# ASSESSING PERCEPTIONS ON PERFORMANCE MEASURES AND FUNDING PROCESSES AT A DEVELOPMENT FINANCE INSTITUTION IN SOUTH AFRICA

by

**Petunia Siphiwe Mhlahlo**

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Supervisor: Prof. L Julyan

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## DECLARATION

I declare that:

**ASSESSING PERCEPTIONS ON PERFORMANCE MEASURES AND FUNDING PROCESSES AT A DEVELOPMENT FINANCE INSTITUTION IN SOUTH AFRICA**

is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

_____ _____

Ms Petunia Siphiwe Mhlahlo Date

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## ABSTRACT

The Industrial Development Corporation is the largest provider of development funding in South Africa. Despite having documented processes for assessing funding applications, which include traditional performance measures, the impairments as a percentage of outstanding funding book are increasing. However, scholarly literature indicates that traditional performance measures seem inadequate, with Economic Value Added providing more detailed performance company. The study assesses the Industrial Development Corporation employee's perceptions on stipulated and additional performance measures and its funding processes. The study followed a quantitative research design using a questionnaire. The Statistical Package for Social Sciences was used to analyse the data. The study found that stipulated performance measures are mostly used, but not Economic Value Added. Funding processes could be enhanced through more performance measures and additional pre and post investment processes. It is recommended that processes be enhanced and the addition of Economic Value Added be investigated to assist in reducing impairments.



### Key terms

Performance measures; Funding processes; Industrial Development Corporation (IDC); Economic Value Added (EVA); Development Finance Institutions (DFIs); Impairment rate; Traditional performance measures; Ratios; Funding institutions; Basic assessment; Due diligence; Workout & Restructuring; Financial performance

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| | |
|---|---|
| ANOVA | Analysis of Variance |
| BA | Basic Assessment |
| B-BBEE | Broad-Based Black Economic Empowerment |
| BIC | Board Investment Committee |
| CEO | Chief Executive Officer |
| CPs | Conditions Precedent |
| DBSA | Development Bank of Southern Africa |
| DD | Due Diligence |
| DFIs | Development Finance Institutions |
| EPS | Earnings per Share |
| EVA | Economic Value Added |
| IDC | Industrial Development Corporation |
| NEF | National Empowerment Fund |
| NHFC | National Housing Finance Corporation |
| NOPAT | Net Operating Profit after Tax |
| PIC | Public Investment Corporation |
| PIM | Post-Investment Monitoring |
| PIMD | Post-Investment Monitoring Department |
| PPS | Profit per Share |
| ROA | Return of Assets |
| ROCE | Return on Capital Employed |
| ROE | Return on Equity |
| ROI | Return on Investment |

| | |
|---|---|
| ROS | Return on Sales |
| SADC | Southern African Development Community |
| SAICA | South African Institute of Chartered Accountants |
| SAP | System Application Product |
| SBU | Strategic Business Unit |
| SMME | Small, Micro and Medium Enterprise |
| SPSS | Statistical Package for the Social Sciences |
| UNISA | University of South Africa |
| W&R | Workout & Restructuring |
| WACC | Weighted Average Cost of Capital |

# CHAPTER 1
# INTRODUCTION AND BACKGROUND TO THE STUDY

## 1.1 INTRODUCTION

In any country, development finance seems to be a powerful instrument to grow the economy of the country (Industrial Development Corporation (IDC), 2014a). Depending on what they are assigned to do, development finance institutions (DFIs) around the world have made remarkable contributions to the renewal of industries, expansion of economies, diversification of sectors, enterprise growth, inclusive and transformed development, and other societal and economic goals (IDC, 2014a). Therefore, it seems DFIs are used around the world to assist in making meaningful contributions to the economic goals of the country.

DFIs operate in the space between private investment and public aid, as they are financial institutions which grant finance for investment in the private sector to promote development (Griffith & Evans, 2012). Griffith and Evans (2012) state further that DFIs' focus area is on developing regions and countries that have limited access to financing from the private sector, and DFIs are usually supported or owned by governments. Therefore, it seems DFIs have the support of the government and operate in areas where private sector financing is not available and easily accessible.

The IDC of South Africa Limited is a DFI established to lead industrial development in South Africa (IDC, 2013). The IDC is the biggest DFI in South Africa with the objective of creating sustainable economic growth around Africa (Du Plessis, 2014). The IDC is a DFI with the primary objective of contributing to the general economic empowerment of the South African people and Africa's stable, sustainable economic growth, thereby encouraging the economic prosperity of all people (IDC, 2014a). Accordingly, the IDC is the largest-recognised DFI in South Africa and was formed to lead and develop sustainable growth in the country.

### 1.1.1 About the Industrial Development Corporation

The IDC has been operating for 77 years and was established by an Act of Parliament under the Industrial Development Corporation Act, No. 22 of 1940, and the IDC is fully owned by the state (IDC, 2012). As such, it seems that the IDC has been in existence for a long time and is supported by the government.

The IDC achieves its objectives by encouraging entrepreneurship in order to build industries which are competitive and build companies based on good business principles (IDC, 2014a). Thus, this institution has the responsibility to empower entrepreneurs and encourage viable companies. The IDC is committed to encouraging growth that is generally sustainable and to increase diversity in sectors which uplift the production of locally produced goods (IDC, 2014a). As a result, the IDC funds sustainable companies that produce locally.

DFIs often provide funding for projects in areas deemed too risky for commercial banks and investors, such as poorer countries and underdeveloped sectors (Griffith & Evans, 2012). The position of the IDC as a DFI calls for the consideration of funding to distressed and start-up companies. It also considers growing and even supporting industries that are normally marginalised (IDC, 2014a). Therefore, it funds companies that are uncommon and would ordinarily not be funded by other financiers. Since the IDC in its nature takes higher risks, it is important that it uses performance measures that can give reliable financial performance information.

The IDC can provide a minimum of R1 million funding to start-up companies and existing companies for expanding capacity (IDC, 2014a). Accordingly, it seems that the IDC funds large-capacity companies that require more funds to start or expand their companies. Hence, more funding has been approved year-on-year for companies.

The IDC generates its own funding through equity. It acquires shares in a company and earns dividends. It also generates its funding by means of loan investments, where it provided funding, and earns interest on those funds. It also

borrows from other DFIs, banks, and other lenders at no interest or even at a lending rate that is lower than those charged to other companies on loans (IDC, 2014a). The IDC relies on profits made from its own investments to ensure availability of resources to continue with its engagements (Griffith & Evans, 2012). Dividends received from equity investments gives the IDC an annuity income, and exiting maturing equity investments gives capital to further fund new equity investments (IDC, 2013). Therefore, the IDC generates its funds by borrowing funds from other financial and non-financial institutions and making those funds available to companies at a higher interest rate.

The IDC covers its obligations to lenders through interest and capital repayments received on loans they have granted to other companies (IDC, 2013). A positive balance sheet enables the IDC to use borrowings and retained earnings to provide further funding (IDC, 2013). Because of that, it is vital that the IDC invests in companies that will generate positive returns, since they rely on those profits to pay back the funds they had borrowed.

The process of funding projects and companies is according to approved systems and procedures (IDC, 2014a). These systems and procedures include applications, basic assessments, due diligence, approval of funding, legal agreements, drawdown, and aftercare (IDC, 2014b). The systems and procedures will be discussed in Chapter 3. After the due diligence, the team compiles a submission report for approval by the relevant committee. A 'financial paragraph' is included in the documents that are submitted for the approval of funding. The 'financial paragraph' should include a discussion on profitability, cash flow, and structure performance measures in particular (IDC, 2014c).

The IDC established the Post-Investment Monitoring Department (PIMD) to actively monitor clients' performance and ensure that they keep to their contractual obligations (IDC, 2014a). Therefore, it seems that the IDC has approved systems and procedures in place. Care is placed to ensure that the suitable funding is given and the companies are monitored to ensure that they are able to repay their loan as per agreement.

The IDC PIMD regularly identifies companies that cannot meet their financial obligations or companies that are high risk and are financially distressed (IDC, 2014a). The struggling companies are transferred to Workout and Restructuring (W&R) for the development of a turnaround strategy and assistance with the recovery phase (IDC, 2012). Accordingly, the IDC keeps track of the performance of companies they funded and has established a unit it uses to develop solutions for struggling companies in order to reduce the chance of failures. The IDC places effort on ensuring that the companies it funded do not collapse or even fail. Despite the efforts that the IDC puts in to keep track of the performance of the companies it funded and the support it provides to struggling companies after funding, impairments still occur as reflected in Figure 1.1.

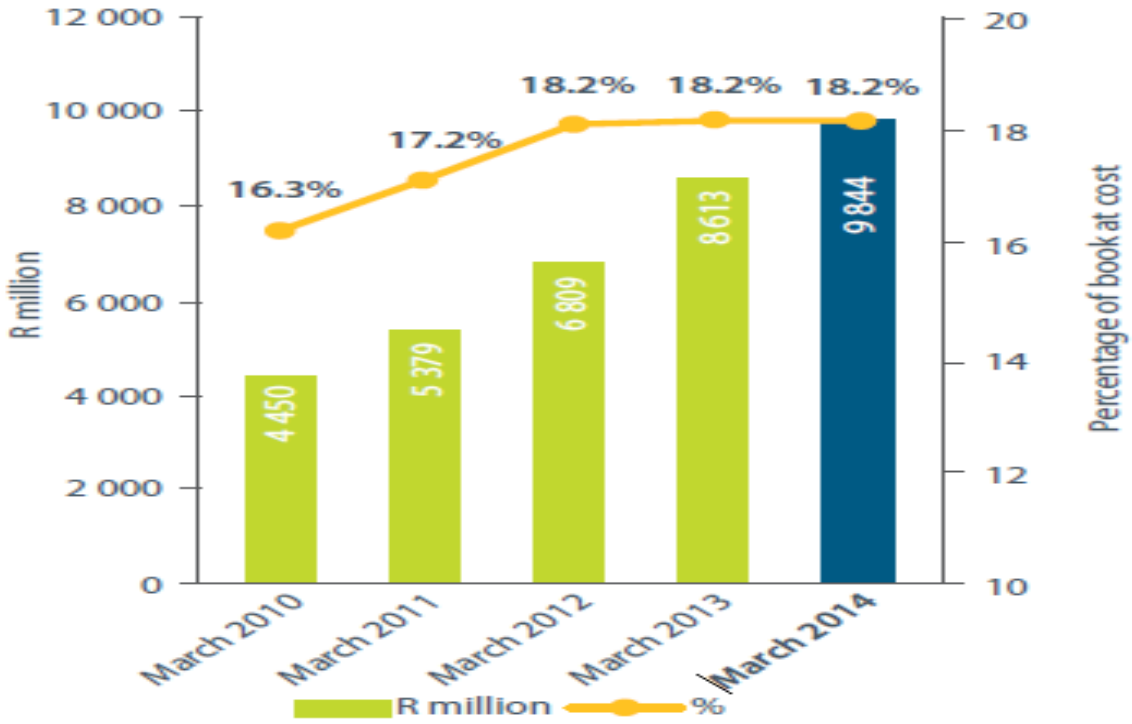



**Figure 1.1: Cumulative impairments from 2010 to 2014 and impairments as a percentage of outstanding funding book at cost**

Source: IDC (2014a)

Figure 1.1 indicates cumulative impairment levels, which show the reduction in the recoverable amount of an asset that is below the actual carrying amount of the asset, within the IDC in the 2010 to 2014 financial periods. From Figure 1.1,

it can be seen that the portfolio for the W&R at 31 March 2014 had increased by 15% from R8.7 billion to R10 billion. That being the case, the IDC may need additional measures to assess applications of those who need funding to ensure that the companies remain profitable and that they will be able to meet their loan obligations, as that will reduce the impairment levels. It seems that the IDC may need to add other performance measures in its application assessment, possibly Economic Value Added (EVA), to determine the future performance of the business. Additional traditional performance measures to those presently used by the IDC could also be considered.

### 1.1.2 About traditional performance measures and Economic Value Added

Performance measures have a critical role to play not only in the evaluation of the current company's performance but also in the future growth and achievement of higher performance targets (Khairi & Djaouahdou, 2012). There have been some concerns regarding the use of traditional performance measures such as net operating profit after tax (NOPAT), return on equity (ROE), return on investment (ROI), earnings per share (EPS), and others (Sharma, 2012). Shil (2009) found that when traditional accounting performance measures are used, most companies seem to be profitable when in fact many are not. Therefore, concerns have been raised regarding the traditional performance measures, since they do not provide reliable financial information and may mislead users of the information.

The EVA concept originates from early in the 1900s (Shil, 2009). Further, EVA is a performance measure for companies and was introduced in the business environment by General Motors in 1920. EVA was introduced as a performance measure linked to creating wealth for shareholders over a period of time (Haque & Islam, 2013). The EVA idea is a new detection, but it is based on an age-old concept (Ray, 2012). Thus, it seems that the EVA concept as a performance measure has been around for a long time and was used to measure the wealth created for shareholders of companies.

Soon after its introduction, EVA was forgotten until in the 1980s when Stern Stewart Company reintroduced it again as a replacement for the traditional accounting performance measures (Sirbu, 2012). The indication was that EVA has advantages when compared with the traditional accounting performance measures, such as profit per share (PPS), profit, ROE, ROI, or return on sales (ROS) (Zdeněk, 2011). Therefore, it seems that EVA was reintroduced to replace existing measures, since they did not give reliable profitability results of the companies. Thus, it seems that EVA is a performance measure that may be used to measure the profitability of the business.

The development of EVA has improved flexibility in performance measurement (Reddy, Rajesh & Narayana, 2011). The purpose of performance measurement is not to only know the business performance but to assist the business to perform much better (Khairi & Djaouahdou, 2012). Further, shareholders need a performance measure that will indicate accurately to them the profits made in the financial period. Hence, it seems that EVA is able to show the financial performance of the business and may be used to improve companies' performance.

It is concurred that EVA is the performance measure that captures the company's real economic profit (Shil, 2009; Arabsalehi & Mahmoodi, 2012). EVA measures and strives to improve efficiency and value creation (Ray, 2012). EVA clearly shows that when capital is employed by managers, the business will be able to pay it back according to agreements (Reddy et al., 2011). On that account, EVA may be used as a tool to measure the profits that the business may have made and be used as a tool to measure real value creations. EVA is therefore an effective performance measure to assist the business in assessing whether they will be able to keep to their financial obligations and be profitable.

EVA is a measure that is innovative in measuring business performance because it gives a more realistic overview of the business' current state (Ray, 2012). EVA can be used as the top financial goal by measuring corporate performance (Zdeněk, 2011). Accordingly, EVA seems to be able to measure and give more accurate results on the profitability of the business.

The role of managers is to efficiently allocate resources to maximise the wealth of shareholders (Haque & Islam, 2013). Accordingly, managers should be able to invest the company's finances on projects that will generate returns for the shareholders. Hence, it seems important that the company use a measure that gives them reliable performance information of the company. Therefore, the traditional performance measures are presented as inadequate in providing reliable financial performance of the company, and EVA seems to be able to give managers reliable performance information.

## 1.2 MOTIVATION OF THE STUDY

The important goal of the financier is to raise the capital allocation in the investment portfolio, resulting in the investment yielding expected profits given the risk associated with the investment (Du Plessis, 2014). Hence, it is proper that the funding applications be assessed thoroughly to avoid issues of clients struggling to meet their loan obligations after the loan has been disbursed. Therefore, this study may assist the funding institution when approving a funding application based on the requirement that the business should be sustainable, be able to create wealth, and be able to pay its loan obligations.

## 1.3 PROBLEM STATEMENT

An overview of the IDC systems and procedures of granting funding were provided in Section 1.1.1. As part of this, a 'financial paragraph' which includes selected performance measures is included. Despite this, Figure 1.1 illustrates that the cumulative impairment as a percentage of the outstanding funding book of the IDC is increasing annually. This may indicate that the application assessment tools and the traditional performance measures presently used by

the IDC may not be sufficient to gauge the future sustainability of the companies applying.

The discussion in Section 1.2 revealed that traditional performance measures are not able to provide reliable financial performance of the company. It was also revealed that EVA has been presented as a tool that has the potential to evaluate both the present performance and future growth of a company.

## 1.4 RESEARCH QUESTION

Based on the problem in the foregoing section, the following research question can be asked: Can IDC employees give meaningful input into the performance measures and funding processes that can contribute towards improved gauging of the sustainability of the companies at application stage and after funding has been provided?

