	3.3	53%	2.9	3.2	3.3	5.0	3.0	3.4	3.6	3.2	4.0	3.5	2.6
The level of depreciation and other non-debt tax shields	3.1	40%	2.9	3.0	3.5	3.3	2.8	2.6	3.0	3.0	4.3	3.1	3.0
We restrict borrowing so that the profits from new / future projects can be captured fully by shareholders and do not have to be paid out as interest to debtholders	2.97	27%	2.9	2.6	3.5	3.3	2.6	2.2	2.8	3.3	3.3	2.8	3.4
We limit debt so that our customers / suppliers are not worried about our firm going out of business	2.57	20%	2.8	2.4	2.3	3.0	2.0	1.6	3.8	2.4	3.7	2.3	3.3
To ensure that top management work had and efficiently, we issue sufficient debt to ensure that a large portion of our cash flow is committed to interest payments	2.23	13%	2.0	2.2	2.7	2.0	2.4	1.4	1.8	2.4	3.3	2.3	2.3

4.3.1 Group 1: The three most important factors influencing debt decisions

Overall, the three most significant factors that influence the debt decisions of the respondents of this survey are (i) the level of forecasted cash flows from investment projects that the debt will be used to fund, (ii) the volatility of earnings and cash flow and (iii) financial flexibility. On a more detailed level, the forecasted cash flows that the investment will fund is found to have the highest average score of 4.27 with 77 percent of the respondents stating that they consider it "often" or "always". This factor was not included in GH's original survey but since it was introduced by Cohen and Yagil (2007) it has consistently been rated as one of the most important factors. Firms with no target debt ratio are less likely to consider this factor (an average of only 3.4). The level of forecasted cash flows from the investment is one of the factors that will determine the interest rate charged by the lender, and thus a Pecking Order firm that targets the cheapest source of finance available would most likely take this factor in account. However, the firms that conform to the definition of the Pecking Order theory (firms with no target debt ratio) have the least regard for this factor. These results are however consistent with Gwatidzo and Ojah (2009) who found that profitability is a major concern for South African companies.

A firm with a high preference for financial flexibility restricts borrowing so that enough internal funds are available to pursue new projects when needed. Significance of this factor would thus indicate support for the Pecking Order theory. This is substantiated by the finding that Pecking Order firms (firms that indicate that they have no target debt ratio) show strong support for this factor (average score of 4.25). However, firms that indicate that they have a strict debt ratio (therefore Static Trade-Off firms) have even stronger support for this factor (average score of 4.67). If the score of firms that have a "somewhat strict" target debt ratio is added, the Static Trade-Off firms still have a relatively high average score of 4.00. The results therefore show that classical Pecking Order characteristics are not limited only to

Pecking Order firms and that the dividing line between the Pecking Order and Static Trade-Off of firms is not as clear in practice as it is in theory.

The last factor is the volatility of the firm's earnings and cash flow, which scores an average score of 4.23 with 80 percent of all respondents considering it "often" or "always". This is to be expected as the CFO will be hesitant to issue debt if s/he is unsure about the stability of the firm's future earnings.

4.3.2 Group 2: The three moderately important factors influencing debt decisions

In the case of the second group, the three factors that have a moderately important influence on the debt decisions of the respondents are the tax advantage of interest deductibility, the potential cost of bankruptcy and the firm's credit rating. With regards to the tax benefit associated with debt, the respondents rate this factor as moderately important with an average rating of 3.6 and 57 percent of the respondents stating that they consider it "often" or "always". According to GH, this factor is the strongest supporting indicator of the Static Trade-Off theory and accords with Kraus and Litzenberger (1973) who argue that firms balance the tax benefits of debt against possible bankruptcy costs. Thus, it is not unexpected that the respondents in this group rate bankruptcy costs as the second moderately important factor (average of 3.5 and 53 percent considering it "often" or "always"). However, the results further show that smaller firms attach greater importance to this factor than larger firms, possibly because they have a greater chance of going bankrupt.

The last factor in the second group, the firm's credit rating, was rated as being moderately important overall (average of 3.3 with 53 percent of respondents considering it "often" or "always") but was rated extremely important among firms that have a strict target debt ratio (all these firms indicated that they always consider their company's credit rating).

It is therefore possible that one of the reasons that companies maintain strict debt ratios is to achieve a specific target credit rating.

