Investigating the treatment of deferred tax in the debt-to-equity ratio

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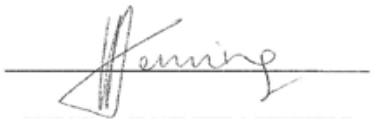

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ABSTRACT

The current business environment is filled with challenges and companies face a constant struggle to remain competitive and an attractive investment that can guarantee investors long-term growth. One of the most useful tools to determine financial performance is the financial statements published by a company. These statements are a summary of the business performance of the entity and can be used by shareholders to take a closer look at how the entity performed during a specific financial period.

The figures reported in said financial statements contain a wealth of information. However, these financial statements need to be analysed and interpreted using certain techniques in order to obtain this information. The main objective of this study is to gain a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this differs between theory and practice.

The study firstly focuses on the literature of financial statement analysis, ratio analysis, and specifically the debt-to-equity ratio. Ratio analysis is a critical analysis tool as this technique is one of the most commonly used financial statement analysis tools. Debt and equity are the forms of financing available to an entity and serves as the platform to embark on future projects that will contribute to growth and sustainability of the firm, and in these two forms of financing we can find the capital structure. This is where debt management comes in along with the role the debt-to-equity ratio plays in ensuring that correct decisions are made.

The calculation of ratios and the inputs used to calculate these ratios are often open to high levels of subjectivity. This leads to the question of how certain items should be treated in the calculation of ratios. Deferred tax is one of those inputs that is subject to uncertainty when it comes to the proposed treatment of this item in the calculation of the debt-to-equity ratio.

The second part of the study employs a qualitative method approach to collect empirical data, using semi-structured research interviews which consist of a pre-arranged set of questions (which are based on the literature review). It is found that the debt-to-equity ratio is very important and that valuable information can be extracted from this ratio based on the responses from participants in academia and practice. Even though there are a multitude of ways in which deferred tax can be

treated in the calculation of the debt-to-equity ratio, participants from academia and practice overwhelmingly respond that they would rather include deferred tax as part of debt. In so doing the item is not merely excluded, and this ensures that no unnecessary loss of information occurs.

The practical implications of the study is that the research can be used as starting point by financial statement users to investigate the effect that deferred tax can have on other ratios based on the figures reported in the financial statements. This will facilitate discussion regarding ratios and show that the items included in calculations are not set in stone and have a variety of implications.

The limitations of the study are that only stockbrokers and portfolio managers are used as the representatives of professionals in practice. The only input investigated in the calculation of the debt-to-equity ratio is deferred taxes. The participants in academia only consist of lecturers from one of South Africa's major universities. Areas for further research include using participants from more than one university and also including banks as part of the professionals in practice. Other inputs that have an impact on the debt-to-equity ratio can be examined and more focus can be placed on equity, which is also a very important input in the calculation of this ratio.

The study recommends that, when calculating the debt-to-equity ratio, deferred tax should be included in the calculation to ensure that the ratio remains comparable and as simple as possible. By doing so this item is not simply excluded this ensures that no unnecessary loss of information will take place. Furthermore, it is also recommended that the debt-to-equity ratio should be calculated including and excluding deferred tax and that both these ratios should be disclosed. By computing both ratios the user has the freedom to select the ratio that best suits their needs and thus the impact of deferred tax will not be ignored.

Keywords: Accounting standards, Debt, Debt-to-equity ratio, Deferred taxes, Equity, Financial statement analysis, Gearing, Ratio analysis.

OPSOMMING

Die huidige sake-omgewing is uiters uitdagend en maatskappye is gewikkel in 'n konstante stryd om beide mededingend te bly en 'n aantreklike belegging te wees wat langtermyn groei vir beleggers kan waarborg. Een van die mees bruikbare instrumente om finansiële prestasie te bepaal is die finansiële state wat deur ŉ maatskappy gepubliseer word. Hierdie state dien as 'n opsomming van die maatskappy se besigheidprestasie en kan gebruik word deur belanghebbendes om ŉ beter begrip te verkry van hoe die entiteit presteer het tydens 'n spesifieke finansiële tydperk.

Die syfers gerapporteer in die finansiële state bevat 'n rykdom van inligting. Die finansiële state moet wel ontleed en geïnterpreteer word deur gebruik te maak van sekere tegnieke om hierdie inligting te bekom. Die hoofdoel van hierdie studie is om 'n beter begrip ten opsigte van die hantering van uitgestelde belasting in die skuld-tot-ekwiteit-verhouding te verkry en ook om vas te stel hoe hierdie aspek in teorie en in die praktyk verskil.

Dié studie fokus eerstens op die literatuur van finansiële staatontleding, verhoudingsanalise en spesifiek die skuld-tot-ekwiteit-verhouding. Verhoudingsanalise is 'n kritiese analise instrument omdat hierdie tegniek as een van die mees algemeen gebruikte finansiële staatanalise instrumente beskou word. Skuld en ekwiteit is die vorme van finansiering wat vir 'n entiteit is en dien as die platform vir die voortsetting van toekomstige projekte. Dit sal ook bydra tot die groei en volhoubaarheid van die firma, en in hierdie twee vorme van finansiering vind ons die kapitaalstruktuur. Dit is hier waar skuldbestuur voorkom en ook waar die rol van skuld-tot-ekwiteit-verhouding speel om te verseker dat korrekte besluite gemaak kan word duidelik word.

Die berekening van verhoudinge en die insette wat gebruik word om hierdie verhoudinge te bereken is dikwels hoogs subjektief. Dit lei tot die vraag hoe sekere items in die berekening van verhoudings hanteer moet word. Uitgestelde belasting is een van die insette wat onderhewig is aan onsekerheid wanneer dit kom by die voorgestelde hantering van hierdie item in die berekening van die skuld-tot-ekwiteit-verhouding.

Die tweede deel van die studie maak gebruik van 'n kwalitatiewe benadering vir die insameling van empiriese data met behulp van semi-gestruktureerde navorsingsonderhoude wat bestaan uit 'n voorafbepaalde stel vrae (gebaseer is op die literatuuroorsig). Daar is bevind dat die skuld-tot-ekwiteit-verhouding baie belangrik is. Gebaseer op die antwoorde van die deelnemers in die akademie en praktyk is bepaal dat waardevolle inligting vanuit hierdie verhouding verkry kan word. Alhoewel daar baie verskillende maniere is hoe uitgestelde belasting in die berekening van die verhouding hanteer kan word, noem deelnemers vanuit die akademie en praktyk met ’n geweldige meerderheid dat hul eerder uitgestelde belasting sal insluit as deel van skuld in die berekening van die skuld-tot-ekwiteit verhouding. So word dit verseker dat die item nie bloot uitgesluit word nie en dat geen onnodige verlies van inligting sal plaasvind nie.

Die praktiese implikasies van die studie is dat die navorsing gebruik kan word as vertrekpunt deur finansiële staat gebruikers om die effek wat uitgestelde belasting op ander verhoudings kan hê te ondersoek gebaseer is op die syfers wat in die finansiële state gerapporteer is. Dit sal help om besprekings rakende verhoudings te fasiliteer en ook om te toon dat die items wat in berekeninge ingesluit kan word nie vasgestel is nie en 'n verskeidenheid van implikasies kan hê.

Die beperkinge van die studie is dat slegs aandelemakelaars en portefeuljebestuurders as verteenwoordigers van die professionele praktyk optree. Die enigste inset waarna gekyk word rakende die berekening van die skuld-tot-ekwiteit-verhouding is uitgestelde belasting. Akademiese deelnemers bestaan slegs uit dosente van een van Suid-Afrika se groot universiteite. Gebiede vir verdere navorsing sluit in die gebruik van deelnemers van meer as een universiteit en om banke in te sluit as deel van die professionele mense in die praktyk. Ander insette wat 'n impak op die skuld-tot-ekwiteit-verhouding het kan ondersoek word en meer klem kan op ekwiteit geplaas word, wat ook 'n baie belangrike inset in die berekening van hierdie verhouding lewer.

Die studie beveel aan dat uitgestelde belasting in die berekening van die skuld-tot-ekwiteit-verhouding ingesluit moet word om te verseker dat die verhouding vergelykbaar en so eenvoudig as moontlik bly. Sodoende word die item nie bloot uitgesluit nie en word verseker dat geen onnodige verlies van inligting sal plaasvind

nie. Verder word dit ook aanbeveel dat die skuld-tot-ekwiteit-verhouding bereken moet word insluitende en uitsluitende uitgestelde belasting, en albei hierdie verhoudings moet openbaar word. Deur die berekening van beide hierdie verhoudings het die gebruikers die vryheid om die verhouding wat die beste by hul behoeftes pas te kies en die impak van uitgestelde belasting sal nie bloot geïgnoreer word nie.

Sleutelwoorde: Ekwiteit, Finansiële staatontleding, Hefboom, Rekeningkundige standaarde, Skuld, Skuld-tot-ekwiteit-verhouding, Uitgestelde belasting, Verhoudingsanalise.

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CHAPTER 1

1.1. PURPOSE, SCOPE AND PROGRESS OF STUDY

1.1.1. Background

Current economic conditions play a big role in the survival of new and upcoming entities as well as long standing corporations. The economic environment and business strategy of a firm influences its business activities (Palepu & Healy, 2008:1-2). The above-mentioned highlights the importance of financial performance and management. One of these performance aspects lies in evaluating financial statements to gain a clearer insight regarding how the entity performed on a financial level during the previous financial years to ensure continuous improvement on a performance level. Gibson (2013:628) states that financial statements include the balance sheet, income statement, and statement of cash flow. The new heading for balance sheet has changed to the statement of financial position, the name change is recognised, but for the purpose of the literature review and study reference will be made to the balance sheet. The balance sheet and income statement provide the information required by most of the stakeholders of a business required for decision making (Singla, 2014:17). Financial statements play a very important role in gaining a better understanding of how an entity functions. These statements are a primary source of evaluating their investment in an entity for any investor. Penman (2010:2) maintains that the primary source of information regarding a firm is the financial statements they publish. Financial statements help investors to decide whether to invest in a firm. Investors use these financial statements to ensure that the firm has the ability to keep adding value to their investment (Penman, 2010:2). According to Singla (2014:17) some of the most valuable information of past performance and present position of an entity are stored in financial statements. Financial statements are the lens that provides insight on the business and it is important to gain a better understanding of how the entities' operations are presented through the financial statements (Penman, 2010:232).

The comparative and relative importance of data presented can be emphasised through various financial data analysis techniques which can be used to evaluate the

position of a firm (Gibson, 2013:199). Financial analysis is the process of synthesizing and summarizing financial and operative data with a view of gaining insight into the operative activities of a business. It is a technique used to X-ray the financial position as well as the progress of a company (Singla, 2014:18).

Financial analysis is used to assess the performance of a firm based on its stated goals and strategies (Palepu & Healy, 2008:5-1). According to Jeter and Chaney (1988:42) the usual goal of conducting a financial statement analysis is to predict future conditions and performance based on the evaluation of past and current financial positions. Singla (2014:18) summarises the purpose of financial statement analysis as diagnosing the profitability and financial soundness of a business through treatment of the information contained in the financial statements. The importance of financial statement analysis and the role it plays in an entity's future success can't be overstated. Long-term sustainability and improved management of businesses by owners can be gained through better interpretations and proper use of financial statements (Van Auken & Yang, 2014:2).

Damjibhai (2016:30) states that a very powerful measurement tool that can be used to measure organisation performance is ratio analysis. Ratio analysis also serves as a prediction tool that can be used to prevent financial distress and fraudulent financial reporting (Arshad, Iqbal & Omar, 2015:35-36). Ratio analysis is when different account balance relationships are compared (Gibson, 2013:638). The definition of ratio analysis is the systematic use of ratios to interpret statements to determine where an entity's strengths and weaknesses lie as well as to determine current financial conditions and historic performance (Damjibhai, 2016:31). Ratio analysis is very open ended, especially when it comes to certain inputs to calculate a ratio. Gibson (2013:200) states that different computations of the same ratio can be derived from each author or source on financial analysis.

Debt management and financial leverage play an important role in financial management and have a number of implications (Correia, Flynn, Uliana, & Wormald, 2013:5-15). The debt-to-equity ratio is one of the key ratios in terms of risk and debt management for an entity. According to Correia *et al.* (2013:5-16) the debt-to-equity ratio indicates to what extent shareholders' funds cover debt and is an indication of medium financial risk. The debt-to-equity ratio is used as an indicator of risk (Skae,

2014:297*).* The debt-to-equity ratio is commonly used to measure financial leverage, and is also useful for credit analysis (Penman, 2010:371). This ratio is a useful assessment tool to analyse an entity's debt paying ability. Long-term debt-paying ability can be determined by computing the debt-to-equity ratio. Creditors can also use this ratio to determine if they are well protected in case of insolvency (Gibson, 2013:285). Thus this ratio can be used to determine a company's debt position, especially from the perspective of future investors and creditors. The lower this ratio, the better a company's debt position is in terms of long-term debt-paying ability (Gibson, 2013:285). The ratio indicates how well a company is capitalised, and a higher ratio indicates that a company is dependent on future profits for the payment of debt.

1.1.2. Motivation of topic actuality

Two problems often encountered with ratio analysis are, firstly, the inclusion or exclusion of certain items in a specific ratio and, secondly, ensuring consistency. A lack of uniformity is one of the problems that arises when calculating certain ratios (Gibson, 2013:286). Financial statement analysis has no standard setters, is not codified, and has no framework. It therefore lacks structure in contrast to financial accounting (Entwistle, 2015:555). There are certain aspects of the debt-to-equity ratio that can be problematic for an analyst, specifically the appropriate treatment of deferred taxes. IAS 12 is the international accounting standard that regulates the proposed treatment of deferred taxes purely from a financial accounting perspective. Correia *et al.* (2013:5-16) maintain that the appropriate treatment of deferred tax is an issue that arises from the debt-to-equity ratio. The classification of deferred taxes in this ratio lies in the hands of the analyst (Lasman & Weil, 1978:49). Deferred tax can be treated as equity or as a liability (Huss & Zhao, 1991:71), and this leads to an area where further study can be done to determine how this item is classified. Deferred tax is frequently regarded as equity based on the premise that there will always be a new tax allowance to replace those that are reversing; therefore it is unlikely that a liability will arise (Huss & Zhao, 1991:71). Should there be an expectation that a liability will arise, it is suggested that it is appropriate to treat the item as debt. Gibson (2013:626) states that deferred tax can be classified as an asset or a liability based on the nature of the timing differences. These differences are the result of revenue and expenses recognised in different time periods for the

purpose of tax and financial statements. Deferred tax will never really reverse in a growing company; thus the deferred tax liability should be added to equity when calculating debt ratios (Bartlett, 2014:693). Jeter and Chaney (1988:42) concur that the treatment of deferred taxes lies in the consistent growth of the account and the likelihood of future reversal.

The treatment of deferred tax in the calculation of the debt-to-equity ratio can lead to information being reported in a manner that does not reflect the economic substance of the item. When anticipating that the total amount of deferred taxes will not reverse in the future, the reported liability will be higher than the economic substance of the event (Jeter & Chaney, 1988:42). The reason for treating deferred tax as a liability is based on the user's assumption that the tax will be paid in the near future (Huss & Zhao, 1991:71). Equity treatment is motivated by the fact that increases in deferred taxes are *de facto* earnings (Huss & Zhao, 1991:71). In practice the treatment comes down to the fact that deferred taxes are treated as equity and added back to net income (Jeter & Chaney, 1988:42). Deferred tax treatment can also be affected by factors that affect a rating decision, for example future profitability judgements (Huss & Zhao, 1991:71). The question that needs to be answered is how the theory differs from practice regarding the treatment of deferred tax and what the reasons are, if any, for these differences.

1.2. PROBLEM STATEMENT

Financial statements can be used as an indicator of future growth and soundness of a company, but in itself is silent (Singla, 2014:17). The owners' perception of the financial statements can influence the way in which financial statements are used and interpreted (Van Auken & Yang, 2014:2). The personal judgement and competence of the accountant can affect the financial statements of an entity (Singla, 2014:17). Taking this into account, financial statements and the analysis thereof relies greatly on the judgement of certain people. This begs the question how certain items should be treated in the financial statements to ensure that the correct decisions can be made based on this information.

Debt-to-equity is one of the most commonly used debt management ratios (Bartlett, 2014:693). The debt-to-equity ratio provides crucial information to creditors, analysts,

shareholders, and potential investors regarding the financial strength or weakness of a company, for example long-term survival and the probability of future dividend payments (Axson, 2010; Matthew, Fada, Ukonu & Adejoh, 2016:6). The debt-to-equity ratio can be used to calculate the share price of an entity with greater precision (Safania, Nagaraju & Roohi, 2011:278). The importance of the debt-to-equity ratio and the role it plays in financial statement analysis can't be understated, emphasising the importance of the correct calculation of this formula. Lasman and Weil (1978:49) point out that the number of analysts who calculate the debt-to-equity ratio is almost the same as the number of definitions for this ratio indicating the level of subjectivity involved. The appropriate treatment of deferred tax is one of the subjective items in the calculation of this ratio.

The question could therefore be asked: what is the appropriate treatment of deferred tax when calculating the debt-to-equity ratio? The inclusion or exclusion of this amount can have a significant influence on the debt-to-equity ratio, which is viewed as one of the key risk formulas for any entity.

1.3. OBJECTIVES

The main objective of this study is to gain a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this differs in theory and in practice.

The main objective will be achieved by the following secondary objectives:

- Conceptualising the debt-to-equity ratio from the literature by performing an in depth theoretical study regarding the ratio to gain a better understanding of the purpose and implications of this ratio (research objective 1);
- Conceptualising from the literature what the appropriate treatment of deferred tax in the debt-to-equity ratio is (research objective 2);
- Determining from an academic perspective how deferred tax should be treated in the calculation of the debt-to-equity ratio by gaining the opinion of specific academic practitioners who specialise in the field of financial management and financial accounting (research objective 3);

- Determining how stockbrokers and portfolio managers take deferred tax into account when calculating the debt-to-equity ratio by performing interviews with certain professionals in practice (research objective 4); and
- Based on research conducted, formulate a conclusion and recommendations regarding the treatment of deferred tax in the debt-to-equity ratio (research objective 5).

1.4. RESEARCH DESIGN/METHOD

To achieve the above objectives, a thorough literature study with an empirical study will be conducted.

1.4.1. Literature review

The literature study will follow a two-pronged approach. Firstly, the work of theorists regarding this specific ratio will be carefully reviewed and considered. Consideration will also be given to locally (nationally) and internationally published academic research on this matter. This will be performed to gain a thorough understanding of the current and proposed treatment of deferred tax in the debt-to-equity ratio. Different opinions of theorists will be analysed and compared. This will be done to gain a better insight regarding the inner workings of the debt-to-equity ratio and to identify to what extent the literature agrees or disagrees regarding certain aspects of this ratio.

The literature study will aim to achieve the following:

- To obtain a sound foundation of widely accepted theory and detailed reasoning behind the acceptance of this theory for the calculation of the debt-to-equity ratio;
- To gain a better understanding regarding deferred tax and what the proposed treatment of this amount is based on theory;
- To determine how stockbrokers and portfolio managers calculate the debt-to-equity ratio and if there are any differences between theory and practice;

- To determine whether previous studies, both nationally and internationally, have posited any conclusions or recommendations regarding the proposed treatment of deferred tax; and
- To determine how deferred tax should be treated in ratio analysis by examining the following proposed treatments as stated by Huss and Zhao (1991:70):
    - Liability treatment: The deferred income tax credit will be included as part of the company's long-term liabilities;
    - Equity treatment: The deferred income tax credit is added to shareholder equity; and/or
    - Excluded from the ratio: The deferred income tax credit will not be used in the calculation of the debt-to-equity ratio.

1.4.2. Empirical research

This study will adapt the constructivism paradigm, as subjective meaning based on interpretation will be developed to answer the research questions in the best possible manner. Social constructivists adhere to the belief that individuals seek understanding of the world in which they live and function. This understanding is gained by developing subjective meaning from their own life experiences (Creswell, 2014:8). The research method used in this study is a qualitative research method. Qualitative research is one of the best methods to use when studying a subject in depth (Myers, 2013:9). Qualitative research places more concern on words rather than numbers and provides a primary view of the connection between theory and research (Bryman & Bell, 2011:386). Pellissier (2007:23) states that when qualitative research is conducted, a wide assortment of data-collection methods and the application of varied conceptual frameworks are used to solve problems. The design is chosen to meet the objectives of this study.

The empirical research will be conducted by performing interviews regarding the proposed treatment of deferred taxes in the debt-to-equity ratio and investigating the specific views regarding this aspect. The representatives of this proposed empirical study includes stockbrokers and portfolio managers to gain insight regarding the views in practice; further interviews will be conducted with academics at the North-

West University who specialise in the fields of financial accounting and financial management for a more theoretical background. For the purpose of this study stockbrokers and portfolio managers are defined as professionals who focus on investing and selling shares in firms. The reason for the selection of the above-mentioned professionals is that they view ratios as a primary focus area when it comes to evaluating and making decisions regarding a specific share. Thus financial statement analysis plays an important role in gaining a more comprehensive insight regarding a specific company to ensure appropriate and informed decisions can be made. Interviews with academics are done to gain specific insight regarding IAS 12 (deferred taxes), which is an accounting term, and to ascertain the different views regarding this item from a financial management perspective. Interviews are seen as social interactions with specific norms, expectations, and social roles. The explicit purpose of an interview is to gain specific information through a structured conversation (Babbie & Mouton, 2012:249). The content of the interviews will be developed to include questions regarding the current treatment of deferred taxes in practice and the rationale behind the treatment. It is purely based on theory and an academic view how this item should be handled in the debt-to-equity ratio.

For the purpose of this study, trustworthiness will be illustrated by recording, transcribing, and coding the interviews conducted. The results of these interviews will be interpreted and the results obtained from professionals in practice will be compared and analysed to determine whether any differences or similarities exist in the participants' treatment of deferred taxes. The results of interviews with academics will also be interpreted to determine what the specific views are from an academic perspective, and based on this information a comparison between theory and practice will be made. The results of the interviews and the literature study will be used to draw a conclusion regarding the proposed treatment of deferred tax in the debt-to-equity ratio.

1.5. OVERVIEW

The study will be conducted in six chapters, *as follows*:

Chapter 1: Purpose, scope and progress of study

The first chapter of this study provides a summary of the background on the research. The background of ratio analysis and the debt-to-equity ratio is discussed and the research objectives are provided together with the methodology used as well as the outline of the study.

Chapter 2: Purpose and implications of the debt-to-equity ratio

Chapter two consists of a literature study that focuses on what the accepted theory is regarding financial statement analysis, the debt-to-equity ratio, and the proposed inputs when calculating this ratio. This is done to gain a better understanding regarding this ratio and which inputs have a significant influence when it comes to calculations. Previous literature studies, text books, and locally as well as internationally published academic research are studied to gain further insight regarding this issue from a purely theoretical viewpoint.

Chapter 3: Treatment of deferred tax in the debt-to-equity ratio

The treatment of deferred taxes is the main input where further theoretical study will be required to gain a better understanding regarding the proposed classification of this item and how the classification of this item will influence the debt-to-equity ratio. This chapter focuses on gaining further insight regarding the proposed treatment of deferred taxes in the debt-to-equity ratio by reviewing previous studies, textbooks, and articles that address this matter. These resources are used to gain better insight regarding the treatment of deferred taxes from a theoretical and research viewpoint.

Chapter 4: Research design and method

In Chapter 4 the research methodology of this study is described. The development of questions used for the interviews as well as the rationale for selecting certain people for interviews are discussed and explained. The reasons for certain questions are more thoroughly discussed to ensure the required information is gained from interviews.

Chapter 5: Analysis of empirical results

In this chapter the results of the interviews conducted are assessed, specifically regarding the proposed treatment of deferred taxes based on theory and the views of

academics that specialise in their respective fields. The feedback from stockbrokers and portfolio managers is assessed and compared to theory.

Chapter 6: Conclusion and recommendations

Conclusions are drawn based on the results of the literature review and the interviews conducted are discussed based on the objectives set out in sections 1-3. Recommendations are then made based on the study.

CHAPTER 2

PURPOSE AND IMPLICATIONS OF THE DEBT-TO-EQUITY RATIO

2.1. INTRODUCTION

This chapter consists of a literature study of the accepted theory of ratio analysis and specifically the debt-to-equity ratio to address the first secondary objective set in section 1.3 in Chapter 1. The purpose of this chapter is to obtain sufficient information from the literature regarding the debt-to-equity ratio and to gauge what the specific functions behind this formula are. This aids in creating a bigger picture of the subject under discussion and provides a good indication of what the content of the interviews developed for the empirical study should consist of.

To fully understand the theory behind ratio analysis, the importance of financial statements must first be understood. A better understanding of the role of financial statements enhances the understanding of the importance thereof. Ratio analysis serves as one of the principal analysis tools used in the analysis of financial statements (Palepu & Healy, 2008:5-1). The financial analyst is just as important as the techniques he uses to analyse the financial statements, because without proper interpretation and analysis of figures accurate projections and decisions will not be achievable (Correia *et al.*, 2013:5-15). With regard to the previous statement, deeper insight regarding the role and the importance of the analyst will also be required.

A sound foundation of widely accepted theory is established and the reasoning behind the acceptance thereof is discussed. This is done to obtain a better insight into the calculation of the debt-to-equity ratio and the extent to which the literature agrees and disagrees on different aspects regarding this topic.

Consideration is then given to published local and international academic research performed in order to determine whether previous studies indicate any variation between how theory suggests the inputs in the debt-to-equity ratio should be treated and how it is done in practice. The different aspects of debt and equity are analysed to determine the role these items play in the above-mentioned ratio.

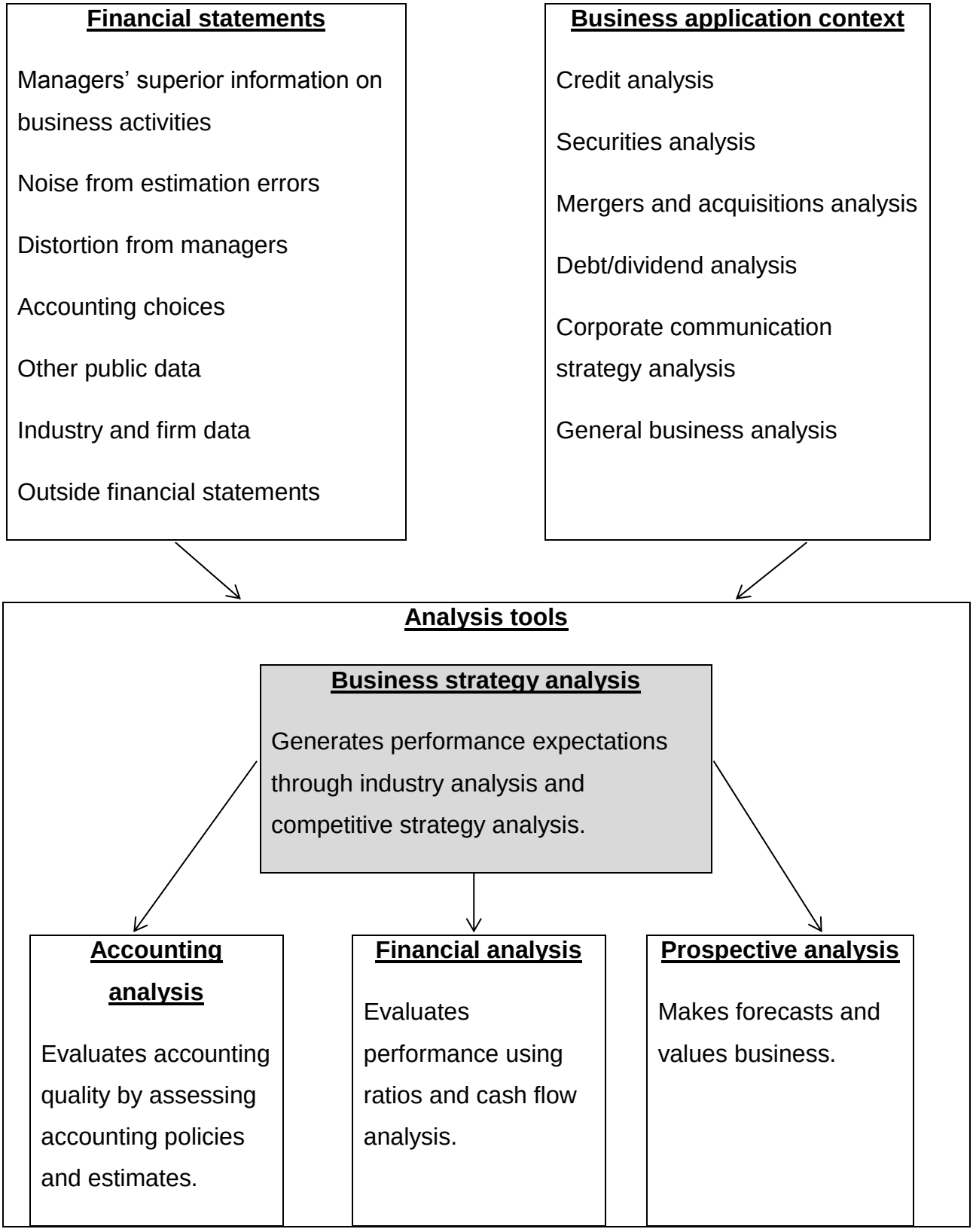
2.2. FINANCIAL STATEMENTS

The economic consequences of the business activities of a firm are summarised in its financial statements (Palepu & Healy, 2008:1-3). The end product of an organisation's accounting cycle is the financial statements that are delivered from this process, which provide a representation of the company's financial position and periodic performance (Albrecht, Holland, Malagueño, Dolan & Tzafrir, 2015:803-804). Financial statements are derived from financial reporting processes which are governed by accounting rules and standards, management incentives, and the enforcement and monitoring of mechanisms (Subramanyam & Wild, 2009:67). Accounting numbers are translated from the economic factors and financial statements report these numbers (Penman, 2010:17).