## 1.5 RESEARCH AIM AND OBJECTIVES

The aim of the study is to assess the perceptions of IDC employees on the performance measures used to gauge the performance of the company requesting funding as well as the application, approval, and post-approval processes used. The study seeks to establish whether employees would agree to improved funding processes to possibly reduce impairments at the IDC.

The objectives of this study are as follows:

(i) To understand traditional performance measures generally used to assess the performance of companies and EVA

(ii) To investigate the roles and performances of selected DFIs as well as the pre- and post-funding process of the IDC

(iii) Assess the employees' perceptions on the adequacy of performance measures and funding processes used at the IDC

## 1.6 THESIS STATEMENT

It is argued in the study that improved funding processes and the addition of EVA to the traditional performance measures currently being used could assist in reducing the impairment rates at the IDC.

## 1.7 RESEARCH METHODOLOGY

### 1.7.1 Research design

This study will follow quantitative research design. Quantitative research is primarily used with the purpose of explaining the phenomenon (Geletta, 2012). Therefore, a quantitative research seeks to gather knowledge on a concept. As such, quantitative research will be suitable for the study, since the study seeks to gather perceptions of employees on the phenomenon of the increasing impairment and build further information around the funding processes at the IDC. A detailed discussion on research design will be given in Chapter 4.

### 1.7.2 Research method

#### *1.7.2.1 Literature review*

According to Hofstee (2006), a literature review provides a theory base over surveying published documents that relate to the investigation. The literature review is the process of surveying documents and providing a theory base for the study. A literature review will be done, which will include making use of scholarly articles, journals, theses, dissertations, textbooks on the subject matter, and conference transcripts. The UNISA library will be used as the main source of information required for this study. Other sources such as Google Scholar, the National ETD Portal, open theses, dissertations, and accredited scholarly material will be checked for useful material.

The literature review will focus on understanding the concepts, formulas, advantages, and weaknesses of the selected traditional performance measures generally used in assessing the performance of companies. Further, the concept

of EVA, calculation, advantages, and its shortcomings will be explored to determine its popularity and suitability in assessing the performance of the company.

Another focus of the literature review will be on understanding the roles and performance of selected DFIs in and around the world. This will be done to determine the opinions and views of other authors in relation to their funding strategies, impairment rates, repayment rates, and their sustainability.

#### *1.7.2.2 Empirical study*

The main purpose of the quantitative research method is to evaluate objective data by producing numerical data (Welman, Kruger & Mitchell, 2005). Therefore, it concentrates on quantifying data received. The study will follow a quantitative approach. The purpose of the empirical part of the study is to assess the perceptions of selected IDC employees on performance measures and funding process at the IDC. The funding process includes the application process, approval conditions, and post-approval interventions. The employees in the P-Band will be selected for the study, and the employees will be selected based on their involvement in the application process in the IDC, and the data will be collected using a questionnaire.

According to Hofstee (2006), questionnaires are used as tools that elicit information directly from people whom the researcher presumes have that information. That being the case, the questionnaire seems suitable to use as a tool to source information on the perceptions of the employees. The link to the questionnaire will be sent electronically to all respondents, and they will be requested to complete and save their responses on the same link.

The population for the study will be 828 people working at the IDC. From the population, a sample of 340 employees will be selected. The selection of the sample for the study will be simple and dependable. The sample will consist of employees in the professional staff band, known as the P-Band in the IDC, who will be chosen for the study. The selection of the sample will be based on their

knowledge, skill, and experience in the funding industry and their involvement in funding activities. The knowledge, skill, and experience of the selected sample will be adequate to produce accurate results.

This study will use a non-probability sampling method. According to Sefolo (2010), the researcher may use non-probability judgement sampling when, based on her judgement, only individuals suitably qualified are selected for the study. Judgement sampling will be used in this study to ensure that only individuals that are involved in the assessment of the loan applications are included in the study.

A questionnaire will be designed such that it solicits information on the perceptions of the employees. The questionnaire will be a reliable and valid method of sourcing information from the employees for the purpose of this study. The employees involved in the funding process will be used in the study to ensure that the information sourced will be reliable and valid. A Microsoft Excel spreadsheet will be used in analysing the collected data. Further details on the research method will be discussed in the research methodology chapter.

## 1.8 DEFINITION OF TERMS

*Broad-Based Black Economic Empowerment (B-BBEE)*: This refers to the economic empowerment of all black people including women, workers, youth, people with disabilities, and people living in rural areas through diverse but integrated socio-economic strategies that include but are not limited to increasing the number of black people that manage, own and control enterprises and productive assets. It also includes facilitating ownership and management of enterprises and productive assets by communities, workers, cooperatives, and other collective enterprises. Additionally, it has to do with human resource and skills development; achieving equitable representation in all occupational categories and levels in the workforce; preferential procurement; and investment in enterprises that are owned or managed by black people (Republic of South Africa, 2003).

*Business*: This is an organisation or economic system where goods and services are exchanged for one another or for money. Every business requires some form of investment and enough customers to whom its output can be sold on a consistent basis in order to make a profit. Businesses can be privately owned, not-for-profit or state-owned. An example of a corporate business is PepsiCo, whilst a mom-and-pop catering business is a private enterprise (Business Dictionary, 2014a).

*Capital employed*: Generally, capital employed is presented as deducting the current liabilities from the current assets. It can be defined as equity plus loans which are subject to interest. To define it properly, capital employed can be expressed as the total amount of capital that has been utilised for acquisition of profits. It also refers to the value of all assets (fixed as well as working capital) employed in a business (Ready Ratios, 2014).

*Capital funding*: This refers to the money that lenders and equity holders provide to a business. A company's capital funding consists of both debt (bonds) and equity (stock). The business uses this money for operating capital. The bond and equity holders expect to earn a return on their investment in the form of interest, dividends, and stock appreciation (Investopedia, 2014a).

*Company*: This means an incorporated juristic person, a domesticated company, or a juristic person that immediately before the effective date:-

a) Was registered in terms of the:-
   i) Companies Act, 1973 (Act No. 61 of 1973), other than as an external company as defined in that Act; or
   ii) Close Corporation Act, 1984 (Act No. 69 of 1984) if it has subsequently been converted in terms of Schedule 2;
b) Was in existence and recognised as an "existing company" in terms of the Companies Act, 1973 (Act No.61 of 1973); or

c) Was deregistered in terms of the Companies Act, 1973 (Act No. 61 of 1973), and has subsequently been re-registered in terms of this Act (Republic of South Africa, 2008).

*Development finance*: This means to furnish venture capital and financial assistance in developing sustainable industries (Du Plessis, 2014).

*Equity financing*: The process of raising capital through the sale of shares in an enterprise. Equity financing essentially refers to the sale of an ownership interest to raise funds for business purposes (Investopedia, 2014b).

*Financial statements*: A complete set of financial statements includes:

- A statement of financial position
- either:
    - a statement of profit or loss and other comprehensive income, or
    - a comprehensive statement of profit or loss plus a statement showing other comprehensive income
- a statement of changes in equity
- a statement of cash flows
- accounting policies note and other explanatory notes (Chartered Institute of Management Accountants, 2014)

*Financing*: This is the act of providing funds for business activities, making purchases, or investing. Financial institutions and banks are in the business of financing, as they provide capital to companies, consumers, and investors to help them achieve their goals (Investopedia, 2014c).

*Funding*: This means providing financial resources to finance a need, programme, or project. In general, this term is used when a firm fills the need for cash from its own internal reserves, and the term ‘financing’ is used when the need is filled from external or borrowed money (Business Dictionary, 2014b).

*Guarantees*: This could be in the form of loan guarantees which the firm sources from financial markets or, alternatively, the IDC could issue service guarantees. Service guarantees could take on many forms including rental provisions, which guarantee rental cash flows, or product purchase guarantees, which guarantee purchasing of output products through contracts with other state-owned entities such as a state-owned power utility (Du Plessis, 2014).

*Impairment*: This is a reduction in the recoverable amount of a fixed asset or goodwill below its carrying amount (E-conomic, 2014).

*Investment*: This means an asset or item that is purchased with the hope that it will generate income or appreciate in the future (Investopedia, 2014d).

*Loan*: This refers to the act of giving money, property, or other material goods to another party in exchange for future repayment of the principal amount along with interest or other finance charges. A loan may be for a specific, one-time amount or can be available as open-ended credit up to a specified ceiling amount (Investopedia, 2014e).

*Performance measure*: A set of measures is multi-dimensional, as it includes both financial and non-financial measures that include both internal and external measures of performance which quantify what has been achieved as well as measures which are used to help predict the future (Okwo & Marire, 2012).

*Profit*: This is regarded as the favourable difference between the income earned during a specific period and the cost incurred to earn that income (Erasmus, Strydom & Rudansky-Kloppers, 2013).

*Retained earnings*: This refers to the net earnings not paid out as dividends but retained by the company to be reinvested in its core business, or to pay debt. It is recorded under shareholders' equity on the balance sheet (Investopedia, 2014f).

*Returns*: The gain or loss of a security in a particular period. The return consists of the income and the capital gains relative to an investment. It is usually quoted as a percentage (Investopedia, 2014g).

*Risk*: This means any action that increases the possibility that the principal sum might be forfeited (as in the case of liquidation) or that the compensation (in the form of dividends) will not be paid, increasing the risk for the supplier of capital (Erasmus et al., 2013).

*Shareholders*: These are people or organisations that have bought shares in a limited liability company. They own a part of the company in exact proportion to the proportion of the shares they own (Ranti, 2011).

*Write-off*: This is a reduction in the value of an asset or earnings by the amount of an expense or loss (Investopedia, 2014h).

## 1.9 LIMITATIONS OF THE STUDY

The study has identified the following limitations:

- The study will be limited to IDC as the largest DFI in South Africa.
- Only P-Grade employees will be considered, since they are mostly involved in the processing of funding applications at the IDC.
- The relationship influencing perceptions while controlling for the individual characteristics identified in the study will not be articulated.
- The study will be limited to performance measures and funding processes, and will not consider other factors which could affect impairments at the IDC.

## 1.10 CHAPTER LAYOUT

The following is a brief summary of the study per chapter:

**Chapter 1: Introduction and background to the study**

The chapter provided an introduction to the study about the IDC, traditional performance measures and EVA, motivation for the study, problem statement, research aim and objectives, the thesis statement, definitions of terms used in the study, and limitations associated with the study.

**Chapter 2: Selected traditional performance measures, EVA, and ratios used at the IDC**

The chapter discusses the roles of performance measurement and gives an overview of the definitions and calculation of selected traditional financial performance measures used in the funding sector and their weaknesses. The EVA definition and calculation together with the weaknesses and advantages are discussed, and the overview of the performance measures used in the IDC is given.

**Chapter 3: Literature review of other DFIs and IDC's internal processes**

The chapter provides an overview of the DFIs operating in the European and African countries, SADC, and South Africa. It also details the background on South African DFIs, the application process in the IDC, and post-investment activities.

**Chapter 4: Research methodology**

In this chapter, the design and methodology that will be used in the study is explained. The steps and procedures that will be followed in data collection and analysis are also detailed. Limitations of the methodology and ethical considerations are discussed.

**Chapter 5: Analysis of results**

The chapter deals with the analysis and interpretation of the findings from the assessments of collected primary data. An evaluation of the findings is done.

## Chapter 6: Conclusions and implications

In conclusion, the key findings of the study will be reviewed, and conclusions on the objectives of the study will be drawn. Identified limitations, the implications and suggestions for future studies will be indicated.

# CHAPTER 2
# SELECTED TRADITIONAL PERFORMANCE MEASURES, ECONOMIC VALUE ADDED, AND RATIOS USED AT THE INDUSTRIAL DEVELOPMENT CORPORATION

## 2.1 INTRODUCTION

The analysis of performance measures is important to many decision-makers. The performance of a company can be measured when all the relevant information is made available to the financiers for the decision to invest in the project. The performance measures can be used to measure profitability, debt, and cash flow of the company. Analysis of performance measures has some limitations, and every business and its dynamics must be known before drawing conclusions on certain performance measures. There are a number of performance measures used by funding institutions to determine the performance of the company. These measures are used to give funding institutions some level of comfort in terms of the current and future performance of the company. It is vital for the funding institutions to use performance measures that will be able to indicate future viability of the business.

The preceding chapter provided an introduction and background to the study. This chapter will review literature of the selected traditional performance measures and EVA. The chapter commences with information on the role of performance measurement of a company. Thereafter, selected traditional performance measures often used will be discussed, namely, EPS, ROE, return on assets (ROA), and return on capital employed (ROCE). The description of the traditional performance measures, their formulas, and elements in the formulas will also be discussed. Furthermore, the analysis of the outcome of the calculation of the traditional performance measures will be described. This is followed by weaknesses of traditional performance measures as identified by scholars. Next, EVA as a performance measure will be discussed, followed by the weaknesses and limitations identified in EVA. The chapter will conclude with

the advantages that are distinctive about EVA and the ratios being used to assess funding applications at the IDC.

## 2.2 THE ROLE OF PERFORMANCE MEASUREMENT

The purpose of measuring performance is not only to know how a company is currently performing but also to enable that company to perform better in future (Okwo & Marire, 2012). Therefore, implementing proper performance measures that may be able to give current and future performance of the company may be beneficial to measuring the company's future performance. The aim of implementing a system to measure performance is to assist a company to improve its performance in order to service its clients, employees, shareholders, and others better (Khairi & Djaouahdou, 2012). Accordingly, an appropriate performance measure may be able to improve the performance of the company so that the company can be able to service other people or companies associated with it more appropriately.

Sharma and Kumar (2010) put it that the appropriate performance measures should be able to assess how the actions of senior management affect the value of the company. Therefore, the management of a company is expected to make meaningful decisions that improve the performance and increases the value of the company. Managing the assets of the company so that they create profit for shareholders is the target and goal of any company (Fouché, 2012). Every company should therefore strive to operate its assets optimally to ensure that the company achieves its set targets and that value is created for shareholders.

The performance measures aim to give an indication of how the company is generating its income over time, given the different dimensions that the company may be faced with at the time, such as stock levels, sales, and cost efficiencies (EU Banking Structures, 2010). The performance measures should be able to determine the income generated by the company with any given financial situation that the company may be facing. Further, by investing retained income, the company is able to improve its profitability (EU Banking Structures, 2010). It is further stated that the company's profitability is seen as its guard against

unexpected losses, as profitability strengthens the capital position of the company (EU Banking Structures, 2010). Thus, a company's profitability is important, as its retained profits can be used to cover unexpected losses that the company may incur.

A company that keeps making losses will eventually exhaust its capital structure, and that puts more risk on lenders and creditors (EU Banking Structures, 2010). Credit management in companies is an important concern for managers, shareholders, and creditors, since it has an impact on creditworthiness, success, and growth of the company (Hwarire, 2012). It becomes difficult for the funding institutions to give funding to a company that is not profitable and has destroyed its value, and it is also difficult for that company to raise further capital from any finance institution if the performance of the company is poor (Vijayakumar, 2011). Hence, a company that is not making profits and has a low asset base is not easily fundable and therefore may struggle to raise capital.

Vijayakumar (2011) is of the view that the difficulty of getting funding is due to a company being constrained by the discounted share price caused by assets losing their value; the high interest charged on debt raised through the bank; or creditors who are demanding their payments. Therefore, companies that do not have any value and are indebted to the banks and other creditors are not easily fundable. It thus seems important that the performance measures of the company show good performance, for the company to be able to raise any required funds and be able to qualify for any credit.

## 2.3 SELECTED TRADITIONAL PERFORMANCE MEASURES

Companies have in the past been using traditional performance measures to indicate profits made in the financial year (Fouché, 2012). Amongst others, traditional performance measures such as EPS, ROE, and ROA have been used to measure the performance of the company (Panigrahi, Zainuddin & Azizan, 2014). Reddy et al. (2011) concur that EPS and ROE are used to measure company performance, and in addition, they identified ROCE as another traditional performance measure. Therefore, traditional performance measures

have been used by companies previously; the selected performance measures mostly used to measure performance have also been identified.