4.3.3 Group 3: The four factors that are not considered important when making debt decisions

Overall, the final four factors are not considered important by most firms, but some groups do consider these factors. For example, the results show that financial firms are more likely to limit their debt so that their customers/suppliers are not worried about their firm going out of business. In addition, smaller firms are found to be more likely than larger firms to limit their debt, possibly so that the profits can be captured by shareholders and not paid out as interest to debt holders. This could be because the major shareholders are often the founding members and/or are part of management and would therefore benefit financially if the profits were paid out to the shareholders.

The factor of issuing debt to ensure that top management work hard and efficiently, ends in the last place with an average score of 2.23 and only 13 percent of the respondents considering it “often” (no respondent indicated that they consider it “always”). GH report similar results and posit two explanations. Firstly, CFOs might not admit that they use debt to control other managers; and secondly, CFOs might be unwilling to use debt to control other managers, in spite of the possible benefits. Their lack of support therefore does not disprove the Agency Theory.

4.3.4 Comparison between this survey and previous surveys

Table 4 shows how the factors found to affect the debt decisions according to the respondents in this study differ to those in other surveys. The top five factors were selected for each survey based on the percentage four and five scores that each factor received. Table

5 then ranks the factors in order of how many times they appear on Table 4. The results show that this survey is representative of previous surveys, with the top six factors identified in this survey forming part of the top seven overall. Hence, the results presented in Tables 4 and 5 suggest that CFOs across the world tend to value similar factors when making debt decisions.

Table 4: Comparison of the factors affecting debt decisions across the different surveys

USA 2001	Europe 2002	UK 2004	Netherlands 2007	Germany 2007	France 2007	USA 2007	UK 2009	Germany 2009	Canada 2009	Japan 2009	Greece 2009	Czech Republic 2012	Hungary 2012	Poland 2012	Romania 2012	South America 2012	South Africa 2013
FF	FF	FF	FF	FF	FF	FC	FC	FC	FC	FC	RP	FC	FC	FC	BC	TAX	ECV
CR	CR	ECV	ECV	CR	ECV	SP	SP	SP	FF	SP	LTV	BC	NTS	NTS	FC	ECV	FC
ECV	TAX	CSV	CR	ECV	CSV	FF	FF	FF	SP	FF	MC	NTS	BC	BC	TAX	RP	FF
TAX	ECV	TAX	TAX	TC	CR	TC	TC	TC	TC	TC	FC	TAX	TAX	TAX	NTS	CR	TAX
LIR	TC	BC	CID	RP	TAX	VC	VC	VC	VC	VC	FI					TC	BC
			BC		BC	CR	CR	CR	CR	CR							CR

Table 5: Ranking of most dominant factors across the different surveys

Symbol	Factor	Occurrences
FF	Financial Flexibility	12
CR	Credit rating	12
TAX	Tax savings	11
FC	Forecasted cash flow	11
TC	Transaction Costs	8
ECV	Earnings and cash volatility	7
SP	Effect on Stock Price	5
VC	Voting control	5
NTS	Non-debt tax shields	4
LIR	Level of interest rates	1
FI	Financial independence	1
MC	Maintain competitiveness with rivals	1

4.4 Factors influencing equity decisions

The respondents were also asked to indicate how important certain factors are when choosing to issue equity (using the same Likert scale that was used for the debt decision). The results are shown in Table 6. Overall, the average scores for the factors that influence equity decisions are distinctly lower than the average scores for the debt decision questions. There are two possible reasons for this result. This might be because the actual factors that influence the equity decision are not listed in the survey; or because South African CFOs issue debt more often and are therefore more confident about the factors that play an important role in their debt issue decision than the factors that play an important role in their equity issue decision.

On a more detailed basis, the results show that the most important factor affecting a firm's equity decision is earnings per share (EPS) dilution (with an average of 3.86 and 65.5 percent of respondents considering it "regularly" or "always"). According to GH, a firm's earnings are not diluted with an equity issue, as long as the firm earns the required return on

the new equity. A debt issue will increase the earnings per share[5] but the risk associated with the return also increases and the result is therefore a zero sum game. The prominence of this factor is therefore inconsistent with conventional theory but is consistent with arguments that CFOs pay close attention to factors that they believe might have an effect on earnings per share (EPS), such as the belief that issuing equity dilutes EPS (Brealey and Myers, 1996), that earnings is the factor most closely scrutinized by investors (Graham *et al*., 2005), and changes in EPS impact management incentives (Jiang *et al*., 2010). Thus, the significance of this factor is not unexpected even though conventional theory suggests that it might be misplaced.