Financial statements form the lens through which the business is viewed and it is important to gain a better understanding of how entities' operations are presented through the financial statements (Penman, 2010:232). Financial statements play a central part in analysing and understanding a firm (Stickney, Brown & Wahlen, 2007:2). The financing and investment activities of a company are, at a point in time, reported in its financial statements, and these statements are used to summarise the operating activities for the preceding period (Subramanyam & Wild, 2009:27).

Figure 2-1 summarises the information that can be obtained from financial statements, what business application context is, and the types of tools that exist to analyse the aforementioned.

Figure 2-1: Summary of the financial statements, business application context and various analysis tools



Source: Palepu & Healy, 2008:1-9

Correia *et al.* (2013:5-6); Penman (2010:34), and Gibson (2013:628) state that a full set of financial statements comprise the following:

1. Statement of financial position (balance sheet): This statement provides a snapshot of the entity's operations at a certain point in time. The items displayed in this statement include assets, liabilities and shareholders' equity;

2. Statement of comprehensive income (statement of profit or loss and other comprehensive income): The statement of comprehensive income summarises the entity's income and expenditure over a specific period. This statement reports the movement of shareholders equity based on the entity's business activities;

3. Statement of change in equity: This statement explains how the equity changed over the period and this is shown by displaying the movement between the beginning-of-period equity and the end-of-period equity;

4. Statement of cash flows: This statement displays how cash is generated or utilised during the period with regard to the following three major areas, namely operating activities, investing activities, and financing activities; and

5. Notes that comprise a summary of any significant accounting policies and explanatory information. The notes to the financial statements enable the user to fully understand and interpret the information displayed in the financial statements.

2.2.1. The role of financial statements

The value of the reporting process is emphasised by the financial statements delivered. The most important part of the financial reporting process and the financial reporting environment is the statutory financial statements that result from the process (Subramanyam & Wild, 2009:68). Potential equity, debt and credit suppliers, as well as company management can dramatically reduce their cost of searching for financial information by using a company's general purpose financial statements (Colsen, 2005:80). Jesswein (2010:53) contends that "financial statements are the lifeblood of finance". The importance of financial statements cannot be understated and is an integral part of an entity's operations, as evidenced in the preceding information.

A financial statement presents a picture of the economic performance of an entity and is the primary source of information regarding the company (Alexander, Britton & Jorisson, 2003:548; Penman, 2010:2). Correia *et al*. (2013:5-6) confirm that the entire year's performance of an entity is summarised in its financial statements. The financial statements of a company serve as a representation of its management, who carry the prime responsibility for the fairness of presentation and the information presented (Subramanyam & Wild, 2009:113).

The performance of a firm and its financial position at the end of the year can be displayed through its collective financial statements. According to Singla (2014:17) some of the most valuable information of past performance and present position of an entity are stored in financial statements. Financial statements provide important information to stakeholders and are a legitimate part of good management (Albrecht *et al.*, 2015:804). Dobrin (2010:25) states that the owners can follow the company's financial position by using reports and financial statements. Thus it can be concluded that financial statements are more than a mere list of figures; it plays a much bigger role in gaining a better understanding regarding an entity's performance. The value of financial statements therefore lies in the fact that current and historic financial performance can be derived from this information and can be used to make important decisions.

2.2.2. Uses and users of financial statements

Financial statements are prepared for a group of diverse users, and each one of these users have certain objectives that they want to achieve through analysis (Gibson, 2013:215). According to Bartlett (2014:693) and Correia *et al.* (2013:5-9) the main stakeholders who use financial statements are a company's shareholders, credit providers, government bodies, employees, auditors, and investment analysts. Financial statements provide the information used by most of the stakeholders of a business to make decisions regarding the entity (Singla, 2014:17).

The following section addresses how stakeholders can use financial statements. By comparing the views of White, Sondhi and Fried (2003:2) with that of Burke (2011:138), one could posit that financial statements are used by investors and creditors to make better economic decisions and guide them regarding where to place their scarce investment resources. Financial statements help investors decide

whether to invest in a firm. Investors use these financial statements to ensure the firm has the ability to keep adding value to their investment (Penman, 2010:2). Equity analysts and credit analysts are interested in formulating expectations about future earnings and cash flows, about the financial position and possible changes in the financial position; therefore the information these two parties require is very similar and financial statements have evolved to serve these needs (Comiskey & Mulford, 2000:9). Shareholders use the financial statements of the firm to measure actual performance compared to expectations (Albrecht *et al.*, 2015:804).

The financial statements of an entity are used as a tool to communicate to external stakeholders; thus these annual accounts can be used to convey a certain message to the outside world (Alexander *et al.*, 2003:548). Financial statements portray the role of supporting external users in evaluating current and projected performance of the company and are one of the least expensive and most widespread methods of communication management (Dobrin, 2010:29). The financial statements provided by an entity are not only used to ensure compliance is reached, but also to deliver valuable information to their stakeholders regarding an entity's business activities.

The information contained in financial statements can be used and helps the analyst to infer fundamental value (Penman, 2010:32). The analyst therefore also depends on these statements, because without this information proper analysis would not be possible and it would be hard to create value. The financial statements the company publishes is one of the sources that can be used to gain insight into the performance of the company (Vergoossen, 1993:156). Financial statements are used to gain external financing, and the rapid communication thereof can be an incentive to gain loans at a lower cost (Achek & Gallali, 2015:147). White *et al.* (2003:2) maintains that, because of the selective reporting of economic events by the accounting system, compounded by alternative accounting methods and estimates, financial statements are at best a resemblance of the economic reality. Hence financial statements are, at best, only a resemblance of the economic reality, but without these figures there would be no resemblance whatsoever, which would place a great deal of strain on the decision making process.

2.3. BUSINESS ANALYSIS

Business analysis is the action of evaluating a company's economic expectations and risks and is useful for making a wide range of business decisions. This analysis aids in making informed decisions by giving structure to the decision making task through an evaluation of the company's strategies, business environment, financial position, and performance (Subramanyam & Wild, 2009:3-4). As reported by the International Institute of Business Analysis (IIBA), an entity's weaknesses can be identified through the use of business analysis. The goal of this analysis is to achieve changes that will provide added value to shareholders (Bradea, Sabău-Popa & Boloş Marcel, 2014:851).

Business analysis assists the company in defining its strategy, goals, the requirements for projects, and the improvement of technology and processes (Bradea *et al*., 2014:851). Business intermediaries try to achieve successful business analysis through the following four key steps: business strategy analysis, accounting analysis, financial statement analysis, and prospective analysis (Palepu & Healy, 2008:1-8). Combining accounting analysis with several techniques of financial analysis should enable external parties to judge the performance and the financial position of a company in a proper perspective (Alexander *et al.*, 2003:632). The technique of analysing financial statements is viewed and should be seen as an important and integral part of business analysis. An important part of this analysis lies in analysing an entity's business environment and strategy (Subramanyam & Wild, 2009:14).

2.4. FINANCIAL STATEMENT ANALYSIS

According to Subramanyam and Wild (2009:3) the analysis of financial statements is integral and an important part of the broader field of business analysis. Financial analysis is defined as the process of studying a company's financial reports (Gibson, 2013:216). The analysis of financial statements consists of quantitative and qualitative conditions which are taken into consideration when measuring the relative financial position among firms and industries (Gibson, 2013:628). Financial analysis becomes a very interesting activity, especially when it comes to determining whether the market is fairly pricing an entity's shares (Stickney *et al*., 2007:2). Another important aspect of financial statement analysis is to determine what a company's

financing and investing activities consist of and to analyse the summarised operating activities for the preceding period (Subramanyam & Wild, 2009:27).

The analysis of financial statements has traditionally been seen as part of the central analysis that is required for the valuation of equity (Nissim & Penman, 2001:109). By analysing financial statements it provides users with meaningful information and enables them to interpret the financial and non-financial information they receive in order to make informed decisions (Skae, 2014:280). The analysis of financial information can be done in different ways, depending on the nature of the firm or industry and what the specific needs of the user are (Gibson, 2013:216). Financial analysis is a technique used to X-ray the financial position as well as the progress of a company. It can be defined as the process of synthesizing and summarizing financial and operative data with a view of getting an insight into the operational activities of a business enterprise (Singla, 2014:18).

Financial analysis focuses the lens on the company's statements to create a clearer picture regarding its operations. Through this analysis the durability of competitive advantage from sequences of accounting numbers are organised to highlight these features of the entity (Penman, 2010:17). Financial analysis aims to use financial data to evaluate the current and past performance of a firm and, in so doing, assess the company's sustainability (Palepu & Healy, 2008:1-9).

2.4.2. The purpose of financial statement analysis

The overall objective of analysing financial statements is to examine the financial position and returns in relation to the risk of the firm, with the view of forecasting the firm's future prospects (Correia *et al.*, 2013:5-9). Financial analysis serves the purpose of evaluating the performance of the firm based on the strategy, economic-, and industrial environment in which the company is competitive and the accounting strategy that the company has applied (Alexander *et al*., 2003:586). The standard analysis of financial statements distinguishes shareholders' probability from the risks that arises from operations which emerge from the companies' borrowings to finance operations (Nissim & Penman, 2003:532). The analysis of financial statements leads to the identification of certain aspects that are relevant to make investment decisions. The goal of this analysis is to assess the firm's value based on the financial statements (Ou & Penman, 1989:295).

The analysis of financial information is a valuable activity when managers have detailed information on an entity's strategies and performance that will not likely be fully disclosed due to a variety of institutional factors (Palepu & Healy, 2008:1-1, 1-8). Therefore financial analysis intends to obtain managers' inside-information from public financial statement data (Palepu & Healy, 2008:1-1, 1-8). Based on the aforementioned it may be postulated that financial statement analysis is not only important for external stakeholders, but also plays a very important role for managers inside the company.

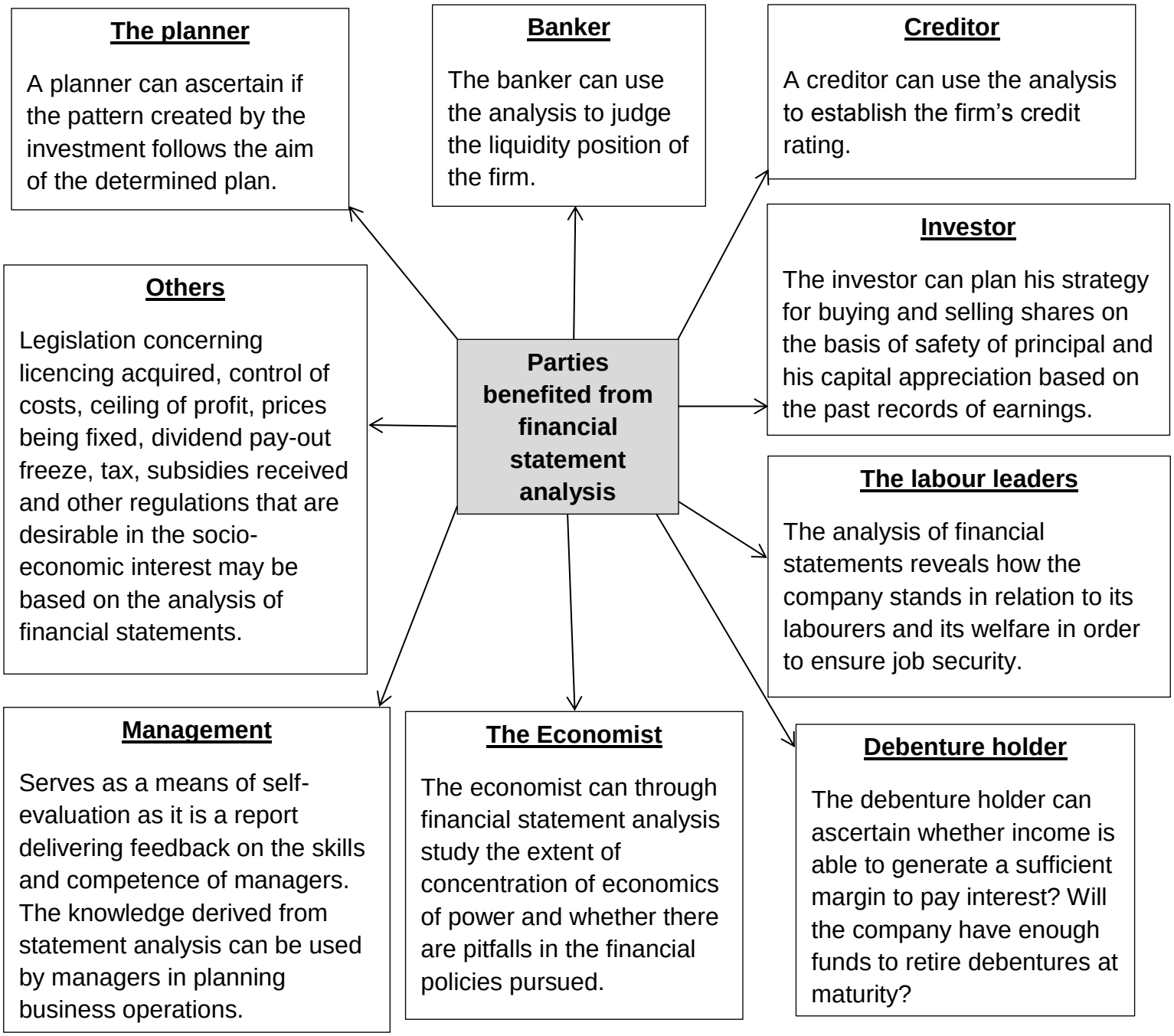
The analysis of financial statements is a method that is used to analyse the entire business (Penman, 2010:17). The goal of financial statement analysis is to determine entity performance, future prospects, and the company's financial structure (Skae, 2014:280). According to Konchitchki and Patatoukas (2013:682) the financial analysis of a firm's probability drivers applied at the aggregated level delivers a timely insight regarding its future real economic activity. Long-term sustainability and improved management of businesses by owners can be gained through better interpretations and proper use of financial statements (Van Auken & Yang, 2014:2). The objectives of financial and non-financial analysis are interrelated with the needs of financial statement users (Skae, 2014:280).

Financial analysis is used to assess the performance of a firm based on its stated goals and strategy (Palepu & Healy, 2008:5-1). Financial statement analysis is not a source of every single answer required regarding the specific firm, but enables the appropriate questions to be posed regarding the firm's performance (Duhovnik, 2008:134). The aim of this analytical process is to establish trends for the particular enterprises over a certain period and to compare the results and trends with those of competitors to identify appropriate measures to improve current strengths and weaknesses (Skae, 2014:280). Singla (2014:18) summarises the purpose of financial statement analysis as diagnosing the profitability and financial soundness of a business through treatment of the information contained in the financial statements. Based on the results of empirical analysis performed by Nissim and Penman (2003:531) the conclusion is made that financial statement analysis explains cross-sectional differences in current and future rates of return including price-to-book ratios, which are established on expected rates of return on equity.

When the results of financial analysis are compared with industry averages and with competitors' results more meaningful information will be gained. It is important to take note that caution must be exercised when using industry averages and competitors' results, because these results are not a complete determination of how competitors function, but rather an indication of where the firm is currently standing in the market (Gibson, 2013:216). The analysis of accounting data serves as an important precondition for effective financial analysis, as the quality of the financial analysis and conclusions drawn therefrom depends heavily on the quality of the underlying accounting data (Subramanyam & Wild, 2009:106).

According to Singla (2014:18-19) there are a wide range of parties that benefit from financial analysis, as illustrated below:

Figure 2-2: Parties benefiting from financial statement analysis



Source: Author

2.4.3. Financial statement analysis techniques

Financial statement analysis is an incremental and critical tool which is useful for gauging prospects of the real economy that is of interest to academics and practitioners (Konchitchki & Patatoukas, 2013:669-670). Gibson (2013:199) maintains that financial statement analysis is a process of judgment and that one of

the primary objectives is the identification of considerable changes in amounts, trends, relationships, and investigating the reasons underlying the changes in the above-mentioned.

Financial statement analysis employs a variety of techniques to emphasise the comparative and relative importance of data displayed and to evaluate the firm's financial position (Gibson, 2013:199). The analysis of financial statements can be achieved through a variety of tools designed to meet specific needs (Subramanyam & Wild, 2009:27). The financial analyst has access to a variety of techniques to analyse financial statements and can choose the technique that best suits his/her required needs (Correia *et al*., 2013:5-9). The evaluation technique must have benefits that outweigh the cost of using it for it to be an acceptable technique, and the cost-benefit trade-off has to compare favourably with alternative techniques (Penman, 2010:76). Two important skills are linked to financial analysis. The first is that the analysis must be systematic and efficient, and secondly the analysis must allow the analyst to use financial data to explore business concerns (Palepu & Healy, 2008:1-9).

Traditionally the analysis of financial statements has been performed by using a set of ratios to highlight the relative performance of the firm as compared to the industry (Feroz, Kim & Raab, 2003:49). Financial statement analysis has, however, seen a series of developments highlighting its importance. These developments include using univariate statistics to validate the use of ratios for the prediction of corporate bankruptcy, the use of factor analysis to select variables to be used in multiple discriminant analysis models for the prediction of bond ratings, and the use of multivariate statistics to predict certain events like insolvency (Walker, Stowe & Moriarty, 1979:184).

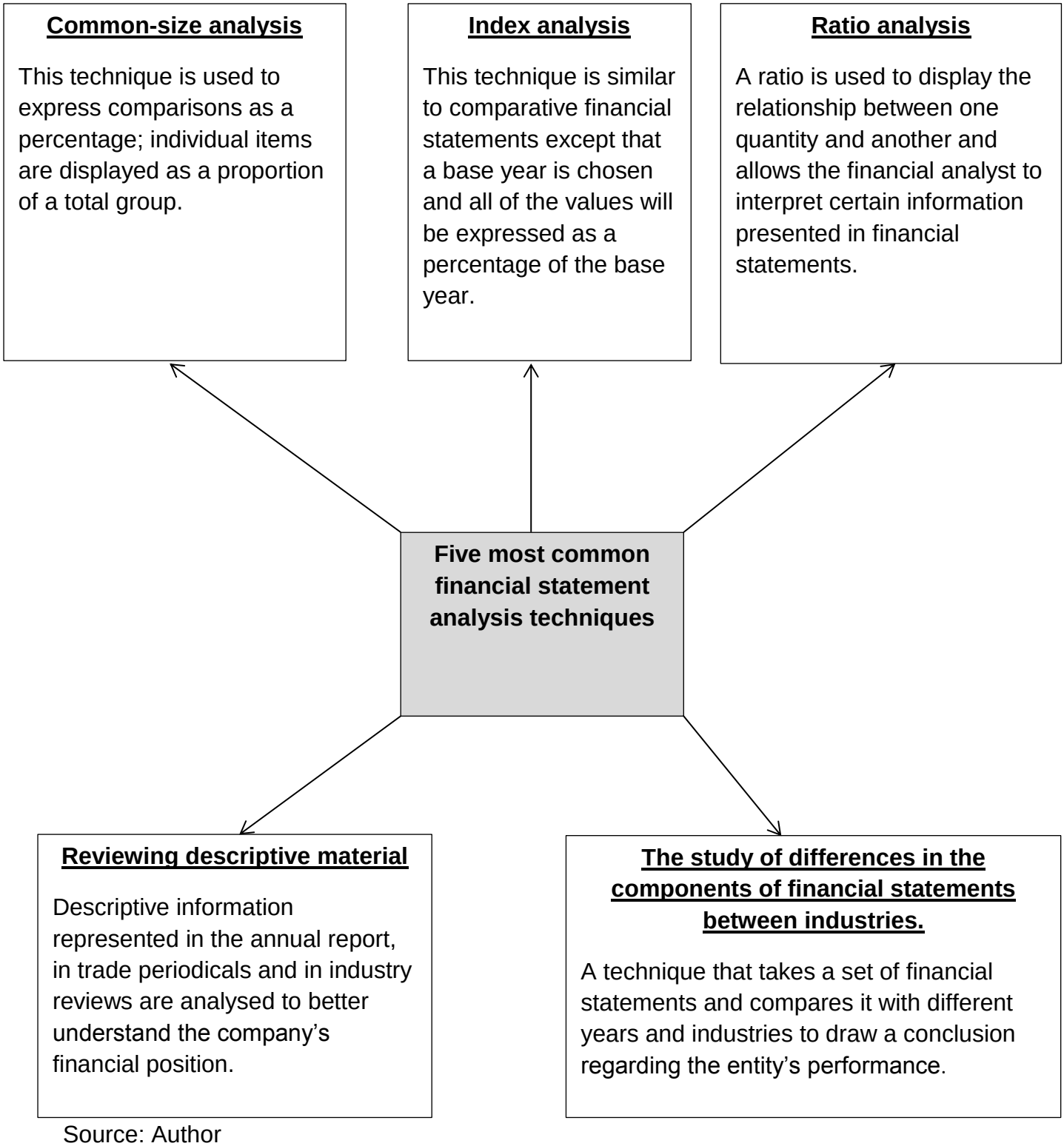
The five most common financial statement analysis techniques are (Correia *et al.,* 2013:5-13; Gibson, 2013:199):

- Common-size analysis;
- Index analysis;
- Ratio analysis;

- Reviewing descriptive material; and
- The study of differences in the components of financial statements between industries.

These techniques are presented in figure 2.3 below.

Figure 2-3: **Five most commonly used financial analysis techniques**



Source: Author

2.5. THE FINANCIAL ANALYST

2.5.1. What does the financial analyst need to know?

Analysts use ratios to make projections about the future; this means that it is important that the analyst should understand the factors that could affect such ratios in the future and how past events can affect the ratio (Correia *et al.*, 2013:5-15). The analyst has to provide insightful comments and, in order to do so, this basic knowledge of the local and global economic and political environment within which the entity operates is required (Skae, 2014:282). Modern general financial statements serve the purpose of backing the analyst's valuation of a company's equity as articulated in the Financial Accounting Standards Board's (FASB) conceptual framework, and has led to fair value measurement and accounting treatment of asset-and-liability recognition, which are both appropriately orientated toward the future rather than the past (Colsen, 2005:80).

According to Penman (2010:2, 14, 17) an accomplished analyst knows the business he/she is analysing through knowledge of the following:

- An understanding of the industry in which the company operates and the firm's position in it;
- A good understanding of the business and the entity's competitive advantage;
- An understanding of how the financial statements measure the success of the business;
- The firm's strategy to build networks, how to meet challenges of their competitors, and how to adapt to technological change;
- The type of products that the company sells;
- The company's consumer demand anticipation;
- Whether there is excess capacity in the firm's industry;
- An understanding of the ever evolving technology path, how data, voice and multimedia might be delivered in the future; and

- An understanding of government regulations.

2.5.2. The role of the financial analyst

Analysis corrects where accounting measurement is defective and the analyst supplements the financial statements with other information when the picture is not complete, but to do this the analyst must know what the statements are truly saying (Penman, 2010:17). The company's published annual report is a key source of information for the analyst; however, these financial reports have certain drawbacks which the financial analyst need to understand and take into consideration when performing certain tasks (Bartlett, 2014:717). The financial analyst who understands management's disclosure strategies has the opportunity to create inside information from public data. The analyst plays an important role in enabling outside parties to evaluate the firm's current and prospective performance (Palepu & Healy, 2008:1-10). The financial analyst can proceed to value the business through the use of financial statements and good knowledge of the entity's operations (Penman, 2010:17).

The financial analyst has the task of analysing a firm's profit potential. In order for the analyst to be able to do this they first have to assess the profit potential of each of the industries in which the firm is competing (Palepu & Healy, 2008:2-1). The analyst collects information on one or more shares, forms opinions, and writes recommendations when shares are being appraised. This association usually stretches from investment banks to brokerage houses that provide recommendations to profitable customers (Bildstein-Hagberg, 2003:439). The primary focus of the financial analyst should be on the accounting estimates and methods that the firm uses to determine critical success factors and risks (Palepu & Healy, 2008:1-10).

The financial analyst can be viewed as a critic in terms of a dramatic context and portrays the role of a silent messenger between the stage and audience that assesses the quality of the plot (financial statements) and the performance of the main actors (management) (Bildstein-Hagberg, 2003:435). According to Givoly (2003:620) the role that the financial analyst plays in code law countries, which are countries that have a legal code that purports to exhaustively cover a complete system of law, is less important, because companies rely more on private debt-financing. Thus the outside analyst only has limited access to corporate information,

regardless of search efforts to gather specific information. The financial analyst forces the market to act and becomes an active creator of trade, by upsetting the structure that separates the reckonable and controllable from the unknown and ambiguous (Bildstein-Hagberg, 2003:435).

2.5.3. The investment analyst

The investment analyst plays a critical role in the capital market as information mediator between companies and investors. There are three main types of investment analysts, namely investment advisors, portfolio managers, and directors/heads of departments (Vergoossen, 1994:156). The investment analyst makes decisions that are often followed by both institutional and individual investors in making final investment decisions. These decisions can also affect the market value of the firm, consequently emphasising its importance (Putri & Arofah, 2013:90, 91). Investment analysts are often investors in their own right, e.g. portfolio managers. They gather, analyse and interpret accounting numbers and disseminate the results due to their function as information intermediaries between the company and parties interested in the company's performance (Vergoossen, 1993:156).

2.5.4. The inside and the outside analyst

Outside analysts are the professionals who are outside of the business looking in (Penman, 2010:12). The outside analyst tries to create "inside information" through the analysis of financial statement data, which leads to the analyst gaining valuable insight about the firm's current performance and future prospects (Palepu & Healy, 2008:1-1). According to Penman (2010:12) there are two main types of outside analysts, namely credit analysts, for example bond rating agencies, and equity analysts, which are seen as the prime amongst business analysts (Palepu & Healy, 2008:1-1).

The outside analyst might have a disadvantage in terms of information relative to the company's managers, but is more objective in evaluating the economic consequences of the entity's investment and operational decisions (Palepu & Healy, 2008:1-1). The outside analyst has the objective of understanding an entity's strategies and aims to answer the question regarding the durability of the entity's competitive advantage (Penman, 2010:17).

The inside analyst is responsible for designing strategies that help the company maintain its competitive advantage (Penman, 2010:17). The inside analyst plays the role of having to decide what idea to buy or what strategy to invest in based on the cost of implementation. To make this decision the investors turns to analysis (Penman, 2010:17). The inside and outside analyst differ from each other based on one aspect, which is that the inside analyst has more information to work with and has access to more information than the outside analyst (Penman, 2010:13).

2.6. RATIO ANALYSIS

A multitude of figures are presented in a company's financial statements. These figures do not mean a great deal to the user in isolation; hence it needs to be compared with something else. This is where ratio analysis can be used (Alexander *et al*., 2003:605). Ratio analysis is when different account balance relationships are compared (Gibson, 2013:638). Ratios simply express the mathematical relationship between one variable and another and allows the user to analyse the financial information on which the ratio is based (Bartlett, 2014:680; Damijibhai, 2016:31). The computation of these ratios might be a simple arithmetic process, but the true challenge lies in the interpretation of the ratio which can be more complex (Subramanyam & Wild, 2009:33). Ratios are used to interpret statements to determine where an entity's strengths and weaknesses lie as well as to determine current financial conditions and historic performance (Damjibhai, 2016:31).

Ratio analysis is seen as one of the principal tools of financial analysis and includes an assessment of how various line items in the company's financial statements relate to each other (Palepu & Healy, 2008:5-1). It is important to highlight the fact that ratios are tools that provide insight into the underlying conditions and should not be viewed as a complete and final financial analysis, but should rather be seen as a starting point for further analysis (Subramanyam & Wild, 2009:35; White *et al*., 2003:114).

Numerous ratios can be computed from the figures reported in a company's financial statements; some of these ratios might have general application in financial analysis, while others are exclusive to specific circumstances or industries (Subramanyam &

Wild, 2009:36). Financial statements can be standardised across firms and over time by means of ratio analysis, facilitating comparative analysis (White *et al*., 2003:154).