Despite the traditional performance measures being identified and used, Reddy et al. (2011) further noted that the major shortcoming in all cases is that a positive rate of return does not automatically translate into positive returns to shareholders. Thus, the performance measures have shortcomings, and their translation is not automatic. Furthermore, they added that EVA is another financial performance measure that can be used to measure a company's performance (Reddy et al., 2011). A number of traditional performance measures used to measure company performance have been identified, and their weaknesses have also been identified. In addition, EVA has also been introduced to assist in measuring the performance of a company. The subsection that follows will discuss the formulas, characteristics, and weaknesses of each of the common traditional performance measures identified thus far.

### 2.3.1 Earnings per Share

According to Panigrahi et al. (2014), most investment analysts still consider EPS as a powerful performance measure. De Wet (2013) adds that financial executives thought of EPS as the most popular performance measure. Therefore, it seems that EPS is considered as an appropriate performance measure and is used by analysts and executives. Panigrahi et al. (2014) highlight the calculation of a company's profitability using EPS as an indicator as follows:

$$\text{EPS} = \frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

The elements of the EPS formula above are discussed. When calculating the Net Income, total sales, financing costs, cost of goods sold, and income tax are needed (Panigrahi et al., 2014). Additionally, Panigrahi et al. (2014) bring out that to get to the net income, the total revenue is reduced by the cost of goods sold, income taxes, interest, depreciation, and other operating expenses. Since the number of outstanding shares may change at any time, using the weighted average number of outstanding shares in the reporting period may be more

accurate for the calculation. The statement of comprehensive income of a company will provide financial information, and it is an essential measure of profitability over a specific period of time (Reddy et al., 2011). Therefore, the calculation of net income of the EPS requires items from the statement of comprehensive income which seem to be important in measuring profitability.

In reality, EPS measures the company's profitability based on the equity share basis (Vijayakumar, 2011). Vijayakumar (2011) revealed that the higher the EPS, the better it is, and the lower it is, the worse it is for the company. Therefore, the calculation of EPS is simple and can be understood easily. When EPS is positive, management is congratulated (De Wet, 2013).

Contrary to this, arguments have however been made that EPS is an unreliable and inappropriate performance measure (Reddy et al., 2011). Other characteristics and limitations have been cited in support of this stance as will be shown. De Wet (2013) mentions EPS's inability to show whether any wealth was created for the shareholders, the overall management of EPS, and the bias towards positive growth of EPS as limitations of EPS. Therefore, it seems the ability of the performance measure to indicate whether the company has created value is indispensable and that a performance measure that does not give that information could be seen as inappropriate.

Panigrahi et al. (2014) state that it is expected that companies which do not pay out all the dividends from their profits and keep some of the profits aside will have a higher EPS. Reddy et al. (2011) explain another characteristic is that EPS is simply increased by investing more money into the business. Further, if the invested funds are from the retained earnings (equity), then EPS will increase (Reddy et al., 2011). Reddy et al. (2011) add that if the return of those invested funds is positive and if the invested funds are borrowed (debt), then the EPS will only increase if the return of those funds exceeds the cost of the debt. Consequently, EPS can easily be increased by not paying out any dividends to shareholders and by also putting more funds into the business. Also, the increase

or decrease of EPS depends on whether the invested funds are from equity or debt.

Reddy et al. (2011) found that where the invested funds are a mix of equity and debt, then the EPS will increase if the rate of return of those mixed funds is between zero and the cost of debt. A concern was raised by Panigrahi et al. (2014) that the problem with the reinvested profits is their ability to keep the capital structure without a need to borrow any funds, and this may lead to an increase in assets with high earnings and high EPS. Reddy et al. (2011) therefore conclude that EPS is totally inappropriate in measuring the performance of a company. Since the EPS calculation is found to be inappropriate where a company has equity and debt, EPS is not seen as a suitable performance measure.

### 2.3.2 Return on Equity

ROE is considered the crucial performance measure that shows the profitability and the potential for growth of the company (Kumbirai & Webb, 2010). ROE is used mostly as a profitability performance measure (Kabajeh, AL Nu'aimat & Dahmash, 2012). Al-Nasser (2014) describes ROE as a performance measure that measures the profitability of the investment made by shareholders. Herciu, Ogrean and Belascu (2011) add that ROE is seen as the most important performance measure of all other fundamental performance measures. Accordingly, ROE is seen as an essential performance measure with the ability to ascertain how profitable a company is and also to be able to measure the return made on investments made by shareholders. ROE is calculated using the following formula (Panigrahi et al., 2014):

$$ROE = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

From the above formula, it can be seen that both sales and assets are denominators and numerators; therefore, they can be eliminated. With regard to the elements of the remaining ROE formula, in the formula, the three elements show the net profit margin; the operating margin; asset turnover; and the financial

leverage multiplier (Herciu et al., 2011). The net profit margin can be managed by controlling the cost and selling prices, and also product mix optimisation (McGowan Jr. & Stambaugh, 2012). The income and profit are used interchangeably by the authors, but for purposes of this study, profit will be used. It was further noted by McGowan Jr. and Stambaugh (2012) that the total asset turnover shows how the company is effectively using the assets in generating the sales of the company. The financial leverage multiplier is a component that indicates how the company relies on debt to fund its operations, and therefore, a company that is over-indebted may not get funded (Booth, Cleary & Drake, 2014). Therefore, a company can be able to control the net profit margin by buying and selling at reasonable prices and also by producing the product mix that the market needs and can be sold profitably, therefore generating more profit. Accordingly, the total asset turnover will be able to give an indication whether the assets that the company has acquired are being used effectively to generate the sales for the company. Hence, the financial leverage multiplier show when the company's operations are being funded by debt.

Panigrahi et al. (2014) describe the calculation of ROE as taking the net income after tax for the year divided by the book value of equity at the start of the financial year. Net income is calculated by deducting the cost of goods sold, income taxes, interest, depreciation, and other operating expenses from the total revenue (Panigrahi et al., 2014). According to Herciu et al. (2011), the average equity is used in the calculation. Equity consists of issued ordinary share capital, share premiums, and a company's reserves (Panigrahi et al., 2014). Herciu et al. (2011) state that equity would comprise issued ordinary share capital and adding the share premium and reserves of the company. Therefore, the net income is found in the statement of comprehensive income, and the other items can be found in the statement of financial position of the company; equity also plays a key role in the calculation.

Van Blerck (2012) concludes that taking more risk may improve the ROE. The higher the ROE ratio, the more efficient the utilisation and management of funds are (Vijayakumar, 2011). Skae (2012) highlights another characteristic, namely,

that the ROE is the same as EPS in that it measures the profitability of the company. Evidence that the company has managed to create value for the shareholders is shown in the increase in the ROE ratio (Skae, 2012). ROE shows the profitability of the company by measuring the shareholders' return (Herciu et al., 2011). ROE is thus considered to be a profitability performance measure; it measures how management uses funds in the company.

Since ROE shows how shareholders' funds were spent by managers, it is considered to give a detailed picture of a company's performance (Vijayakumar, 2011). ROE is therefore used to indicate the spending of the managers of a company, and it gives shareholders information on what the funds were spent on. Moreover, since preserving and creating value for shareholders is the ultimate goal of any company, in order to create value for the shareholders, the ROE has to be greater than the cost of equity (EU Banking Structures, 2010). Hence, a high ROE compared to the cost of equity is an indication that a company has created value for its shareholders.

According to Panigrahi et al. (2014), shareholders consider the ROE as an appropriate tool to measure the company's performance. ROE measures the ability of the company to generate profit on the equity shareholders' funds (Vijayakumar, 2011). Skae (2012) describes another characteristic, namely, that the ROE is a performance measure that is able to isolate the profit belonging to the shareholders from the overall profits of the company. Accordingly, ROE calculates the amount considered to be shareholders' profits from the total profits made by a company.

There are however critics of ROE as a performance measure. ROE is seen as an element of rewarding the relationship between the companies and the markets, and less as a performance measure, as a comprehensive performance measure would need to check more than what ROE is showing (EU Banking Structures, 2010). Therefore, that could indicate that ROE is not considered to be an adequate performance measure. Panigrahi et al. (2014) found that the inherent weaknesses in earnings affect owners' equity, and ROE is sensitive to

changes in financial gearing. As such, ROE is badly affected when gearing is changed in the company. It is further stated that features of a performance measure that are desirable to shareholders should also indicate other performance and not only profitability as ROE does (EU Banking Structures, 2010). It is further noted that a good performance measure should include forward-looking measures, and it should not be easily manipulated by the market (EU Banking Structures, 2010). Therefore, ROE is seen as inadequate in assessing the performance of a company, as it measures profitability only, and the desirable performance should include more measures that can even measure future prospects of the company.

### 2.3.3 Return on Assets

According to Panigrahi et al. (2014), the ROA is used to indicate the company's profitability in relation to the company's total assets. Kabajeh et al. (2012) concur that ROA is mostly used as a profitability performance measure. Heikal, Khaddafi and Ummah (2014) add that ROA is a performance measure used to measure the extent to which the assets were used to generate profit for the company. Panigrahi et al. (2014) state the calculation of ROA is as follows:

$$\text{ROA} = \frac{\text{Net income}}{\text{Total assets}}$$

The elements of the ROA formula above will now be discussed. The company's financial information on the total assets and net income are necessary for the calculation of ROA (Panigrahi et al., 2014). According to Al-Nasser (2014), the ROA performance measure is calculated using the book value of the assets and not the market value. The method of calculating the net income was given in Section 2.3.2. ROA gives another perspective on the effectiveness of management and shows the profit the company has made for every investment in the assets. The assets may include items such as cash, inventory, debtors, properties, equipment, and furniture (Herciu et al., 2011). Therefore, the measure gives an indication of how the assets acquired are generating income for the company.

When calculating this formula, one needs to check the asset base of the company to ensure that they are properly maintained and improved, as the problem of the company's ROA significantly increasing may arise when the company is reducing its operating assets and allowing the deterioration of its asset base (Skae, 2012). Accordingly, it is vital to ascertain that the assets of the company are accounted for accordingly and are not understated when the ratio is calculated, and that the book value is used and not the market value of the assets.

The ROA is a financial performance measure that indicates the company's capital strength (Panigrahi et al., 2014). According to Skae (2012), the ratio is also the ROI. Another characteristic of ROA is that the performance measure shows the ability of the company to generate profit, and ROA is considered for measuring the overall strength of the earnings (Al-Nasser, 2014). The performance measure shows the value of net profit generated as per the value of the assets (Kumbirai & Webb, 2010). According to Heikal et al. (2014), a high ROA is an indication that the company is performing well and that the performance is improving. The asset base of the company is important for the performance measure. Thus, ROA measures to what extent assets contributed to the generation of the profit of the company.

The ROA may be improved either by increasing the sales or reducing invested assets (Skae, 2012). Therefore, the ROA can easily be manipulated by increasing the sales or by reducing the asset base of the company. ROA measures the efficiency extent which the company is operating based on the profits generated from the assets (Kabajeh et al., 2012). It is often assumed that a higher ROA is an indication that the company has increased its sales without making investments in fixed assets (Skae, 2012). Hence, analysing the outcome of the calculation seems easy, as an analyst may be able to conclude what the increase or decrease in the performance measure indicates. ROA may therefore relate to how the assets were managed or used in the generation of the profit for the company.

### 2.3.4 Return on Capital Employed

Panigrahi et al. (2014) define capital employed as net capital employed or gross capital employed. Capital employed refers to capital reserves, total capital, revenue reserves, long-term loans, and debentures (Panigrahi et al., 2014).

Different formulas are used by different companies when calculating the ROCE, but this study will use the approach of Reddy et al. (2011). According to Reddy et al. (2011), different companies call ROCE with different names such as ROA, ROI, return on net assets, and return on invested capital. Panigrahi et al. (2014) explain that ROCE is calculated from the following items from the assets' side of the statement of financial position:

- the fixed assets being included at replacement value after subtracting depreciation or at their net values at original cost, must be recorded at replacement value which is the assets' current market value
- investment in the business
- all current assets such as cash at bank, cash in hand, bills receivable, sundry debtors, and stock

According to Vijayakumar (2011), the ROCE calculates the profits made from the total capital invested in the company; therefore, it provides information of how efficiently the long-term funds of the shareholders and creditors are being invested in the company. Satisfying returns on the invested capital is the main reason for any business investment (Panigrahi et al., 2014). Accordingly, the ROCE measures how all the funding acquired is being implemented in the generation of the profit of the company. Hence the performance measure will show when the invested funds are being misused and not applied to growing the business.

ROCE is seen as a comparatively adequate financial performance measure (Reddy et al., 2011). According to Panigrahi et al. (2014), ROCE provides for the

relationship between the net assets invested and the net income. Therefore, the return on capital employed is used to measure the success of a business' investments earning satisfying returns for the shareholders. Another characteristic is that ROCE shows the overall efficiency and profitability of the business and gives the percentage of return on the invested net assets (Panigrahi et al., 2014). The higher the ROCE, the stronger the indication that the capital employed is being used efficiently in the company (Vijayakumar, 2011). Thus, the ROCE is able to give an indication of returns generated by the acquired assets. Hence the performance measure will show the returns on the investments.

## 2.4 WEAKNESSES IDENTIFIED IN TRADITIONAL PERFORMANCE MEASURES

Panigrahi et al. (2014) argue that it is possible to manipulate the income of a company, since managers of different units use different accounting choices and because the investment and income are not always clearly defined to ensure consistency. Furthermore, the managers may be encouraged not to replace old assets and keep them to improve performance although the old assets may decrease performance in future. Another weakness is that the performance measures do not measure the performance based on the company's objectives but measure the performance of the manager in the specific unit (Panigrahi et al., 2014). Therefore, traditional performance measures such as EPS, ROE, ROA, and ROCE can easily be manipulated, and the manager may manipulate them by keeping the old equipment and not investing in new ones just to maintain and improve the performance measure.

The traditional performance measures reflect past performance, and that has no relevance for the future progress in the company's performance (Khairi & Djaouahdou, 2012). Another weakness is that the traditional performance measures use accrual accounting, of which the income does not take into account the time value of measure and the cash flow (Panigrahi et al., 2014). For a long time, the traditional accounting performance measures were however

used to indicate the profit that the company made in a financial period (Fouché, 2012). Since it is important for shareholders to get an indication of future prospects in terms of the performance of the company, traditional performance measures have a weakness of capturing the past and not future performance.

Van Blerck (2012) highlights that traditional performance measures often account for the cost of debt and not the debt used to generate the profit. Further, traditional performance measures do not consider the cost of capital invested in the company (Van Blerck, 2012). The non-inclusion of the cost of capital of the traditional measures has also received some level of criticism (Panigrahi et al., 2014). Fouché (2012) adds that another weakness of traditional performance measures is that they do not seem to consider the cost of investment. Panigrahi et al. (2014) concur that these measures only consider the cost of debt and not the total cost of investment. Additionally, the cost of equity is not accounted for in those measures (Nusrathunnisa & Janakiramudu, 2014). Therefore, they seem to ignore the cost of capital in the calculation and do not give a true reflection of the activities of the company.

The inability of traditional performance measures to include the full cost of capital but using accounting income, which is not a reliable analysis of company value, has however drawn criticism (Sharma & Kumar, 2010). Traditional performance measures such as EPS, ROE, ROA, ROI, or return on sales get criticised as being deficient and inadequate and therefore unsuitable for fully assessing the company's strategic outcomes and performance, as well as the company's strategic accounting (Al-Mamun & Mansor, 2012). The EPS and net income, including traditional income measures, can be manipulated easily (Nusrathunnisa & Janakiramudu, 2014). Hence the traditional performance measures can be manipulated to give a good impression to shareholders that the performance of the company is good. Therefore, the traditional performance measures received criticism for their inadequacy in assessing the performance of the company.

The weaknesses of traditional performance measures as discussed above may be mitigated by adding EVA as a performance measure in the company. That will give the shareholders an indication of the rate of return to be earned to compensate them for the risk they took by investing in the company (Panigrahi et al., 2014). It seems that the weaknesses of the traditional performance measures may be reduced by the introduction of the EVA, which will give the shareholders an indication of the return to expect for the risk taken in investing in the company.

## 2.5 EVA AS A PERFORMANCE MEASURE

As discussed in Section 1.2, the concept of EVA was introduced in the 1900s. According to Geyser and Liebenburg (2003), the concept of EVA was introduced by Stern Stewart & Co. in 1989. Geyser and Liebenburg (2003) and Ray (2012) concur that Stern Stewart & Co. trademarked the EVA concept. The concept was introduced to revise the formulation that was put forward by Alfred Marshal in the early nineteenth century (Sharma & Kumar, 2010; Reddy et al., 2011). The performance measure was introduced to measure wealth and value created for shareholders. The calculations used to measure EVA are discussed next as well as the elements that are involved in those calculations.