The second most important factor that the CFOs consider when choosing to issue equity is whether the firm's recent profits have been sufficient to fund its activities (average 3.76 and 62.1 percent consider it "regularly" or "always"). This factor suggests that the firm gives preference to internal funds before issuing equity and thus supports the Pecking Order theory. The third most important factor is maintaining a target debt to equity ratio (average 3.38 and 62.1 percent consider it "regularly" or "always"). This factor supports the Static Trade-Off theory in that it indicates that the firm has a target debt to equity ratio. Furthermore, the finding that 62.1 percent of the respondents indicate that they have a target debt to equity ratio (compared to the 30 percent that indicated that they have a strict or somewhat strict target debt ratio) suggests that a significant portion of the respondents adhere to the Static Trade-Off theory.

The third most important factor is the amount by which the stock is under or overvalued by the market. The finding that 51.7 percent of the respondents consider it "regularly" or "always" (an average of 3.34) suggests that the capital structure decision of South African

[5] A debt issue will increase the earnings per share by increasing the amount of capital available to earn a return while not increasing the number of shares.

CFOs may be impacted by the management timing effect of Baker and Wurgler (2002). The remaining five factors are not highly rated by the larger firms but are found to be significant to smaller firms. For example, the fact that they cannot obtain funds from other sources is the most important factor for smaller firms (average of 4.25). Small firms are also much more likely to view common stock as their cheapest source of funds and they are marginally more likely to view stock as their least risky source of funds. The results thus suggest that small and large firms use equity for different purposes. The small firms are more likely to use equity as source of convenient finance, while larger firms are more likely to use equity as a means to adjust their debt to equity ratio. Hence, these results show that similar to the debt decision; large South African firms are more likely to follow the Static Trade-Off theory, while small South African firms are more likely to follow the Pecking Order theory.

Table 6: Factors influencing equity decisions

	All Respondents		Target debt ratio breakdown				Industry sector breakdown					Firm size breakdown	
	Average response	Percentage that considers the factor regularly (score 4&5)	No Target debt ratio	Flexible	Somewhat strict	Strict	Basic materials and Oil & gas	Consumer goods	Financial	Industrials	Telecommunication and Technology	Large Firms	Small Firms
Earnings per share dilution	3.86	65.5%	3.38	3.62	4.83	4.50	3.00	3.63	4.80	4.13	3.67	3.90	3.75
Whether our recent profits has been sufficient to fund our activities	3.76	62.1%	3.38	3.69	4.33	4.00	3.80	3.38	3.80	3.88	4.33	3.71	3.88
Maintaining a target debt to equity ratio	3.38	62.1%	2.13	3.54	4.17	5.00	3.00	3.38	4.00	3.25	3.33	3.43	3.25
The amount by which our stock is under or overvalued by the market	3.34	51.7%	2.63	3.23	4.33	4.00	2.80	2.88	3.80	3.50	4.33	3.29	3.50
Providing shares to employee bonus and stock option plans	3.07	37.9%	3.50	2.92	2.83	3.00	3.20	3.75	3.80	1.88	3.00	2.86	3.63
Stock is our least risky source of funds	2.97	44.8%	2.88	2.85	3.00	4.00	2.80	2.50	2.80	3.13	4.33	2.76	3.50
Inability to obtain funds from other means	2.97	44.8%	3.50	2.38	3.33	3.50	2.40	2.25	3.40	3.38	4.00	2.48	4.25
If our stock price has risen recently, we can issue at a high price	2.66	24.1%	2.88	2.38	2.83	3.00	2.00	2.50	3.20	2.38	4.00	2.43	3.25
Common stock is our cheapest source of funds	2.17	20.7%	2.75	2.00	2.00	1.50	1.60	2.88	2.20	1.50	3.00	1.86	3.00

4.4.1 Comparison between this survey and previous surveys

TableTable 7 compares the responses in this survey to those in other surveys based on the five factors that received the highest amount of 4.0 and 5.0 scores in the surveys. As can be seen, the question on what factors are taken into account for equity decisions has been asked in fewer surveys than the question on what factors are taken into account for debt decisions; and this study is the first to ask the equity decision question in a survey conducted in an emerging economy. Table 8 then ranks the factors in order of how many times they appear on Table 7, and the results suggest that CFOs across the world tend to value similar factors when making equity decisions. Nevertheless, the results for the debt decision appear to be slightly more consistent than for the equity decision.