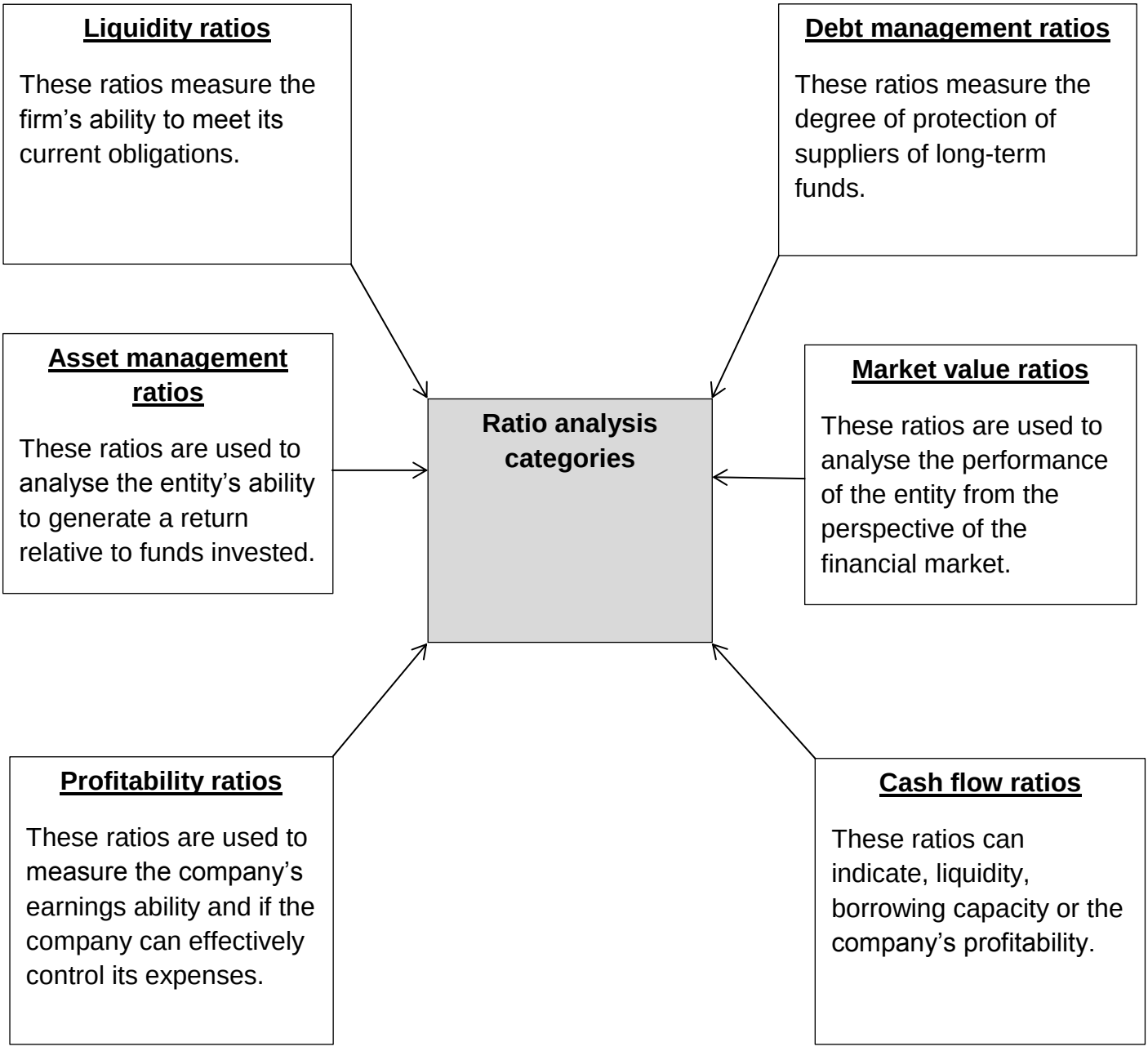
By comparing the views of Alexander *et al*. (2003:548) with that of Subramanyam and Wild (2009:33) it can be determined that ratio analysis is one of the most well-known and widely used tools of financial analysis. According to Stickney *et al*. (2007:35) one of the most useful analytical tools for analysing profitability and risk is financial statement ratios. Damjibhai (2016:30) states that ratio analysis is a very powerful measurement tool that can be used to measure organisational performance. Forecasts of future performance can be made when a company's present performance is compared to its past performance and/or the performance of its peers. This may be achieved through ratio analysis, which provides the foundation to make these forecasts, and through calculating and benchmarking these ratios against past performance, management objectives, or other organisations' ratios. This ultimately contributes to making meaningful forecasts (Palepu & Healy, 2008:5-1; Klumpp & Cole, 2016:23). Financial ratios can be used to help equity investors and creditors make intelligent investment and credit decisions through the comparison of risk and return of different firms (White *et al.*, 2003:111). Ratio analysis creates a comparison of individual firm's ratios against the benchmarks of similar firms both in the past and the present, to get a sense of what is normal and abnormal (Nissim & Penman, 2001:109). Ratio analysis consists of the analysis of current financial statements, but is also an analysis of future residual earnings. Combining this analysis tool with valuation analysis will provide substance to fundamental analysis (Nissim & Penman, 2001:109).

Ratio analysis is used to assess the firm's income statement and balance sheet data and is used as a tool by the financial analyst to examine the firm's performance and financial condition given its strategy and goals (Palepu & Healy, 2008:5-31). Ratio analysis is a simple financial analysis technique and serves as a quick method of comparison; evidence suggests that financial ratios contain predictive value even if it only finds application in times of financial distress (Le Roux & Lowies, 2009:3). Ratio analysis enables the user to focus on specific questions concerning the current financial position of the entity (Alexander *et al.*, 2003:605). The primary advantage of ratios is that the risk and return relationship of firms of different sizes can be

compared. These ratios can then be used to deliver a profile of the firm, its economic characteristics, and competitive strategies (White *et al*., 2003:111).

Financial ratios are divided into the following six conventional categories (Correia *et al.*, 2013:5-44; Skae, 2014:283, 284; Gibson, 2013:199).

Figure 2-4: **Ratio analysis categories**



Source: Author

2.6.2. The purpose of ratio analysis

Comparing the views of Alexander *et al*. (2003:606) and Mesarić (2014:127) it can be determined that analysing the financial statements by means of financial ratios is helpful in answering specific questions regarding the entity. These questions include how successful the business is (for example whether it makes a profit), whether assets are utilised to the fullest, questions regarding sustainability, the entity's ability to fulfil commitments, and whether the entity is in fact profitable and efficient. The analysis of a specific ratio can lead to important relations and bases of comparison being revealed, which can in turn be used to uncover conditions and trends which are difficult to detect by inspecting the individual components that constitute the ratio (Subramanyam & Wild, 2009:35). Different analysts stress different attributes regarding the same ratio, meaning that ratios are diverse and have a multitude of application possibilities in more than one specific ratio analysis category (Duhovnik, 2008:134). Ratio analysis, like any other analysis tool, is often more useful when future oriented, which means that the factors affecting the ratio is usually adjusted to represent the probable future trend and magnitude (Subramanyam & Wild, 2009:35).

Researchers and practitioners find that ratios which express relationships between various items from the three financial statements serve as effective indicators of various dimensions of probability and risk (Stickney *et al.,* 2007:35). The analysis of financial information is a very important and commonly used tool that determines the financial health of a company (De, Bandyopadhyay, & Chakraborty, 2010:535; Klumpp & Cole, 2016:23). Ratios calculated from financial information have long been considered to be accurate predictors of business failure and have proven to make accurate distinction between failed and non-failed companies several years prior to failure (Maricica & Georgeta, 2012:728).

Financial ratios are very valuable tools for company managers. They allow the user to summarise the data received, and, through the analysis of this data, provide meaningful information that can be used to make decisions (Singh & Schmidgall, 2002:201). Ratios deliver further insight into the entity's performance and economic relationships when assessed through an integrated analysis. This technique does not aim to provide all the answers about a firm, but rather to point to the relevant questions (White *et al*., 2003:154). Financial ratios have multi-dimensional purposes in finance, because these ratios can be used for judging the financial health or

performance of the company over a period of time; furthermore, the ratios are also a useful tool that can be used to compare the firm's financial position and performance with respect to others who are operating in the same or different industry, to pinpoint areas of concern, or to identify areas for further improvement (De *et al.*, 2010:535). The ratio itself is important, but the financial analyst draws more value from the relationship between the variables used to calculate the ratio and how these variables change over time and compare to suitable benchmarks (Bartlett, 2014:680).

Even though the analyst might not get all the answers regarding the performance of the firm when using ratio analysis, this analysis technique will still help the analyst to frame certain questions for further probing (Palepu & Healy, 2008:5-1). Ratio analysis helps the user to understand the firm's liquidity and provide valuable insight into the financial future of the company. Through the use of this technique appropriate action can be taken to improve the firm's liquidity (Klumpp & Cole, 2016:23). Based on the information found in the three major financial statements, a variety of ratios can be calculated and these ratios can assist financial managers to summarise and analyse the financial and operating data included in the statements (Singh & Schmidgall, 2002:201). Many of the ratios that can be calculated have important variables in common with other ratios; accordingly, it is not necessary to calculate every possible ratio in order to analyse a situation (Subramanyam & Wild, 2009:35).

Financial ratios are a useful measurement tool that provide a snapshot of the firm's financial position at a particular point of time and have the ability to provide a comprehensive idea about the financial performance of the company over a period of time (De *et al.*, 2010:535). The interpretation and studying of how a ratio changes over time and the comparison of a company's specific ratio with suitable benchmarks that enables the analyst to draw certain comparisons and conclusions is one of the instrumental goals of ratio analysis (Bartlett, 2014:680). Ratio analysis is an essential part of comprehensive financial analysis, and this specific analysis tool is designed to facilitate comparisons by eliminating differences of size across firms and over time (White *et al*., 2003:112). Ratio analysis also serves as a prediction tool that can be used to prevent financial distress and fraudulent financial reporting (Arshad *et al.*, 2015:35-36).

2.6.3. How to ensure ratio analysis achieves its stated goals

Like most other techniques in financial analysis a ratio is not relevant in isolation. Ratios are useful when interpreted in comparison with prior ratios, predetermined standards, and the ratios of competitors (Subramanyam & Wild, 2009:35; Bartlett, 2014:680). To ensure the analyst gains the most out of ratio analysis the primary focus should be the relationships indicated by the ratios, not the detail of the calculations (White *et al.*, 2003:119).

To achieve success through analysis consistency is both required and is important; even more important is the interpretation of the ratios calculated to determine what the ratio means to ensure value adding comments can be provided once the analysis has been performed (Skae, 2014:282). Ratio analysis has different indicators which reveal a variety of aspects of the business and are used for different purposes. This means that the focus should be on the correct aspect during analysis to ensure success of decisions (Mesarić, 2014:128). Ratio analysis has a substantial amount of advantages, but has one big disadvantage, namely that every single ratio must be compared to a benchmark ratio one at a time. Simultaneously, the assumption is made that all other factors remain fixed and that the selected benchmarks are appropriate for comparison. To overcome this problem, ratios can be calculated and combined to create a meaningful picture of a firm's financial structure (Yeh, 1996:980).

The calculation of a financial ratio on its own contains little meaningful information. To ensure effective interpretation of these ratios they either have to be compared to historic ratios to identify trends, industry ratios or management goals and standards, and they need to be evaluated in the context of associated ratios. The trend and variability of these ratios also need to be taken into consideration (Correia *et al.*, 2013:5-15; Gibson, 2013:200). To effectively implement ratio analysis the financial numbers of the underlying business factors need to be related in as much detail as possible (Palepu & Healy, 2008:5-1).

2.6.4. Challenges regarding the application of ratio analysis

The most challenging aspects of ratio analysis lie in the skilful application and interpretation of the ratios, and therein lies the success of this analysis technique (Subramanyam & Wild, 2009:35). Financial managers often encounter one specific

challenge created by ratio analysis, namely the inconsistency in utilisation of ratios in different texts and how they are used by different entities (Skae, 2014:282). The lack of benchmarks that indicate optimal levels is often a problem when it comes to ratio analysis and the evaluation of a ratio often depends on the view and skill of the analyst (White *et al*., 2003:112).

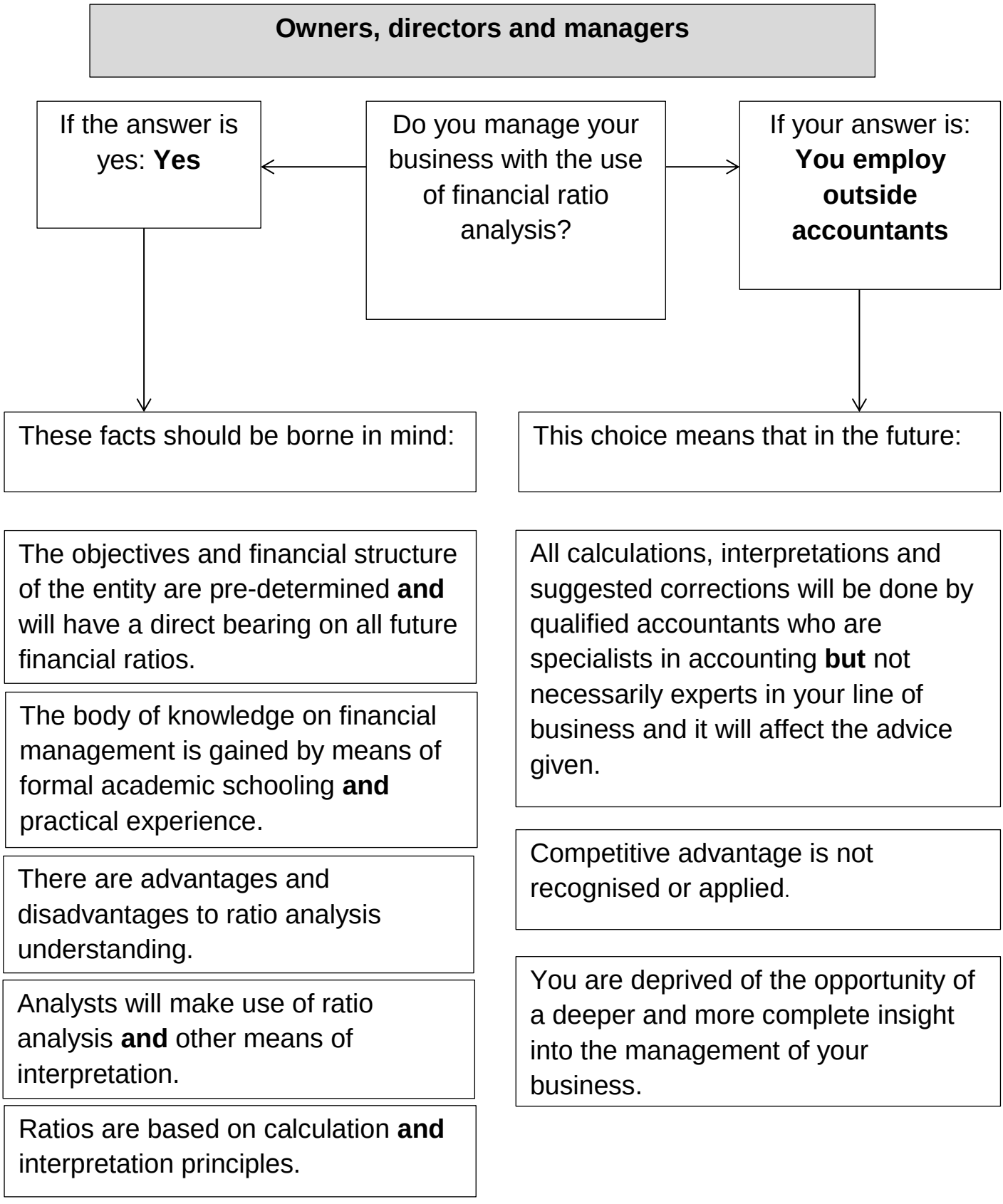
Computing financial ratios is the easy part of ratio analysis; the challenge lies in the interpretation of these ratios (Correia *et al.*, 2013:5-15). The interpretation of ratios needs to be done with care, because factors affecting the numerator can correlate with those affecting the denominator, thus emphasising the level of skill required for proper analysis (Subramanyam & Wild, 2009:35). Results gathered from ratio analysis should be interpreted in the proper context keeping in mind the purpose and priorities of the analysis, considering that there are many other factors and indicators involved in assessing performance, and that ratios alone should not be the sole source for decision making purposes (Mesarić, 2014:128). The calculation of a set of ratios is not a complicated task; the aggregation of those ratios is where the analysis process starts becoming complicated and requiring imagination and experienced judgement (Yeh, 1996:980).

There is no standard definition of ratios; however, there is a certain consensus about the importance and significance of certain ratios, but no agreement on how the ratios should be calculated (Duhovnik, 2008:134). Gibson (2013:200) states that different computations of the same ratio can be derived from each author or source on financial analysis. A standard list of ratios or standard calculations of these ratios does not exist. Each financial analysis author and source makes use of a different list of ratios and even different calculations. This is one of the challenges of ratio analysis (Gibson, 2013:200). The importance and the possible classification of ratios in different groups are reasons which make this analysis technique complicated and challenging (Duhovnik, 2008:134).

Based on the information stated above it can be noted that ratio analysis and the application thereof poses some definite challenges. It is a complicated process for users and analysts who are still deciding whether or not to utilise ratio analysis. It is very important for the two parties mentioned to understand the importance of

decisions and choices that can be made based on ratios. Figure 2-5 serves as a starting point to help these users in undertaking this process.

Figure 2-5: **Process of choices in the application of ratio analysis**



Source: Le Roux & Lowies, 2009:18

2.6.5. Limitations, pitfalls and risks of ratio analysis

Ratio analysis in itself is not a complete and all-inclusive analysis technique; ratios deliver a wide variety of information, but have limitations and problem areas which include (Correia *et al.*, 2013:5-30; Le Roux & Lowies, 2009:1,3,18; Mesarić, 2014:129; Skae, 2014:316):

- The diversification of firms in different industries can be misleading when comparing such a firm against one set of industry averages and this can lead to inaccurate decisions being made;
- Management could strive to be up to the sector leaders; as such averages would not be the correct comparison base and industry leaders should rather be used for comparisons;
- Different accounting policies play a role when making inter-firm comparisons and this can cause limitations in terms of comparison accuracy;
- Company's year-ends should be taken into consideration and can cause distortion in ratios, because of factors like seasonality which lead to inaccurate comparisons being made;
- When performing ratio analysis the focus should be on small focused entities rather than large entities that operate in a variety of industries. The limitation arises because it is not always possible to make comparisons with small focused entities;
- The manipulation of financial statements poses a problem area, specifically when it comes to making accurate conclusions from ratios based on these statements;
- The financial statements of the company do not include inflationary effects; because these statements are prepared on the historic cost basis and with the exclusion of this element it can lead to financial ratios being distorted;

- Ratio analysis includes making a conclusion regarding whether the ratio is good or bad, but because of the amount of subjectivity that is required the task of making this conclusion becomes very complicated;
- Some ratios might have preference in a particular industry but not in another. Some ratios require minimal values and have strong importance compared to others of minor importance. All of these factors contribute to the difficulty level of ratio analysis;
- Ratio analysis on its own is not a complete method of financial analysis, because this analysis technique is only directed at the measurement of financial objectives;
- Ratio analysis lacks an explicit theoretical structure and the authority of the analysts' experience is what the user of a ratio has to rely on to make decisions;
- Using ratios in isolation could lead to incomplete conclusions being drawn from financial information; and
- Internal ratios can be influenced by external factors and can cause difficulty in the measurement and explanation of substantial ratio changes.

The above-mentioned limitations do not negate the efficacy nor the importance of ratio analysis. The important part of these limitations is that the financial analyst take note of them and makes the necessary adjustments to ensure effectiveness (Correia *et al*., 2013:5-31). The use of a blindly implemented procedural approach can be dangerous as the efficacy of the entire exercise depends on the interpretation of the ratios. The skill of the analyst becomes more important, but perceptive analysis of the ratios will ensure accurate insight into the entity's operations (Correia *et al*., 2013:5-31).

2.7. DEBT-TO-EQUITY RATIO

There are two main sources of financing available to a company, namely debt and equity. Both these sources differ and have well-known characteristics (Alexander *et al.*, 2003:617). Debt financing and equity financing do not need to be interrelated,

meaning that an increase in equity doesn't need to be reflected by an equivalent decrease in long-term debt (Cheng & Yun, 2006:135). Leverage is when relatively more debt financing is used in the capital structure. Leverage aims to increase the returns on equity investors' funds in exchange for the acceptance of higher financial risk (Correia *et al.*, 2013:14-3). The ideal mix of debt to equity would be a mix that ensures the maximum return on equity. This will ensure that the firm magnifies returns to ordinary shareholders and that the inherent risks are controllable (Madan, 2007:400).

2.7.1. Debt

Debt forms part of a company's liabilities which represents an obligation to make payments of cash, goods, or service at an amount that is determinable on a reasonably predictable future date as compensation for benefits or services received in the past (Stickney *et al*., 2007:19). According to Correia *et al*. (2013:14-3) there are different forms of debt financing which include long-term or short term debt and secured or unsecured debt.

Debt financing includes several potential benefits that make it an attractive form of financing. These advantages include that, if debt financing is used instead of equity financing, the current shareholders will not lose any control over the firm (Correia *et al.*, 2013:5-20; Palepu & Healy, 2008:5-19). Debt is a cheaper form of financing compared to equity due to lower risk, lower expected return, and tax advantages (Skae, 2014:97). Debt might be a cheaper form of finance, but the implication of this is that the financial risk of the company will keep increasing as more debt is incurred. Interest and capital payments must still be made even in times of economic downturn, regardless if the entity has sufficient income to cover these payments (Correia *et al.*, 2013:14-3; Skae, 2014:93). The greater the weight of debt in a firm's capital structure, the more likely it is that shareholders will either lose everything or strike it rich. Thus meaning the higher the firm's leverage, the more volatile returns will be (Arditti, 1967:22).

Debt financing differs from equity financing because an agreement or contract is usually drawn up, which leads to the receiver of credit having to perform by making loan repayments with interest on specific dates (Subramanyam & Wild, 2009:17). There was a time when it was regarded appropriate to only include long-term debt in

leverage calculations as short-term debt was generally only used for seasonality purposes. Current practice, however, dictates that short-term debt which either is not repaid on an interim basis, or is gained or funded (replaced with long-term debt), should be included in the calculation of leverage (Fridson & Alvarez, 2002:271-272).

2.7.2. Equity

Shareholder equity refers to the amount that remains after a company's liabilities have been deducted from its assets. It is referred to as residual interest, because these shareholders are exposed to the maximum amount of risk associated with the company. This entitles them to the residual interest (Gibson, 2013:628; Subramanyam & Wild, 2009:137). Equity is seen as the main summary number on the balance sheet when it is viewed from a share price valuation perspective (Penman, 2010:34). Dividends received by shareholders and the capital growth in the value of the shares are two of the rewards equity investors receive (Correia *et al.*, 2013:14-3). Shareholder equity can be divided into two basic categories, namely paid-in capital and retained earnings. Other accounts, disclosed separately from these two categories, may also appear (Gibson, 2013:117). The implication of shareholder equity is that the owners of this interest have a claim on all assets not required to meet the claims of creditors, and valuing the assets and liabilities in the balance sheet in turn leads to the valuation of equity (Stickney *et al*., 2007:19).

2.7.3. Debt management ratios

Debt management and financial leverage play an important role in financial management and have a number of implications. By using these ratios the analyst will attempt to assess the impact of financial leverage on risk (Correia *et al*., 2013:5-15). Debt-to-equity is one of the most commonly used debt management ratios (Bartlett, 2014:693). Debt management ratios are also known as solvency ratios (Bartlett, 2014:693). The solvency or long-term sustainability of the company can be evaluated when using the debt management ratios.

Debt management ratios are used to determine the company's adherence to its stated financing policies, their target capital structures, and agreed upon debt-to-equity proportions (Bartlett, 2014:693). The analysis of a firm's capital structure is essential and plays a pivotal role in evaluating long-term risk and return prospects, indicating the important role debt plays as well as the risk that comes with it (White *et*

al., 2003:130). Analysts use debt ratios as a measurement tool to analyse a company's solvency and measure the amount of liabilities, particularly the amount of long-term debt in a firm's capital structure. The higher the proportion of debt relative to equity, the higher the solvency risk for the firm (Stickney *et al.,* 2007:2; White *et al.,* 2003:130). Debt management ratios attract the interest of certain stakeholders, such as banks and credit providers in particular, because these ratios provide some indication of the future prospects and current financial well-being of the company (Bartlett, 2014:693).

2.7.4. Background to the debt-to-equity ratio

The debt-to-equity ratio serves the purpose of displaying the proportion of debt financing used by the company compared to equity funds invested (Madan, 2007:400; Palepu & Healy, 2008:5-20). The debt-to-equity ratio provides crucial and important information to creditors, analysts, shareholders, and potential investors regarding the financial strength or weakness of a company, for example the probability of long-term survival and the expectation of future dividend payments taking place (Axson, 2010; Matthew *et al*., 2016:6).

The investment structure and operational activities of the company are two elements which contribute to the debt-to-equity ratio (Cheng & Yun, 2006:135). The debt-to-equity ratio is used as a measurement tool and is an appropriate ratio when it comes to measuring the financial risk or financial strength of the company (Alexander *et al.*, 2003:617). Skae (2014:297) agrees that the debt-to-equity ratio is used as an indicator of risk. The debt-to-equity ratio is another computation used to analyse the long-term debt-paying ability of a company and also indicates to what extent creditors are protected in case of insolvency.

The debt-to-equity ratio indicates to what extent shareholders' funds cover debt and is an indication of medium financial risk (Correia *et al*., 2013:5-16). The debt-to-equity ratio has many positives and is a common measurement tool, because the ratio highlights the effect of different accounting treatments without over-complicating the issues. In its simplest form the calculation of this ratio will be debt divided by equity (Lasman & Weil, 1978:49). According to Taub (1975:412), the expectation of a direct relationship between the size of the firm and the debt-to-equity ratio of said firm exists. The necessary adjustments to leases, pensions, and unconsolidated

subsidiaries may lead to the debt-to-equity ratio increasing and in turn a more accurate reflection of this ratio (Lasman & Weil, 1978:49).

Comparing the views of Feldstein, Green, and Sheshinski (1983:45) with Taub (1975:412) one could postulate that the desired debt-to-equity ratio of a firm is influenced by the difference between the respective costs of debt and equity. The greater the difference between these costs, the greater the influence on the desired ratio. The firm can therefore choose an optimal debt-to-equity ratio in order to minimise the total cost of capital. The numerator compromises of both secured and unsecured loans, and the denominator consists of ordinary and preference share capital, reserves, and surpluses (Madan, 2007:400). The numerator of the debt-to-equity ratio will be debt. The debt used in the calculation of this ratio can include all liabilities; all liabilities excluding current liabilities or only long-term interest bearing debt can be used, and debt held on behalf of other company's and the government will be excluded from debt (Lasman & Weil, 1978:49).

A problem area of ratio analysis is the lack of uniformity in the way certain ratios are calculated. This becomes especially pertinent when the debt-to-equity ratio is calculated. To make comparison possible the debt-to-equity ratio of the firm should be calculated in a similar manner as industry ratios (Gibson, 2013:285).

2.7.5. Implications of the debt-to-equity ratio

Many borrowings may include a covenant that protects the issuer (Subramanyam & Wild, 2009:35). One of these covenants can include the maintenance of a constant debt-to-equity ratio, and if this covenant is not upheld it could lead to the immediate repayment of the outstanding amount (Subramanyam & Wild, 2009:35). The long-term debt-to-equity ratio can be used to calculate the share price of an entity and helps to ensure that the calculation is done with greater precision (Safania *et al*., 2011:278). The debt-to-equity ratio is the most commonly used ratio worldwide when it comes to measuring financial risk. The higher the ratio, the higher the financial risk of the company, since a higher ratio implies higher interest charges and an increased exposure to possible interest changes (Alexander *et al*., 2003:617).

Factors such as national or institutional differences can influence certain aspects of the debt-to-equity ratio. In countries more oriented to shareholders the debt-to-equity ratio will be lower than in countries more credit oriented that (Alexander *et al.*,

2003:618). High corporate debt-to-equity ratios are detrimental to macroeconomic stability, and the size of this ratio significantly influences and affects the interest rate policy on savings and investments. If the debt-to-equity ratio exceeds a critical limit it will lead to changes in financing policies, and stabilisation policies will involve high costs of growth forgone (Sundararajan, 1985:431).

When the financial analyst is assessing the solvency of the company, different coverage ratios and the debt-to-equity ratio will be analysed (Lasman & Weil, 1978:49). The debt-to-equity ratio can show what the current debt position of a company is by interpreting the long-term debt paying ability of the company (Gibson, 2013:285). It can be determined with certainty that the efficacy of bankruptcy as a source of discipline for management will be affected by the financial structure of the firm, specifically its debt-to-equity ratio (Grossman & Hart, 1982:108).

If a firm's share price falls, the market value of the firm's share price has the tendency to fall at a more rapid pace than the market value of its debt. This will cause the debt-to-equity ratio to rise, which leads to an increase in share risk (Beckers, 1980:662). Movement in a firm's debt-to-equity ratio has certain implications. For example, a reduction in the ratio can lead to a decrease in the probability of bankruptcy of the firm, and a reduction in financial leverage could lead to an increase in the value of existing risky debt, because bondholders now receive greater protection on their claims (Agrawal & Mandelker, 1987:826).

Debt bears with it an inherent risk in the form of increased variances regarding returns, and the debt-to-equity ratio of a firm is used as a measure of this risk. Consequently, as this ratio increases, the risk borne by shareholders and the expected utility of their investment will decrease and lose its appeal (Arditti, 1967:22). Madan (2007:409) states that neither a high nor a low debt-to-equity ratio is desirable for any firm, and although financing is a very subjective decision and a function of multiple factors it is important that a firm which operates above the break-even point with assured profits should always introduce more debt into the capital structure to increase the debt-to-equity ratio to an optimal point.

Therefore, one can confidently posit that analysing and interpreting financial statements and financial information is a very important tool to gain deeper insight and a clearer picture of an entity's operations and functions. Debt and equity are the

forms of financing available to an entity and serve as the platform for embarking on future projects that will contribute to growth and sustainability of the firm. In these two forms of financing we can find the capital structure. Proper management and planning of the capital structure plays a big role in the success of fund management and ensuring profitable projects can be embarked upon. This is where debt management comes in, and the role the debt-to-equity ratio plays in ensuring correct decisions can be made especially when it comes to financing and proper financial leverage of the firm.

2.8. SUMMARY

The importance of financial statements to a diverse group of users who require this information to determine what the figures really say about the inner workings and performance of the business is evidenced in the stated research. A complete set of statements serves a deeper purpose than merely representing information. It is a lens which enables one to focus on the economic performance of the entity and which displays the entity's true performance during a specific financial period. Financial statements are the life blood of finance and are a representation of management, who perform a critical task in ensuring business success. The true value of statements is that it provides past and current information regarding financial performance. Stakeholders can use this information to make predictions regarding the future of the business.

Financial statements paint a picture of the entity's ability to create value for shareholders and whether the entity will be able to do this indefinitely. Financial statements is a very important instrument a firm can use to communicate to the outside world regarding their operations. The financial analyst also draws invaluable information from statements, because without it the financial analyst would not be able to clearly analyse the puzzle to determine the true meaning behind the figures. The figures in financial statements of a firm is only a representation of the events that took place during the year; to truly extract true value the information and figures should be analysed and interpreted.