EVA was introduced to measure the profitability of a company (Reddy et al., 2011). EVA was described as a measure which strives to improve on the traditional performance measures by calculating the economic profits of the company (Khairi & Djaouahdou, 2012). In the calculation of EVA, the cost of capital, interest charges, and operating profit are used (Stewart, 1991). EVA calculates the difference between the NOPAT and the cost of capital (Ray, 2012).

The selected authors describe formulas for EVA as follows:

Van der Poll, Booyse, Pienaar, Büchner and Foot (2011) listed the formula for calculating EVA as:

$$EVA = NOPAT – [Capital \times Cost\ of\ Capital]$$

Al-Mamun and Mansor (2012) listed a more descriptive formula for EVA using the formula:

EVA = Net Sales – Operating Expenses (all operating expenses including tax)
= Operating Profit – Capital Charges

The calculation of Capital Charges is the weighted average cost of capital (WACC) multiplied by the company's invested capital.

According to Panigrahi et al. (2014), Stern Stewart & Co. proposed the first basic formula for EVA as follows:

EVA = Net Operating Profit after Tax (NOPAT) – (Cost of Capital x Capital Employed),

*where:*

*NOPAT = Net Operating Profits after Taxes*
*Capital employed = Capital invested by debt holders and equity holders*
*Cost of Capital = Weighted average of the cost of debt and cost of equity after taxes*

Mengi and Bhatia (2014) concur with the formula for EVA used by Stern Stewart & Co.. That formula is NOPAT – Weighted Average Cost of Capital x Capital Employed.

Vijayakumar (2011) puts it that EVA is calculated as the net operating profit less the appropriate charges for the cost of capital invested, in both equity and debt, in the company. Khairi and Djaouahdou (2012) uses operating profits after tax less the cost of capital employed to get the profit of the company. Totowa (2015) concurs that in the calculation of EVA capital charges, operating profit and cost

of capital are used. He used EVA in the context of investors who needed to evaluate the performance of the company based on the financial information available to them. The EVA calculation was used by Totowa (2015) to determine whether the investors could get a better understanding of the company's performance by using two performance measures. Accordingly, the different companies use different formulas in the calculation of EVA. Therefore, it seems that in the calculation of EVA, the cost of capital and the capital charges are deducted from the operating profit after tax.

In observing the aforementioned formulas used by authors for calculating EVA, it seems that most of the authors use different formulas. Although different formulas are used, there are similarities in the formulas, such as the NOPAT and cost of capital.

Van der Poll et al. (2011) used (NOPAT – Capital) x Cost of Capital, but others (Al-Mamun & Mansor, 2012; Panigrahi et al., 2014; Mengi & Bhatia, 2014) used (NOPAT – WACC) x Capital Employed. Thus, it seems that the after-tax value is used and that is adjusted by deducting costs to indicate the value created or destroyed by the company. The steps considered in the calculation of EVA are discussed next.

As aligned to the formula used by Panigrahi et al. (2014), according to Khaddafi and Heikal (2014), the following are considered to be steps involved in the calculation of EVA:

Step 1: Calculate Net Operating Profit after Tax (NOPAT)
Step 2: Count Invested Capital
Step 3: Calculate Weighted Average Cost of Capital (WACC)
Step 4: Calculate Capital Charges
Step 5: Calculate EVA

An explanation of the elements of the steps involved in the EVA calculation as described by Khaddafi and Heikal (2014) is given below.

*NOPAT*: It measures the capability of the company to generate cash from normal business activities, excluding the capital structure (Shil, 2009). Hence, NOPAT looks at the cash generated from the business operation without considering the assets, therefore accounting only for the normal operation of the company.

*WACC*: According to Arnold (2013), WACC is the weighted average cost of equity and debt proportioned according to their contribution towards the company's cost of capital. WACC will increase or decrease based on the amount owed in the debt or equity funding (Arnold, 2013). Therefore, WACC is determined by the contribution of equity and debt to the cost of capital.

According to Khaddafi and Heikal (2014), the following criteria must be met to determine that EVA performs and is doing well:

- when EVA is greater than zero, then the company is performing well and has created value;
- when EVA is equal to zero, then the company is at a break-even position, meaning that the returns are equal to the WACC; and
- when EVA is less than zero, then the company is not performing well, which means that the cost of capital exceeds the profits earned, which then indicates that the company is not creating value.

Van der Poll et al. (2011) highlight that the formula may look simple and easy, but it can be deceptive, as it includes determining the NOPAT and then subtracting capital charges, as per the market value of operating assets. Therefore, EVA also has weaknesses and limitations associated with its calculation, and those are discussed hereunder.

## 2.6 WEAKNESSES AND LIMITATIONS IDENTIFIED WITH EVA

Because of the complexity of the cost calculation in the method of EVA, the implementation of EVA was considered to be relatively difficult (Khaddafi & Heikal, 2014). The necessity of performing some adjustments of data and information received from the financial statements and the risk of manipulating the results are other negative aspects of using EVA (Burešová & Dvořáková, 2013). On account of the adjustments that have to be made in the calculation of EVA, the performance measure may become easily miscalculated and therefore not reliable and user-friendly.

The accurate calculation of EVA is dependent on the transparency of management, as companies that are less transparent may not accurately report their internal state of finances (Khaddafi & Heikal, 2014). There are possibilities that the calculation of EVA only looks at the final outcome, and that the effect of retention rates and customer loyalty are not measured (Khaddafi & Heikal, 2014). The EVA calculation may be easily manipulated, since it depends on whether management wants to fully disclose the company's financial information. Therefore, the calculation of EVA does not take all the factors that relate to customers into consideration; as a result, that is seen as another weakness.

According to Shil (2009), due to inflation and other factors, the value added to shareholders may not be estimated in a periodic EVA calculation. Dumitru and Dumitru (2010) emphasise that inflation distorts EVA. In inflationary times, EVA is not usable to give an estimate of the company's actual profitability; as such, EVA cannot be used in inflationary times, since it may not be able to give the true profitability of the company. Moreover, Shil (2009) highlights that EVA does not correctly account for the assets in the period in which they were acquired, since there may be new company assets that have not been depreciated in the statement of financial position and that may result in EVA being negative, although in the long run, the company would be profitable. Dumitru and Dumitru (2010) stress the fact that normal depreciation can be small at the beginning of a project and become bigger towards the end of the project, which also distorts EVA. Therefore, the unstable inflation figure affects the EVA calculation, and the

depreciation amount may cause EVA to not show the profitability of the company, since the amount starts small and accumulates into a big amount as the project approaches completion.

Other weaknesses and limitations by Dumitru and Dumitru (2010) and Shil (2009) are described separately below. Dumitru and Dumitru (2010) describe the following as the weaknesses of EVA:

- EVA is not adequate for assessing a company's progression towards achievement of its strategic goals and for measuring the performance of divisions in the company, on its own. Therefore, EVA needs other performance measures in order to give an adequate assessment of the performance of the company.
- A company with a number of new investments will show lower EVA than the real profitability would show, and a company with a number of old investments will show higher EVA than the real profitability would show. The effect of new investments on EVA could be due to the fact that the company with newer investments pays a higher interest then causes the EVA to be lower, and the company with older investments may show higher EVA, since the interest payment is lower than when the investment started.
- EVA can appear to be positive in a company's records but have the value of the company's shares declining in the marketplace. Therefore, the outcome of the calculation of EVA may be deceptive since the calculation may bring a positive outcome whilst the value of the shares is down.

Shil (2009) has described the limitations of EVA as follows:

- EVA is seen as a short-term performance measure, and some companies with a long-term focus have decided that EVA is not suitable for them. Therefore, not all companies may need to use EVA, depending on their focus for the company.

- Since future returns can only be estimated and not measured, the objective measure of EVA cannot be done for long-term investments. Accordingly, EVA cannot be calculated on long-term investments of the company due to their returns not been realised yet and only realised in the future.
- For companies that are currently heavily invested with the expectation of future positive cash inflows, the suitability of EVA being a primary performance measure may be doubtful. Accordingly, EVA is not suitable for a company with many investments because their cash flow may be negative due to repayments of investments.
- EVA was observed that in its calculation, the incremental value of the asset is not catered for.

The above-mentioned weaknesses and limitations indicate that EVA is not adequate when used on its own. The weaknesses and limitations show that EVA may not be used by all companies. EVA may not be suitable for companies that have recently just acquired assets, and the depreciation line item in the financial statements distort the calculation of EVA, since depreciation depends on when the assets were acquired and the lifespan of an asset. It was discovered that depending on the long-term plans and vision of companies, EVA may also not be suitable for the initial implementation of a project. Therefore, the information shows that EVA is not a faultless performance measure; it also has weaknesses and limitations. On that account, it needs other performance measures to be able to cover the process of measuring the performance of a company.

## 2.7 DISTINCTIVE ADVANTAGES OF EVA

EVA has been considered to be an appropriate company performance measure (Paragh, 2012). Paragh (2012) further concluded that EVA is better suited as a performance measure than the traditional performance measures such as EPS, ROI, and ROE. It seems that EVA is seen to be an appropriate and suitable performance measure as compared to the other performance measures.

Accordingly, EVA may be appropriate in assessing the performance of a company.

The EVA application needs only two mostly used financial statements – the statement of financial position and the statement of comprehensive income (Ray, 2012). Financial statements include a statement of financial position which indicates the assets and liabilities of the company and the statement of comprehensive income which expresses the difference between revenue and expenses as profit value for the period (Totowa, 2015). Thus, the EVA calculation needs only the statement of financial position and the statement of comprehensive income.

Ray (2012) found that EVA may be applied by any company which has an accurate set of financial statements. Therefore, it seems that the use and application of EVA are easy to a company which has an accurate set of financial statements. Dumitru and Dumitru (2010) discovered that calculating EVA is quite easy, as the information can be extracted from the financial statements at both the statement of financial position and the statement of comprehensive income, and adjusting the information accordingly. Hence the calculation of EVA may be easy, since the financial statements may be accessible and the adjustments that need to be made on the financial statements may be done easily.

Users of EVA report that the important benefit of using EVA is that its calculation adjusts reported accounting results to remove miscalculations identified in measuring the real economic performance of the company (Dumitru & Dumitru, 2010). Another benefit is that EVA calculates the profitability of the company after cost of capital raised (Mengi & Bhatia, 2014). Further, EVA covers economic, market, and accounting factors in its assessment (Reddy et al., 2011). Sirbu (2012) concurs that EVA gives a much broader view of the performance of the company. Another advantage of EVA is that it has a practically universal application because it can be applied and used by any company worldwide (Ray, 2012). Therefore, it seems EVA has advantages that are impressive to investors,

since EVA's use can be widespread and is able to give the investors a broader perspective in terms of the performance of the company.

The use of EVA in the company encourages managers to use the assets of the company more productively, and it also assists in mending differences between the interest of both the shareholders and the managers of the company (Paragh, 2012). It assists the managers in making investment decisions that will benefit the company, identifying opportunities for improvements and considering short- and long-term benefits for the company (Dumitru & Dumitru, 2010). Another characteristic is that EVA encourages managers to give attention to the statement of financial position and not only the profit and loss account (Sirbu, 2012). Therefore, EVA is the performance measure that aligns the needs of both the company and of management, since it encourages management to make use of assets of the company in an effective way and thus creating value for the shareholders.

EVA gives a measure of the quality of decisions taken by management and gives an indication of future value growth. The higher the EVA, the better the job done by managers in using the capital funded to create value add in the company (Dumitru & Dumitru, 2010). According to Sirbu (2012), EVA is a performance measure that measures the company's performance in a manner that calculates profit adjustments in the cost of capital, as it gives an estimate of the company's real economic profit (Dumitru & Dumitru, 2010). Therefore, EVA will give an indication that the management of the company has used the assets to create value for the shareholders.

EVA is a performance measure that focuses on capital management and profit management (Haque & Islam, 2013). The hinge on whether the shareholder's value has been destroyed or created does not exist with EVA, as EVA can give the results of whether value has been created or not (Dumitru & Dumitru, 2010). EVA measures the value created by the company, and when the company keeps its EVA high, then the value of the company keeps going up as well (Mäkeläinen, 1999). EVA is therefore a performance measure that measures the decision-

making of those in management, the management of the assets, and the profit of the company. Accordingly, EVA can give an indication of whether the value was created or destroyed in the operations of the company. EVA was found to be known to measure the performance of management by creating value for the shareholders (Sirbu, 2012). Thus, EVA is able to encourage management to make investment decisions that will create value for the company.

Many companies use performance measures such as ROA, net interest margin, and ROE, but again the economic measures of profit such as EVA have been getting more popular in the areas of performance measurement for financial companies (Munteanu & Brezeanu, 2012). Van der Poll et al. (2011) note that for some reason, it seems that EVA is not commonly used in South Africa. Accordingly, more companies around the world have been using other traditional performance measures, and it seems that EVA has started to be popular. It appears that companies in South Africa have not been using EVA to measure their performance; as such, EVA is not that popular in South Africa.

It was recognised that using EVA with other performance measures may be advantageous to South African companies (Van der Poll et al., 2011). That has led to a conclusion that EVA, as a performance measure, could be effective in motivating and directing managers to create wealth for the shareholders of the company (Paragh, 2012). EVA may therefore be used together with other traditional performance measures and may be beneficial to companies in South Africa because it could be used in encouraging managers of companies in value creation for shareholders.

## 2.8 RATIOS USED AT THE INDUSTRIAL DEVELOPMENT CORPORATION

The IDC has identified ratios that should be considered in the assessment of finance applications. The details of the ratios are described in a ‘financial paragraph’. A financial paragraph should be included as part of the documents that are submitted for approval of funding applications (IDC, 2014c). The financial paragraph should include a discussion on the outside funds to cash flow; income

security cover; and structure ratios in particular (IDC, 2014c). Accordingly, the IDC has a process of reporting on the financial assessment of the application by using the financial paragraph and the discussion of identified ratios.

The outside funds to cash flow ratio calculates the time it will take the company to repay the funds based on the cash flow generated in that specific year. The shorter the time it takes, the better, since it indicates that the company will have a strong cash flow (IDC, 2014c). The income security cover ratio calculates whether the cash flow generated can pay the interest expenses and the capital instalment. The higher the security, the better, as it indicates that, should the profit be reduced, then the income will still be enough to cover the interest expenses and capital instalments (IDC, 2014c).

The structure ratio shows the extent to which the shareholders have put equity into the company as compared to the funding required. The lower the structure ratio, the better for the IDC, since it indicates that the IDC did not put in more than the shareholders, and therefore, should the company fail, then the exposure was not high (IDC, 2014c). As stated in Section 1.1.1, a sensitivity analysis should also be included in the discussion to highlight areas that are sensitive in the company and how those are being mitigated (IDC, 2014c). Accordingly, the approving committee needs detailed financial information when assessing the application to decide whether to approve the funding application. Therefore, the ratios are used to indicate the financial performance of the company and form an integral part of the approval decision.

## 2.9 SUMMARY

This chapter placed emphasis on the literature of selected traditional performance measures and EVA. Performance measurement is seen to be a useful technique to analyse the financial statements and therefore getting a better understanding of the company's financial position and performance. Performance measures may be used to improve the performance of the company; they encourage management to use the assets optimally in order to meet the targets that the company has set and therefore operate profitably and

strengthen the capital position of the company. Performance measures are also used to determine the capital structure of the company when assessing the creditworthiness and the chances of success and growth of the company. It is not easy to grant funding to a company that is making losses, does not have a strong capital structure, and has no value.

Traditional performance measures such as EPS, ROE, ROA, and ROCE were described as appropriate when used on their own. They can indicate the profitable performance of the company and are able to give an indication of the performance of the assets that the company has acquired. That has gained them popularity with shareholders and managers alike. They are used by most managers and shareholders as a performance measure of the company.

Although the traditional performance measures were said to be appropriate, there were still weaknesses associated with them. The weakness being that traditional performance measures only measure the profitability of the company, they reflect past performance of the company, they do not seem to consider the cost of capital, and they can be easily manipulated by managers to give the shareholders an impression that the company is performing well. Competitiveness and performance are amongst the important words companies use these days, and they are crucial for the company's survival. Therefore, a performance measure that does not indicate the important issue of the sustainability of the company is seen to be weak.