Table 7: Comparison of the factors affecting equity decisions across the different surveys

USA 2001	Europe 2002	UK 2004	Netherlands 2007	Germany 2007	France 2007	South Africa 2013
EPS	EPS	EBOS	TDE	SPR	TDE	EPS
MV	SR	MV	EPS	MV	SCF	SPR
SR	TDE	SR	IFM	SR	LR	TDE
EBOS	MV	TDE	SR	EBOS	SPR	MV
TDE	EBOS	EPS	EBOS	LR	SR	EBOS

Table 8: Ranking of most dominant factors across the different surveys

Symbol	Factor	Occurrences
SR	Has the share price risen recently?	6
EBOS	Providing shares to employee bonus scheme	6
TDE	Maintaining target debt-equity ratio	6
EPS	Earnings per share dilution	5
MV	Market valuation of share price	5
SPR	Has recent profits been sufficient to fund all activities	3
LR	Stock is least risky source of funds	2
SCF	Common stock is cheapest source of funds	1

5 Conclusion

The past 50 years have seen major developments in capital structure theory starting with the propositions of Modigliani and Miller (1958), and leading to the Static Trade-Off Theory by Kraus and Litzenberger (1973), the agency theory of Jensen and Meckling (1976), and to the Pecking Order Theory of Myers (1984). However, despite the elegance of these theories, empirical studies have found that management's capital structure decisions are complex and do not easily fall within one theory or another. Hence, Graham and Harvey (2001) initiated a series of survey studies that aims to bridge the gap between theory and practice by asking the CFOs of listed firms what factors influence their capital structure decisions. The results of Graham and Harvey, and several subsequent studies generally suggest that developed markets tend to favour a range of theories, while emerging markets tend to favour the Pecking Order theory.

In the case of South Africa, the empirical literature suggests that South African capital structure decisions are consistent with those of other emerging markets in supporting the Pecking-Order theory. However, the results are inconclusive as to date no in-depth capital

structure specific survey has been conducted. Hence, this study attempts to fill this gap by conducting an analysis based on Graham and Harvey (2001) tailored to the South African context.

The results of the survey show that there is moderate support for both the Pecking Order and the Static Trade-Off theory when considering target debt ratios. However, a large number of the respondents indicated that their target ratio is flexible, which can thus support either the Pecking Order or the Static Trade-Off theory. Nevertheless, the majority of respondents that indicated that they often consider "maintaining a target debt to equity ratio" indicate that a relatively large amount of the flexible debt ratio respondents might follow the Static Trade-Off theory. Furthermore, the results also reveal that smaller firms are more likely to follow the Pecking Order theory while larger firms are more likely to follow the Static Trade-Off theory. In contrast, when the respondents were asked to consider the factors that influence the firm's debt decision, the results show stronger support for the Pecking Order theory than for the Static Trade-Off theory. However, further analysis shows that while firms with no target debt ratio show strong support for the Pecking Order theory, greater support can be found from the respondents with a strict debt ratio, thus adhering to the definition of the Static Trade-Off theory. Hence, these results show that the dividing line between the Pecking Order and Static Trade-Off choice of capital structure is not as clear in practice as it is in theory.

An examination of the factors that influence the equity decision finds equal support for the Static Trade-Off and Pecking Order theories. However, as in the case of the debt decision, the results suggest that large companies tend to follow the Static Trade-Off theory while smaller companies tend to follow the Pecking Order theory. In addition, moderate support is found for Baker and Wurgler's (2002) argument that a firm's capital structure is determined by management's efforts to time the market.

Overall, the three most significant factors that influence the debt decisions of the respondents of this survey are: (i) the level of forecasted cash flows from investment projects that the debt will be used to fund, (ii) the volatility of earnings, and (iii) cash flow and financial flexibility. The three most significant factors that influence the equity decision are found to be: (i) earnings per share dilution, (ii) whether recent profits have been sufficient to fund company activities, and (iii) maintaining a target debt to equity ratio.