In doing so the business as a whole can be analysed, after which the financial analyst can work his/her way toward the financial statements, a specific component

of business analysis, to gain an overall picture of how the entity functioned and performed. The financial analyst will include quantitative and qualitative conditions in his overall procedure of financial analysis, and if proper financial analysis is performed it will be a gateway to determine future prospects, measure risk, determine a fair price for the shares and the efficacy of financing, and determine how investment activities are managed. This information can then be compared to that of similar entities and industry standards. Financial analysis is the process of synthesising and summarising financial and operative data. Through this process true value can be extracted in the form of meaningful information that possesses value to those who need to make informed decisions. This will further enable them to take the appropriate steps.

Financial analysis measures firms' performance based on the strategy as well as the economic and industrial environment in which the firm operates and determines how successful and effectively the firm is being managed. Financial analysis results can be used to determine certain key areas and identify trends. By comparing these results with benchmarks and competitors the analyst can identify strengths, weaknesses, and areas where improvement is required to ensure sustainability. Financial analysts have certain analytical tools which can help them achieve their stated goals and ensure efficacy. One of the most commonly used analytical techniques is ratio analysis, which takes the figures represented in financial statements and expresses them in certain specific ratios. These ratios take a figure that does not mean much in isolation and changes it into something that provides valuable information.

The financial analyst requires certain skills to ensure a successful analysis. These skills are that the analyst must be systematic and efficient, and must have the ability to properly analyse financial data and then interpret the results to draw a proper conclusion regarding areas analysed. The financial analyst can use all of his analytical tools to draw accurate conclusions. Ratio analysis is one of the tools which the analyst uses to make insightful comments and deliver proper results to those who require it. An accomplished analyst knows the business he is analysing and with a wide spread knowledge and proper background the analyst can analyse statements and make concrete interpretations of information analysed. Financial statements in truth deliver a blurred and incomplete picture, and the financial analyst

can, through his analysis, sketch a complete and clear picture of what these statements entail.

The annual report published by a company is a key source of information, but still has certain drawbacks, and if the analyst understands and takes this into consideration it will ensure an accurate analysis. The financial analyst can be seen as a critic who portrays the role of a silent messenger between the crowd and the performance of the actors who are the managers and assesses the quality of the plot (statements). The research also reveals that there is a variety of analysts, for example investment analysts as well as inside and outside analysts, and each one of the analysts has their own goals and objectives. Each analyst structures the analysis to ensure they achieve what they set out to do.

Financial statements represent a multitude of figures which do not contain much meaning in isolation, unless it can be compared to something else. Here a specific financial analysis technique, namely ratio analysis, is encountered. Ratios are used to disclose mathematical relations between two figures and thus the figures represented in the statements start to make sense and help the user to understand what is actually being presented. Ratio analysis is regarded as one of the principal tools of financial analysis. Its true value lies in the correlation and reaction between different line items and how they react to each other. The challenge lies in correctly interpreting a ratio and properly assessing and extracting the information required.

It is important to note, however, that ratios are not an end unto themselves or a complete analytical tool; it has its gaps and shortcomings. By combining this technique with other analytical tools, however, and with the required skill and knowledge a complete and overall assessment can be done. Ratio analysis should be viewed as a starting point for further analysis. If done correctly it can open doors to perform analyses on a specific area of the business. The value of this information can be instrumental to investors who need to make smart investment decisions. Ratio analysis is an analytical tool that can be used to analyse profitability and risk, which provides a solid foundation to make forecasts of future performance and whether the firm is on route to achieving their stated goals and strategies. The computation of ratios has the benefit that it is a quick method of comparison which utilises past information as well as the environment of the industry in which the entity

functions. Risk and return relationships can be computed and compared to firms of different sizes, and thus a profile of the firm can be delivered.

Debt-to-equity is one of the more specific debt management ratios and the results of this ratio displays the proportion of debt funds to equity. The information provided through this ratio is crucial to creditors, analysts, shareholders, and potential investors. The debt-to-equity ratio provides an indication of the level of debt financing included in the capital structure of the firm, which can be a signal to future investors regarding the riskiness of the firm and can thus be used determine how investors will approach and perceive the firm within its industry. The debt-to-equity ratio is also a determinant of long-term debt paying ability and to what extent shareholders' funds cover the firm's debt. The ratio is also used by the financial analyst to determine the solvency of the firm and whether the firm is currently in a financial position that can ensure future sustainability.

The aim of this chapter is to address the first secondary research objective as defined in section 1.3 of Chapter 1, namely conceptualising from the literature what the debt-to-equity ratio entails and how this ratio should be calculated. A thorough literature overview on ratio analysis and the debt-to-equity ratio is presented in this chapter. The magnitude of the debt-to-equity ratio for certain stakeholders and how this ratio can portray a specific message regarding the debt and equity function of the firm is made evident in the review.

The importance of financial statements and the analysis of the figures contained therein are discussed in the literature overview. Ratio analysis as a financial analysis tool is investigated and the value of the debt-to-equity ratio and information extracted from this ratio is also determined. The main objective of this study is to investigate the proposed treatment of deferred taxes in the debt-to-equity ratio and through this chapter it is clear how the debt-to-equity ratio functions and how it can be used to better understand how deferred tax can be treated in the calculation of the debt-to-equity ratio. Chapter 3 focuses on deferred tax and how this item can be treated in the calculation of the debt-to-equity ratio.

CHAPTER 3

TREATMENT OF DEFERRED TAX IN THE DEBT-TO-EQUITY RATIO

3.1. BACKGROUND

This chapter consists of a literature study of the accepted theory on deferred taxes and specifically how this item should be treated in the calculation of the debt-to-equity ratio to address the second secondary objective set in section 1.3 in Chapter 1. The purpose of this chapter is to obtain sufficient information from the literature regarding deferred tax to gain a better understanding of this item and how it functions to determine how the proposed treatments will affect the results drawn from the debt-to-equity ratio. This will help to create a bigger picture of the subject under discussion and will provide a good indication of the content to be included in the interviews used in the qualitative part of this study.

A sound foundation of widely accepted theory is established and the reasoning behind the acceptance thereof obtained. This is done in order to acquire better insight into the calculation of the debt-to-equity ratio and what the appropriate treatment of deferred tax in this ratio is, as well as the extent to which the literature agrees and disagrees on different aspects regarding this topic.

Deferred tax is regarded as an obligation or asset that the company will recover or pay at a future date due to differences between information reported in terms of international financial reporting standards and the income tax act (Koppeschaar, Gaie-Booysen, Rossouw, Papageorgiou, Van Wyk, Smith, Sturdy, Van der Merwe, Deysel, & Schmulian, 2015:152). Deferred tax assets (liabilities) provide progressive information regarding future tax benefits (payments) that will realise upon reversal of the account. The benefits (payments) associated with deferred tax assets (liabilities) are substantial items for many firms (Laux, 2013:1358). Hence deferred tax is a substantial and important item in the financial statements of an entity and further study into this item will aid in gaining a better understanding of this item.

Consideration is given to local and international published academic research to determine whether previous studies found any variation between how theory suggests deferred tax should be treated in the calculation of the debt-to-equity ratio.

The different aspects of deferred tax, including deferred tax assets and liabilities, are analysed to determine the role this item plays and the different ways this item can be treated in this ratio.

3.2. DEFERRED TAX

3.2.1. Background to deferred tax and income taxes

Income tax represents one of the more challenging aspects of financial reporting and analysis; whereas some accounting topics are more narrowly scoped, income taxes have a pervasive impact on an entity's business decisions, financial statements, and associated disclosures (Comiskey & Mulford, 2000:177). Income tax is usually a material item in the balance sheet and, in spite of the pervasiveness and importance of taxes; it is an item that is not well understood by important users of financial statements (Comiskey & Mulford, 2000:177). The amount of tax that is charged against the profit in a given period is an important determinant of earnings per share as well as the price earnings ratio, which obviously affects all other ratios calculated on after tax figures (Alexander *et al.*, 2003:333). The amount of income taxes recognised in the income statement for the current period includes the movement in deferred tax from the opening to the closing of the balance sheet amounts (Alexander *et al*., 2003:349).

Differences between the carrying amounts of assets and liabilities presented in the balance sheet, which are determined in terms of international financial standards, and the carrying amounts recognised in terms of the income tax act lead, to deferred taxes being recognised (Koppeschaar *et al.,* 2015:152). Deferred taxes can be found in the balance sheet and is the estimated amount in need for the upcoming period that exists as a result of temporary differences between financial accounting standards and tax regulations (Ifanda & Wulandari, 2015:159). Deferred tax represents the cumulative difference between taxes that have been calculated using the statutory rate and the amount that has actually been paid (Fridson & Alvarez, 2002:276).

Deferred tax is viewed as an obligation or asset that will be payable or recoverable at a date in the future (Koppeschaar *et al.*, 2015:152). In many countries the amount that is payable by a business for tax purposes for a specific period often bears little

relationship to the profit as reported by the accountants in the income statement. The accountant's report is often used by the tax authorities as their starting point, but a great deal of adjustments are made to it (Alexander *et al*., 2003:334). IAS 12 sets the following requirement: that deferred tax be measured by reference to tax rates and laws, as enacted or substantively enacted by the balance sheet date, that are predicted to apply in the periods in which the assets and liabilities to which the deferred tax relates are realised or settled (Alexander *et al*., 2003:348).

The difference between the statutory rate and taxes actually paid is a reflection of the tax consequences, for future periods of the differences between the assets or liabilities tax base, and their carrying amounts for financial reporting purposes (Fridson & Alvarez, 2002:276). When taking into consideration the temporary differences, it is important to take note that these mainly result from differences in the timing of the recognition of revenue, gains and expenses or losses in the books of the shareholders versus the tax return in determination of pre-tax financial and taxable income respectively (Comiskey & Mulford, 2000:184). Financial statements use specific accounting principles which are not necessarily the same principles used to complete the firm's tax return. Whenever an item enters the financial accounting income statement in one year and the tax return in another, it will lead to the creation of a timing difference (Lasman & Weil, 1978:52).

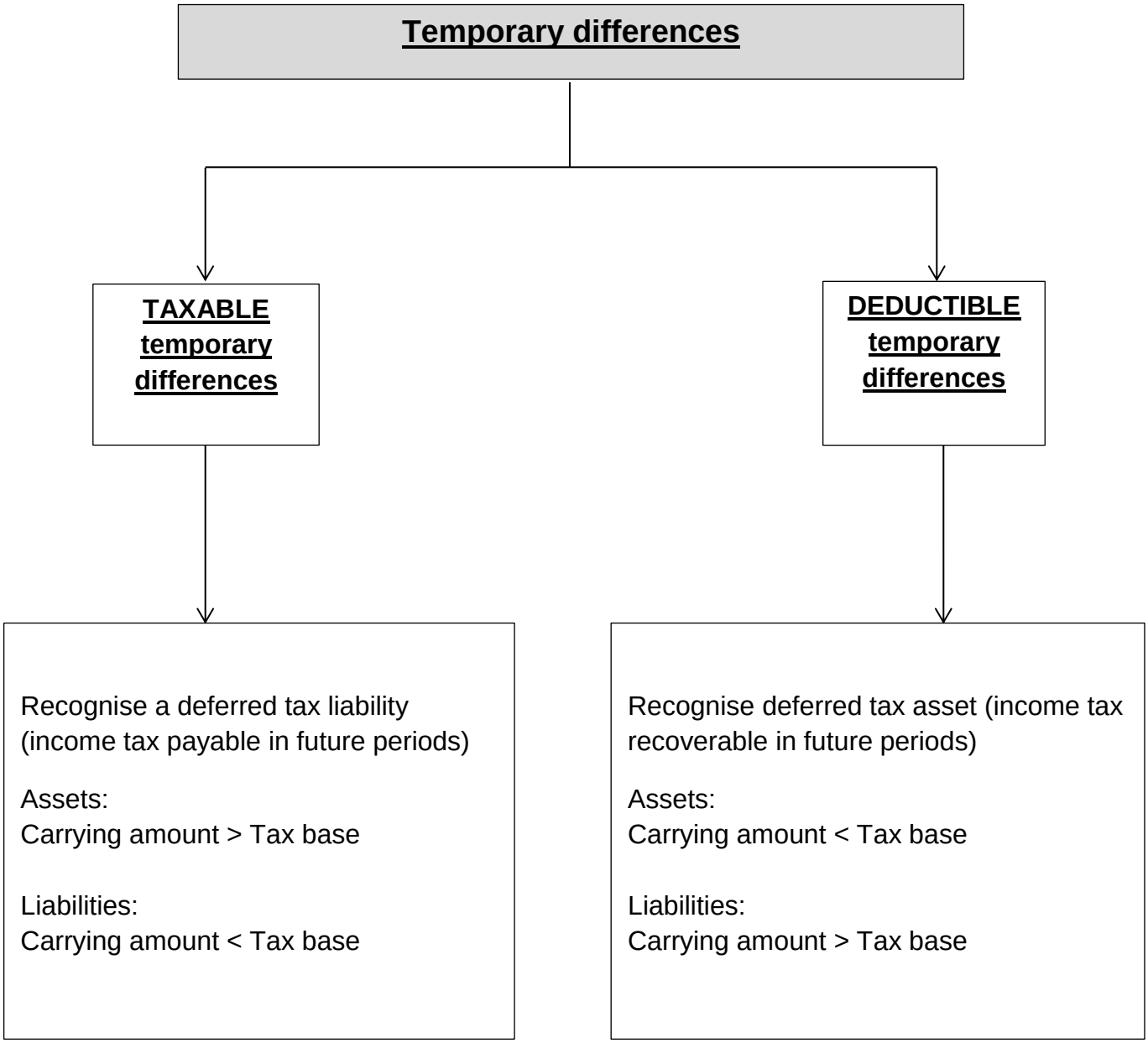
According to Koppeschaar *et al.* (2015:154) for an entity to calculate and recognise deferred tax the following needs to be determined:

- The assets or liabilities carrying amount;
- The tax base of the asset or liability;
- What the difference is between the carrying amount and the tax base of the item and whether this temporary difference will be taxable, deductible, or exempt;
- The suitable measurement of the deferred tax balance; and
- The movement between the newly calculated deferred tax balance and the balance that was recorded at the end of the previous period.

Deferred tax is reflected as a line item in the balance sheet of a firm and displays the amount of deferred tax assets and liabilities. The income tax note show which items in the balance sheet include deferred taxes. These amounts influence the assessment of a firm's financial position such as the current ratio and debt ratios (Stickney *et al*., 2007:587). The deferred tax line item can be classified as an asset or a liability based on the nature of the timing differences. These differences arise due to revenue and expenses being recognised in different time periods for the purpose of tax and financial statements (Gibson, 2013:626). By granting the use of accelerated depreciation methods or instalment accounting, tax law has in effect granted an interest free loan to going concerns that make use of these methods. But the statements of firms that employ these methods that defer taxes contain the same income tax expense they would have had had they not used these methods (Lasman & Weil, 1978:52). Deferred taxes is an item that adds value, because the item represents tax payments that are deferred, so the value of deferred taxes is the net present value of the tax benefits (Amir, Kirschenheiter, & Willard, 2001:275*).*

Temporary differences can be divided into two categories, i.e. deductible temporary differences and taxable temporary differences. The differences between the two categories can be displayed as follows.

Figure 3-1: Description of temporary differences



Source: Koppeschaar *et al.,* 2015:155

The earnings management of the company is influenced by deferred taxes and this influence is exerted through minimising the firm's taxable income (Ifanda & Wulandari, 2015:155). Deferred tax assets and liabilities are substantial items for many firms and is a very important balance sheet item (Laux, 2013:1358). The deferred taxes expense of the company will increase as the company increases the speed of expense recognition for accounting purposes, compared to what is recognised for tax purposes (Ifanda & Wulandari, 2015:157).

Deductible temporary differences is a temporary difference that upon origination leads to the reduction of pre-tax financial income to below the level of taxable income, and the creation of deductible temporary differences will give rise to a deferred tax asset (Comiskey & Mulford, 2000:232). Taxable temporary differences are differences that upon its reversal will lead to the taxable income increasing above the level of pre-tax financial income, and upon the origination the taxable temporary difference will lead to deferred tax liability being created (Comiskey & Mulford, 2000:235).

3.2.2. Deferred tax assets and liabilities

A deferred tax asset (liability) provides forward-looking information about future tax benefits (payments) that are a result of the deferred tax account reversing in the future (Laux, 2013:1358). Generally accepted accounting principles require that deferred taxes be reported in a manner that reflects temporary differences between tax and book income (Sansing, 1998:359). Recognising deferred taxes either as a deferred tax liability or as a deferred tax asset is due to temporary differences arising due to differences between the tax base and carrying amount of an asset or liability. The difference between a book basis and tax basis recognition of items in the balance sheet multiplied by the tax rate leads to the creation of deferred taxes. In other words the deferred tax asset or liability is equal to the tax amount that would need to be settled if all the assets and liabilities were sold for their book values today (Koppeschaar *et al.*, 2015:154; Sansing, 1998:359).

A deferred tax liability can be viewed as a future tax obligation that is the result of the origination of taxable temporary differences, and upon origination these temporary differences cause pre-tax financial income to exceed taxable income (Comiskey & Mulford, 2000:233). A deferred tax liability is defined as the amount of income tax that will be payable in future periods in respect of a taxable temporary difference, and a deferred tax asset is the amount of income tax that will be recovered in a future period (Koppeschaar *et al.*, 2015:153). Most of the listed deferred tax assets emerge as a result of the recognition of expenses or losses in the determination of pre-tax financial income before they can form part of the determination of taxable income (Comiskey & Mulford, 2000:185). The disclosure of deferred taxes form a very important part of an entity's financial statements, and a change in the deferred

tax asset and deferred tax liability each year is a reflection of the deferred income tax expense for the year (Stickney *et al*., 2007:587).

During times of crisis, only the net deferred tax liabilities of a firm experiencing losses will be significant, indicating that in crisis periods investors do not appreciate the recording of deferred tax liabilities, which are in total higher than the deferred tax assets. This is likely because these liabilities lead to additional tax payments in future periods, which delay the reversal of the effects that the crisis exerted on the firm (Samara, 2014:143). Investors have the perception that net deferred tax liabilities contain negative information content that becomes even more negative for firms who record losses during financial crises, and when net deferred tax liability is recorded it will deliver a negative signal to investors because it implies future payments of taxes (Samara, 2014:144).

Tax base is defined as the amount that is attributable to a specific asset or liability for tax purposes. IAS 12 has specific guidelines that serve the purpose of determining the tax base of assets and liabilities (Koppeschaar *et al.*, 2015:155). The tax base of a deferred tax asset relies on whether the future economic benefits arising from the carrying amount of the asset will be recovered and whether it will be taxable or not. If the future economic benefits are taxable, the amount deductible for tax purposes will be the tax base of the asset (Koppeschaar *et al.*, 2015:155). A deferred tax liability can be created from two different items, which are liabilities and revenue received in advance, and both items have specific criteria that should be used to determine the tax base (Koppeschaar *et al.*, 2015:157).

A deferred tax asset should only be created to the extent that it will be utilised in the future by means of taxable temporary differences, or when appropriate evidence exists to indicate that ample taxable income will be available against which the deductible temporary differences can be utilised (Koppeschaar *et al*., 2015:168). Alexander *et al*. (2003:334) maintain that, based on the principles of IAS 12, a deferred tax asset is recognised for all deductible temporary differences to the extent that there will be taxable profit against which these deductible temporary differences can be utilised. Samara (2014:144) determines that the recording of deferred tax assets becomes a source of information content for share prices under specific circumstances, in particular during a financial crisis. Deferred tax assets which are

recognised by loss making firms is seen in a positive light by investors, because recording the deferred tax is a signal of future profitability (Samara, 2014:144).

Expenses (revenues) included in the net income of the company after taxes, for example accelerated depreciation, lead to the deferred tax liability (asset) being recognised after the tax related cash-flows are realised in the financial statements. Hence the deferred tax liability (asset) is not associated with future tax payments and the timing of reversal does not influence the timing of future tax payments (Laux, 2013:1358). Most significant deferred tax liability positions are represented in the disclosures of firms in capital-intensive industries (Comiskey & Mulford, 2000:210). Deferred tax liabilities expected to realise later do not have a lower value than deferred tax liabilities expected to realise sooner. The same concept applies to deferred tax assets regarding the value being higher for a deferred tax asset with a quicker realisation period, and firms that avoids the reversal of deferred tax liabilities which originate from differences between book and tax depreciation by reinvesting in new assets which do not increase firm value (Guenther & Sansing, 2000:2).

3.2.3. Implications of deferred tax

In principle, deferred taxes are the tax impact of future income which exists due to differences between the tax and accounting treatment of tax losses, which can still be used in the future and set off against taxable income (Ifanda & Wulandari, 2015:160). Deferred taxes provide incremental information about future tax payments of the firm, but the magnitude of the information provided is still very small (Laux, 2013:1357). Deferred tax has certain inherent weaknesses that come with the premise of this item. One of these weaknesses is that a going concern using accelerated depreciation on the tax return will probably be able to suspend payment of the so-called liability indefinitely (Lasman & Weil, 1978:52). Current earnings are influenced by deferred taxes and also act as a source of information that help predict future earnings; current and future earnings clearly have implications for the overall value of the firm (Guenther & Sansing, 2000:3).

The deferred tax amount displayed on the balance sheet is not a legal obligation to the government or anyone else. The government levies taxes on a firm's taxable income displayed on the tax return and only as it is earned. It does not automatically levy a tax because the deductions for depreciation decline. Taxes are levied in a

given year only if there is taxable income available in that period (Lasman & Weil, 1978:53). Laux (2013:1359) indicates that, based on his findings, investors seem to value only the information content of certain items of deferred tax; he therefore questions the information's ability to offset the cost of delivering and utilising it. One way to view the deferred tax balance is to see it as an interest-free loan which the government provides to the firm and that needs to be repaid in the future; therefore the item is a liability. By using this framework the presence of deferred taxes effectively increases the financial gearing and consequently creates ordinary share systematic risk (Chandra & Ro, 1997:314).

Deferred tax items are value relevant under specific circumstances. Moreover, it is likely that the chances of a loss during a financial crisis lead to incremental negative coefficients of net deferred tax liabilities. This implies that recognising net deferred tax liabilities makes the reversal from losses to profits less likely because it is an indication of future tax payments. This is perceived as a negative signal from the firm to investors (Samara, 2014:139). Deferred tax has many implications for a firm, but delaying the repayment of a deferred tax liability will not increase firm value as, is in order to delay reversal of the liability arising from depreciation differences, a firm will need to purchase new assets which generate new accelerated tax depreciation. However, the present value of the tax saving would have already been reflected in the price of the new asset and therefore a firm that allows the deferred tax liability to reverse has the same value as a firm that keeps its deferred tax liability from reversing (Guenther & Sansing, 2000:2-3).

3.2.4. Treatment of deferred tax in the debt-to-equity ratio

Both the traditional and the Modigliani-Miller view is that the debt-to-equity ratio of the firm is in direct relation to the current tax rate of the firm as well as the current inflation rate (Feldstein *et al.*, 1983:45; Taub, 1975:412). Correia *et al*. (2013:5-16) state that the appropriate treatment of deferred tax is an issue that arises from the calculation of the debt-to-equity ratio. Given the history of the diversity of accounting policies regarding deferred taxes as well as the variety of different prevailing views on the nature and cash flow implications, it becomes important to determine and understand how the market perceives deferred taxes (Chandra & Ro, 1997:314).

In a growing company deferred tax will never really reverse, and therefore the deferred tax liability should be added to equity when calculating the debt-to-equity ratio (Bartlett, 2014:693). Many analysts are of the opinion that the net worth of the firm is understated by the amount of the deferred tax liability, since this item will in all likelihood never become due and it is therefore not really a liability at all (Fridson & Alvarez, 2002:276). Jeter and Chaney (1988:42) concur that the appropriate treatment of deferred taxes lies in the consistent growth of the account and how likely future reversal might be. The reasoning behind deferred tax liability forming part of equity is based on the fact that, as long as the company continues to pay taxes at less than the statutory rate, the deferred tax account will continue to grow (Fridson & Alvarez, 2002:276).

Intuitively, even though the deferred tax liability might never reverse, the difference between the tax and economic depreciation will decrease over time, because the tax base of the assets will gradually diverge from the cost of replacing the asset. However, the tax-favoured investment might have a lower pre-tax rate of return and it will be invariant. So the firm will continue to bear implicit taxes, but no longer receive tax benefits in the form of tax allowances in excess of economic depreciation, which will create a gap between the market value of the firm and the cost of replacement (Sansing, 1998:360-361). Reserves for deferred tax usually include differences between the income reported and taxable income that will never reverse; this can lead to the debt-to-equity ratio being distorted and not being an accurate reflection (Lasman & Weil, 1978:49). Deferred tax treatment can also be influenced by factors that affect a rating decision, for example future profitability judgements (Huss & Zhao, 1991:71).

The financial analyst has to determine whether deferred tax will be included or excluded when the debt-to-equity ratio is calculated (Lasman & Weil, 1978:49). The treatment of deferred taxes can lead to information being reported in a manner that does not reflect the economic substance of the item. When anticipating that the total amount of deferred taxes will not reverse in the future, the reported liability will be higher than the economic substance of the event (Jeter & Chaney, 1988:42).

The reason for treating deferred tax as a liability is based on the assumption that the tax will be paid and redeemed in the near future by the person who bears the tax

responsibility (Huss & Zhao, 1991:71). The deferred income tax line item reported on the balance sheet clearly does not have all the attributes of a liability, as there is a lack of legal obligation as well as relative certainty of the amount and relative certainty of the date the obligation will be settled. Moreover, unlike a true long-term liability, the amount displayed in the statement is not a present value calculated using a historical market interest rate. All these factors add to the item not being a true liability (Lasman & Weil, 1978:53). Huss and Zhao (1991:70) posit that one of the ways to calculate the debt-to-equity ratio is to completely exclude deferred tax from the calculation in order to minimise the influence of this item.

Equity treatment is motivated through the fact that increases in deferred taxes are *de facto* earnings (Huss & Zhao, 1991:71). Relative to current standards, when deferred taxes are accounted for in terms of international accounting standards, it leads to the liability being overstated. The overstatement should be accounted for as equity. Further, the effect of this overstatement will depend on whether or not the tax benefits are capitalised into the original cost of the asset that lead to the deferred tax liability being recognised. If so, the tax liability should be reduced to net present value; if not, the entire balance should be reported as equity (Amir *et al*., 2001:276). The view of recording the deferred tax liability as shareholders' equity will have certain implications, one of which is that this treatment will be negatively related to ordinary share risk (Chandra & Ro, 1997:314).

Deferred taxes modelled in the form of equity and the contribution of the aforementioned deferred taxes to the debt-to-equity ratio will then also be negatively related to the financial risk of the firm. The view of the market regarding deferred taxes leads to the item being treated as equity or as a proxy for factors which inversely relate to ordinary share risk (Chandra & Ro, 1997:313).

The high persistence and strength of the observable negative correlation between deferred tax and risk is an indication that the market does not regard deferred taxes as a liability, but might instead view it as a form of equity. Deferred taxes are not redeemable as long as the firm is experiencing increasing amounts of originating temporary differences each year (Chandra & Ro, 1997:326). Amir *et al*. (2001:275) state that, through analysis performed, the results show that the deferred tax liability, as currently recorded in accordance with financial accounting standards, overstates

the firm's liabilities. According to Chandra and Ro (1997:329) when the debt-to-equity ratio is being calculated and an adjustment is made for deferred taxes as a liability, the deferred taxes account will relate in a negative manner to the market beta and the standard deviation of ordinary share returns. This negative relation will persist when the accounting beta, financial gearing, and the variability of operating returns are controlled, and this negative relation will be prevalent over subsamples of firms where the selected characteristics differ.

Tax benefits included in the cost of an asset lead to classical accounting relations being preserved by expensing only a portion of the deferred tax expense. If the deferred tax liability is not expensed against the price of the asset, and the benefits are not reflected in the price of the operating assets, proper accounting determines and requires the deferred taxes to be valued as equity, increasing the value of the firm on a dollar to dollar basis (Amir *et al*., 2001:288-289). Deferred taxes become repayable and in effect reverse temporary differences when the reported temporary differences exceed the originating differences during the year when such a firm reduces the size of its depreciable assets while earning increased taxable income, which is rare. Thus the view of the market might be that deferred taxes is a permanent tax saving or a transfer of the government's share of firm value to shareholders, thereby increasing shareholder equity (Chandra & Ro, 1997:326).

Tax deductibility and the taxability regarding the deferred tax liability is something that can be taken into account when the value of an asset is being determined (Huss & Zhao, 1991:70). Huss and Zhao (1991:70) maintain that asset reduction treatment is one of the ways in which deferred tax can be treated when calculating the debt-to-equity ratio. This proposed treatment suggests that the deferred tax liability should be treated as a reduction in the value of the firm's assets.

Firm value serves a meaningful purpose for investors, but it is not meaningful to ask whether deferred taxes should be recognised as a liability or shareholder equity from the standpoint of firm value. Any differences between these two proposed treatments of deferred taxes merely shift value between the book value of equity and future abnormal earnings, without affecting the total firm value (Amir *et al*., 2001:285). The debt-to-equity ratio can be calculated in a wide variety of ways, and when this ratio is adjusted for deferred taxes to include the tax liability in equity, the change in the

debt-to-equity as a result of deferred taxes is negatively related to the ordinary share risk and financial risk measures of a company (Chandra & Ro, 1997:329).