Management and shareholders need a performance measure that will indicate to them the profits made and the value created in the financial year. Traditional performance measures are criticised for lacking in giving future prospects of the company's performance. Thus, the inadequacy of the traditional performance measures in giving a full assessment of the company's performance has led to EVA getting popularity and financial companies introducing EVA as another performance measure in their companies. All the performance measures are important in the assessment of the company's performance. Adding EVA

therefore places the company at an advantage of reporting the economic, accounting, and marketing factors of the company's performance.

EVA is seen to be an appropriate performance measure to determine the value created or destroyed by the company. It is also vital for the shareholders and managers to get an indication of whether the company has created value or destroyed it. EVA has been recognised as the measure that is able to indicate the future prospects of the company. It is important for the shareholders and managers to get a performance measure that can indicate whether the company is sustainable enough to still be operating even in the future.

The weaknesses and limitations identified in Section 2.6 highlighted that EVA alone is not appropriate in assessing the performance of a company. Those weaknesses identified for EVA were, amongst others, that EVA may not be suitable for a company with a long-term focus and a company with many investments and with a vision of reaping the rewards in later years. It was also established that EVA is distorted by inflation and depreciation.

Even though weaknesses and limitations were identified, there are advantages distinctive to EVA. Advantages were that they are seen to be appropriate and suitable for measuring the performance of the company. Additionally, the calculation of EVA needs only the statement of financial position and the statement of comprehensive income. EVA can be used all over the world as universal and is able to align the needs of the shareholders and management. EVA is also able to indicate whether management has used the assets of the company to create value for the shareholders or not, which has gained EVA popularity around the world. Although EVA may have weaknesses, it is still the better performance measure as compared to the traditional performance measures.

EVA also needs other traditional measures to be effective in measuring the performance of a company, since EVA is seen to be the appropriate performance measure that encourages the management of the company to make profits for

the shareholders of the company. Although the performance measures have their weaknesses, they are seen to be more reliable when used together with EVA. Those who are part of the management of the company need a performance measure that pushes them to perform better and therefore to create value for the shareholders.

The IDC uses the financial paragraph as part of the submission for funding, which involves three ratios and the sensitivity analysis. The three ratios that are included in the financial paragraph are outside funds to cash flow, income security cover, and structure ratios. Based on the IDC assessment, the shorter the time on the outside funds to cash flow calculation, the better, since it shows the strength of the cash flow of the company. A higher income security cover shows that, should the profits of the company be reduced, the income available will be enough to pay the capital instalment and other expenses of the company. A lower structure ratio is preferred by the IDC because it shows that the shareholders have also invested funds as compared to what the IDC is putting into the company. The sensitivity analysis indicating the sensitive areas and measures to address those areas is also included with the financial paragraph.

Owing to the increase in impairments in the IDC, it seems that the current performance measures are not adequate in giving the performance of the company. Therefore, more performance measures may need to be added to those currently used in the IDC, to gauge the future sustainability of the companies applying for funding.
The next chapter will discuss a literature review of DFIs and the IDC.

# CHAPTER 3
# LITERATURE REVIEW OF OTHER DEVELOPMENT FINANCE INSTITUTIONS AND THE INDUSTRIAL DEVELOPMENT CORPORATION'S INTERNAL PROCESSES

## 3.1 INTRODUCTION

DFIs are important vehicles used by the government to develop industries. They are seen as dedicated institutions that support government economic development missions through the provision of financial services at a lower interest. They normally get funding from the government to promote certain initiatives, and they are also eligible to source funding from other financial institutions.

DFIs fund companies that are considered risky by other private funders and are therefore seen as taking higher risks. Although the companies may be seen as risky, it is important that the funded companies be able to repay their loans. It is crucial that DFIs be sustainable, since they are important role players in the development of the country's economy. Therefore, it is critical that they provide funding to companies that will be able to repay the loans granted to them.

The previous chapter discussed selected traditional performance measures, EVA, and ratios used at the Industrial Development Corporation. This chapter commences with an overview of the role of DFIs showing the European, African, Southern African Development Community (SADC), and South African perspective. This is followed by a discussion of the major South African DFIs and their performance. Following that is a discussion of the IDC's application process, which includes the basic assessment of applications; due diligence; approval process; and the signing of legal agreements and the disbursement of funds. Lastly, the post-investment process, which constitutes post-investment monitoring, and the statistics of the workout and restructuring department are described in this chapter.

## 3.2 OVERVIEW OF DEVELOPMENT FINANCE INSTITUTIONS

### 3.2.1 Role of Development Finance Institutions

Development finance can be defined as providing funding to sectors that are not fully catered for by the financial system (Thorne & Du Toit, 2009). DFIs have been used in most socially and economically developed countries as a means to enhance economic growth, industrialisation, and human resources development (Gumede, Govender & Motshidi, 2011). Hence, development finance is used to fund projects that would not normally be funded and are therefore used as a means to develop resources of the country.

According to Thorne and Du Toit (2009), DFIs played a vital role in Europe after World War I and the Great Depression of 1929 where they facilitated industrialisation and reconstruction by giving long-term finance after the demand created by the war and the depression. Thus, the funding given by DFIs plays a significant role in assisting the country to industrialise and reconstruct. DFIs can borrow funds from international capital markets at low interest rates, as they seem to be creditworthy (Griffith & Evans, 2012). Since DFIs are seen as creditworthy, they are able to borrow funds at low interest from international capital markets.

The main function of DFIs is to provide risk-based financial services to increase the chances for their targeted group to access funds (Mkhumane, 2015). Accordingly, DFIs are used in their countries to improve development and to assist their targeted group access funds for their companies. They are therefore mainly used as a source of funding for the group considered to have risky operations. DFIs play a vital role in the promotion of the economic development in sectors that are underserved (Garmendia & Olszewski, 2014). As such, the countries will identify sectors that need to be explored and enhanced, and then use DFIs as a source of funding for projects in those sectors.

As already discussed, funding is normally used to promote economic and social development objectives of the government and is available for a targeted group.

The target group may include different market sectors that the government deems appropriate, since those sectors need financial support and may not be serviced by the private sector (Mkhumane, 2015). Garmendia and Olszewski (2014) concur that DFIs give development funding to regions and sectors where the private sector is hesitant to invest. Therefore, it seems DFIs make a meaningful contribution to their countries by funding sectors that the government thinks need financial support and that are not easily funded by private investors. Figure 3.1 illustrates the role of DFIs.

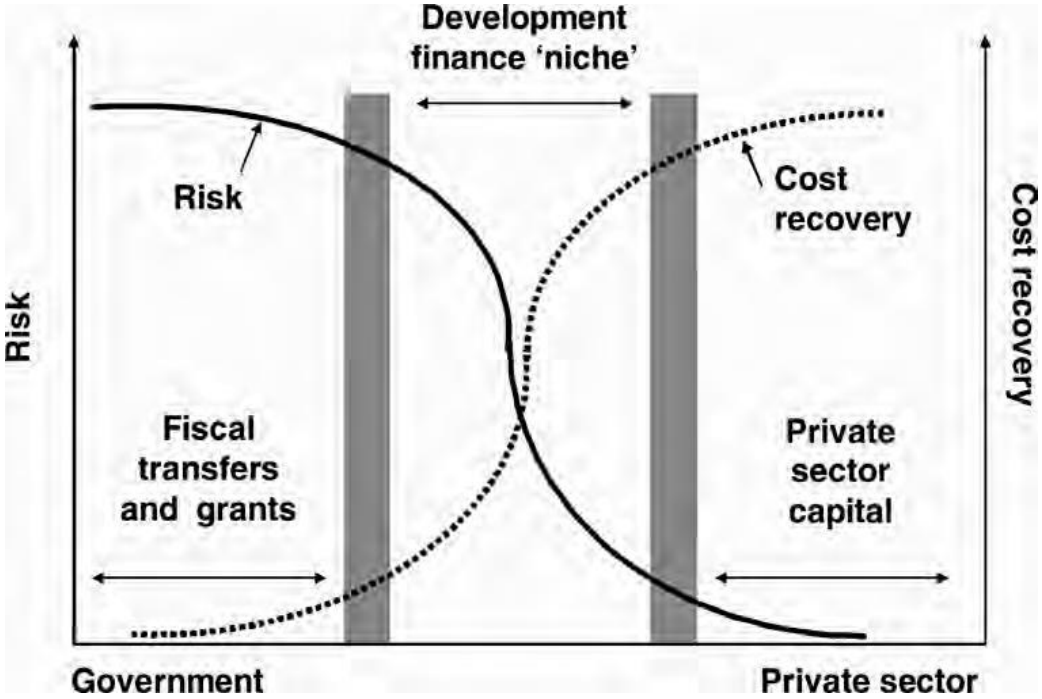



**Figure 3.1: Role of DFIs**

Source: Thorne and Du Toit (2009)

Figure 3.1 indicates that development finance is used to complement the funding made available by government and by private funders. The funds are used to fill the gap between projects where there is a possibility of funds not being recovered and private funding where making profits is a priority. Therefore, the government takes higher risks and invests in projects where they may not be able to recover funds, and the private sector takes a lower risk with the possibility of recovering their funds. The gap between the government and the private sector is filled by development finance, which gives funding to sectors where there are risks

involved, but there are chances of recovering the funds to keep the DFIs sustainable.

Although DFIs are expected to finance projects with socio-economic development at a minimal return, they are equally expected to generate enough funds to keep them sustainable (Banda, 2014). Hence, DFIs need to fund projects in the financing gap shown in Figure 3.1. The financed entities must, however, be able to repay their loans to avoid high impairment rates, which, in turn, could keep DFIs sustainable.

### 3.2.2 DFIs: A European perspective

The Association of European DFIs has a group of about 15 DFIs (Aprodev, 2013). Most DFIs in European countries have a strategy of focusing on specific geographic areas, sectors, and in their area of expertise (Dalberg Global Development Advisors, 2010). They use different financial products including equity and quasi-equity, loans, and guarantees for funding (Dalberg Global Development Advisors, 2010). Thus, DFIs in the European countries have developed a strategy for approaching funding requirements and products to suit business needs.

DFIs in the association have collectively invested €23.7 billion in 2011, and the funds were invested in 4 421 projects (Aprodev, 2013). DFIs in European countries have managed to double their funding from the year 2001 to 2009 (Dalberg Global Development Advisors, 2010). That is an illustration that DFIs in European countries have been approving more development funds. It was noted that DFIs in European countries perceive specialisation in certain products to be beneficial, and they normally differ in how they balance the benefit with the risk (Dalberg Global Development Advisors, 2010). Therefore, it seems the specialisation in European DFIs is working, as they have managed to use their expertise and risk management to fund billions in over 4 000 projects.

European DFIs focus their investment activities mostly on return on investment and economic performance (Aprodev, 2013). Hence, it seems DFIs in European

countries have strategies in place for their concentrated areas and funding models, as they invest in projects with a better return on investment and which show economic performance. The weighted average return on investment was 7%, and the total average profit per year for 2007-2009 was €522 million (Dalberg Global Development Advisors, 2010). Therefore, DFIs in European countries have managed to avail more funding in their areas, and the funds provided a strong financial return for their shareholders.

### 3.2.3 DFIs: An African perspective

The continent of Africa boasts more than 140 DFIs (Calice, 2013). According to Calice (2013), they include different institutions comprising development banks, guarantee funds, government-owned banks, and insurance companies. It therefore seems that the governments in African countries have DFIs in place as different institutions to address development issues in their countries. Calice (2013) further states that African DFIs are careful when approving funds, as most of them require the company to give 25% of the total funding they are applying for as the owners' contribution towards the loan. The companies are also required to give physical assets and cash of about 35% of the loan value as collateral (Calice, 2013). Accordingly, DFIs are cautious when giving development funding, as they require companies to make an own contribution as a way of sharing the risk with applicants. The own contribution can be any productive assets and cash.

Griffith and Evans (2012) found that most African DFIs measure their impact by key dimensions such as economic performance, financial performance, private sector development, and environmental and social performance. Although African DFIs have measures in place, Calice (2013) found that they have not been defined clearly, as about 21% calculate performance measures such as the expected employment to be generated, the economic rate of return, and the cost per job to be created to measure their impact. DFIs in African countries may have key measures for their impact, but they have not been clearly defined. Accordingly, African DFIs have performance measures they use to assess their

impact, but most of them may still need to clearly define them and have them known.

### 3.2.4 DFIs: A Southern African Development Community perspective

According to Banda (2014), about 51% of DFIs in SADC countries are financially unsustainable due to making poor funding decisions. This is in contrast to DFIs in African countries that require companies to put up own contributions towards the loan in the form of productive assets and cash, therefore reducing the risk exposure of the DFIs. It seems that DFIs in SADC countries may not be able to sustain themselves due to companies not being able to pay funding advanced to them. Accordingly, DFIs in SADC countries may need to put strategies in place to ensure that they make properly informed funding decisions to provide funding to companies that will be able to repay their loans so that they remain sustainable in the future. In light of that, more performance measures may need to be introduced to assess the funding applications, to ensure that the company will be able to repay funds advanced.

Although applications should be approved based on the capability of the company to repay a loan, collateral, guarantees, and transaction structures may be used to help reduce the risk faced by SADC DFIs (Calice, 2013). Accordingly, in addition to the company's ability to repay the loan, other measures such as collateral towards the loan should be put in place to ensure that the risk is reduced and that DFIs are not exposed to financial problems. A loan transaction thus needs to be structured such that it indicates the future performance of the company and the ability of the company to repay the loan granted.

As indicated already highlighted, DFIs in SADC countries are struggling financially and need to put in place other measures to cover the risk that DFIs are exposed to when funding a company. DFIs in SADC need to balance their developmental impact and financial viability in order to remain successful (Banda, 2014). Therefore, DFIs may need to weigh the risk they take by granting funding against the return expected from the funding. Accordingly, the decision

to fund an application should be based on the viability of the business proposal and the developmental impact.

### 3.2.5 DFIs: A South African perspective

According to Mkhumane (2015), the portfolio of investment for the South African government is in four major DFIs. They include the Development Bank of Southern Africa (DBSA), the IDC, the Land Bank, and the National Empowerment Fund (NEF). There is also the Public Investment Corporation (PIC), which holds a portfolio where government employees' pension funds are invested, though the government does not own the investment. Table 3.1 shows the financial status of DFIs as at 31 March 2011.

**Table 3.1: Financial status of DFIs as at 31 March 2011**

| Table 3.1: Financial Status of DFIs as at 31 March 2011 | | | | | | | |
|---|---|---|---|---|---|---|---|
| R 000 | DBSA | IDC | Land Bank | NEF | NHFC | Other DFIs | Total |
| Total assets | 47,397,116 | 106,806,000 | 18,297,673 | 5,315,860 | 2,990,521 | 7,088,343 | 187,895,513 |
| Total debt | 29,484,094 | 13,738,000 | 13,557,919 | 35,283 | 713,939 | 456,034 | 57,985,269 |
| Total equity | 17,913,022 | 93,068,000 | 4,739,754 | 5,280,576 | 2,276,586 | 2,110,306 | 125,388,244 |
| Development loans | 37,845,148 | 12,053,000 | 14,299,153 | 1,109,673 | 1,330,393 | 856,514 | 67,493,881 |

Source: Mkhumane (2015)

Table 3.1 gives an illustration of the asset base of the four major DFIs identified in the table at the end of March 2011. Further, the National Housing Finance Corporation (NHFC) and a column for other DFIs appear. The assets are to be used for the development funding, which is used to assist in the creation of new opportunities in different sectors (Mkhumane, 2015). Based on Table 3.1, it seems that DFIs listed managed to acquire assets of almost R188 million, with total debt of almost R58 million, therefore a net asset value of R130 million. Further, they have distributed almost R67.5 million in development loans, their total equity is high, and so is their debt. That may be viewed as an indication that

DFIs are fully developed and have managed to establish themselves in the funding environment.

Three of the four major South African DFIs, namely, DBSA, the IDC, and NEF will be discussed in the next section. The three selected DFIs operate in the same field of offering development funding to companies. The Land Bank and NHFC will not be included in the discussion, as they are not considered to be in the same operational space as the other four major South African DFIs because they deal mostly with issues of land and housing and not business development funding.

## 3.3 BACKGROUND ON SELECTED SOUTH AFRICAN DFIS

The IDC will be discussed towards the end of this section in order to give a better flow to Section 3.4. The Small Enterprise Finance Agency (Sefa), as a subsidiary of the IDC, will also be included in the discussion because it also operates in the same development funding environment as the four major South African DFIs.