Comparing these results with those of studies conducted in other parts of the world indicates that although the factors that South African CFOs consider when making capital structure decisions are similar to the factors in other countries, South African firms are more likely to have a target debt ratio (albeit relatively flexible) than firms in other emerging countries. Thus in summary, this study finds reasonable support for both the Pecking Order and the Static Trade-Off theories but strongly suggests that large firms are more likely to follow the Static Trade-Off theory while small firms are more likely to follow the Pecking Order theory. In addition, the results suggest that South African firms are more likely to follow the Static Trade-Off theory than firms in other emerging countries.

References

Almeida, H., and Philippon, T. (2007). "The Risk-Adjusted Cost of Financial Distress." *The Journal of Finance*, 62(6): 2557–2586.

Alti, A., and Sulaeman, J. (2012). "When Do High Stock Returns Trigger Equity Issues?" *Journal of Financial Economics*, 103(1): 61–87.

Anand, M. (2002). "Corporate Finance Practices in India: A Survey." *Vikalpa*, 27(4): 29-56.

Archbold, S., and Lazaridis, I. (2010). "Capital Structure Decisions and Decision Making: Survey Evidence from the UK and Greece," Conference paper presented at the *Seventeenth Annual Conference of the Multinational Finance Society*, available at: http://eprints.kingston.ac.uk/18509/1/Archbold-S-18509.pdf

Baker, M., and Wurgler, J. (2002). "Market Timing and Capital Structure." *The Journal of Finance*, 57(1): 1–32.

Bancel, F., and Mittoo, U. (2004). "Cross-Country Determinants of Capital Structure Choice : A Survey of European Firms." *Financial Management*, 33(4): 103-132.

Bargon, G. and Gossel, S.J. (2011). *An Empirical Investigation into the Determinants of Corporate Leverage within Industry Segments of South African Listed Companies*. MBA Research Report, Graduate School of Business, University of Cape Town, South Africa.

Beattie, V., Goodacre, A., and Thomson, S.J. (2006). "Corporate Financing Decisions: UK Survey Evidence." *Journal of Business Finance and Accounting*, 33(9-10): 1402–1434.

Biglaiser, G. and Staats, J.L. (2010). "Do Political Instiutions affect Foreign Direct Investment." *Political Research Quarterly*, 63(3): 508-522.

Booth, L., Aivazian, V., Demirgüç-Kunt, A. and Maksimovic, V. (2001). "“Capital Structures in Developing Countries.” *Journal of Finance*, 56(1): 87-130.

Brealey, R.A., and Myers, S.C. (1996). *Principles of Corporate Finance* (5th ed.). New York: McGraw-Hill.

Brounen, D., Jong, A. De, and Koedijk, K. (2004). "Corporate Finance In Europe Confronting Theory With Practice." *Financial Management*. 33(4): 71-101.

Busetti, F. (2009). *The effective investor*. Rollerbird Press and Pan Macmillan SA, South Africa.

Cohen, G., and Yagil, J. (2007). "A Multinational Survey of Corporate Financial Policies." *Journal of Applied Finance*. 17(1): 57-70.

Correia, C., and Cramer, P. (2008). "An Analysis of Cost of Capital, Capital Structure and Capital Budgeting Practices: A Survey of South African Listed Companies." *Meditari Accountancy Research*, 16(2): 31–52.

De Jong, A., and Verwijmeren, P. (2010). "To Have a Target Debt Ratio Or Not: What Difference Does It Make?" *Applied Financial Economics*, 20(3): 219–226.

DeAngelo, H., and Roll, R. (2014). "How Stable are Corporate Capital Structures?" *The Journal of Finance*, forthcoming, DOI: 10.1111/jofi.12163

Demirgüç-Kunt, A. and Maksimovic, V. (1999). "Institutions, Financial Markets, and Firm Debt Maturity." *Journal of Financial Economics*, 54: 295-336.

Dittmar, A., and Thakor, A. (2007). "Why Do Firms Issue Equity?" *The Journal of Finance*, 62(1): 1–54.

Fama, E.F., and French, K.R. (2005). "Financing Decisions: Who Issues Stock?" *Journal of Financial Economics*, 76(3): 549–582.

Fan, J.P.H., Titman, S., and Twite, G. (2011). "An International Comparison of Capital Structure and Debt Maturity Choices." *Journal of Financial and Quantitative Analysis*, 47(01): 23–56.

Graham, J. (2000). "How Big are the Tax Benefits of Debt?" *The Journal of Finance*, 55(5): 1901–1941.