Investors regard deferred taxes as a real liability and they discount the amount to its present value according to the likelihood and timing of settlement. Users of financial statements will have the view that a portion of the deferred tax liability should form part of equity, and this will be a more appropriate treatment of the item. For accounting rule-making bodies it can be determined that deferred taxes that arise from inter-period tax allocation is transformed into value that is consistent with the allocation between equity and liabilities by investors (Givoly & Hayn, 1992:406). When an assessment of ordinary share risk is done, the market regards deferred taxes not as a tax burden, but as an indicator of favourable future cash flows or perhaps as a permanent transfer of the government's stake in the overall value of the firm to shareholders. It would seem that the market rewards firms' efforts to defer or minimise taxes by viewing such firms as a lower risk investment. Many doubts and questions are raised regarding the treatment of deferred taxes as a liability and whether this treatment is an appropriate basis for formulating accounting rules for deferred taxes (Chandra & Ro, 1997:329).

3.3. SUMMARY

Income taxes, and with it deferred taxes, pose one of the more challenging areas of financial accounting and is an area which may be truly challenging to the financial analyst. Deferred tax is usually a material amount in the balance sheet of a firm and thus has a direct implication when it comes to the calculation of certain ratios. If the deferred tax amount is substantial it has a material effect on the ratios calculated. Consequently the interpretations and results of these ratios will also be affected. Deferred taxes can be separated into a deferred tax asset or liability, and the liability treatment is where the questions lie, especially in terms of how this item should be treated in the calculation of the debt-to-equity ratio. The research shows that deferred tax can either be included as a liability, equity, or be partially offset against the price of the asset. Each one of these proposed treatments will have a different outcome when calculating the debt-to-equity ratio and this ratio can substantially be affected, which can lead to different decisions being made on a ratio affected by one substantial item.

The aim of this chapter is to address the second secondary research objective (*cf.* Section 1.3, Chapter 1) which seeks to conceptualise from the theory what deferred taxes are and what role it plays in the financial statements of an entity. Further, a deeper understanding regarding the difference between a deferred tax asset and liability and the different factors that lead to these items being created is gained. Deferred taxes are thoroughly discussed in order to truly understand this item. This will aid in creating a better understanding of how this item can be treated when calculating the debt-to-equity ratio.

The different proposed treatments of the deferred tax liability in the debt-to-equity ratio is thus established and a reason for each one of these proposed treatments determined. The main objective of this study is to investigate the proposed treatment of deferred taxes in the debt-to-equity ratio and in this chapter it is determined how this aspect is viewed from a literature perspective. Chapter 4 focuses on the research methodology followed in this study.

CHAPTER 4

RESEARCH METHODOLOGY

4.1. INTRODUCTION

This chapter is aimed at and focuses on the relevant information regarding the research paradigm, research design, and the methods used to conduct this study. The method and paradigm proposed for this project are therefore discussed (*cf.* Sections 3.3 to 3.5), and the research design described, which details the scientific procedures followed to investigate the problem stated (*cf.* Section 1.2). In other words, the framework of the plan to perform the study is set out (research design), and specifics of how to achieve this plan discussed.

The main purpose of conducting research is to obtain new insight into a specific phenomenon and in this way formulate answers and solutions about previously identified research questions (Kumar, 2008:6). The research methodology is described as one of the most important aspects of the research paper as it provides information by which the quality and the validity of the study can be judged (Fox & Jennings, 2014:140; Kallet, 2004:1229). The manner in which the research is conducted, e.g. the research design, data-sets, and analysis techniques will directly affect the validity of the study results. The research methodology is aimed at providing a detailed explanation of how the study was conducted in order to enable other researchers and reviewers to replicate the study themselves and asses the merit of the research (Fox & Jennings, 2014:138). Hannabuss (1996:23) states that the research methodology should be determined fairly early in the research process as it plays an essential part in determining whether the study is feasible.

Chapters 2 and 3, respectively, focuses on providing a literature review that provides an overview of previous research conducted on ratio analysis, debt-to-equity ratio, and the impact of deferred tax in this specific ratio. The literature review is used to develop the questionnaires used during interviews with academic practitioners and professionals in practice. The primary reason for conducting a literature review is to determine what is already known about the specific area the study focuses on (Bryman & Bell, 2011:91), and to determine how this topic is viewed by others (Berg,

2007:25). This review is performed to contextualise the study in order to debate and justify a case as well as synthesise the literature on the topic in order to engage and analyse it (Henning, 2009:27). This chapter will focus on all the relevant information regarding the research paradigm, research design, and the methods used to conduct this study.

4.2. THE RESEARCH OBJECTIVES OF STUDY

As stated in Section 1.3, the main objective of this study is to gain a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this differs in theory and practice. The secondary research objectives applicable to the empirical research are formulated in Section 1.3 and are described as follows:

- Conceptualising the debt-to-equity ratio from the literature by performing an in depth theoretical study regarding the ratio to gain a better understanding of the purpose and implications of this ratio (research objective 1);
- Conceptualising from the literature what the appropriate treatment of deferred tax in the debt-to-equity ratio is (research objective 2);
- Determining from an academic perspective how deferred tax should be treated in the calculation of the debt-to-equity ratio by gaining the opinion of specific academic practitioners who specialise in the field of financial management and financial accounting (research objective 3);
- Determining how stockbrokers and portfolio managers take deferred tax into account when calculating the debt-to-equity ratio by performing interviews with certain professionals in practice (research objective 4); and
- Based on research conducted, formulate a conclusion and recommendations regarding the treatment of deferred tax in the debt-to-equity ratio (research objective 5).

4.3. PARADIGMATIC ASSUMPTIONS

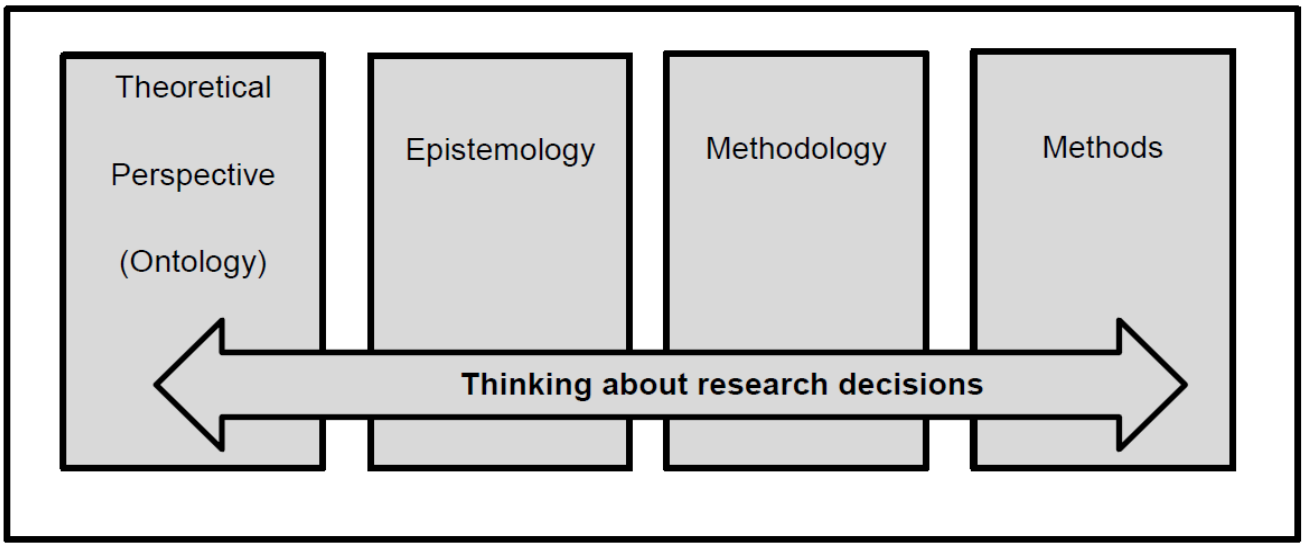
During the process of research the scientist will always interpret the research from a specific paradigm. Certain philosophical assumptions will therefore be used when

looking at the world in a certain way (Mertens, 2014:8). According to Babbie and Mouton (2012:49) methodological paradigms are more than just a collection of research methods and techniques. These paradigms include both actual methods and techniques used by social researchers during research, as well as the assumptions and underlying principles regarding their use. A paradigm acts as a lens that scientists can use to perceive and understand problems in their specific field, and also to provide solutions to those problems (Hathaway, 1995:541). Each paradigm will deliver a different type of organisational analysis as each one aims at addressing specific organisational problems in a different way (Bryman & Bell, 2011:24).

Paradigms serve as all-encompassing systems of interdependent practice accompanied with the reasoning that researchers will define the nature of their enquiry along three dimensions (Wheeldon & Ahlberg, 2012:6), namely what researchers consider as data, the role the researcher portrays during the investigation and how the researcher will view reality, and how this reality can be accessed (Hathaway, 1995:541). According to Babbie and Mouton (2012:49) the research paradigm does not only consist of the methods and techniques which vary according to the task that will be performed, but also includes the principles and assumptions that motivate their use. Paradigms enable researchers to better understand and make sense of their scientific world (Hathaway, 1995:541).

According to Scotland (2012:9) and Terre Blanche, Durrheim, and Painter (2006:6) each research paradigm consists of the following four components: ontology, epistemology, methodology, and methods.

Figure 4-1: The research process



Source: Wheeldon & Ahlberg, 2012:6

Ontology is concerned with what constitutes reality, and what can be known about it (Scotland, 2012:9; Wheeldon & Ahlberg, 2012:6). A description for ontology is how the world is viewed by the researcher, either from a realistic or relativistic perspective (De Villiers & Fouché, 2015:126). **Epistemology** specifies the relationship between how knowledge can be created, acquired, and communicated (Scotland, 2012:9; Wheeldon & Ahlberg, 2012:6), or to understand from a theoretical perspective the theory of knowledge (Crotty, 1989:3). The strategy or plan that specifies how the researcher will collect and analyse data is described as the **methodology** (Scotland, 2012:9; Wheeldon & Ahlberg, 2012:6; Crotty, 1989:3). Lastly, **methods** can be described as the techniques or procedures used by the researcher to acquire and analyse data related to the research question (Crotty, 1989:3). In table 4-1 below Crotty (1989:4) attempts to list a representative sampling of each of the above-mentioned components.

Table 4-1: Representative sampling of each component

Theoretical perspective (Ontology)	Epistemology	Methodology	Methods
Positivism (and post-positivism) Interpretivism Critical enquiry Feminism Postmodernism etc.	Objectivism Constructivism Subjectivism (and their variants)	Experimental research Survey research Ethnography Phenomenological research Grounded theory Heuristic enquiry Action research Discourse analysis Feminist standpoint research etc.	Sampling Measurement and scaling Questionnaire Observation Interview Focus group Case study Life history Narrative Visual ethnographic methods Statistical analysis Data reduction Theme identification Comparative analysis Cognitive mapping Interpretive methods Document analysis

			Content analysis Conversation analysis etc.

Source: Crotty, 1989:5

The purpose served by these four components is to ensure the soundness of the research performed and to present convincing results (Crotty, 1989:6). The three dimensions of ontology, epistemology, and methodology constrain each other (Wheeldon & Ahlberg, 2012:7). Scotland (2012:10) maintains that the research methods used to conduct a research study could be traced back, through the methodology and epistemology, to the ontological position of the researcher.

4.3.1. Philosophical worldviews

All researchers have certain beliefs and philosophical assumptions, and by gaining appropriate knowledge regarding research philosophies will influence the research design and how research will be performed (Blumberg, Cooper & Schindler, 2008:17; Creswell, 2012:15). Creswell (2013:6) distinguishes between four philosophical worldviews, namely post-positivism, constructivism, transformative view, and pragmatism. The major elements of each one of these worldviews are represented in table 4-2 below:

Table 4-2: **Four worldviews**

Post-positivism	Constructivism
• Determination • Reductionism • Empirical observation and measurement • Theory verification	• Understanding • Multiple participant meanings • Social and historical construction • Theory generated
Transformative view	**Pragmatism**
• Political • Power and justice oriented • Collaborative • Change-oriented	• Consequences of actions • Problem-centred • Pluralistic • Real-world practice oriented

Source: Creswell, 2013:6

Each one of these philosophical worldviews will briefly be discussed and explained below.

Post-positivism

The post-positivist assumption represents the traditional form of research, and this worldview is referred to as the scientific method. Knowledge developed through a post-positivist lens is focused on the objective reality that exists in the world based on careful observation and measurement of this objective (Creswell, 2014:7). Positivism advocates the application of the methods of natural science in in order to study social reality and beyond (Bryman & Bell, 2011:15). The overarching aim of the positivist is to ensure that theoretical constructs link to the observable measurements through the notion of operational definitions (Babbie & Mouton, 2012:52).

Constructivism

Constructivism is regarded as an approach to qualitative research and can be described as interpretivism. Social constructivists follow the belief that individuals seek understanding of the world in which they live and function. This understanding is gained by developing subjective meaning from their own life experiences (Creswell, 2014:8). Constructivism is an ontological position which states that social phenomena and their meanings are achieved by social actors on a continuous basis (Bryman & Bell, 2011:22).

Transformative view

The transformative worldview determines that the research performed contains an action agenda for reform that might lead to a change in the lives of participants, the institution where the participants work or live, and lastly the researcher's life. The researcher acts as a voice and messenger for the participants in the situation (Creswell, 2014:9).

Pragmatism

This worldview is a result of actions, situations, and consequences rather than antecedent conditions; this worldview is more focused on the research problem than the methods used to perform the research (Creswell, 2014:10-11). The researcher selects techniques and methods that ensure the research objective is reached in the best possible way (Creswell, 2012:28). Philosophers who adopt the pragmatic paradigm reject the notion that answers to research problems can be found by using a single scientific method (Mertens, 2014:35).

4.3.2. The philosophical perspective of this study

For the purpose of this study the researcher adopts the constructivist paradigm. The qualitative research approach is usually linked to phenomenology or interpretivism (Babbie & Mouton, 2012:49). Constructivism implies that social interaction does not only produce social phenomena and categories, but that these are also in a constant state of revision (Bryman & Bell, 2011:22). The interpretivist researcher cannot be separated from the subject being studied (De Villiers & Fouché, 2015:128). Interpretivism is predicated upon the view that a strategy is required that respects differences between people and the objects linked to the natural sciences, and

therefore requires the social scientist to grasp the subjective meaning of social action (Bryman & Bell, 2011:17). In this study a qualitative method approach is followed, which is supported by the constructivist paradigm, as the most appropriate method used to gain a better understanding regarding specific areas covered in the research questions. Further, through conducting interviews subjective meaning is developed in order to answer the research questions in the best possible manner.

4.4. RESEARCH APPROACH

4.4.1. Frame of reference

The researcher engaging in a research study must take note that it is important to organise the thinking about the practice of scientific research before the research design and the research methodology is determined (Mouton, 2008:141). This allows the researcher to identify the frame (world) in which the research is conducted. Mouton (2008:137) refers to the "three worlds framework" which distinguishes between the worlds in the following manner:

- World 1: The world of everyday life and lay knowledge;
- World 2: The world of science and scientific research; and
- World 3: The world of meta-science.

The world where one spends most of one's life is referred to as world 1. This is the ordinary life where physical and social activities exist. World 2 is the world of science, and obtaining truthful knowledge is the ultimate aim. Processes or phenomena are taken from world 1 and researched to gain the truth thereof in world 2. The nature of science is the area of focus in world 3 (Mouton, 2008:138).

This study clearly relates most to world 2, where an aspect (deferred taxes) is taken from the business world (the calculation of the debt-to-equity ratio), which is world 1, and is researched to find truthful knowledge when performing the research study (what is the proposed treatment of deferred taxes in the calculation of the debt-to-equity ratio?).

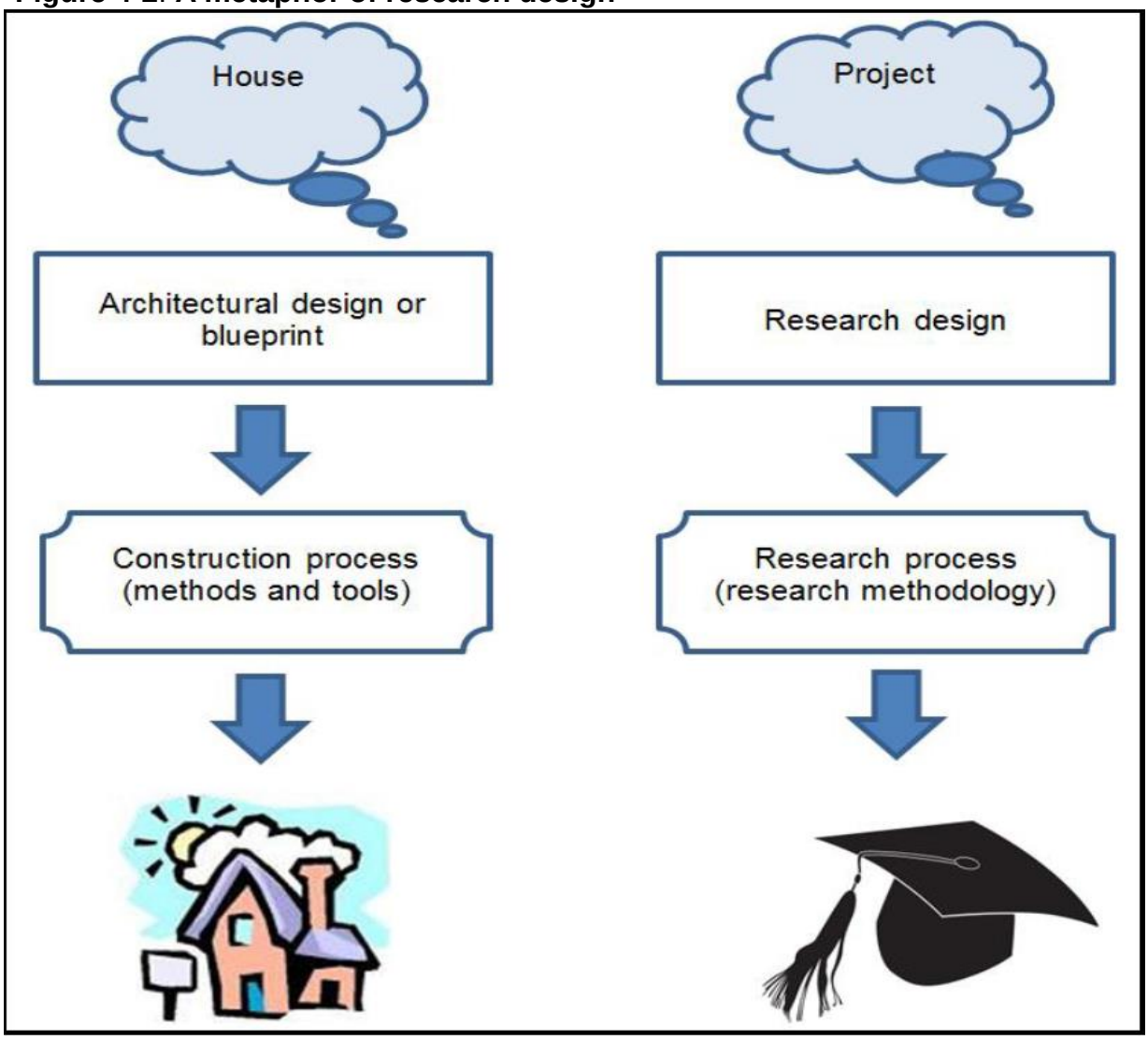
4.4.2. Research design

The research design is used to specify certain aspects that contribute towards answering the research question; these aspects include determining the participants, data collection, variable measures, and data-analysis methods (Lussier, 2011:97). The research design allows the researcher to select a suitable research method that will justify the research objectives and constructivist research paradigm of this study. The study must be attentively planned to answer the research question, as the research question is the starting point of the entire research process (Lussier, 2011:97).

Babbie and Mouton (2012:74) make a clear distinction between the research design and the research methodology by referring to the analogy of building a house. When a couple decides to build a house there are many different ideas that arise regarding the style, size, shape, etc. The architect will then be consulted to try and visualise their ideas and then use these ideas to draw a plan for the house. The architect will then discuss the plan with the couple in order to make the changes necessary to satisfy their needs. When the design plan is finalised the architect will start building the house through the execution of the design. The building contractor will make use of different tools and methods (here, the research methodology) to perform the different tasks of building the house. The building inspector will, after the house is completed, certify the house to ensure the house was built in accordance with the original plan. These steps constitute the research design.

The analogy of building a house discussed above can be put into context by referring to Figure 4-2 below that displays a metaphor for the research design:

Figure 4-2: **A metaphor of research design**



Source: Babbie & Mouton, 2012:74

The main purpose of the research design is to sketch a road map of the whole research project, and should include clear guidelines and procedures regarding what the researcher will do and when (Myers, 2013:19). Terre Blanche *et al*. (2006:6) state that the main task of the research design is to specify and combine key elements and methods together to provide maximum validity. The research design is also very important in ensuring that the researcher can convince specific people that the research can be performed successfully and that the project is viable (Myers, 2013:19).

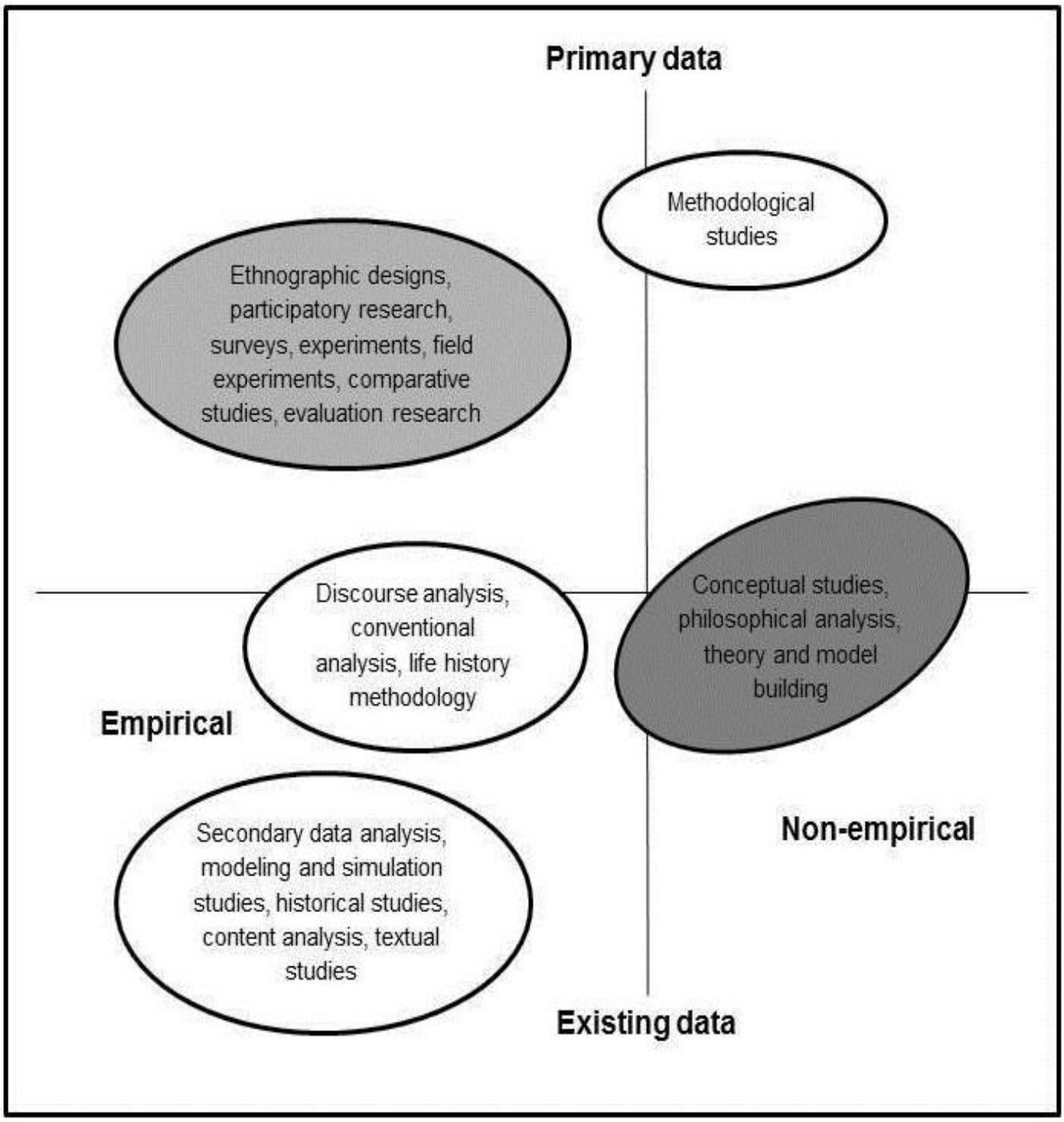
As indicated by Terre Blanche *et al*. (2006:34) the research design plays the important role in linking the research question to the execution of the research. The stages of research can be explained as follows:

- Stage 1: Defining the research question;
- Stage 2: Designing the research;
- Stage 3: Data collection;
- Stage 4: Data analysis; and
- Stage 5: Writing the research report.

The research design consists of three principles: empirical and non-empirical research, primary and secondary research, and textual and numerical data (Babbie & Mouton, 2012:74). The research design is discussed by referring to figure 4-3, which maps out the different dimensions of primary data versus existing data and empirical versus non-empirical studies. This study falls in the first quadrant, as empirical methods are used to gather primary data. Primary data (new information) is gained by conducting interviews and document analysis. The primary data obtained consists of textual data, which is analysed and compared with the theoretical framework.

Figures 4-3 and 4-4 below map out the differences between empirical and non-empirical research and are used to discuss the research design of this study.

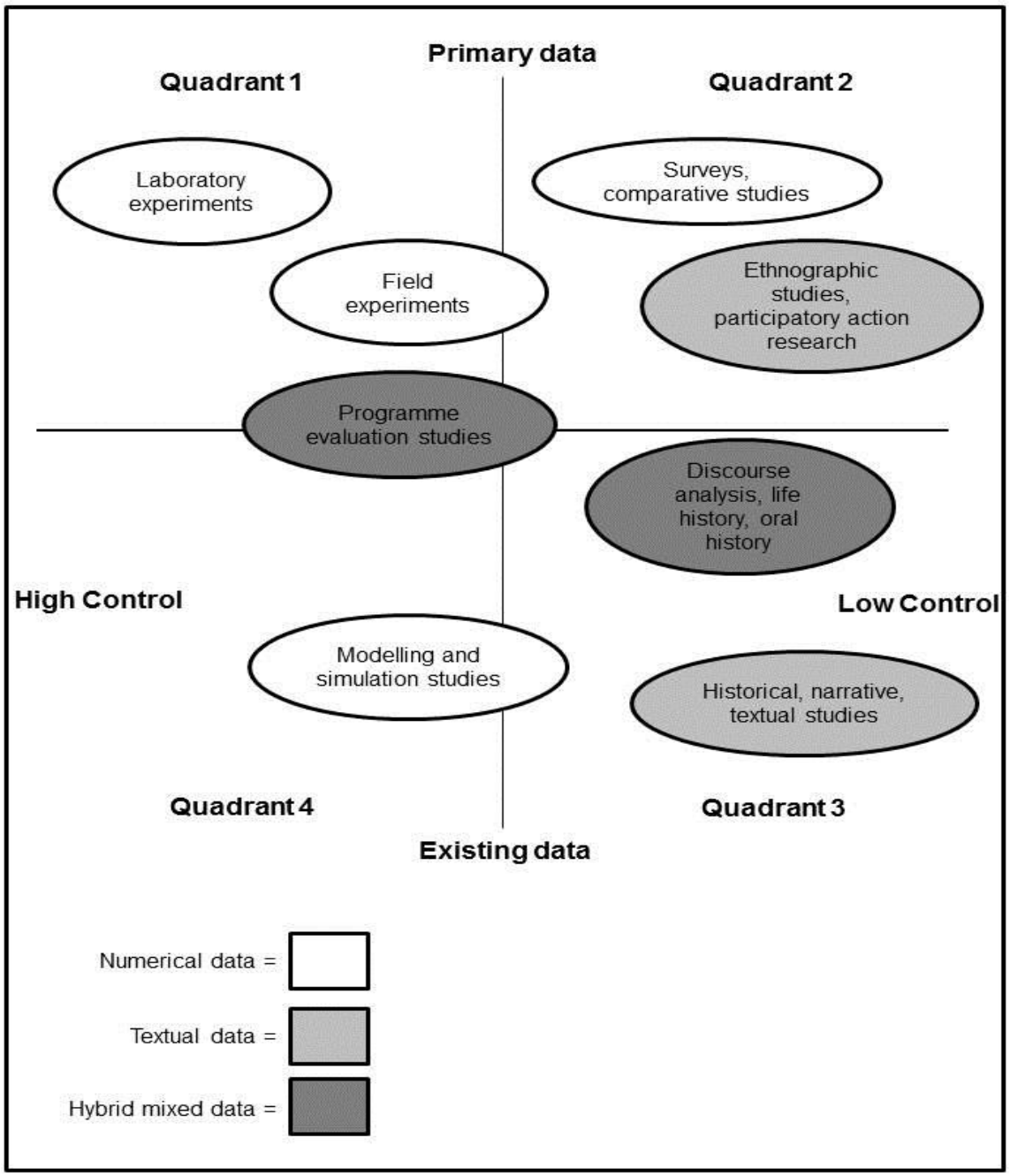
Figure 4-3: Mapping designs



Source: Mouton, 2008:144

Figure 4-4 below elaborates on empirical studies by distinguishing between primary data versus secondary data and the degree of control, by making use of these items relative to the different dimensions. This study falls into the second quadrant, as primary data is obtained and used in this study (data obtained from interviews) and the researcher interprets the information obtained from responses of the participants. As interpretation is used, another individual might not interpret the data in exactly the same manner, and therefore a low level of control is present in this study.