### 3.3.1 Development Bank of Southern Africa

The DBSA is a government-owned institution. The main focus of the DBSA is indicated as to fast-track socio-economic development and better the life of those under SADC (DBSA, 2013). The DBSA's focus is on the delivery of developmental infrastructure (NEF, 2014). Therefore, the focus of the DBSA is on infrastructure development in SADC countries.

The DBSA achieves the aforementioned by providing non-financial services, which does not include funds that will have to be repaid by the company and investing financially in economic and social infrastructure sectors (DBSA, 2013). The DBSA is committed to accelerating socio-economic development by providing funding to social, physical, and economic infrastructure (DBSA, 2013). The DBSA plays multiple roles of Financier, Advisor, Partner, Implementer, and Integrator to mobilise finance and expertise for development projects (Mkhumane, 2015). It appears that the DBSA has an established focus area of performance and has different roles it plays in the industry.

The financial position of the DBSA is sound (DBSA, 2013). Based on Table 3.1, at March 2011 the DBSA had an asset base of over R47 million and had issued over R37 million in development loans (Mkhumane, 2015). It seems that the DBSA had a financial standing and was performing well until 2011. The 2012 financial year showed an impairment loss of R495 million (DBSA, 2013). The financial performance in 2013 was however affected by the international, national, and regional economic conditions. Total impairments of R1.6 billion based on loans that were granted in prior years that were not performing well were recorded (DBSA, 2013). The 2013 impairment loss was significantly higher than the 2012 loss (DBSA, 2013).

Although the DBSA may be in a good financial standing, it seems that its impairments keep increasing. In 2013/14, R12.7 billion was provided in infrastructure financing and R1.7 billion in municipal market funding (DBSA, 2014). Non-performing loans declined from R3.2 billion in March 2013 to R3 billion in March 2014 (DBSA, 2014). The provision for impairments increased from R2.3 million in March 2013 to R2.4 million in March 2014 (DBSA, 2014). Impairments for 2014 were thus provided for higher than the amount of the previous year.

### 3.3.2 National Empowerment Fund

The NEF is the only DFI with the sole mandate of developing B-BBEE (NEF, 2014). Mkhumane (2015) mentioned that the NEF is focused on economic

empowerment and transformation through supporting B-BBEE. It is the only DFI which deals exclusively with growing B-BBEE (NEF, 2014). In view of that, the NEF is the only DFI which concentrates only on funding for B-BBEE transactions.

The NEF sustains itself from interest on deposits, debt collected, and dividends received from investments (NEF, 2014). It is a development financier with funding terms of a maximum of seven years for some companies and 10 years for rural and industrial development companies (NEF, 2014). Since the NEF is aimed at developing B-BBEE companies, its funding conditions and loan terms are long.

It is important for the NEF's portfolio to remain positive so that it is able to sustain its funds (NEF, 2014). Portfolio management through financial management is therefore important. The monitoring of the return on investment, impairments, portfolio risk, and collection rates are the key performance indicators that are performed on a regular basis (NEF, 2014).

As shown in Table 3.1, in 2011 the NEF had an asset base of over R5 million and had issued development funding of over R1 million (Mkhumane, 2015). The NEF approved 30 new transactions totalling R418.4 million in the 2013/14 financial year and disbursed a total of R636 million. The disbursements figure included deals approved in both the current and previous years (NEF, 2014). The NEF approved 94 transactions worth R895 million and has disbursed R562 million in the 2014/15 financial year (NEF, 2015). Accordingly, financial sustainability is a priority for the NEF; because of that, it implements performance indicators to keep track of approved transactions. The NEF therefore keeps approving loans and disburse more funds.

It has been reported that the impairments on the aforementioned loans were at 19.94%, which is a decline from 20.01% in previous years (NEF, 2014). Hence, impairments are recorded where the recoverable amount of the assets has been reduced. The decline was due to the active involvement of management in identifying portfolios that showed signs of distress and were able to intervene early (NEF, 2014). The decline in impairments was thus due to management

involvement in identifying problems early and assisting in solving them. Write-offs, which are accounts that may not be recovered, that amount to R87.1 million were made after a long recovery process in the 2013/14 year (R3.5 million in 2012/13) (NEF, 2014). Accordingly, the NEF monitoring systems seem to be assisting in marginally reducing the impairment, but the write-offs are increasing. Although the losses are being reduced, the amounts still seem high and may still need monitoring.

### 3.3.3 Small Enterprise Finance Agency

The Small Enterprise Finance Agency (SOC) Limited (Sefa) was formed on 1 April 2012 (Sefa, 2014). Sefa is wholly owned by the IDC (Sefa, 2014). Sefa was formed to cater for establishing, developing and growing Small, Micro and Medium Enterprises (SMMEs). It contributes to the alleviation of poverty, creation of jobs, and the growth of the economy (Sefa, 2014). Entrepreneurs approach Sefa as a last resort when they seek funding. It funds companies that commercial banks do not have an interest in granting funding (Sefa, 2014). Accordingly, Sefa was formed to address social issues of jobs and poverty. That being the case, companies approach Sefa when the banks do not want to fund them.

Sefa managed to support 46 407 entrepreneurs in the 2014 financial year. It granted loans amounting to R822 million in 2014 (Sefa, 2014) and approximately R440 million in the 2013 financial year (Sefa, 2013). It was further noted that the impairments of 25% (30% in 2013) on the loans are still high (Sefa, 2014). The high impairments were mainly due to non-payment of loans. Failure by clients to pay their loans remains a great concern for Sefa (Sefa, 2014). It seems that Sefa keeps increasing its clients and therefore disbursing more funds. The impairments are still high. The company's inability to service the loans concerns Sefa, since it creates a risk of unsustainability for NEF.

In the process of credit assessment, the clients' risk profiles are used to classify them. The idea is to rank the client risk base and determine the chance of a default on loan repayments (Sefa, 2014). Sefa has implemented the credit policy and framework, strengthened its credit management committees, general

compliance and prevention strategies, and also capacitated its credit verification department (Sefa, 2014). Sefa and the South African Institute of Chartered Accountants (SAICA) have an agreement where SAICA will provide bookkeeping and financial management skills to Sefa's clients (Sefa, 2014). Sefa has accordingly implemented strategies to reduce the chances of the clients defaulting on their loan repayment and therefore increasing the impairments.

### 3.3.4 Industrial Development Corporation

The IDC is often required to finance business ideas that show economic merit but were disregarded, or even unnoticed, by other business financiers (IDC, 2014a). Such business ideas are often new, non-traditional and even uncommon in nature. Although the IDC considers funding for projects that are risky and mostly marginalised, it should be noted that funding will only be considered where the projects are deemed to be economically viable (IDC, 2014a). Employment creation, rural development, B-BBEE, and Small Medium Enterprise sector expansion are other key objectives for IDC funding (IDC, 2014a).

The IDC funding encourages regional integration and development, where communities are involved in the production process and are therefore developed. This ensures that the communities are economically empowered and get opportunities in the growth and development process (IDC, 2014a). The IDC funding has the specific outcome of developing industrial capacity. This important outcome is achieved by funding companies that produce in large quantities and in bulk, and enable the creation and keeping of jobs (IDC, 2014a). Therefore, the IDC funding is for companies that will be able to produce locally and in large quantities, be sustainable, and be able to create and maintain jobs in the communities where they operate.

The IDC also has funds which it manages for third parties, such as the Department of Trade and Industry (IDC, 2013). Those funds can again be used by the IDC for co-investment, where a company is funded through both IDC and third-party funds, thereby providing a fee income for the IDC (IDC, 2013).

Funding criteria are based on the expectation that the shareholders/owners make some financial contribution towards the loan (IDC, 2014a). The financial contribution of people who are historically disadvantaged could, however, under special circumstances, be lowered. In that case, the IDC could grant additional finance to cover the owner's contribution.

Since the aim of the IDC is to expand the industrial base. The following are preconditions to the lowering of the personal financial contribution towards the loan (IDC, 2014a):

- The business or project must show economic merit for sustainability and viability.
- The business or project must comply with international environmental standards.
- The security for the loan must relate to the companies or project's specific circumstances without any refinancing of fixed assets.

The IDC does not give 100% funding; it expects the shareholder to make a contribution as well. Exceptions can be made to lower the contribution where the criteria stated above have been met.

Funding can be structured from a wide range of instruments including debt or equity, quasi-equity, guarantees, trade finance, and bridging finance (IDC, 2014a). Therefore, it seems that the IDC has a range of funding instruments that it offers to the company. The cumulative funding approvals have over the past five-year period increased substantially to a total of R58.5 billion. The approvals increased by 78% from the previous five-year period approval of R33 billion (IDC, 2014a). During the past 20 years, the IDC has approved approximately R141 billion (IDC, 2014a). Accordingly, the IDC funding approvals keep increasing. Thus, it is vital that the funding be given to a company that will be able to meet its loan obligations and be sustainable.

Figure 1.1 illustrated that the W&R portfolio had increased by 15%. The percentage represents a total of 329 clients in 2014 and 283 in 2013 (IDC, 2014a). The number of companies being transferred to W&R seems to be increasing. The increase in impairment levels is still in line with the risk that the IDC can take considering the IDC's role of funding high-risk industries and companies that other commercial financiers may find unattractive (IDC, 2014a). Although the impairment levels increase, they are within IDC appetite.

## 3.4 THE IDC'S APPLICATION PROCESS

As discussed in Section 1.1, the IDC was established to promote industrial development and economic growth. It mainly provides funding to companies in South Africa and other African countries (Mkhumane, 2015). The IDC funds companies based on defined internal processes of approved systems and procedures. Figure 3.2 illustrates the application process.

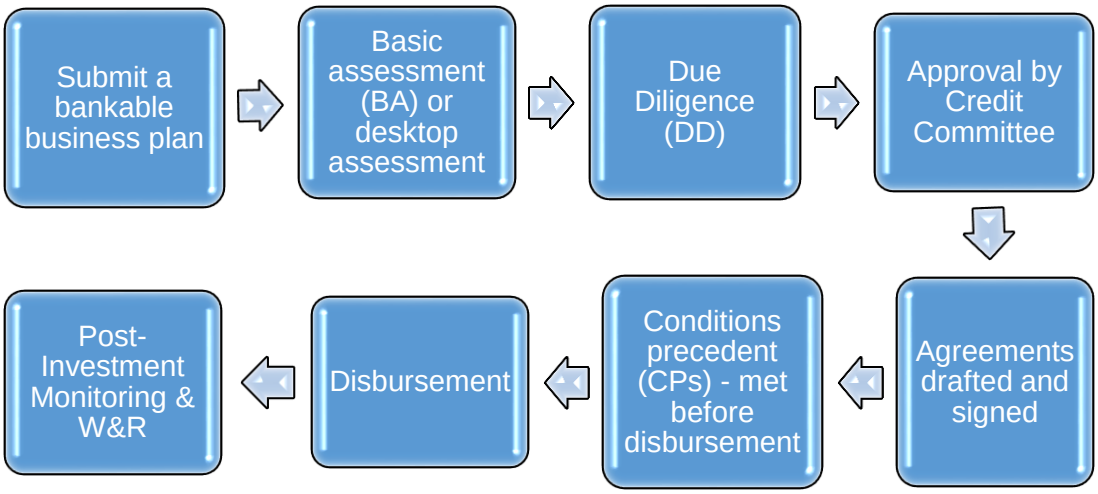



**Figure 3.2: IDC application process**

Source: IDC (2014d)

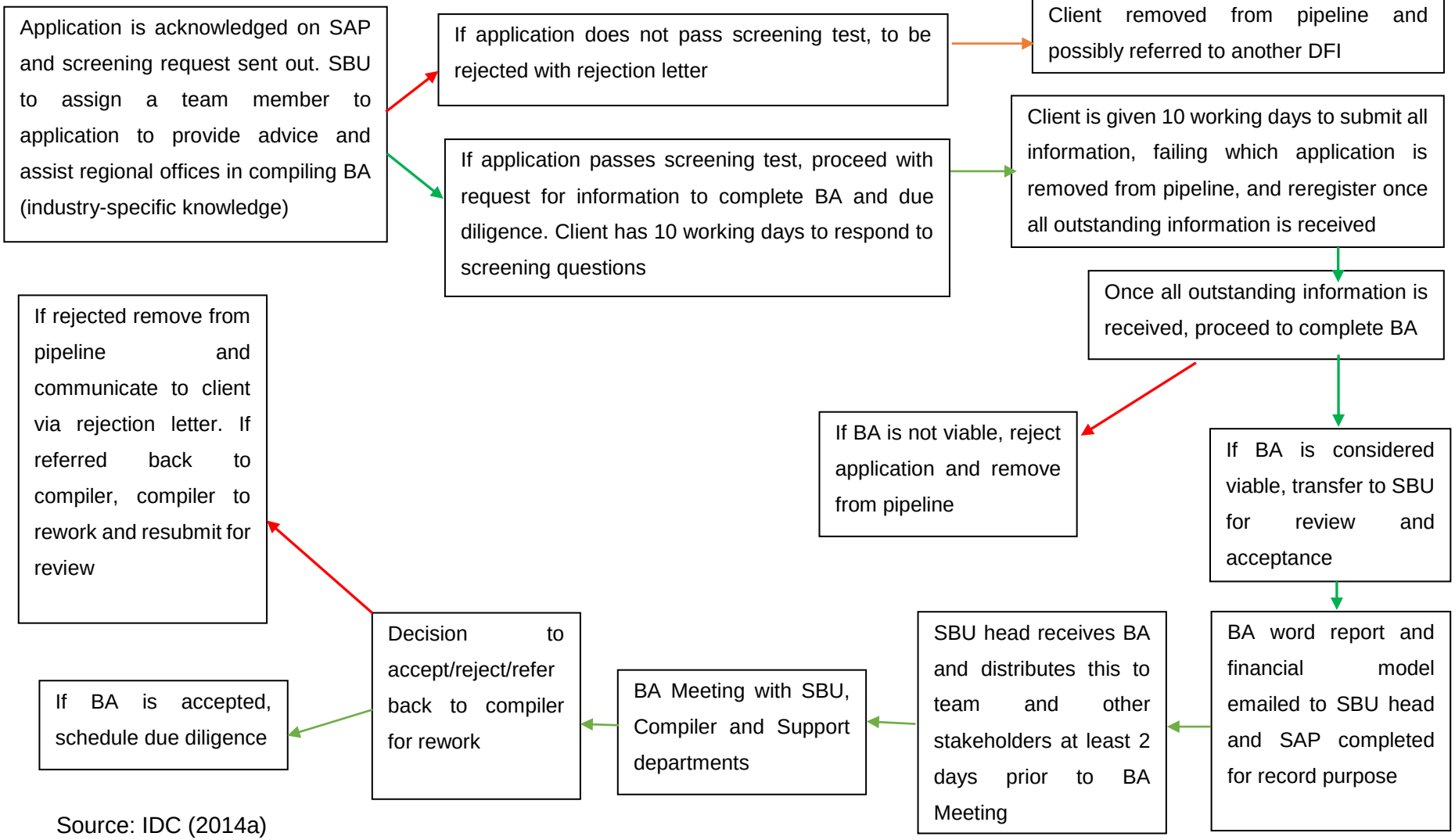
As illustrated in Figure 3.2, the application process includes applications by submission of a bankable business plan, basic desktop assessments, due diligence, credit committee approval of funding, signing of legal agreements, conditions precedent, disbursement, and post investment. Accordingly, the IDC

has a process of application in place from the application to post investment of funds. The elements of the process will be discussed.

### 3.4.1 Application and basic assessment

Clients can directly make their funding application online on the IDC website. The system was implemented to make the application process easier and faster, and to also assist in the streamlining of the application process (IDC, 2014a). Figure 3.3 illustrates the steps required in the basic assessment process within the IDC.

**Figure 3.3: Basic assessment process**




Source: IDC (2014a)

As illustrated in Figure 3.3, once the application has been received, a basic assessment (BA) process of a basic screening test is performed on the application. The test is to assess whether the application meets the IDC's minimum requirements in terms of minimum funding required; is within the IDC mandate; and the industry and sector that the business will operate in. The red arrow in the figure indicates that the application cannot be processed further, and the green shows the processing of the application continues. The applications are processed on an electronic system called System Application Product (SAP). Once the application is received, then the acknowledgement letter to be issued to the client is generated on SAP. The Strategic Business Unit (SBU) appoints an account manager to assist the region with any industry-specific knowledge required to process the application. If the application does not meet IDC minimum requirements, then the application gets rejected, and a rejection letter is issued, and the application is removed from the pipeline. However, if the application meets minimum requirements, then the client is issued with the request for information letter for additional information required to complete the BA and the Due Diligence (DD), and the client is given 10 days to submit such information.