Graham, J.R., and Harvey, C.R. (2001). "The Theory and Practice of Corporate Governance : Evidence from the Field." *Journal of Financial Economics*, 60: 187-243.

Graham, J.R., Harvey, C.R., and Rajgopal, S. (2005). "The Economic Implications of Corporate Financial Reporting." *Journal of Accounting and Economics*, 40(1-3): 3–73.

Graham, J.R., and Leary, M.T. (2011). "A Review of Empirical Capital Structure Research and Directions for the Future." *Annual Review of Financial Economics*, 3: 309–345.

Gwatidzo, T., and Ojah, K. (2009). "Corporate Capital Structure Determinants: Evidence from five African countries." *African Finance Journal*, 11(1976): 1–23.

Hernadi, P., and Ormos, M. (2012). "What Managers Think of Capital Structure and How They Act: Evidence from Central and Eastern Europe." *Baltic Journal of Economics*, 12(2): 47–72.

Hoffman, R.C. and Gopinath, C. (1994). "The importance of international business to the strategic agenda of U.S. CEOs." *Journal of International Business Studies*, 25: 625-37.

Jensen, M. (1986). "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers." *The American Economic Review*, 76(2): 323–329.

Jensen, M., and Meckling, W. (1976). "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics*, 3: 305–360.

Jiang, (Xuefeng), J., Petroni, K.R., and Yanyan Wang, I. (2010). "CFOs and CEOs: Who Have the Most Influence on Earnings Management?" *Journal of Financial Economics*, 96(3): 513–526.

Kraus, A., and Litzenberger, R. (1973). "A State-Preference Model of Optimal Financial Leverage." *The Journal of Finance*, 28(4): 911–922.

Kruger, R. and van Rensburg, P. (2008). "Evaluating and constructing equity benchmarks in the South African portfolio management context." *Investment Analysts Journal*, 37(67): 5-17.

Mans, N., and Erasmus, P. (2011). "The Combined Effect of Changes in the South African Business Environment on Capital Structure." *Management Dynamics*, 20(1): 219–221.

Mateus, C. and Terra, P. (2013). "Leverage and the Maturity Structure of Debt in Emerging Markets." *Journal of Mathematical Finance*, 3(3A): 46-59.

Maquieira, C.P., Preve, L.A., and Sarria-Allende, V. (2012). "Theory and Practice of Corporate Finance: Evidence and Distinctive Features in Latin America." *Emerging Markets Review*, 13(2): 118–148.

Miller, M. (1977). "Debt and Taxes." *The Journal of Finance*, 32(2): 261-275.

Modigliani, F., and Miller, M. (1958). "The Cost of Capital, Corporation Finance and the Theory of Investment." *The American Economic Review*, 48(3): 261–297.

Modigliani, F., and Miller, M. (1963). "Corporate Income Taxes and the Cost of Capital : A Correction." *The American Economic Review*, 53(3): 433–443.

Mutairi, M. Al. (2012). "Corporate Governance and Corporate Finance Practices in a Kuwait Stock Exchange Market Listed Firm: A Survey to Confront Theory with Practice." *Corporate Governance*, 12(5): 595–615.

Myers, S. C. (1984). "The Capital Structure Puzzle." *The Journal of Finance*, 39(3): 575-592.

Myers, S.C., and Majluf, N.S. (1984). "Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have." *Journal of Financial Economics*, 13(2): 187–221.

Pfaffermayr, M., Stöckl, M., and Winner, H. (2013). "Capital Structure, Corporate Taxation and Firm Age." *Fiscal Studies*, 34(1): 109–135.

Raubenheimer, H. (2010). "Concentration in the South African equity market and its implied restrictions on the long only equity fund manager's opportunity set." *South African Journal of Business Management*, 41(4): 1–10.

Ross, S. (1977). "The Determination of Financial Structure: The Incentive-Signalling Approach." *The Bell Journal of Economics*, 8(1): 23–40.

Vasiliou, D., and Daskalakis, N. (2009). "Behavioral Capital Structure: Is the Neoclassical Paradigm Threatened? Evidence from the Field." *Journal of Behavioral Finance*, 10(1): 19–32.

Warner, J. B. (1977). "Bankruptcy, Absolute Priority, and the Pricing of Risky Debt Claims." *Journal of Financial Economics*, 4(3): 239–276.