Figure 4-4: **Mapping designs (Level 2)**



Source: Mouton, 2008:145

Mouton (2008:146) further puts forward the following classification framework of different design types as a summary:

Table 4-3: **A classification framework of design types**

Dimension	Data type
Dimension 1: Empirical or non-empirical	Empirical Non-empirical
Dimension 2: Data collection of primary or secondary nature	Primary Secondary Hybrid
Dimension 3: Type of data	Numeric Textual Combination
Dimension 4: Degree of control	High control Medium control Low control

Source: Mouton, 2008:146

By using the classification provided in table 4-4 above, the appropriate classification of this study is as empirical, collecting primary textual data, with a low level of control.

To conclude, the study is therefore classified as empirical, as interviews is the selected technique utilised to gather information from the selected participants. New data collected from the participants through the above-mentioned method and data collection is therefore classified as of primary nature. The type of data gathered and used in this study is textual data, as the responses of the interview questions regarding descriptive questions are interpreted as textual results. As the researcher is responsible for interpreting the results and responses of interviews, it leads to a low level of control being present; the reason is based on the fact that interpretation might be different when done by another individual.

4.5. QUANTITATIVE, QUALITATIVE AND MIXED METHOD OF RESEARCH

Distinctions between qualitative and quantitative research methods are one of the most common distinctions used to classify and characterise different types of research (Myers, 2013:7). The quantitative research method stems from a strong academic tradition and there is considerable dependence on numbers that represent concepts and opinions (Amaratunga, Baldry, Sarshar & Newton, 2002:19). Quantitative research methods within the natural sciences were originally developed with the aim of studying natural phenomena (Myers, 2013:7). The process of undertaking quantitative research is purely empirical in nature, based on this method being defined as drawing conclusions based upon evidence extracted from data and statistical analysis by means of deductive reasoning (De Villiers & Fouché, 2015:129).

Qualitative research in general consists of a small sample size and does not report statistical results (Terre Blanche *et al*., 2006:9). The qualitative method is more focused on words and observations (Amaratunga *et al*., 2002:19) and can sometimes be a very helpful method to gain an understanding of the local meaning of certain phenomena (Bartunek & Seo, 2002:238). The qualitative research methodology is defined as a research method that yields evocative data gained through the researcher's experiences and perceptions put in writing (De Villiers &

Fouché, 2015:133). It is a method that makes use of observational methods such as conducting interviews or observing participants to gather data (Babbie & Mouton, 2012:53).

Qualitative and quantitative research is often seen as complimentary within the context of research literature, hence the existence of the mixed method. The mixed method approach consists of both qualitative and quantitative methods of research to gather data (De Villiers & Fouché, 2015:137). The mixed method can also be described as triangulation, and within the research context the strengths and weaknesses of one method is balanced with those of the other method. Triangulation stems from the idea that the researcher should do more than just one thing in the study, this means that during the research project more than one research method must be utilised to gather data (Myers, 2013:9). Amaratunga *et al*. (2002:19) and Grafton, Lillis and Mahaama (2011:12) describe mixed methods as research strategies that consist of both quantitative and qualitative research methods used to study the same phenomenon.

The researcher using a combination of qualitative and quantitative research methods will gain the advantage of better insight into results being gathered (Amaratunga *et al*., 2002:30). By combining the qualitative and quantitative research methods the researcher is provided with the opportunity to incorporate divergent views into their study, which results in gaining a deeper understanding of the research problem (Grafton *et al.,* 2011:12). The use of mixed methodologies has many advantages, but one of the main challenges arising from this approach is choice of data collection techniques to achieve a triangulation of results to improve their validity (De Villiers & Fouché, 2015:137). Each research method has its merits and one method is not inherently better than the other, but the researcher must choose a method that ensures the research objectives are achieved (Amaratunga *et al.,* 2002:30). Creswell (2013:17) provides a summary of the three methods which can be seen in table 4-5:

Table 4-4: Quantitative, mixed and qualitative methods

Quantitative Methods	Mixed Methods	Qualitative Methods
Predetermined	Both predetermined and emerging methods	Emerging methods
Instrument based questions	Both open-and-closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, and census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audio-visual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretation

Source: Creswell, 2013:17

The qualitative approach is utilised in this study, as more focus is placed on words and correspondence than on numbers which represent concepts and opinions. The qualitative study consists of a research interview conducted with participants which include academic practitioners and professionals in practice.

4.6. THE STUDY POPULATION

The population of qualitative data collection was selected by means of non-probability purposive sampling. Convenience sampling is when the researcher relies on the availability of participants in order to gather data. When sampling is chosen based on the judgement of the researcher it is referred to as non-probability purposive sampling (Babbie & Mouton, 2012:166). The target study population

chosen to perform the qualitative research interview is academic practitioners and professionals in practice.

The academic practitioners selected consist of a sample that reflects both the financial accounting and financial management fields in order to represent a fair reflection of both sides of the theory. Accounting academics are specifically chosen because of their focused knowledge of deferred taxes, a specific accounting term based on International Financial Reporting Standards (IFRS), to better understand their views regarding this item and the treatment thereof. Financial management academics are chosen because of their focussed knowledge regarding financial statement analysis, specifically the calculation of the debt-to-equity ratio, to gain data regarding what the proposed treatment of deferred taxes is when calculating this ratio.

The professionals in practice chosen consist of stockbrokers and portfolio managers who focus on investing and selling shares in firms. The reason for the selection is based on the fact that these professionals calculate specific ratios based on a company's statements and use these ratios in their decision making process to determine if shares should be bought or sold (refer to section 2.5). The stockbrokers specifically are equity traders who, on a daily basis, make use of financial information to make decisions. The debt-to-equity ratio is one of the ratios a stockbroker and portfolio manager can use to determine the financial leverage of a company and thus determine the enclosed financial risk, which influences decisions regarding the company's shares (*cf.* Section 2.7.4).

4.7. THE RESEARCH INSTRUMENT

Babbie and Mouton (2012:100) state that the social scientist has a variety of research instruments at his/her disposal and that each instrument has its strengths and weaknesses which allow certain concepts to be appropriately studied. The research instrument significantly influences the reliability and validity of the research being performed (Richardson, 2004:349). The research instrument best suited to address the research question must be selected to ensure the research objectives are achieved.

During this study the following data collection instruments are used:

- Interviews with academic practitioners; and
- Interviews with professionals in practice.

Richardson (2004:349) concludes that a reliable research instrument is one that yields results which are consistent when used repeatedly under similar conditions and with similar participants over a period of time. The research instrument should be valid, meaning that the instrument measures what it purports to measure; it is one of the fundamental requirements of the research instrument (Richardson, 2004:350).

To demonstrate the validity, reliability, and scope of the research instrument used to gather data in the study, a discussion further describing the instrument follows below:

4.7.1. The qualitative research interview

Interviews are viewed as one of the most important data gathering techniques for qualitative researchers and is the most widely used qualitative research method. Interviews allow the researcher to gather valuable data from people who find themselves in various roles and situations (Myers, 2013:119). The natural basis of an interview is based on human conversation, where the researcher has the choice of setting the pace and style of questions to gain required results (Hannabuss, 1996:22). In this study the research interview is employed as a qualitative research method.

4.7.1.1. Description

The research interview is described as a method of obtaining qualitative information through the process of interacting with participants who are exposed to the phenomenon being studied (De Villiers & Fouché, 2015:135). When using questionnaires the participants are expected to read the enclosed questions. Interviews consist of face-to-face encounters between the researcher and the participant (Babbie & Mouton, 2012:249). The essential characteristic that distinguishes a questionnaire from an interview is the fact that a research questionnaire does not require direct interaction, whereas the interview requires direct interaction between the researcher and the participant (Rowley, 2014:308).

4.7.1.2. Objective of the research interview

The type of interview technique selected by the researcher is very important to ensure that the desired quality of data is obtained through the interviews conducted (De Villiers & Fouché, 2015:135). The main objective of conducting a research interview is to make use of a prearranged set of questions that allows the researcher to obtain data from the participants (Babbie & Mouton, 2012:249). The objective of the research interview is to help the researcher focus on the subjects of the world, and to use the language of the participant instead of imposing one's own views (Myers, 2013:119).

4.7.1.3. Reliability and validity of the research interview

Reliability

Reliability can be defined as a concept that is achieved when the results derived from a study are repeatable (Bryman & Bell, 2011:41). The researcher responsible for conducting the interview must be able to build a relationship with the participants involved in the research interview, and possess suitable skills to ensure reliability (De Villiers & Fouché, 2015:135). The level of comfort-ability brought to the interview by the interviewer and their preparedness to talk directly affects the disclosure received from participants (Myers, 2013:119). One of the major challenges of conducting research interviews is that the researcher must ensure that the interview is free of research bias and subjectivity. By using research interviews the researcher always runs the risk of putting certain ideas or answers in the heads of participants by influencing them on an interpersonal level (Hannabuss, 1996:24). Reliability can crop up in different forms when performing social research, and when a single observer is the sole source responsible for deriving data reliability concerns are raised, especially because of the lack of safeguards against the subjectivity of the researcher (Babbie & Mouton, 2012:120).

The attitude of the researcher who performs the interview directly influences the responses of the participants (Babbie & Mouton, 2012:120). To ensure reliability of the research interview it is critical that the interviewer be prepared and understands each question that needs to be answered (Babbie & Mouton, 2012:120). The researcher's preparedness and knowledge of the research questions will allow the interviewer to correctly apply the questions to each participant's specific

circumstances. This will ensure that the questions are asked and answered in the manner intended (Babbie & Mouton, 2012:120).

During the process of conducting the research interview the researcher specifically focuses on the above-mentioned factors combined with pervasive objectivity throughout the entire discussion, ensuring that all of the above-mentioned factors are addressed. The researcher also tested the questionnaire by performing a test interview in order to establish that all of the questions are clear and understandable. All of the interviews were recorded and the responses carefully transcribed.

Validity

Validity is described as a concept that is mainly concerned with the integrity of the conclusions developed from a piece of research (Bryman & Bell, 2011:42). The research questionnaire and a copy of the transcribed script was sent to each one of the participants. This was done in order to confirm the validity and accuracy of their responses. The selection of participants plays a very important role in determining the validity of the research interview. Purposive non-probability sampling was the method used to select the participants for the interview. Participants from both specific academic fields covered in this study were included as well as professionals in practice who specifically make use of the debt-to-equity ratio.

The validity of the research interview is increased when similar answers are delivered from participants based on questions that differ from each other in a very small manner (Griffee, 2005:37). Triangulation of data increases the validity of data obtained from the research interview. Triangulation is when at least two sources of data are compared to each other (Griffee, 2005:37). Triangulation increases validity when interviews are performed with multiple participants delivering similar answers with the assumption that at least a couple of duplicate questions exist (Griffee, 2005:37).

Validity was ensured by making use of an independent person to transcribe the results of the research interview to ensure objectivity and accuracy in transcribing. Face validity was ensured by consulting the literature review (thus other researchers and experts on the subject) when the questionnaire was developed.

4.7.1.4. Conducting a research interview

Based on how important the research interview is, and how valuable data extracted from this process can be, indicates that performing this qualitative data collection method is no trivial enterprise (Qu & Dumay, 2011:238). Each interview performed is seen as a small work of art, and each piece of art is created at a different pace in relation to its specific ebb and flow (Trochim & Donnelly, 2007:115). Performing a successful research interview requires that the interviewer makes use of various skills, for example extensive listening, note taking, and carefully and sufficiently planning the interview (Qu & Dumay, 2011:239). Every interview has certain similar components; there is the opening part that allows the interviewer to set the tone and pace, the middle, described as the heart of the interview, and lastly the end part viewed as the wrap-up of the interview (Trochim & Donnelly, 2007:115).

The researcher can choose between three basic interview techniques, namely structured, semi-structured, and unstructured interviews. The selection of the appropriate interview technique helps the interviewer to obtain the desired quality of data (De Villiers & Fouché, 2015:135). The different types of interviews each pose its own set of strengths and weaknesses, and each technique might be more or less suitable to achieve the goals of certain areas of research (Hannabuss, 1996:24). Each one of the above-mentioned interview techniques is discussed in further detail below.

Structured interviews

Structured interviews consist of pre-formulated questions that are usually asked and answered in a specific order, within a certain pre-determined time frame (Myers, 2013:122). Further exploration of the topic is very limited as the answers of respondents are predefined by the researcher (Blumberg *et al*., 2008:265). The structured interview, also referred to as the standardised interview, aims to give each respondent the same interview stimulus by using the same frame of questioning (Bryman & Bell, 2011:202). Responses on questions asked in a structured interview are limited to a set amount of categories, and there is little to no room for deviation when it comes to the pre-determined questions used for the interview (Qu & Dumay, 2011:244). The role of the interviewer is minimised when the structured interview is

used due to the lack of improvisation required when the interview is conducted (Myers, 2013:122).

Unstructured interviews

The unstructured interview is a very useful technique if the interview is conducted with regard to a wide-ranging problem area and the researcher has to identify the issues that will help better understand the situation (Blumberg *et al*., 2008:265). The unstructured interview is on the exact opposite side of the spectrum as structured interviews as this form of interview consists of little pre-formulated questions and placing a time limit on the interview is not mandatory (Myers, 2013:122). This type of interview is very useful to gain information in contrast to using fixed-choice alternatives asked in a closed question as with structured interviews (Bryman & Bell, 2011:204). Consistency between unstructured interviews is not all-important, meaning that maintaining consistency between unstructured interviews is not a primary focus or objective for the interviewer (Myers, 2013:122).

Semi-structured interviews

The semi-structured interview finds its place somewhere between a structured and unstructured interview. Pre-formulated questions are used when performing the interview, but the interviewer is not required to strictly adhere to these questions (Myers, 2013:122). The list of questions used in the semi-structured interview is usually pre-determined, but the interviewer can still ask additional questions to gain further clarification on responses (Griffee, 2005:36). The focus of the interview is using the established interview guide, which includes a broad range of themes that need to be addressed. The interviewer uses this guide to direct the questions in such a manner that it ensures all the topics and issues of the study are covered (Qu & Dumay, 2011:246). The semi-structured interview starts out with more specific questions to ensure that the necessary areas are covered, and these questions are asked in a similar manner between interviews (Blumberg *et al.*, 2008:265).

Consistency is maintained during semi-structured interviews given the fact that each interview will start with similar types of questions each time (Myers, 2013:122). Questions asked in semi-structured interviews are usually more general in their frame of reference, and the interviewer has a higher level of freedom to ask further

questions in response to replies that are viewed as significant (Bryman & Bell, 2011:205).

The participants taking part in the interview need to be informed regarding the purpose of the study. Furthermore, the reason for selecting the participant and how their responses will be treated should be communicated (Hannabuss, 1996:25). The research interview can be a difficult data collection technique which requires a sophisticated skill set. Dilley (2000:134) states that the following five foci need to be considered throughout the entire interview:

- Listen to what the interviewee is saying;
- Compare the interviewee's responses to what is currently known;
- Compare the interviewee's responses with other questions asked;
- Always keep track of time; and
- Offer information to initiate responses, clarification or further explanation.

Based on the above descriptions it was determined that the appropriate type of interview to use in this study would be a semi-structured interview making use of a pre-arranged set of questions. The semi-structured interview allows the researcher to obtain answers to questions that are not limited while also allowing the interview to flow without steering it in a pre-determined direction.

Difficulties of an interview

The prime risk associated with performing a research interview is that the possibility always exists that the conversation might derail and move off topic, thus affecting the data collected (De Villiers & Fouché, 2015:135). The research interview can be very expensive and time consuming and is often very intensive; consequently, the risk of covering a small sample of the population, which is not representative of the population as a whole, increases (Hannabuss, 1996:23). The risk of selecting an incorrect interview technique is ever present, due to the fact that the technique selected has such a prominent effect on the quality of data gained from the interview (De Villiers & Fouché, 2015:135). The results and data gathered from the interview can also be corrupted or unreliable as a result of various factors, emphasising that

the research interview is not a risk free data gathering method (Hannabuss, 1996:24).

4.7.1.5. Study sample of the interview

The population of the interview consists of academic practitioners specialising in the fields of financial accounting and financial management. The professionals in practice consist of stockbrokers and portfolio managers. The study sample was selected based on purposive non-probability sampling, which is a sampling method used to select participants based on the judgement of the researcher. Four academic practitioners were selected of which two specialise in accounting and two in financial management. All of the academic participants are qualified charted accountants and one of the participants also has a doctoral degree in accounting sciences and is an accredited professor at the North-West University.

The professionals in practice reflect a wide range regarding specific qualifications, age, background, and types of portfolios managed. The sample of four participants consist of traders, fund managers, quantitative-, and equity analysts. Each one of these participants obtained specific qualifications which they use in their respective fields and their experience range from four years up to 26 years. The qualifications held by the professionals in practice include a B.com economics honours, B.com honours in risk management, charted financial analyst and charted accountant degree.

4.7.1.6. Administration of the interview

In order to conduct the interviews each one of the participants were contacted and the research was briefly explained to them. Permission was obtained to conduct interviews and then appointments were scheduled. It was clearly communicated to each participant that the interview was voluntary and anonymous. Permission was also obtained from each participant to record the interview.

The type of interview used was a semi-structured interview making use of a pre-arranged set of questions. The questionnaire was followed carefully in order to ensure reliability. The participants were, however, allowed to provide additional comments, and if the participants had any further questions the researcher answered it. The lists of questions used in the interviews are documented in Appendix A.

4.7.1.7. Analysis of the interview

The interviews performed were recorded and the data carefully extracted and transcribed from the recordings by an independent person to ensure objectivity. This was done to ensure that the data remains objective and free from any form of bias. One of the crucial stages in the process of doing a content analysis is the coding of data (Bryman & Bell, 2011:299). Data was then sorted into categories based on the research objectives. Coding was used to sort the data in different themes and categories (Section 1.3).

Qualitative data was analysed by means of thematic content analysis by searching for patterns and themes in the data. The researcher familiarised himself with the data by reading through it several times. After the data was read several times different items were placed in different themes and categories and Atlas.ti was used to code the data to determine the specific applicable themes. This was done by searching for important themes and similar ideas between different interviews. Themes were further separated into sub-themes. By making use of sub-categories coding and interpretation of data was made possible.

4.8. SUMMARY

The objective of this chapter is to provide an overview of the philosophical paradigm applicable in this study, as well as the research design and methods that will be implemented to achieve secondary research objectives 3, 4, and 5 (see Section 1.3). The constructivist paradigm is the most applicable paradigm to address the research objective. This study makes use of the qualitative research method approach. This approach is thoroughly discussed; the reason for implementing this specific method in the study was explained in Section 4.5.

One research instrument used in this study is the qualitative research interview (see Section 4.7.1). The specified instrument is discussed in detail and the reliability and validity thereof are accounted for. The study sample and population for the research interview and the reason for selection is justified and determined. In conclusion, this chapter aims to address different aspects of the research design and methods used in the study. By addressing these aspects the purpose behind each technique and

method is discussed. In the next chapter results and analysis of the empirical data are provided.

CHAPTER 5

ANALYSIS OF EMPIRICAL RESULTS

5.1. INTRODUCTION

The main objective of this study is to gain a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this differs in theory and in practice. In order to achieve this objective, further secondary objectives are set. A thorough literature study regarding ratio analysis and the debt-to-equity ratio is done in Chapter 2 in order to gain more insight into the calculation of this ratio and to determine how this ratio fits into the bigger picture of financial statement analysis. The literature study performed in Chapter 3 is used to better understand deferred taxes and how this item should be treated in the calculation of the debt-to-equity ratio. The most suitable research method to achieve the remaining objectives is established and discussed in Chapter 4. The results from the research interviews performed will now be analysed and discussed in order to achieve secondary research objectives 3 and 4 as set out in Section 1.3.

5.2. THE RESEARCH INTERVIEW

Semi-structured interviews were conducted in order to investigate what the proposed treatment of deferred tax in the calculation of the debt-to-equity ratio is as based on the views of academic practitioners and professionals in practice. The questions were based on a questionnaire consisting of open-ended questions (*cf.* Appendix A). The participants were asked for their permission to record all the interviews for transcription and analysis. Based on the transcribed texts three different themes could be identified and analysed. These themes are the factors outside deferred tax taken into consideration regarding the debt-to-equity ratio, current treatment of deferred tax as a liability in this ratio and the impact thereof, and the proposed treatment of deferred tax in the calculation of the debt-to-equity ratio. The results of the interviews will now be discussed. Direct words from professionals in academia will be indicated with an (A) while those of professionals in practice will be indicated with a (P).

5.2.1. Theme 1: Factors other than deferred tax taken into consideration when calculating the debt-to-equity ratio

The first theme emerging from the interviews regards factors other than deferred tax which can be taken into consideration regarding the debt-to-equity ratio. It consists of three sub-themes, namely:

- What value can be placed on the calculation of the debt-to-equity ratio and the information that can be extracted from this ratio?
- Should information reported in terms of International Finance Reporting Standards (IFRS) be adjusted when calculating certain ratios?
- Will the type of analyst influence the inputs used to calculate the debt-to-equity ratio?

5.2.1.1. Value placed on the calculation of the debt-to-equity ratio and information that can be extracted from this ratio

Firstly, the participants were asked whether they believed that the calculation of the debt-to-equity ratio had certain value to it and what importance can be placed on information that can be extracted from this ratio (Question 1, Appendix A, page 148). Table 5-1 contains the direct words of the participants regarding the value that can be placed on the calculation of the debt-to-equity ratio. Although some of the participants were hesitant in their answers, the majority of professionals in academia and practice felt that the debt-to-equity ratio is a very valuable ratio that contains very important information (1). Most of the participants could elaborate as to why this ratio is very valuable based on the specific purpose that it serves, and it was determined that, both in theory and practice, the ratio is regarded as one that plays a very important role regarding some key areas - solvency, leverage, share price, and summarising the entire balance sheet (2). There is, however, a recurring theme in terms of questioning the value of the ratio. The problem that most of the participants have, especially in practice, is that the ratio is not the most important ratio to consider, but that it is more of a check ratio. The true importance usually comes from the size of the ratio, which can be a flag for further investigation (3). Furthermore, the academic participants also named certain cases in which the ratio has a great deal more meaning and value. For example, for external purposes the ratio would be much more important compared to looking at it internally (4).

Table 5-1: **Participants' responses regarding the value that can be placed on the calculation of the debt-to-equity ratio**

Theme	Number	Participants' direct words
The ratio is valuable	**1**	- On the management side it would definitely be more valuable (A). - From management's viewpoint there will definitely be value in the calculation. There are a lot of factors that still need to be taken into consideration (A). - I think it is important, it comes down to the fact that I think it is better to use other people's money to make money rather than to use your own (A). - I personally think that it is very important (A). - I would think that the ratio will deliver very valuable information and very important information (A). - So I would think that debt-to-equity is critical (A). - For me the debt-to-equity ratio is very important (P). - It is also a ratio that from time to time I definitely look at and follow (P). - It is when the margins start compressing and if the margins start compressing and there is a lot of debt that is a flag (P). - There is information that can be extracted from the debt-to-equity ratio (P).
The ratio serves the following purposes	**2**	- Because the gearing of your company can then be viewed better and then it can be determined where the company is heavier or lighter, and you can also go and look at what your cost of loans/capital is (A). - The reason for gaining extra equity is because the company

		required money or to finance a transaction. So the focus when looking at the debt-to-equity was never to strive towards a certain structure (A). - The ratio is still used to indicate if a company is solvent or insolvent, and it is part of your company act requirements to test for solvency in cases of certain transactions (A). - The debt-to-equity ratio actually summarises the entire balance sheet, so it gives the users of the ratio for example banks, investors etc. a big picture overview on how healthy the company is (A). - I look at it often in a relative sense, for comparative purposes to obviously see if the company is more indebted than their peers and also just for very high levels within ranges (P). - Depending on the time and cycle in which the economy is it definitely plays a role to invest in a company that is highly leveraged, the statements usually look a bit better. The contrary is also true when it comes to debt and leverage as it is a double edged sword (P). - All they have to do is make sure that they are able to service the debt. At the end of the day that is the most important thing, is the cash flow justified and is the debt justified to the cash flow (P). - Interesting theme that I have picked up from an quantitative perspective is that when you start to see a property stocks debt-to-equity ratio go up the share price actually performs pretty well and I think the reason for that is they are obviously identifying opportunities and taking on some finance to finance those properties and it seems to be that the debt-to-equity ratio is supporting the share prices over time (P).
Reason for the	**3**	- There is definitely value in the ratio; the problem is I am not sure

ratio not being so valuable		actually how valuable it is (A). - The company where I found myself didn't specifically go about the debt-to-equity ratio; the focus was more on what banks required of us to give us finance. The focus was did you have equity and how many equity do you require and in that case the company would put in a % and the rest would be borrowed (A). - The ratio was definitely important, but the company did not centre around what the debt-to-equity ratio is or what it should be (A). - The ratio is extremely important. Do people actually use the ratio like it is supposed to be used to make proper predictions of businesses in distress, and the answer is no, and that is a problem for me with the ratio (A). - It is almost more for me a check to look for extreme values. It is only extreme values that really get any attention from me rightly or wrongly (P). - I don't look at the debt-to-equity ratio specifically. I think if debt-to-equity is more than two, two and a half times then it would be a flag. It is more the size of the ratio that would actually trigger me (P).
In what aspect does the ratio hold more value	**4**	- The use of the debt-to-equity ratio for me is more for external purposes rather than for internal (A). - According to me it was never a problem internally, because the driver behind it was that the company needed to gain financing and then the banks had a required equity that we needed to put in and this is what we focused on (A). - I think there is value when it comes to this ratio, I think you have to go and look closely what purpose you have for using the ratio, because I think it can differ from one user to another (A).

The responses from participants correlate with the findings of Axson (2010) and Matthew *et al*. (2016:6) who find that the debt-to-equity ratio provides crucial and important information regarding the company to a wide variety of stakeholders. It could also be determined that the ratio delivers important information regarding some key areas, for example financial risk, solvency, leverage, and share price, and is a ratio that summarises the entire balance sheet. This correlates with the findings of Alexander *et al.* (2003:617), Axson (2010), Matthew *et al*. (2016:6) and Palepu and Healy (2008:5-20) who propose that the debt-to-equity ratio is a tool that delivers very important information regarding long-term survival, financial risk, and the level of debt financing being used by a company.

Most of the participants in practice opine that the ratio is not the most important ratio to calculate or use and that the ratio is likely used more often as a check ratio. The true importance of this ratio actually comes through when the ratio is quite sizeable, which could then be a flag for further investigation. Mesarić (2014:129) makes a similar finding regarding ratio analysis, that some ratios have stronger importance compared to other ratios, and that a certain ratio might have a higher preference in one industry compared to another.

5.2.1.2. Should information reported in terms of IFRS be adjusted when calculating certain ratios for more accurate information?

The purpose of this question was to determine whether the figures and information that the company reports in terms of IFRS need to be adjusted for the calculation of certain ratios and whether these adjustments would deliver more accurate results (refer to Question 2, Appendix A). Table 5-2 provides the responses of participants regarding the adjustment of information reported in terms of IFRS. The participants in practice emphasise the fact that there is a large time constraint on them that makes it very hard to actually adjust figures and that adjustment is not always an option. This question elicited many divergent results. A couple of the participants feel that the information should not be adjusted; this is emphasised mostly from those in the accounting field who feel that the information reported in terms of IFRS already serves a very all-round purpose and that there is no requirement to adjust. The professionals in practice are also of the opinion that the time constraint largely

factors into their response that IFRS information should not be adjusted. A very important response is that the needs of the company should be taken into account before adjusting, and that an important item that could be considered for adjustment is deferred taxes (1). The adjustment of the information is also supported by many participants as they believe that adjusting information will help to improve comparability and make information more meaningful and understandable. It is also determined that standardising information across the board for a group of companies will enable the analyst to cover more ground in a shorter time frame (2 and 3).

Table 5-2: **Participants' responses regarding whether information reported in terms of IFRS should be adjusted when calculating certain ratios**

Theme	Number	Participants' direct words
Reasons why information should not be adjusted	**1**	- No, I would not adjust anything, because it's going to change anyway (P). - I would not make any recommendations and say please do this or please do that (P). - The truth is we are looking at it in particularly my role, we are looking at lots of companies and I don't have the time or capacity to go and re-adjust and actually go and look through each company to see what is in and what is out (P). - If someone is adopting an accounting policy that leads to there being some difference, that difference needs to be extremely material to move a company's ratio from middle of the row to extremely high for it to be an extreme (P). - If the idea is that the ratio is used for example by banks, investors and analysts etc. Then I don't think it is necessary to adjust information. I think the debt-to-equity ratio for me is an example of something that I would think should not be adjusted (A). - No I think it would depend on the needs of the company,

		the big item that could be looked at for adjustment would be deferred taxes (A). - Sometimes adjustments should be made, but most times I think these adjustments come down to manipulation; this means these adjustments are made to manipulate information (A).
Reasons why information should be adjusted	**2**	- As far as possible you want to normalise the data, standardise, the figures across the board especially when you start looking at companies you want to cover more ground and thus you should adjust (P). - I think you will always need to adjust results in some way (P). - The problem is the person who prepared the financial statements did it according to his own interpretation, so you will have to go and look what was added where and then you will have to go and make your own conclusion (P). - I think it depends on who is using the ratios that is being calculated, if the ratios are being used for internal decision making purposes, and then I would say there is room to adjust the information (A). - Yes you should adjust. Among other things we said if you are looking at depreciation for example then this item will probably have to be adjusted (A). - The feeling in the market is that IFRS is so descriptive, the normal users of financial statements has half of an aversion towards IFRS, but I don't think it is a bad idea to adjust some things (A).