Once all information is received, the BA is performed on the application, and if not viable, then the application is rejected and taken off the pipeline. However, if the BA is viable, then the BA report and the financial model are prepared, and the application is recommended to the SBU for the DD. The funding is normally structured on the financial model to meet the specific needs of the business, namely, funding for short-, medium- and long-term loans as available and for payment holidays, which allows no capital or interest payments for periods as required and negotiated when the loan is initiated and as per the business needs (IDC, 2014a). Accordingly, various funding models are available for different companies, depending on the business needs.

SAP pipeline will be completed for record purposes. According to Makgeta (2010), the SBUs are operational units within the IDC that do the funding. When the SBU head receives the reports, he forwards them to his team to prepare for

the BA meeting. At the meeting, a decision will be taken to accept/reject/refer back to the compiler for rework. If the application is rejected, then the rejection letter is generated and sent to the applicant, and SAP is updated accordingly. If the application is referred back to the compiler, then SAP is updated accordingly, and the compiler will rework the application and resubmit to the SBU once finished. If the application is accepted by the SBU, then SAP is updated accordingly, and the SBU will schedule the DD. Therefore, it appears that there are proper procedures for the application and basic assessment processes at the IDC.

### 3.4.2 Due Diligence

Once the BA has been completed and recommended to the SBU for DD, then the SBU head will allocate the team to perform the DD on the BA. According to Shuping (2013), the team will comprise the team leader and the account manager responsible for marketing, technical, and financial disciplines, and where necessary, the evaluation and legal account managers will also be involved with the DD. The team will visit the business premises and meet the management team of the business. Necessary checklists will be completed, and a thorough analysis of the business will be conducted (Shuping, 2013). The team normally spends 3-5 days at the business premises with the management team and thereafter finalises the DD at the IDC office (Shuping, 2013).

The team leader will prepare a submission which will be given to the records department that prepares documents to be submitted to the approving committee (Shuping, 2013). Accordingly, the DD processes are in place and are thorough and detailed to ensure that the finance, technical, and market aspects of the business operations are covered in the due diligence of the business. Also, the DD team spends time at the business premises to gather relevant information about the business to be able to compile a submission to the Credit Committee for consideration.

The team leader includes a financial paragraph as part of the documents that are submitted for approval of funding applications (IDC, 2014c). The financial

paragraph should include a discussion of the outside funds to cash flow, income security cover, and structure ratios in particular (IDC, 2014c). The outside funds to cash flow calculates the time it will take the company to repay the funds based on the cash flow generated in that specific year. The shorter the time it takes, the better, since it indicates that the company will have a strong cash flow (IDC, 2014c). Income security cover calculates whether the cash flow generated can pay the interest expenses and the capital instalment. The higher the security, the better, as this indicates that should the profit be reduced, then the income will still be enough to cover the expenses and instalments (IDC, 2014c).

The structure shows the extent to which the shareholders have put in funds into the company as compared to funding given. The lower the structure, the better for the IDC, as it indicates that the IDC did not put in more than the shareholders and therefore should the company fail, then the exposure was not high (IDC, 2014c). The sensitivity analysis should also be included in the discussion to highlight areas that are sensitive in the company and how those are being mitigated (IDC, 2014c).

The approving committee needs detailed financial information when assessing an application to decide on whether to approve the funding application. Accordingly, information about the financial performance of the business should be detailed in the report, and any issues that may be sensitive should be highlighted and mitigating factors for them put in place. Hence, it is vital that the financial information should also include a calculation that will be able to indicate the future prospects of the company's performance.

### 3.4.3 Approval process

The board considers applications where the total exposure by the counterparties is above R7 billion, their directors may pose a conflict of interest, or where it a strategic investment (IDC, 2013). Other than these cases, the submission is presented to the Credit Committee by the DD team. Although the board delegates its powers to one of the board committees and the executive management, it is still accountable to its shareholder, the State. There are three

committees with delegated powers from the board. These are the Board Investment Committee (BIC), the Special Credit Committee, and the Credit Committee (IDC, 2013). The different committees are assigned to applications of different amounts. The committee and their functions are discussed hereunder.

The BIC considers applications where the IDC exposure is over R250 million and/or exposure by the counterparties is between R1 billion and R7 billion. The BIC consists of non-executive directors. It makes recommendations to the board where the applications have a regional and/or transaction sector limit, which is where the IDC has put in limits not to give funding in certain sectors, regions, or amounts (IDC, 2013).

The Special Credit Committee considers applications where the IDC exposure is between R25 million and R250 million and where the exposure by the counterparty is below R1 billion. It comprises executive management and other members who are not in the employ of the IDC, and the CEO chairs the committee. It considers applications of related parties but makes recommendations to the BIC or the board for approval (IDC, 2013).

The Credit Committee considers applications where the IDC exposure is under R25 million and/or the counterparty exposure is under R250 million. It consists of the executive management, the CEO excluded, and other members who are not in the employ of the IDC. It is chaired by a member who is not operationally involved in the IDC (IDC, 2013).

The aforementioned board committees represent the board and their purpose is to consider funding applications. Accordingly, there are structures assigned with the responsibility of assessing funding applications. The IDC approved a funding record of R13.8 billion in 2013/2014, which is higher than the 2011/2012 record of R13.5 billion (IDC, 2014a).

### 3.4.4 Signing of legal agreements, CPs, and disbursement of funds

The Credit Committee will interrogate the funding application, and when satisfied, it will approve or disapprove the funding (Shuping, 2013). Where funding is approved, the legal department will prepare the legal documents based on the terms and conditions as approved by the approving authority. The client will be invited to the office or the team leader will visit them at their premises to sign the legal document (Shuping, 2013). Where there are conditions that need to be met before disbursement, the client will be required to submit the information or documents before the funds can be disbursed. Once all conditions preceding disbursement are satisfied, then the funds will be available for disbursement.

According to Shuping (2013), the client will make a written request to have the funds disbursed based on the approved conditions per the loan agreements. Accordingly, after the approval, the client will sign the loan agreement to agree to the terms and conditions of the loan, which would normally include the repayment terms and the instalment (Shuping, 2013). After the contracts have been signed, the client can request to access the approved funds.

## 3.5 POST-INVESTMENT PROCESS

### 3.5.1 Post-Investment Monitoring

The IDC established the PIMD where all loans are transferred after they have been approved to actively monitor a client's performance (IDC, 2014a). When the loans deviate from the contractual obligations, Post-Investment Monitoring (PIM) would recommend either loan restructuring if there is economic merit or to take legal action to recover the IDC's outstanding money (IDC, 2014a). On early detection of a struggling company, proper measures are put in place to ensure IDC's interests are protected and to prevent the IDC from incurring any financial losses (IDC, 2012). Accordingly, the IDC has a unit that monitors the performance of the companies that they have given funding to, to ensure that they keep to their loan repayments and to secure the IDC's investment.

The PIMD gets involved after the approval of any type of funding including quasi-equity, which is classified as subordinated loans or preference shares; equity investments; and guarantees (IDC, 2012). PIM constantly monitors all IDC loans by following up on the quality of the books of funded companies in order to be able to detect any deterioration signs early enough (IDC, 2012). PIM monitors activities such as the receipt and analysis of the financial statements, and the analysis consists of comparing the financial statements with the projection as approved and provided when the fund was approved (IDC, 2012). Accordingly, it is important for the IDC that the loan performs as it was presented when the funding application was submitted. As such, the IDC has PIMD to monitor the performance of the companies that were provided with funding.

Verifying that the client adheres to predetermined undertakings, milestones, and covenants as per the agreement are responsibilities of PIM (IDC, 2012). Furthermore, PIM monitors the performance of loan investments and decides on any necessary action that can be taken regarding potential non-performing or non-performing loans (IDC, 2012). It seems that it is vital that the company complies with the terms and conditions of the loan agreements, as any deviation from the conditions will result in action being taken against the company.

PIM action may comprise recommending the loans for Business Support, where in order to protect IDC's rights as an investor, they can enforce the following (IDC, 2012):

- appointment of a director on the board and committees of the client's company;
- checking whether the company has achieved the planned developmental (capital expenditure, B-BBEE, job creation) outcomes of the funding; and
- checking whether funds were applied for the purpose they were intended for.

Business Support is also recommended to the company to protect the IDC's invested funds. Where PIMs attempts to assist the company to fail, then the company may be transferred to W&R for the development of a turnaround strategy and assisting with the recovery phase (IDC, 2012). The W&R turnaround strategies are developed to save jobs created and to create sustainable companies (IDC, 2012). Since the IDC has structures in place to constantly monitor the performance of the loan granted to the companies and offer assistance to companies that are facing challenges, the IDC has W&R where companies are transferred for turnaround strategies. According to Makgeta (2010), the company may be transferred to W&R when one or more of the following occurs:

- The account falls in arrears by three months or more on interest and/or capital payments.
- A request for another postponement of interest and/or for interest to be capitalised even whilst a company is already on an extended capital moratorium.
- Where the IDC is at the stage of issuing the business with summons.
- The business has a judgement valued at more than 10% of its Net Asset Value issued by the IDC or any other creditor.
- The assets of the business are attached by the IDC or any other creditor.
- Application to liquidate the business has been made by the IDC or any other creditor.
- When the business intends to stop or has stopped its operations.
- When a major disruption that affects the future viability of the business occurs.
- The business does not honour the terms of redeeming the IDC's preference shares.
- The business does not honour the approved dividends policy applicable to preference and ordinary shares.

It appears that the financial performance of the companies that were given funding is important to the IDC. As a result, the IDC has put systems in place to identify struggling companies and offer strategies to assist the business. Although the IDC may have strategies to assist companies keep to their loan agreements and terms, some of the companies may need to be referred to the W&R of the IDC for further assistance in terms of the turnaround strategies and improvements.

### 3.5.2 Workout & Restructuring

The IDC has PIM, which monitors the performance of a business they funded. When companies start showing signs that they are struggling, they are transferred to the W&R. W&R are therefore rescue interventions in PIM for companies with a reasonable chance of being profitable and being rehabilitated (IDC, 2014a). Thus, the IDC has measures in place to intervene when the business needs rescue. The W&R has the primary objective of minimising the risk of business failure (IDC, 2014a), but when companies fail, the W&R may also assist the legal department with recovering the invested funds (IDC, 2014a). The W&R therefore also has the function of assisting other IDC departments to recover funds when companies face difficulties and fail.

In W&R, restructuring is given to companies that need to restructure their balance sheets, when problems that the business faces have emanated mainly from cash flow constraints (IDC, 2014a). Turnaround strategies are extensive reviews and assessments of the business activities given to companies which need operational interventions where their business model shows potential growth but the operations need improvements to realise the growth (IDC, 2014a). Therefore, restructuring and turnaround strategies are also available for IDC clients who are facing difficulties, to assist them to get back on track.

The IDC strives to ensure that the projects and initiatives which they get involved in are sustainable and are able to meet the main requirements of the terms of engagement (Du Plessis, 2014). When the business faces financial failure and

the liquidation of the business is inevitable, W&R ensures financial recovery of IDC loans through the selling of financed assets and through payments from clients and any related parties (IDC, 2014a). Accordingly, W&R must ensure that the funds are recovered in the event of the company failing and being liquidated. The funds are recovered through the sale of the business assets.

The book value of companies transferred to W&R was R5.8 billion in 2012, which is an increase of 16% from 2011 (IDC, 2014a). As discussed in Section 1.1.1, the value of companies transferred to W&R in 2013 was R8.7 billion, increasing to R10 billion by 2014. This represents an increase of 15% in the W&R portfolio, being 329 clients (2013: 283) (IDC, 2014a). The 2014 W&R portfolio represents 21% of the number of IDC's business partners and 18% of the IDC's total portfolio at cost (IDC, 2014a). Although the IDC has PIM, the figures show that the value of the portfolio and the number of companies struggling – therefore being transferred to W&R – seems to be increasing every year. Consequently, the IDC may need to put measures in place when assessing funding applications to ensure that the future performance of the company is covered. This will assist in ensuring that the companies can be able to repay the loan after funding has been approved. The additional performance measures may assist in reducing the number of companies being transferred to the W&R.

## 3.6 SUMMARY

This chapter started by discussing the roles of DFIs as instruments in driving the economy of the country. They give funding to companies that create jobs and uplift the livelihood of communities. It was highlighted that the roles of the DFIs are to promote and increase investment and industrialisation in the countries where they are established. They provide funding where private funding institutions would not consider funding; therefore, they fill the finance gap between government and the private sector.

The European DFIs have an association with about 15 DFIs. They have developed strategies and use different products for funding. They managed to double their funding and funded over 4 000 projects between 2001 and 2009.

European DFIs fund companies that show economic performance and have a good return on investment. Through their assessment process, they managed to get a weighted average return on investment of 7% and an average profit of €522 million per year for the year 2007-2009.

The African continent has over 140 DFIs. They comprise different institutions such as development banks, guarantee funds, and insurance companies. They measure their impact on economic, financial, environmental, and social performance. About 21% of them use cost per job, economic rate of return, and number of jobs to be created as their performance measures. It was noted that the performance measures for the African DFIs are not clearly defined. African DFIs are cautious when granting funding, and they do not give 100% funding. They expect the company to give 25% owner's contribution in the form of cash and/or productive assets towards the loan. They also required about 35% of the loan in physical assets and cash as collateral.

The majority of DFIs in SADC countries are financially unstable. The instability is caused by poor funding decisions. They seem to be funding companies that are unable to repay the loans granted to them. The DFIs in the SADC region need to put strategies in place to ensure that they fund companies that can repay the loans so that they can become sustainable.

South Africa has a portfolio of four major DFIs. They are the DBSA, IDC, Land Bank, and NEF. The Land Bank was excluded; therefore, the study was performed on the other three DFIs, which are the DBSA, the IDC, and the NEF. Also, Sefa was included, since it operates in the same space and is 100% owned by the IDC.

The DBSA provides financial and non-financial services. They provide funding for social, physical, and economic infrastructure development. The DBSA has a sound financial position. They issued loans of over R37 million in 2011 and grew their portfolio to provide infrastructure finance of R12.7 billion and municipal market funding of R1.7 billion by 2014. Their impairment losses kept increasing

from R495 million in 2012 to R1.6 billion in 2013. In 2014, a provision of R2.4 million was made for impairments, which were R1 million more than the 2013 provision of R2.3 million.

The NEF is mandated to grow B-BBEE. It sustains itself from interest on deposits, dividends, and debt collection. It approved 94 transactions worth R895 million and disbursed R562 million in 2014/15. Its impairments were reduced from 20.01% to 19.94% in 2014, but the write-offs increased from R3.5 million in 2012/13 to R87.1 million in 2013/14. Although the impairments of the NEF are reducing, there has been a major increase in write-offs of their non-performing loans.

Sefa was formed to cater for SMMEs that contribute to the growth of the economy and poverty alleviation. They approved loans of R440 million in 2013 and R822 million in the 2014 financial year. The impairments were reduced from 30% in 2013 to 25% in 2014. Sefa implemented credit risk policies and strengthened credit management to control its loans portfolio and keep track of loan repayments.

The IDC has systems and procedures for application up to disbursement of funds. The elements include BA, DD, approval, signing of legal agreements, and disbursement of funds. They also have the post-investment process, where after the disbursements of funds, the companies are monitored to ensure they perform as projected. When companies show signs of struggle, they are transferred to the W&R for turnaround strategies to assist the company to be profitable and be able to repay the funding advanced to them.

An approval of R13.8 billion was recorded in the 2013/14 financial year, which was higher than the R13.5 billion approved in 2011/12 financial year. Although there are measures in place to ensure companies are sustainable after funding has been disbursed, those measures seem not enough, since the impairments seem to be increasing. The value of companies transferred to W&R in 2014 was

R10 billion (2013: R8.7 billion), and that increased the W&R portfolio by 15%, with the number of companies in W&R at 329 in 2014 (2013: 283).