Effects of adjusting information	**3**	- The more standardised the data is for companies the easier it makes the job for the analyst to cover a larger ground and aids in the process of making comparability easier (P). - The biggest reason for me to adjust the information is to improve comparability (P). - There is a possibility of adjustments that you can make that will make the information more meaningful and understandable (A). - IFRS for example can propose that every company has to include a specific set of ratios. How each one of these ratios is calculated should also be taken into account. This will then enable the user to better understand the ratios (A). - Sometimes it feels like there are adjustments that should be made, but it feels like it will a have a negative impact on comparability because I think the ratios can be manipulated (A).

The responses from participants agree with the statement made by Skae (2014:316) that too many adjustments to financial information could open the door for manipulation, which poses a problem when accurate conclusions need to be made. A large number of the participants support the statement that IFRS figures should be adjusted to increase and improve comparability. Skae (2014:129) agrees that different accounting policies applied by companies can cause limitations in terms of comparability and that, by adjusting certain information, this limitation can be addressed.

5.2.1.3. Will the type of analyst and their background influence inputs used in the calculation of the debt-to-equity ratio

Table 5-3 provides the participants' responses regarding their views of the analyst who calculates certain ratios, and if their background will influence the inputs used to calculate certain ratios (Question 3, Appendix A). Responses indicate very strong

agreement between academia and practice regarding this question. Based on the responses from the participants it is clear that almost all feel that the analyst and their background will in some way or another play a role when it comes to inputs used to calculate certain ratios. Another prominent factor is that each analyst has a different goal and a different method used to achieve this goal (1). One of the participants in practice opines that the background of the analyst does not play such a big role, but based on the responses almost every participant feels that the analyst and their background are very influential when it came to ratios (2).

Table 5-3: **Participants' responses regarding whether the analyst and their background will influence inputs used to calculate the debt-to-equity ratio**

Theme	Number	Participants' direct words
The background of the analyst will influence how the ratio is calculated	**1**	- I definitely think so; I think the number of possible opinions can be reflected by the amount of people that there is who calculate ratios (A). - Every different analyst will look at ratios slightly differently, so some stuff is personal preference and sometimes a person feels very strongly about a certain point, and it is difficult because in the financial management field there aren't clear rules like for example IFRS (A). - I think the background of the person can influence how the ratio is calculated. So the background of, for example bankers, may look into the ratios differently compared to anyone who has a background in accounting, who maybe more sensitive to how the ratio might be manipulated (P). - It will definitely play a role. There are a lot of times where analysts come from an actuary background and some analysts who come from a specific accounting background, and this definitely makes a difference, especially in terms of the type of comments that will be delivered from those type of fronts. I think it goes even further than this and I think it

		comes to a point that the type of experience that the analysts have learned will also play a role (P). - I think it can go very deep into the type of background of the analysts and this will determine the type of conclusions that will be made (P). - Analysts definitely would influence the inputs. I think they all want to talk their book. I think also some of the analysts buy into management's story and some of them don't (P). - Definitely because even normal users of financial statements are supposed to use this information to determine if the company in which they are investing is solvent and liquid, but if these users always do this is a different question. They are supposed to look at the things previously mentioned. I think analysts know that there are certain things that they need to adjust (A). - Definitely there is no doubt. I think every person will look at what is important to them. Financial management is my background so by default I would look at cash flow and the balance sheet and this type of stuff (A). - So there is definitely personal preference, analysts have their own ratio preferences that they will use and look at or they have certain ways of analysing the statement (A). - I think the background will definitely have an impact, and I think it links with my previous thought regarding the manipulation of information (A). - If you are busy looking from a financial management viewpoint how can it be said that you are right or wrong and who says there is something that specifically needs to be included, there isn't a specific standard when it comes to

		the calculation of ratios (A).
Background of the analyst will not influence how the ratio is calculated	**2**	- No I don't think the analyst will have a lot of impact. It's how the company reports that is more important and for that reason I don't think it would specifically be the analyst who influences the inputs of ratios (P).

The overwhelming response from academia and practice regarding this question is that the analyst and their background will in some way influence the inputs used to calculate a ratio.

These responses correlate with previous research and results delivered from others. For example, the fact that there are no specific benchmarks to indicate optimal levels is often a problem that can be encountered with ratio analysis, and the evaluation and calculation of a ratio often depends on the views of the analyst (White *et al.,* 2003:112). The participants' responses show a relationship with Gibson's (2013:200) findings that there is no standard calculation for ratios, and that each analyst and source on financial analysis makes use of different calculations to calculate certain ratios.

5.2.2. Theme 2: Current treatment of deferred tax as a liability in the debt-to-equity ratio and the impact thereof

The second theme regards how deferred tax as a liability should be treated in the debt-to-equity ratio and what the impact of this is. Four sub-themes were identified, namely:

- The role the industry plays in the treatment of deferred tax in the debt-to-equity ratio;
- Can a deferred tax liability be regarded as a form of debt financing?

- Will the inclusion or exclusion of deferred tax from debt influence decisions made based on the calculation of the debt-to-equity ratio?; and
- Is a deferred tax liability an influential item in the calculation of the debt-to-equity ratio?

5.2.2.1. Does the industry in which the entity operates affect the treatment of deferred tax in the debt-to-equity ratio?

The purpose of this question was to determine whether the industry in which an entity functions impacts the treatment of deferred tax in the calculation of the debt-to-equity ratio (*cf.* Question 4, Appendix A). This question was also directed in such a manner to determine how those in academia and those in practice would view this specific aspect. Table 5-4 contains the direct words of participants regarding the impact a company's industry might have on the treatment of deferred tax in the calculation of the debt-to-equity ratio. The participants who primarily focus on financial accounting lean more in the direction that the type of industry in which you operate does not affect the deferred tax liability. The responses from participants are largely divided; more than half of the participants feel that the type of industry in which an entity functions directly impacts the deferred tax liability and in turn affects how this item is treated. These responses are also substantiated by actually describing two different industries and explaining why there might be a difference between these industries (1). Participants who feel that the industry does not affect the treatment of the liability provide clear reasons for this opinion, for example that the industry in which an entity functions is irrelevant, that tax remains tax, and that every company has to pay tax (2).

Table 5-4: **Participants' responses regarding the type of industry in which an entity functions and whether this will affect the treatment of deferred tax in the debt-to-equity ratio**

Theme	Number	Participants' direct words
The industry will affect the treatment of	**1**	- It probably does differ quite a bit from industry to industry. The type of industry is definitely an important factor playing a role (P).

deferred tax in the debt-to-equity ratio		- I think that the impact will most likely be emphasised by how big the deferred tax liability or deferred tax asset will be (A). - I would expect that a service company would have a smaller deferred tax liability, because there will not be such a high level of temporary differences that will be created. The size of the liability will depend on how big the temporary differences are that will lead to the creation of the liability. The temporary differences will depend on the type of business in which you find yourself (A). - Yes I think that the industry will definitely have an impact. I think if you would for example compare the bank industry with the resource industry or compare banks with general retailers it would definitely make a difference and I think it would go further than that in terms of where the company is situated (P). - The industry that is regarded as generally mature or where there is a lot of competition can have an impact on the deferred tax liability, because the chances of that liability being repaid in the near future will probably be very high. The answer is certainly yes on the question asked (A). - For sure, banking is completely different. In banking debt-to-equity means nothing. It is not a ratio that is important at all in the context of banks, the normal debt-to-equity ratio, so banking is thus completely different (P).
The industry will not affect the treatment of deferred tax	**2**	- On the one side yes, this should be taken into consideration from a purely technical viewpoint, on the other side, the entire purpose of ratios is to be comparable. So if you keep on fiddling with the information the ratios will become less comparable. So I would say just compare the companies who are in different industries with each other

in the debt-to-equity ratio		and this will already be inherently more risky, and then you won't have to change anything and you are supposed to rather keep things consistent (A). - I don't think so, according to me it feels that this could lead to more manipulation. This can also lead to comparisons between two companies not being able to be done (A). - The solution that will make comparability possible is to show in their calculations when one company included the liability and another company excluded the liability. Then at least it will be stated somewhere that included in the calculation is a deferred tax liability of this much and if I would leave it out of my calculation the amount would be this much (A). - No, the industry would not affect it in my opinion (P). - The treatment of the deferred tax liability does depend on the industry, but I would say the true treatment for me would depend on the size of the liability and not the industry specifically (A). - I think that it could possibly have an impact, but I would think that it should not have an impact because tax remains tax. So it doesn't matter in which industry you function everyone still needs to pay taxes (P). - So for me the entire issue of deferred taxes or taxes in general is a universal thing that will apply to every single company. So I would not think that the industry should have an impact (P).

In conclusion, the responses regarding this question are divided based on respondents in theory and in practice. The industry can impact the treatment of the

deferred tax liability, but it is not the primary driver behind the proposed treatment of this item as there are still other factors which need to be considered.

5.2.2.2. Can deferred tax be regarded as a form of debt financing in terms of the debt-to-equity ratio?

Table 5-5 provides the participants' responses on whether a deferred tax liability can be viewed as a form of debt financing. The responses to this question are very similar between academia and practice (refer to Question 5, Appendix A). Only two of the participants, one from academia and one from practice, feels that the deferred tax liability could be regarded as a form of debt financing as the liability could take a substantial amount of time before it becomes repayable (1). Most of the participants from academia and practice are of the opinion that a deferred tax liability cannot be a form of financing as it can become repayable at any moment; the fact of the matter is that it is ultimately a postponement of payment rather than financing provided by the South African Revenue Service (SARS) regarding an amount of tax that will become repayable in a future period. When comparing a deferred tax liability with, for example, a bank loan, it clearly shows that deferred taxes do not consist of the same debt format as a loan as it is an obligation to pay taxes (2).

Table 5-5: Participants' responses regarding deferred tax being viewed as a form of debt financing

Theme	Number	Participants' direct words
Yes, it can be regarded as debt financing	**1**	- Yes I think it can, when the liability eventually becomes repayable. Eventually at the end of the company's life the liability will become repayable (A). - So eventually the liability will be a very long-term form of financing and eventually the liability will be repayable, so yes it can be seen as debt, it depends on where the company is in its life cycle (A). - It could be. You are effectively leveraging money that belongs to somebody else. So it is still debt (P).

No, it cannot be regarded as debt financing	**2**	- The loan already exists and you're going to repay it in the future, where deferred tax does not exist yet, but you will have to pay it in the future. Deferred tax is your best estimate of the current obligation to pay the tax in the future. So no I wouldn't say it is similar to a loan even if there is still an obligation to pay the liability in the future. The one feels more concrete than the other one (A). - With a loan I am much more certain that I will repay the amount, you are not hundred present sure about the amount that will be paid to SARS based on the tax that arises from a deferred tax liability (A). - Not at all, it is something that is payable as soon as the transaction is realised, the reason why we include it is to say one day when it realises then there will be taxes. I don't regard deferred tax as a form of debt, financing or credit extension at all (A). - No it is definitely not finance. Everyone has to pay taxes, so it is a reflection of your obligation to pay taxes in the future, but I would not view it as a form of financing as such. So if I had to make a choice between a loan and deferred tax, I would say you could not view a deferred tax liability as financing, but it still forms part of your liabilities (A). - In my experience no, because those companies that generally raise the tax liabilities, generally that deferred tax liability is sustained over very long periods (P). - I have never seen it as worthy, and I would not bring into my calculation as such. The biggest reason for this is based on the magnitude with which debentures, loans or corporate bonds are usually done in relation to the type of debt format that you find when working with deferred taxes (P).

		- No I would not classify it that way. If you compare it to raising a loan from the bank it would lead to companies starting to manage their deferred tax in a certain way to sort of hear it as a way of financing and it forming part of the financing activities (P).

The responses of the deferred tax liability not being a form of debt financing corresponds with those of Comiskey and Mulford (2000:233) and Koppeschaar *et al*. (2015:152), namely that a deferred tax liability can be viewed as a future tax obligation and the repayment of income tax in a future period is the result that will occur upon realisation of this liability.

5.2.2.3. Will the inclusion or exclusion of deferred tax from debt affect decisions made based on the debt-to-equity ratio?

The reason for asking this question was to determine whether a deferred tax liability actually could affect decisions made based on the debt-to-equity ratio and what the impact of this could be (refer to Question 6, Appendix A). Table 5-6 provides the participants' responses regarding this question. All of the participants, from both academia and practice, agree that the inclusion or exclusion of deferred tax from the debt-to-equity ratio would affect decisions made based on this ratio, but that the effect thereof would not always be material. According to the participants there are instances where the exclusion of the deferred tax liability can have an extremely material effect, especially if the liability is very large in proportion to the company's other debt (1). The solution regarding the problem of decisions being affected is either to reduce the risk by always including the deferred tax liability in the calculation of the ratio, or to disclose the ratio including and excluding deferred tax so that the user could see what impact the deferred tax liability actually has on the debt-to-equity ratio (2).

Table 5-6: Participants' responses regarding if decisions will be influenced by including or excluding the deferred tax liability when calculating the debt-to-equity ratio

Theme	Number	Participants' direct words
The deferred tax liability might have an effect on decisions made based on this ratio	**1**	- I would have to say you will once again have to go and look from company to company to see if it would have an effect (P). - It would have an impact, I am not sure if it will be material, but it will have an effect. There might be a 2% or 3% difference, the question now is if you go and calculate the weighted average cost of capital and you include it, 2% will then be a lot. This means certain projects might be discarded due to this and thus it will effect decisions made (A). - Deferred taxes can have an effect internally; it will probably not have such a great effect externally (A). - Yes depending on the size of the liability I think it can definitely have an effect on decisions. But if the amount is very small or even immaterial I don't think the effect will be that big based on decisions made (P). - I would say it would have to depend on the size of the deferred tax liability and if it is material or not (P). - Yes if you only report the ratio without saying whether you have included or excluded it, and two companies are being compared and the one company included it and the other company excluded it and this has a material impact on the ratio. Then it will definitely have an impact on decisions (A). - It depends on management; certainly it can have an impact. Management wouldn't necessarily want to

		manipulate the figure, because deferred taxes are calculated and the figure is there and there is nothing you can do regarding this, then again it is not an item that you can control (A). - Generally not a consideration at all. It's only something that would be looked at if flagged (P). - Most of the companies on the JSE are growing and this is only cyclical components, so there is no reason to suspect that the deferred tax liabilities will unwind. The deferred tax liability is not such a material item that is looked at (P). - I think if you look at how other people view and treat this item, it won't have such a large effect on the decisions they make, but on the other hand if I am looking at buying a company and I look at their debt-to-equity ratio and I see that this company has a very large deferred tax liability it would factor into my decisions made (A).
Proposed treatment of liability to better suite decisions made	**2**	- ...and therefore I would include it as part of the debt-to-equity ratio (P). - I would rather just suggest that the deferred tax liability be included in the calculation of the debt-to-equity ratio (P). - That is why I would suggest as an practical measure what could be done is maybe just to clearly indicate when this ratio is published that you have included or excluded the item, because I think that this can certainly make an material impact (A). - When it comes to the debt-to-equity ratio it is actually better in my opinion to exclude deferred tax from the calculation, because then the ratio can be managed without it and then it won't have to be taken into account the whole

		time (A). - That's why I say that both alternatives of the ratio can be shown and then it can be seen what the deferred tax liability consists of and then a better decision can be made (A).

5.2.2.4. Is a deferred tax liability an influential item in the calculation of the debt-to-equity ratio?

Table 5-7 provides the participants' responses with regard to the deferred tax liability being an influential item in the calculation of the debt-to-equity ratio (Question 7, Appendix A). Three of the four professionals in practice view the deferred tax liability as an influential item, but the level of influence would differ from company to company. The size of the liability would also play an important role (1). The responses from the participants in academia are split between this being an influential item or not, and overall the responses are split almost exactly in half between the participants. The majority of the professionals in practice would look at the type of company and the size of the liability to determine whether the deferred tax liability would be influential. One interesting solution provided by a participant in academia regarding the deferred tax liability is to calculate the debt-to-equity ratio including and excluding deferred tax and to disclose both ratios; this will allow users to make their own decisions regarding the liability and its effect (2).

Table 5-7: **Participants' responses regarding deferred tax being an influential item in the calculation of the debt-to-equity ratio**

Theme	Number	Participants' direct words
The deferred tax liability is an influential item	**1**	- Yes definitely. Depending on the size of the deferred tax it will definitely be important. It could have a meaningful effect in certain cases perhaps not in all companies (P). - Management decisions more importantly would be influenced by the deferred tax liability; I think it should play on the amount because at the end of the day SARS is

		supposed to get paid first (P). - Deferred tax liability is a material item, but again you will have to go and investigate from company to company to determine if it is material or not (P). - Yes, I think it can be quite a sizeable item and because it is money that you put aside, it will form part of your retained income, so yes it will have an effect on what you can invest. If it were to be compared with the other liabilities of the company, I think it would definitely be smaller (A). - I think it will depend from company to company, and what you have. It could have a big impact. I would then say show the calculation with and without the liability and if the item had a material or not a material effect at least both ratios will then be displayed. This is what the ratio looks like if you include the deferred tax liability and this is how the ratio would look like if you excluded it, to show both alternatives (A).

The deferred tax liability isn't an influential item	**2**	- So in other words we are not looking at the deferred tax liability directly, but indirectly and when there is this big difference between cash and effective tax rates we are kind of saying ok well that often sits in a deferred tax liability, and then we would question it. I would not go and look at a balance sheet and say whoa there is a big deferred tax liability and this is an issue (P). - I just don't think that decisions will necessarily be affected in such a material way compared to the real liabilities in the debt-to-equity ratio if I could state it as such. The actual liabilities are supposed to carry a larger weight when it comes to decisions being made. So one option that is available is when the debt-to-equity ratio is published indicating in words or brackets what effect deferred tax had on the ratio (A). - So I think it is a substantial and significant item, but not as material as the other obligations that the company has (A). - I would like to say no, and this is just because I am not an advocate when it comes to the concept of deferred tax, and therefore my answer would be no, I don't think so. Because the company where I was previously employed it wasn't regarded as an item that would have a massive impact on the debt-to-equity ratio (A).

The responses from participants correlate with Chandra and Ro's (1997:329) findings that the debt-to-equity ratio can be calculated in a variety of ways, and that when this ratio is adjusted for deferred taxes this change will then be negatively related to the company's ordinary share risk. Financial risk measures and decisions based on these measures could be affected in a negative manner. Participants posit that, if the deferred tax liability is very small in relation to other debt and equity, the

inclusion or exclusion of this item will not have a big impact on decisions made by the company.

5.2.3. Theme 3: The different proposed treatments of deferred tax in the calculation of the debt-to-equity ratio

The third theme regards the different proposed treatments of deferred tax in the calculation of the debt-to-equity ratio. It is divided into four sub-themes namely:

- How will the participant treat the deferred tax liability in the calculation of the debt-to-equity ratio?
- Can a deferred tax liability be treated as equity in the calculation of the debt-to-equity ratio?
- Can a deferred tax liability be offset against the cost price of an asset when calculating the debt-to-equity ratio? and
- Would the exclusion of the deferred tax liability deliver a more accurate debt-to-equity ratio?

5.2.3.1. How will the participant treat deferred tax in the calculation of the debt-to-equity ratio?

The purpose of this question was to determine how the participants from both academia and practice would actually treat a deferred tax liability in the calculation of the debt-to-equity ratio and to better understand their views (refer to Question 8, Appendix A). The results can be seen in table 5-8. The overwhelming response to this question from participants in academia and practice move towards treating the deferred tax liability as part of debt in the calculation of the debt-to-equity ratio. This is due to the fact that it is still an obligation to repay an amount in the future. Based on the fact that the users of financial statements and ratios are the same, and because IFRS attempts to take everything into account for decision making purposes, six of the participants, three from academia and three from practice, feel that the current treatment of the item as a liability is correct (1). The participants who state that the item should be included as part of debt are in agreement with the views of Huss & Zhao (1991:71) that the treatment of deferred tax as a liability is based on the assumption that the tax will be paid and redeemed in the near future.

Only one participant from academia feels that the deferred tax liability should not form part of debt. The reason for excluding the liability from debt is based on the fact that, if the assets of a company are continuously replaced, the liability will not be repayable for quite some time. Should this happen it would be more appropriate to exclude the item from debt (2). This correlates with Bartlett's (2014:693) view that in a constantly growing company the deferred tax liability will never really reverse due to assets continuously being replaced. Thus the deferred tax liability should rather be excluded from debt.

Table 5-8: **Participants' responses to how they would treat the deferred tax liability when calculating the debt-to-equity ratio**

Theme	Number	Participants' direct words
Include the deferred tax liability as part of debt in calculation	**1**	- In my opinion I have always seen deferred tax as the tax for the future. If it is pulled through to accounting it can be determined that we have a current liability in our books, and it is a present obligation to do something. I would say consider it in your ratios depending on what your goals are. It seems to me you still have a present obligation to pay that tax. I would say you need to include it as part of debt, but I can see the arguments of the people who do not want to include it as part of debt (A). - It depends on whether you consider it to be a liability. It becomes a liability when the amount is repayable. It will only become repayable once the company stops growing. So when the company starts to decline and moves into a declining phase or the company is liquidated, then the deferred tax liability normally becomes repayable (A). - There are many thoughts that went into the development of IFRS. The International Accounting Standards Board does a lot of research regarding what is important for decision making and what isn't important and according to me because the user of the debt-to-equity ratio is the same

		as the user of the financial statements. Based on this I think you should treat it the same as IFRS and therefore it should be treated as part of debt (A). - Normally I don't adjust the ratio; I accept it at face value. I don't adjust the ratio for deferred tax liabilities (P). - It depends on the size. If it is a large amount, it would affect me. So the biggest thing that would influence my decision here is the materiality and the size of the deferred tax liability (P). - I think it should still be viewed as a liability. As it forms more part of the liability. I think it is a bit more conservative to look at deferred tax as a liability because at some point we are going to have to pay that cash out (P).
Exclude the liability from debt when doing the calculation	**2**	- I think we excluded it from debt and ignored it; we emphasised it in the company where I worked and sanitised it. We therefore just excluded it from the calculation. We put the item in the balance sheet and that was it, and it always just lay there (A). - As long as you keep on replacing your assets and if the assets keep on being renewed and as long as the assets are renewed the liability will actually be a reserve, and then I would consider it to be capital and not include it as part of debt (A).

5.2.3.2. Can a deferred tax liability be recognised as equity in the calculation of the debt-to-equity ratio and why?

Table 5-9 provides the participants' direct words with regard to whether they would classify the deferred tax liability as equity when calculating the debt-to-equity ratio (Question 9, Appendix A). The responses regarding this question go both ways; there is a strong argument that the deferred tax liability is closer to equity rather than

a liability because of its permanence and the fact that it is a long-term source of funding. Three of the four participants in practice state that they would rather treat the deferred tax liability as equity due to the permanence of the item in a growing company (1). According to Fridson and Alvarez (2002:276) the reason why the deferred tax liability should form part of equity rather than debt is based on the fact that, as long as the company continues to pay taxes at less than the statutory rate due to assets continuously being replaced, the account will not reverse. The responses from participants agree with research performed regarding this question.

The fact that the deferred tax liability is an obligation to repay an amount to SARS makes it more of a liability than equity, and the fact that the equity holders have no share in this amount can be contradictory towards the decision to recognise it as equity. Three of the participants from academia state that the deferred tax liability still represents an obligation to pay an outstanding amount and, as such, the item cannot be treated as equity (2).

Table 5-9: **Participants' responses regarding a deferred tax liability being treated as equity in the calculation of the debt-to-equity ratio**

Theme	Number	Participants' direct words
The deferred tax liability can be treated as equity	**1**	- Yes, closer to equity than debt. Because of its permanence and it is a permanent source of funding, so that would be the rational (P). - The only thing that I maybe can think of is if it's coming off the back end of a big tax loss and you have the deferred tax loss and you don't pay the tax for the next couple of years than in a sense it could be regarded as equity (P). - If you look at the fact that a growing company which keeps on expanding and buying large new assets will have a deferred tax liability and the probability of reversal does not seem imminent based on the fact that the company reaching maturity is far off and then from that viewpoint it might be regarded as equity (P).

		- Yes because the liability is a long-term source of financing and it is a reserve and money is taken from the company's profit and set aside in a reserve (A).
The deferred tax liability cannot be treated as equity	**2**	- I wouldn't recognise it as equity. Because to me it is more on the side of a liability and because of this I would rather put this item on the liability side (P). - No I don't see why it should be equity. It is a liability. Deferred tax comes down to you owe somebody money and you owe the receiver (P). - No I don't think it can be treated as equity unless it relates to equity and there are a couple of instances where this might happen for example equity-settled share-based payments. I can't see it as equity, it is an amount that you owe SARS, it has nothing to do with the owners of the company. So I am unable to visualise it as part of equity (A). - No, it's not equity, it is something that is payable to a third party. Equity by default means that it is something that the equity holders have an interest in and it is certainly not something that the shareholders have a right to and thus I would not treat this item as equity at all (A). - I would not want to treat it as equity and I wouldn't display this item as equity. It still comes down to what is deferred tax, and deferred tax is tax that will be paid in the future and the moment you say it is tax that will be paid in the future, it means that there is an obligation that exists and then to me it feels more like a liability rather than equity (A).

5.2.3.3. Should the deferred tax liability rather be offset against the cost price of the asset in the calculation of the debt-to-equity ratio and why?

Table 5-10 provides the participants' responses with regards to whether they think the deferred tax liability that exists due to temporary differences created by a specific asset should be offset against the cost price of this asset when calculating the debt-to-equity ratio (Question 10, Appendix A). Three professionals in practice and one in academia feel that the deferred tax liability could be offset against the cost price of the asset that created the temporary differences. But the problem with this proposed treatment is that the liability is kept out of sight and the company might forget about it, which could lead to other ratios being negatively influenced by this treatment (1). The responses correlate with the findings of Amir *et al*. (2001:276) that the deferred tax liability is the result of a certain tax obligation that can be taken into account when the cost price of the asset is being determined or it can be treated as equity.

The other half of the participants, consisting of three professionals in academia and one in practice, are of the opinion that this course of action would overcomplicate things, and that there would be too many unnecessary consequences resulting from treating the deferred tax liability like this (2). This proposed treatment would lead to other information regarding the company being affected and this could lead to incorrect decisions being made that are based on this information.

Table 5-10: **Participants' responses regarding a deferred tax liability being offset against the cost price of the asset that created the liability in the calculation of the debt-to-equity ratio**

Theme	Number	Participants' direct words
The deferred tax liability can be offset against the cost price of the asset	**1**	- I think you can set it off against the cost price of the asset. Absolutely other decisions can definitely be influenced if the deferred tax liability is treated as such (P). - I think you should be able to offset it. I think it would muddy the waters and it would leave the doors open for too much fin nicking if it is done and this can be a problem (P). - You might be able to treat the liability as such, the

		problem with this is it then comes back to the previous question of regarding a liability as equity and then you're technically going to make it part of the asset (P). - It's not a bad idea, but the problem then arises regarding the liability, out of sight out of mind. So if you do not know about it and you put it off against the cost price of the asset and one day when the asset eventually realises you need to remember that there is a deferred tax liability that is parked inside the cost price of the asset and this could influence the figures and the calculations. I don't think it necessarily needs to be disclosed like this on the statements, but I think if you calculate a certain ratio the liability can certainly be treated like this (A).
The deferred tax liability should not be offset against the cost price of the asset	**2**	- No. From my point of view, and others might disagree I always want the accounting to be as simple as possible. I would rather have it be wrong but simple. For there to be add backs and more complications that you have to keep in mind. By doing the proposed treatment it would lead to the over complication of the analysis process (P). - No I don't think so. I think that this might be a solution for the debt-to-equity dilemma, should the liability be included or not, but I think that it will cause other problems. It will lead to information regarding assets being reflected incorrectly, so it will lead to a different area of your decision making process being adversely affected (A). - No, for the simple reason the more information you have the better your decisions will be. As soon as you start off setting items against each other it will cause your information to dampen and then you will have less information available. I don't think these two items should be offset against each other, because it will make the

		information less understandable (A). - To me it feels like if you go and offset the liability against the cost price of the asset, I think that information will be lost, because a person who wants to see what assets you have will now see that your assets are worth less. The reason for this is because I went and included future liabilities in the cost price of my asset (A). - If I, for example went and bought property, plant and equipment and I financed this transaction with a loan, why don't I net the finance lease against the asset, because then my answer would be zero when these two items are subtracted from each other. Why wouldn't we do this with a finance lease, but now we want to go and do this with a deferred tax liability and it would be incorrect (A).

5.2.3.4. Would it be more accurate to exclude the deferred tax liability completely from the calculation of the debt-to-equity ratio?

Lastly, the participants were asked whether a more accurate debt-to-equity ratio would be delivered if the deferred tax liability was completely excluded from the calculation (refer to Question 11, Appendix A). Table 5-11 provides the participants' direct words regarding a more accurate debt-to-equity ratio being presented when deferred tax is excluded from the calculation. Two of the participants, one from practice and one from academia, state that they would exclude the deferred tax liability from the calculation of the debt-to-equity ratio to improve comparability between companies (1). The majority of the participants state that they would include the liability in the calculation of the debt-to-equity ratio, because the deferred tax liability is still an obligation to pay an amount to SARS. The inclusion of the liability as part of debt is a better reflection of the item compared to excluding it from the ratio (2).

Table 5-11: **Participants' responses regarding a more accurate debt-to-equity ratio being calculated by completely excluding the deferred tax liability from the calculation**

Theme	Number	Participants' direct words
It would be more accurate to exclude the deferred tax liability	**1**	- I think in terms of comparing two other companies with each other I would exclude the deferred tax liability from the start and not make it part of the equation (P). - Yes, I am an advocate of this, that the debt-to-equity ratio should be calculated without including the deferred tax liability. The deferred liability will be there either way, it would be better just to ignore it, because you can't control this item with your debt-to-equity ratio. I am definitely an advocate of calculating the debt-to-equity ratio excluding deferred tax and therefore my suggestion would be to calculate the ratio excluding the deferred tax (A).
Include the deferred tax liability in the calculation	**2**	- Personally I would have included it as part of capital because I still think it adds value and it is a source of financing. The other problem is that if you exclude it then management will be able to use the money, but if you include it even if it is as equity then the equity holders will know that they are entitled to this amount and that you should do something with it (A). - Yes, I think it should be included. I think to entirely exclude the amount from the calculation is not the right answer according to me. It reflects your obligation to one day pay taxes. So it should definitely be part of your debt in the debt-to-equity ratio (A). - It doesn't matter enough to us to think about it. It is not a primary driver of our investment decision. It is more a check of our investment decision (P).

		- I think it should be included. That for me is a more appropriate treatment of the item and will deliver a more clear reflection of the debt-to-equity ratio (P). - I would still keep it in the debt-to-equity ratio (P). - I think we should rather go and calculate two formulas, where deferred tax is included and excluded. I think it will accommodate both users who are out there. People who feel strongly about the one side and people who feel more strongly about the other side will be able to gain value and benefit from both formulas, and therefore I would suggest calculating two formulas, one including and one excluding deferred tax (A).

5.3. SUMMARY

This chapter serves to provide an overview of the data analysis of the empirical research done in this study. The results of the qualitative research interviews are thoroughly discussed. The data from the research interviews was independently transcribed and coded by making use of Atlas.ti in order to identify different themes. From this data three main themes could be identified under which the research interviews could be classified. The main themes identified include the following: factors other than deferred tax taken into consideration when calculating the debt-to-equity ratio, current treatment of deferred tax as a liability in this ratio and the impact thereof, and the different proposed treatments of deferred tax in the calculation of the debt-to-equity ratio. The main themes were then split into sub-themes to help better sort and categorise the responses made by participants. These themes and sub-themes were tabulated and thoroughly discussed in section 5.2. The participants' direct words were included in the tables in order to support the identified themes.

With this chapter secondary research objectives 3 and 4 (Section 1.3) are reached. Chapter 6 provides the major findings, conclusions, recommendations, limitations, and recommendations for future research.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1. INTRODUCTION

In this concluding chapter, a general overview of the study is provided in order to indicate that the research objectives, as stated in section 1.3, have been addressed. Conclusions are drawn, the limitations pertaining to this study are discussed, and recommendations for further research opportunities are provided in order to conclude this chapter. This chapter aims to achieve secondary research objective 5 (Section 1.3).

6.2. OBJECTIVES OF THE STUDY

As discussed in Section 1.3, the main goal of this study is to gain a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this differs between theory and practice.

The main objective was achieved by the following secondary objectives:

- Conceptualising the debt-to-equity ratio from the literature by performing an in depth theoretical study regarding the ratio to gain a better understanding of the purpose and implications of this ratio (research objective 1);
- Conceptualising from the literature what the appropriate treatment of deferred tax in the debt-to-equity ratio is (research objective 2);
- Determining from an academic perspective how deferred tax should be treated in the calculation of the debt-to-equity ratio by gaining the opinion of specific academic practitioners who specialise in the field of financial management and financial accounting (research objective 3);
- Determining how stockbrokers and portfolio managers take deferred tax into account when calculating the debt-to-equity ratio by performing interviews with certain professionals in practice (research objective 4); and

- Based on research conducted, formulate a conclusion and recommendations regarding the treatment of deferred tax in the debt-to-equity ratio (research objective 5).

In this chapter conclusions are drawn for each one of these objectives. These conclusions are based on the findings in Chapters 2 to 5.

6.3. OVERVIEW OF THE LITERATURE

The literature study was done in order to obtain information to reach secondary research objectives 1 and 2 and will be discussed below:

6.3.1. Different aspects of the debt-to-equity ratio and the purpose and implications of this ratio

The first research objective achieved in Chapter 2 focused on gaining a better understanding of the debt-to-equity ratio. The literature study undertakes a thorough discussion regarding financial statements and how important it is for stakeholders to better understand what the figures in financial statements really mean. Financial statements are used to sketch a picture of the economic performance of an entity and are the primary source of information regarding the company (Section 2.2.1). Financial statement analysis is a method that can be used to analyse the business as a whole (Section 2.4.2). Financial statement analysis is a method used to thoroughly investigate the financial position as well as the progress of the company, and allows insight into the operative activities to be gained (Section 2.4.1). It is established that financial statements deliver very important information, and through proper analysis of these statements valuable information can be extracted.

Ratio analysis is one of the most well-known and widely used financial statement analysis tools (Section 2.6.1). Ratio analysis can be defined as the systematic use of ratios to analyse and interpret statements in order to determine where an entity's strengths and weaknesses lie (Section 2.6.1). The debt-to-equity ratio is one of the ratios used when the focus of the analysis is directed towards debt management. The debt-to-equity ratio is used to indicate how much debt financing is currently being used by an entity in relation to equity funds invested (Section 2.7.4).

The importance and value of the debt-to-equity ratio lies in the fact that the result of this ratio conveys an important message regarding the investment structure and operational activities of the entity (Section 2.7.3). The debt-to-equity ratio is the most commonly used ratio worldwide when it comes to measuring financial risk or financial strength of an entity, and is used by creditors to determine to what extent they will be protected in case of insolvency (Section 2.7.4). The debt-to-equity ratio is used to determine the solvency of a company, and based on debt paying ability of the company allows stakeholders to determine what the current debt position of the entity is (Section 2.7.5).

In conclusion it can be determined that the debt-to-equity is a very important ratio which can be used to obtain very valuable information regarding the debt management of an entity. The lack of uniformity in the calculation of ratios is a problem, especially when it comes to comparability between industries and benchmarks (section 2.7.4, page 43). This is especially true when it comes to the calculation of the debt-to-equity ratio, because of the fact that there are different views regarding what should be included as part of debt and equity in the calculation of this ratio.

6.3.2. Determining what the appropriate treatment of deferred tax is in the calculation of the debt-to-equity ratio

The second research objective that was achieved in Chapter 3 focuses on gaining a better understanding of deferred tax and how this item should be treated in the calculation of the debt-to-equity ratio. The literature study tends toward the problem identified at the beginning of the study in the thorough study regarding deferred tax. The main research objective is to gain a better understanding regarding the treatment of deferred tax in the calculation of the debt-to-equity ratio. An issue that arises from the calculation of the debt-to-equity ratio is the appropriate treatment of deferred taxes (Section 3.2.4). Chapter 3 focuses on what deferred taxes are in order to gain insight into how a deferred tax liability should be treated in the debt-to-equity ratio.

Income taxes present one of the more challenging aspects of the financial reporting process and have a pervasive impact on the company’s business decisions. Income taxes are usually a material item compared to other items in the balance sheet

(Section 3.2.1). The differences between the carrying amount of an asset or liability presented in the financial statements which are determined according to accounting standards, and the carrying amount recorded according to the tax act, leads to deferred taxes being recognised (Section 3.2.1). Deferred taxes represent the cumulative differences between the amount of taxes that was actually paid and taxes calculated according to the statutory rate (Section 3.2.1).

Deferred tax assets and liabilities are very important balance sheet items and both these items are substantial for many firms (Section 3.2.2). The difference between a deferred tax asset and a deferred tax liability is a very important distinction that needs to be made, especially because the one is an asset that is the result of deductible temporary differences that will lead to less tax being paid in the future. The deferred tax liability is the result of taxable temporary differences that will lead to the company paying more tax in a future period. Deferred tax assets provide information regarding the future tax benefits that will be received upon reversal of this account (Section 3.2.2). A deferred tax liability can be viewed as a future tax obligation that is the result of an item created due to taxable temporary differences which cause the pre-tax financial income to exceed the taxable income (Section 3.2.2).

The concept of deferred taxes has certain weaknesses that come with the premise of this item, and one of these weaknesses is that a going concern will probably be able to indefinably suspend the repayment of the so-called liability by making use of effective and clever tax management (Section 3.2.1). The deferred tax liability should be included as part of equity when calculating the debt-to-equity ratio based on the following: in a constantly growing company the deferred tax liability will never really reverse, and as long as the company keeps paying taxes at less than the statutory rate the deferred tax account will continue to grow (Section 3.2.4). The liability treatment of deferred taxes and including it as debt is based on the assumption that the tax will be paid in the near future (Section 3.2.4). When deferred taxes are accounted for in terms of current international accounting standards it leads to the liability being overstated. The effect of this overstatement can be treated by capitalising the tax benefit into the original cost of the asset (Section 3.2.4). Tax deductibility and taxability regarding the deferred tax liability are factors that can be taken into account when the value of an asset is determined (Section 3.2.4).

In conclusion, deferred taxes is usually a material amount in the balance sheet of a company, and when it comes to the calculation of the debt-to-equity ratio the appropriate treatment of deferred tax liabilities can become a problem. Based on the literature review performed, the deferred tax liability can be treated as debt, as equity, or it can be offset against the cost price of the asset that is responsible for this liability. Each one of these proposed treatments will have a different effect on the calculation of the debt-to-equity ratio and this can lead to different decisions being made based on a ratio affected by one substantial item.

6.4. EMPIRICAL STUDY

An empirical study was performed in order to meet secondary research objectives 3 and 4 (Section 1.3). A qualitative method approach was followed in order to evaluate the requirements as per the literature and compare them to the outcome of the empirical results. Reference is made to the literature studied in Chapters 2 and 3 as well as the empirical results in Chapter 5. In this way the objectives set out in Section 1.3 are put into context.

6.4.1. Participants' views regarding the debt-to-equity ratio and the proposed treatment of deferred tax in the calculation of this ratio

Qualitative research interviews were performed to address research objectives 3 and 4 (Section 1.3). These objectives include determining from an academic and practice viewpoint how participants from both these fields would account for deferred tax when calculating the debt-to-equity ratio. The last research objective is to formulate a conclusion and recommendations based on research performed regarding the treatment of deferred tax in the debt-to-equity ratio. To achieve these objectives interviews were performed with professionals in academia and professionals in practice. The results of these interviews can be seen in Section 5.2. Through the coding of data three main themes were identified in the responses, namely:

- Factors other than deferred tax taken into consideration when calculating the debt-to-equity ratio;
- Current treatment of deferred tax as a liability in the debt-to-equity ratio and the impact thereof; and

- The different proposed treatments of deferred tax in the calculation of the debt-to-equity ratio.

The conclusions drawn from each of these themes are now discussed.

6.4.2. Factors other than deferred tax taken into consideration when calculating the debt-to-equity ratio

Value placed on the calculation of the debt-to-equity ratio and information that can be extracted from this ratio

The participants were asked what value they would place on the calculation of the debt-to-equity ratio and information that can be extracted from this ratio. Most of the participants from both academia and practice posit that the debt-to-equity ratio is a very valuable ratio that contains valuable information. These responses correlate with the findings of the literature study (Section 2.7.4). Most of the participants state their reasons why the debt-to-equity ratio is important to them and why they would place value on the information extracted from this ratio. It is determined that, from both theory and practice viewpoints, the ratio is regarded as one that plays a very important role and delivers important information regarding some key areas, for example financial risk, solvency, leverage, share price, and a ratio that summarises the entire balance sheet.

Even though the debt-to-equity ratio is very valuable and delivers important information, one recurring theme became evident from the participants' responses. Most of the participants in practice state that the ratio is not the most important ratio to calculate or use, and that the ratio is used like a check ratio. This correlates with the findings made in the literature study (Section 2.6.5). The true importance of this ratio actually comes through when the ratio is quite sizeable, and this could then be a flag for further investigation. The participants also state that the debt-to-equity ratio would have more meaning and be more valuable if this ratio is investigated at and used for external purposes compared to looking at the ratio internally. This statement is important as it shows that the ratio is important, but more value can be extracted from this ratio if it is used for external purposes.

Should information reported in terms of IFRS be adjusted when calculating certain ratios for more accurate information?

The second question was asked to determine if participants would adjust certain figures reported in terms of IFRS when calculating certain ratios. The participants in practice emphasise the fact that they deal with very large time constraints which makes it very hard to make adjustments to figures. The question elicited various split results between the participants. The participants in the field of accounting note that information reported in terms of IFRS already takes into account what management requires to make decisions and that there is no requirement to adjust these figures. The responses from participants agree with the findings of the literature study and the statements made by other authors regarding this aspect (Section 2.6.5). A large number of the participants support the statement that IFRS figures should be adjusted to increase and improve comparability; if the adjustments are correctly applied it makes the information more understandable and accurate. The professionals in practice also state that, if information could be standardised across companies, it would allow them to cover more ground over a shorter period, a sentiment echoed in the literature (Section 2.6.5).

Will the type of analyst and their background influence inputs used in the calculation of the debt-to-equity ratio

Thirdly, the participants were asked if the analyst and their background would influence the inputs used to calculate the debt-to-equity ratio. The participants from academia and practice strongly agree on this point as almost every participant states that the background of the analyst would in some way affect and play a role when it comes to what inputs would be used to calculate the debt-to-equity ratio. Each analyst has their own goals when they calculate and look at different ratios, which definitely affects the way a ratio is calculated. Analysts also employ individual methods and techniques to calculate a certain ratio to ensure the correct information can be extracted from the ratio. In conclusion the overwhelming response from academia and practice regarding this question is that the analyst and their background will in some way influence the inputs used to calculate a ratio. The participants' responses agree with the findings of the literature study (Sections 2.5.2 and 2.6.4).

These results and the participants' direct words are found in Section 5.2.1.

6.4.3. Current treatment of deferred tax as a liability in the debt-to-equity ratio and the impact thereof

Does the industry in which the entity operates affect the treatment of deferred tax in the debt-to-equity ratio?

The participants were then asked if they think the industry in which an entity functions would affect the treatment of deferred tax in the calculation of the debt-to-equity ratio. The participants who primarily focus on financial accounting state that the type of industry in which an entity operates would not have an impact on the deferred tax liability and its treatment in the debt-to-equity ratio, because every single company has to pay taxes regardless of their industry. If the deferred tax liability is treated differently between industries, comparability would be directly affected and be less effective. Participants also provide a possible solution, to rather disclose the ratio including and excluding deferred taxes so that the user of the ratio can see both ratios and use the one that best suits their needs. More than half of the participants responded that they believe the type of industry would definitely affect the treatment of deferred taxes. The responses are substantiated by providing examples from two different industries, like banking and mining, and explaining why differences between these two industries exist. Thus the responses regarding this question are divided between theory and practice. The industry can impact the treatment of the deferred tax liability, but it is not the primary driver behind the proposed treatment of this item as there are still other factors that need to be considered.

Can deferred tax be regarded as a form of debt financing in terms of the debt-to-equity ratio

The second question was asked to determine whether the participants regarded deferred tax as a form of debt financing in terms of the debt-to-equity ratio. Only two participants, one from academia and one from practice, feel that deferred taxes could be regarded as debt financing, because the company is effectively leveraging money that belongs to somebody else. The repayment of a deferred tax liability could sometimes take a substantial amount of time leading to it being regarded as a long-term source of financing. Three of the participants in practice and three in academia state that deferred taxes cannot be regarded as debt financing, because it

comes down to an outstanding amount which reflects an entity's future obligation to repay an outstanding amount related to taxes. The deferred tax liability is ultimately a postponement of payment provided by SARS rather than a form of financing. The responses on the deferred tax liability not being a form of debt financing agrees with the findings of the literature study (refer to Section 3.2.1).

Will the inclusion or exclusion of deferred tax from debt affect decisions made based on the debt-to-equity ratio?

The third question asked was if the participants think the inclusion or exclusion of deferred taxes from the debt-to-equity ratio would affect decisions made based on this ratio. All of the participants, from both academia and practice, are in agreement that the inclusion or exclusion of deferred tax from the debt-to-equity ratio could have an impact on decisions made based on this, but they also opine that the impact of this might not always be material. Some participants feel that the impact on decisions would directly be affected by the size of the deferred tax liability; this would also differ from company to company. The type of decisions that the debt-to-equity ratio is used for would also be affected by how substantial the treatment of deferred tax is when calculating this ratio. Conclusions drawn from participants' responses agree with the results obtained from the literature study (Section 3.2.4). Participants respond by saying that, if the deferred tax liability is very small in relation to other debt and equity, the inclusion or exclusion of this item will not have a big impact on decisions made by the company. It is also suggested that the ratio should be calculated including and excluding deferred taxes.

Is a deferred tax liability an influential item in the calculation of the debt-to-equity ratio

Lastly, the participants were asked if the deferred tax liability is an influential item in the calculation of the debt-to-equity ratio. Two professionals in practice and two professionals in academia view the deferred tax liability as an influential item; the level of influence, however, is directly related to the size of the liability. The reason for the item being influential is that the item will definitely have an impact on the management decision making process, and with most companies the deferred tax liability can be quite sizeable and due to this it will have a material impact on decisions made by management. Two professionals in practice and two

professionals in academia note that the deferred tax liability would not be an influential item as it is not an item that receives a large amount of focus when it comes to calculating ratios. Decisions might be affected in some way, but the effect of how the deferred tax liability is treated might not be that material. The solutions that can be implemented is to calculate the debt-to-equity ratio including, excluding deferred taxes, and to disclose both ratios. This will reduce the risk of the item materially affecting decisions as both alternatives of the ratio can be viewed.

These results and the participants' direct words are found in Section 5.2.2.

6.4.4. The different proposed treatments of deferred tax in the calculation of the debt-to-equity ratio

How will the participant treat deferred tax in the calculation of the debt-to-equity ratio?

The first question was asked to determine how each one of the professionals in practice and professionals in academia would treat deferred tax when calculating the debt-to-equity ratio. The overwhelming response regarding this question comes down to the fact that six participants, consisting of three people from academia and three from practice, would treat the deferred tax liability as debt in the debt-to-equity ratio as this item is still debt. The reason why the participants would treat it as debt is based on the fact that the deferred tax liability still remains an obligation to repay taxes in a future period, and the most appropriate treatment would be to include the item as part of debt. This correlates with the findings of the literature study (Section 3.2.4).

Two participants from academia say that they would completely exclude the liability from debt as the results would be more accurate; if one looks at a company that is continuously growing and replacing their assets, the chances that the deferred tax liability will reverse in the near future is very slim. Thus the item should not form part of debt. This agrees with the findings of the literature study (Section 3.2.4).

Can a deferred tax liability be recognised as equity in the calculation of the debt-to-equity ratio and why?

The second question was asked to determine whether the participants would treat the deferred tax liability as equity in the calculation of the debt-to-equity ratio. The

responses regarding this question lean both ways as half of the participants feel that the deferred tax liability could be treated as equity while the other half feels that this treatment would be inappropriate. Three of the four participants in practice state that they would rather treat the deferred tax liability as equity. This is due to that the item can almost be permanent and that the liability can be regarded as a permanent source of funding. The likelihood of the account reversing in a company that is currently in a period of high growth is highly unlikely and, based on this, the item is closer to equity than debt. The statements made by participants agree with the findings made in the literature study (Section 3.2.4).

Three of the participants from academia state that the deferred tax liability still represents an obligation and thus the item cannot be treated as equity. The liability represents an obligation to repay an amount of outstanding taxes to SARS in the future. Therefore the item is not equity, because equity is something that the equity holders have a right to share in. The equity holders have no claim towards the deferred tax liability as this amount has to be paid to SARS in the future and the company cannot use these funds put aside as investments in long-term projects as it is still an obligation that can become repayable at any moment.

Should the deferred tax liability rather be offset against the cost price of the asset in the calculation of the debt-to-equity ratio and why?

The third question regards one of the alternative treatments of deferred tax in the calculation of the debt-to-equity ratio. The participants were asked whether the deferred tax liability could be offset against the cost price of the asset that was responsible for creating the taxable temporary differences. Three professionals in practice and one in academia posit that one could offset the deferred tax liability against the cost price of the asset that created the temporary differences and that this could be a solution for the whole debt-to-equity dilemma and what should be done with deferred taxes. The problem with this proposed treatment is an “out of sight, out of mind” problem as the company might completely forget about the liability. Furthermore, other ratios could also be negatively impacted by treating the liability like this. The conclusion drawn from the interviews correlate with the findings of the literature study (Section 3.2.4).

The other half of the participants, consisting of three professionals in academia and one in practice, state that offsetting the deferred tax liability against the cost price of the asset would unnecessarily overcomplicate matters and the treatment of deferred tax like this could have large consequences for other aspects of the company. Treating the liability in this manner will also lead to information being lost as well as information regarding assets being displayed incorrectly, thus negatively impacting the company in the long run. The responses are equally divided between participants as half of the participants in academia say you could do this while the other half disagrees and says it should not be offset. Participants in practice responded the same way.

Will it be more accurate to exclude the deferred tax liability completely from the calculation of the debt-to-equity ratio?

Lastly, the participants were asked whether they thought that a more accurate debt-to-equity ratio could be calculated if the deferred tax liability was completely excluded from this calculation. Two participants, one from practice and one from academia, respond that they would completely exclude the deferred tax liability from their calculations, as comparability will be improved and better decisions made based on this ratio. The other six participants, consisting of people in practice and academia, state that they would still include the deferred tax liability in the calculation of the debt-to-equity ratio as this item still reflects a future obligation of the entity, and the amount will have to be repaid in a future period. The inclusion of the liability as part of debt is a better reflection of the debt-to-equity ratio as opposed to completely excluding it from the calculation. It is also proposed that two formulas, one including and the other excluding deferred tax, be calculated.

These results and the participants' direct words are found in Section 5.2.3.

6.5. OVERVIEW AND RECOMMENDATIONS

To achieve secondary objective 5, recommendations are made based on the research done and conclusions drawn from this study. The main objective of this study is to gain a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this differs between theory and practice.

With regards to gaining a better understanding about the purpose and implications of the debt-to-equity ratio it can be posited through reviewing the literature that this ratio conveys a very important message regarding the investment structure and operational activities of the company. The debt-to-equity ratio is also one of the most commonly used ratios when it comes to measuring a firm's financial risk. Thus it could be determined that the debt-to-equity ratio is a very important ratio that can deliver very valuable information regarding the debt management of a company. By examining and comparing the information gathered through the literature study and interviews the conclusion can be drawn that the debt-to-equity ratio is certainly a very important ratio from both academic and practice viewpoints. However, the debt-to-equity ratio is not the most important ratio especially when compared to other ratios that deliver more valuable information. The viewpoint regarding the debt-to-equity ratio is that the ratio should rather be used as a check ratio. Due to the large time constraint imposed on them, professionals in practice do not have time to adjust figures reported in terms of IFRS when calculating certain ratios. The proposed treatment of deferred tax in the calculation of the debt-to-equity ratio is one of the focus areas of this study and determining the different ways this item could be treated is an area investigated in detail. Based on the literature study and interviews it can be determined that there are many different ways of treating deferred tax when it comes to the calculation of the debt-to-equity ratio. Each one of these proposed treatments is supported in some manner by participants in academia and practice. The different treatments of deferred tax has many positive aspects, and some of these alternative treatments help to solve the whole debt-to-equity dilemma regarding the deferred tax liability, but each one of these alternatives can also have negative implications.

As a result of these findings the following recommendations can be made:

- Adjustments regarding figures reported in terms of IFRS should not be overemphasised as much time is devoted to the development of reporting standards to ensure that accurate management decisions can be made; thus making adjustments should not be a focus area when calculating ratios;
- The debt-to-equity ratio should not be calculated and used on its own. The ratio can deliver valuable information, but it is not the only ratio that analysts

in practice take into account. Using this ratio in combination with, for example debt-to-EBITDA, will increase the value of information extracted from this ratio. EBITDA stands for earnings before interest, tax, depreciation and amortisation.

- Focus must also be placed on the analyst who calculates and discloses a certain ratio, because the background of the analyst and their views will definitely affect how inputs like deferred taxes are treated in the calculation. This can have a large impact on decisions made;

- The information used to calculate ratios across industries could be standardised as far as possible - if all of the debt-to-equity ratios in one industry includes deferred taxes while another industry's exclude it from the ratio, comparability will be heavily affected which could lead to incorrect decisions being made;

- When calculating the debt-to-equity ratio it should be properly disclosed that the deferred tax liability is not a form of debt financing and that this item should not be taken into consideration when looking at the company's long-term capital structure;

- The views regarding the treatment of deferred tax in the calculation of the debt-to-equity ratio are very similar between academia and practice as the overwhelming responses regarding this item are exactly the same. The main issue faced by professionals in practice is a lack of time to calculate the debt-to-equity ratio in several different ways. Based purely on the responses from the interviews and the literature study performed it is recommended that the deferred tax liability should be included in the calculation of the debt-to-equity ratio as this treatment ensures that the item is taken into account;

- The deferred tax liability could be treated as equity in the debt-to-equity ratio. It is, however, recommended that a disclosure or note should be made indicating that the deferred tax liability forms part of equity. The reason for treating the liability as such should also be stated. The equity holders of the company must also be informed in some way that they have no claim towards

the deferred tax liability and this is still an obligation to pay tax in a future period;

- Financial information should be kept as simple as possible. It is therefore not recommended that the deferred tax liability be offset against the cost price of the asset responsible for the taxable temporary difference. This could complicate matters unnecessarily and could lead to information being lost in the process; and

- It is suggested that the debt-to-equity ratio always be calculated in two ways: one ratio should be calculated by including deferred tax in the calculation of the debt-to-equity ratio and another ratio should then be calculated excluding deferred tax from the calculation. By disclosing both of these ratios the user of the ratios will be able to see what impact deferred tax actually has on the calculation of the debt-to-equity ratio, which will reduce the risk of decisions being significantly influenced by the incorrect treatment of deferred taxes. The person who makes use of the ratios can then select the ratio that best suits their needs without completely ignoring the deferred tax liability.

6.6. LIMITATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

As with every study this study is subject to certain limitations which are now discussed.

- The study only focused on stockbrokers and portfolio managers who are professionals in practice, and these are not the only people who calculate and use the debt-to-equity ratio;

- Only one input was considered regarding the debt-to-equity ratio, and many other inputs could have an impact on the calculation of this ratio;

- The professionals in academia only comprised two subject fields; other fields could also be taken into consideration when looking at this aspect, for example taxation; and

- The participants in academia are lecturers from only one university, and academics from other universities might have different views regarding the

treatment of deferred tax in the calculation of the debt-to-equity ratio. This also means that the results cannot be generalised for all other universities in South Africa.

Future research opportunities may include the following:

- The study includes only interviews with academics from one of the universities in South Africa. As a future research opportunity academics from other universities could be included;
- The study only focuses on portfolio managers and stockbrokers. In future, research professionals from, for example, banks, could be employed, as the ratio is often used by banks and considered in terms of debt covenants;
- The research only focuses on the treatment of deferred tax in the calculation of the debt-to-equity ratio. Future research could explore other inputs that factor into the calculation of this ratio which can also have a significant impact on the results obtained from this ratio;
- The study only focuses on the debt-to-equity ratio and how deferred tax could impact this ratio. Future studies could include other ratios impacted by deferred taxes and what impact deferred tax could have on decisions made based on these ratios;
- This study focuses solely on the debt-to-equity ratio from a South African company's perspective. Future studies could be performed to investigate how deferred tax could influence a company in other countries across the globe; and
- The study primarily focuses on the liability input of the calculation of the debt-to-equity ratio. In future, more focus could be placed on equity and what should be included as part of this item, because equity is a very important component in the calculation of the debt-to-equity ratio.

6.7. SUMMARY

Chapter 6 serves to provide an overview of the research study. The secondary research objectives are used as a guideline to summarise the findings presented in

the previous chapters. Objectives 1 and 2 are addressed in chapter 2 and 3, while objectives 3 and 4 are accomplished in chapter 5.

After careful consideration of the results, recommendations are formulated in order to address the shortcomings detected through the study. The limitations of this study are presented and recommendations for possible future study opportunities made.

The research question focuses on obtaining a better understanding regarding the treatment of deferred tax in the debt-to-equity ratio and to determine how this item is treated in practice and what the theory suggests. This objective was achieved by performing a literature review and qualitative research interviews with professionals in practice and professionals in academia.

The final conclusion of this research study is that the debt-to-equity ratio is definitely a very valuable ratio. In order to ensure that the ratio remains comparable and as simple as possible the ratio should be calculated by including the deferred tax liability as part of debt. By doing this the item is not merely excluded, which ensures that no unnecessary loss of information takes place.

It is also recommended that the debt-to-equity ratio always be calculated in two ways: one ratio should be calculated by including deferred tax in the calculation of the debt-to-equity ratio and another ratio should then be calculated excluding deferred tax from the calculation. Both these ratios should be disclosed. By computing both these ratios the user has the freedom to select the ratio that best suits their needs, and the impact of deferred tax will not simply be ignored.

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ANNEXURES

7.1 APPENDIX A: Semi-structured research interviews

1. What value do you place on the calculation of the debt-to-equity ratio and the information that can be extracted from this ratio?
2. Do you think that information reported in terms of IFRS need to be adjusted to calculate certain ratios to gain more accurate information?
3. Do you believe the type of analyst and their background will influence the inputs used to calculate the debt-to-equity ratio?
4. Do you believe that the type of industry in which an entity functions has an effect on the treatment of deferred tax in this ratio?
5. Can deferred tax in your opinion be regarded as a form of debt financing in terms of the debt-to-equity ratio?
6. Do you believe that by including or excluding the deferred tax liability from debt will influence decisions made based on the debt-to-equity ratio?
7. Do you consider that a deferred tax liability is an influential item in the calculation of the debt-to-equity ratio?
8. How would you treat a deferred tax liability when calculating the debt-to-equity ratio and the reason for treatment?
9. Do you believe that a deferred tax liability can be recognised as equity and why?
10. Do you believe that a deferred tax liability should rather be offset against the cost price of the asset and why?
11. Do you think a more accurate debt-to-equity ratio can be calculated when deferred tax liability is excluded from the calculation?