The risk of business should therefore also be considered when approving funding for the business, and the application should be approved based on the viability of the business idea. Hence, measuring the viability of the business idea may include adding other performance measures to give a broader view of the future performance of the business.

It can be concluded that it seems important that the companies do not fail after funding has been granted, since that will result in an increase in impairments and write-off of loans given to such companies. The increase in impairments and writing off makes it difficult for DFIs to be sustainable and give funding in future due to loans that are not repaid. It seems proper that thorough assessment of the application be done to ensure that the business is sustainable after funding has been granted. Therefore, other performances such as EVA need to be introduced in the assessment of applications to ensure a full analysis of the business' future performance is also covered.

This chapter has concluded the literature review part of the study. The research methodology to be used for the empirical part will be discussed in the next chapter.

# CHAPTER 4
# RESEARCH METHODOLOGY

## 4.1 INTRODUCTION

Chapters 2 and 3 presented the literature review of the study where the role of performance measurement, weaknesses, and limitations of selected traditional performance measures and EVA, and advantages of EVA was discussed. An overview of DFIs, background on South African DFIs, and the application and post-investment process in the IDC were elaborated on.

The objectives of the study are to:

(i) Understand traditional performance measures generally used to assess the performance of companies and EVA. This objective was addressed by the literature review in Chapter 2.

(ii) Investigate the roles and performances of selected DFIs as well as the pre- and post-funding process of the IDC. This objective was addressed by the literature review in Chapter 3.

(iii) Assess the opinions of the employees with regard to the performance measures being used in the IDC and the funding process involved in the evaluation of funding applications. The third objective will be addressed by using a questionnaire. Therefore, the responses to the third objective form part of the empirical study.

This chapter will explain the processes and methodology to be used in the study. The details of the procedures and steps to be followed in the study will also be provided. The chapter seeks to explain the tools that will be used to obtain the research outcome and to expand on the method to be employed by the study to produce the expected research results. The chapter provides for the research methodology to be used in the study of the perceptions of the employees of the

IDC on the performance measures and the application process. The research design and methodology which includes reliability and validity; data collection, which features population and sampling; data analysis; limitations; and ethical considerations for the study are discussed.

## 4.2 RESEARCH DESIGN

According to Hofstee (2006), the research design is the section where the approach that will be used for the study is named and discussed. Matlala (2011) describes research design as being about the type of study that the researcher will conduct and whether it will be able to provide answers for the questions that were formulated. Research design is a process where the focus is on the perspective of the researcher, for the purpose of this study (Hofstee, 2006).

Research design is a plan on how the study will be conducted. According to Maloba (2012), the process requires that a systematic plan be developed for the research to run efficiently. Hence, the plan needs to be in place as a guide to ensure that the research is carried out with utmost efficiency. The systematic plan is used for coordinating the research to ensure that resources are used efficiently and guiding the research based on scientific methods, or a plan to solve a specific research problem (Carelse, 2013). According to Likotsi (2014), the plan describes the full details about the research, as it outlines all the activities involved in the research – from initiation to conclusion of the research. The systematic plan is thus a crucial part of the research, as it describes the details of the research from when it starts to when it is completed.

The study will follow the quantitative research design. Quantitative research is based on the philosophy of the positivist framework (Quinlan, 2011). According to Williams (2007), quantitative research involves the collection of numeric data, and the researchers would employ mathematical methods to analyse the data. Quantitative research uses experiments, measurements, and statistical analysis (Long, 2014). The research is based on statistics and can provide for large quantities of information (Likotsi, 2014). In light of that, quantitative research

presents numerical data; larger quantities of data can be provided for and mathematical tools are used to analyse the data.

Quantitative research entails a research technique that is used to quantify opinions and generalise information from a bigger population sample (Salkind, 2012). Likotsi (2014) states that the research is used for quantifying the opinions of the respondents and that the research can quantify attitudes and behaviours as well. The approach answers questions relating to relationships between measured variables for the purpose of clarifying, forecasting, and controlling phenomena (Geletta, 2012). Therefore, quantitative research is used to quantify the opinions, attitudes, and behaviours of the selected sample and can work with larger quantities of data and information.

## 4.3 RESEARCH METHODOLOGY

The methodology is where the information on research design is explained in detail (Hofstee, 2006). Hofstee (2006) states that the methodology section can be broken into three sections, which are instruments for research, data, and analysis. Where the instruments for research are used, the researcher needs to detail them in this section.

Research instruments are any tools used to source the data that will be analysed in the study (Hofstee, 2006). According to Likotsi (2014), the quantitative methods of collecting data use different types of surveys such as online, paper, and mobile surveys. The research will be performed through a questionnaire. The questionnaire design provides a quantitative description of attitudes, trends, or opinions of the population through a study on the sample of that population (Geletta, 2012). The researcher will thus be able to get the opinions of the population using the questionnaire.

According to Hofstee (2006), questionnaires are a type of interview that is structured, since it has the same questions and the same options of responding to them. Questionnaires are normally structured such that all the respondents are issued with the same questionnaire which asks them to respond to the same

questions and have the same options for responding to them. Accordingly, the questionnaire will be suitable for the study because it will be able to collect answers to the same questions and be used to assess the perceptions of all respondents.

Salkind (2012) states that the questionnaire saves time, since it is self-administered and the respondents can respond to them without the assistance of the researcher. Therefore, the questionnaire may be a useful research instrument, as the researcher does not have to be present when the respondents respond to it. Hofstee (2006) cautions that since the questionnaire does not require the researcher to be present with the respondents, which may pose a disadvantage, there is no interaction between the researcher and respondent. The questionnaire will thus be designed to be comprehensive in order to cover the objectives of the study; hence, the disadvantage of no interaction will be limited for this study.

The questionnaire will include questions on a Likert scale. A Likert scale is used to measure attitudes (Quinlan, 2011). According to Salkind (2012), in Likert scales, the score is allocated when an item is assigned a weight on the scale, and the average score is used to determine respondents' scores. Quinlan (2011) adds that the scales can either be a three-point, five-point or a seven-point scale. Therefore, questions with a Likert scale will be included in the questionnaire when the attitudes of the respondents are measured. The five-point Likert scale was used for the study, to give the respondents a wider range of options in possible responses to select from.

The advantages of using a questionnaire are that it can provide the respondents with confidentiality; the ease of analysis of turning the responses to results; and questionnaires can give more responses, since they can be sent to more people (Hofstee, 2006). In view of the foregoing, a questionnaire will be suitable for this study because it is able to provide confidentiality to respondents and is suitable for a large number of respondents.

A questionnaire was developed where the questions relating to the following headings will be asked:

- Section A: Biographical & Demographical questions
- Section B: Business funding
- Section C: Ratios as performance measures
- Section D: Economic Value Added (EVA) as a performance measure
- Section E: Defaults on loans from the IDC
- Section F: Impairments on loans from the IDC

The responses to the questions under the above-mentioned sections will provide information on the opinions of the employees. This is especially true regarding the performance measures and the funding process in the IDC.

The questionnaire in Appendix A will be distributed through an email with a link to the questionnaire using the SurveyFace v1_1_0. SurveyFace was chosen because of the built-in analytics and is found to be user-friendly for the researcher, and the survey can be sent to a large number of respondents. This will be beneficial to the researcher, since the sample is a large number, which means it will save time when the survey is sent to a group of people at once. Once the user has created an account, it is easy to design a survey, collect responses, and analyse the results – all free of charge.

The content of the consent letter in Appendix B and the permission to participate in the study in Appendix C will be copied as part of the email used to circulate the survey. The questionnaire will be in English, and it is envisaged that the respondents will be able to understand the language and respond accordingly. The questionnaire will take about 15 minutes to complete. The respondents will be given 10 days to complete and return the questionnaire.

### 4.3.1 Reliability

According to Salkind (2012), reliability occurs when the instrument performs the same tests more than once and comes with the same results. It is the consistency and the stability of the measurement instrument (Salkind, 2012). Sefolo (2010) concurs that reliability is when a test gives the same results under constant situations all the time. According to Quinlan (2011), reliability deals with the dependability of the research. Therefore, reliability of the instrument relates to when the instrument does the same tests over again and is able to produce the same result, presenting the instrument as stable and consistent.

To maintain the reliability of the study, respondents to the study will be selected based on their knowledge and experience of the business finance environment, and it is therefore expected that their responses will be credible. The respondents are actively involved in the processing of funding applications and even presenting them to the committee for decisions on whether to grant funding or not.

The responses from the selected respondents are expected to be trusted based on their involvement in the process and their knowledge of the industry. Because of the credibility of the respondents, there is a probability that the respondents will give the same responses to the questions when asked by any other researcher.

The internal consistency of the instrument, that is, its internal reliability will be measured using Cronbach's alpha. Cronbach's alphas are mostly used to test internal reliability, which determines the average for possible split-half reliability coefficients where a value of 1 represents maximum internal reliability, and 0 means that internal reliability does not exist (Bryman & Bell, 2015). Internal consistency talks to a homogeneity measure or the level at which indicators of a concept meet on a common meaning (Quinlan, Babin, Carr, Griffin & Zikmund, 2015). Manerikar and Manerikar (2015) provided a rule of thumb where if Cronbach's alpha is ≥ 0.9, it is excellent (high-stakes testing); ≥ 0.7, it is good (low-stakes testing); ≥ 0.6, it is acceptable; ≥ 0.5, it is poor; and < 0.5, it is

unacceptable. In this case, the value of the Cronbach's alpha was 0.850, which is between excellent and good. Therefore, the instrument to be used to collect data is proved to be very reliable.

### 4.3.2 Validity

Validity means that a measurement that is being used actually measures what is intended to be measured (Salkind, 2012). Therefore, the validity of the measure used in the study is covered when they measure only what is intended to be measured by the study. The validity depends on the research problem, the methodology used to address the problem, and the data collected for the study (Carelse, 2013). Validity will thus be determined by what the research problem is and which methodologies will be used to address the identified problem and the data that will be collected.

To maintain the validity of the study, the research will be conducted amongst P-Band employees at the IDC regional offices and SBUs. Those who are actively involved in the assessment of funding applications and are therefore considered to be valid will be selected.

## 4.4 DATA COLLECTION

### 4.4.1 Research population

Likotsi (2014) highlights that it is important for the researcher to clearly define the population of the study. Hofstee (2006) states that the researcher needs to provide details of the population. The research population may comprise documents, individuals, organisations, groups, incidents, or campaigns (Quinlan, 2011). The population of the study will be individuals. The population consists of employees at the IDC, which is 828 individuals; therefore, it seems adequate for the study.

According to Maloba (2012), it is important for the researcher to determine who the population is and how many of them will be used as a sample for the study.

Therefore, it is essential to determine how many of the individuals in the population will be in the sample and therefore be used for the study.

### 4.4.2 Sampling

According to Carelse (2013), the aim of sampling is to make sure that a sample represents the population in order to avoid negative influences and bias towards the research findings. The intention of sampling is to generalise the responses of the sample to the whole population. The sample will include all the employees in the professional staff (P-Band) in the IDC. Therefore, the researcher may select a sample that will be able to provide information that can be generalised to the whole population.

According to Sefolo (2010), the researcher may use non-probability judgement sampling when, based on her judgement, only individuals suitably qualified are selected for the study. The study will therefore use a non-probability sampling method, and the sampling will be used to ensure that individuals who are involved in the assessment of loan applications are the only people included in the study.

The study will be conducted through a questionnaire conducted amongst professional-level employees in the IDC such as account managers, senior account managers, dealmakers, senior dealmakers, regional officers, and senior regional officers. The study will use the entire professional band complement of the IDC. The individuals that are selected from the population are called a sample. The number of respondents will be 340 employees in the P-Band, which will be a sample size for the study. The reason for choosing that sample is because of their knowledge, skill, and experience in the financing industry and that the population is directly involved in the assessment of funding applications and the ultimate presentation to the committees for a decision on whether to grant finance or not. The sample will consist of account managers, senior account managers, dealmakers, senior dealmakers, regional officers, and senior regional officers from the IDC regional offices and SBUs.

The sample should represent the population in order to ensure that the findings of the research can be generalised to the whole population (Carelse, 2013). It is thus important for the sample to be a representation of the population so that the research findings can be generalised to the whole population. Therefore, it is anticipated that the sample will therefore make a meaningful contribution to the study.

The email addresses of the group are readily available on the IDC contact list. The permission to use the IDC in the study was approved by the IDCs' chief risk officer. The approval letter is attached to this document as Appendix D. Therefore, based on the approval, the researcher will use the available contact list. The list comprises all the IDC staff members; the list will be sorted accordingly to only give contact information of the identified sample.

## 4.5 DATA ANALYSIS

According to Sefolo (2010), data analysis refers to the 'breaking up' of data into manageable items that can be analysed. The data in this study was collected through a questionnaire. Once the data was received, the researcher has to work on it so it could be turned into evidence (Hofstee, 2006). The process entailed the reduction of accumulated data into manageable proportions, developing a summary, identifying patterns, and applying analysing techniques (Maloba, 2012). Hofstee (2006) further states that to turn data into information, the researcher has to analyse the data. Therefore, once the researcher had collected the data, she analysed it and turned it into evidence.

According to Salkind (2012), after the data has been collected and is ready to be analysed, then through the descriptive statistics, the researcher can describe the characteristics of collected information. Researchers use descriptive statistics to describe the collected data (Quinlan, 2011). Put simply, descriptive statistics is used to define the features that the collected data has. Therefore, descriptive statistics were used to summarise, organise, and simplify data by describing the basic features of the data.

Once the data is organised such that it can be examined, then tools called inferential statistics are applied (Salkind, 2012). Researchers use statistic description to try and reach conclusions that are beyond the collected data, to infer, according to the sample of the population, in order to determine what the whole population may think or do (Quinlan, 2011). According to Salkind (2012), researchers apply inferential statistics to assist in deciding how the collected data can be generalised to the whole population and not only the sample that was tested. Inferential statistics may thus be used where a sample was tested from the population and the researchers use their opinions to conclude and generalise the data collected for the whole population.

The data in this study was exported to Microsoft Excel and then to the Statistical Package for the Social Sciences (SPSS) version 24 for analysis. Data was analysed descriptively to give a clear interpretation and was presented in table form. To analyse the data, the collected data was coded accordingly, checked, and captured on an Excel spreadsheet. Descriptive and inferential statistics were used to present the data.

The independent t-test and analysis of variance (ANOVA) were employed to check whether perceptions differ by employee characteristics. The independent t-test tests hypotheses when comparing mean scores of two groups comprising some interval or using ratio-scaled variables of a less-than-interval classifiable variable (Quinlan et al., 2015). The assumptions made for the independent t-test are that the opinions per sample must be independent, and the sample must be selected from a normal population (Gravetter & Wallnau, 2013). ANOVA is a statistical technique used to determine whether samples from two or more groups were selected from populations that have equal means (Hair Jr., Black, Babin & Anderson, 2014). With that in mind, ANOVA is used when determining whether means of populations where two or more samples were selected are equal. Accordingly, t-test and ANOVA will be suitable to assess the employees' perceptions based on their individual characteristics and the groups they work from.

## 4.6 LIMITATIONS

A limitation found in the study was that the employees' contact list may have changed. As a consequence, the questionnaire may not reach all the targeted respondents.

The use of a questionnaire may also limit the respondents from expressing their opinions on the performance measures and the application process in their words. This is because the respondent responses are based on options given to them.

The respondents only featured employees in the P-Band, the selected band of employees who are normally busy with DDs and/or out of office. In view of that, the expected return time for the response of the questionnaire may not be realised, since the P-Band employees are normally travelling, having limited time and internet access.

The analysis of the data will be based at comparative analysis of the groups rather than relationships, therefore regression analysis to examine the factors influencing perceptions will not be performed.

## 4.7 ETHICAL CONSIDERATIONS

The ethical considerations in line with the University of South Africa (UNISA) Ethics Policy relating to researchers were taken into account in this study. According to Maloba (2012), ethics considerations are placed to ensure that research activities do not cause any harm or that respondents do not suffer any adverse consequences. It is unethical for the researcher to conduct research without prior willingness and consent of the respondents in the study (Matlala, 2011). It is thus imperative that the research be performed ethically to ensure that the study does not cause any harm or adverse consequence to any respondent. The ethical clearance in conformity with applicable UNISA policies was obtained for the study. The ethics clearance certificate reference number is 2016_CAS_052, and a copy is attached to this document as Appendix E.

As already stated, the P-Band employees in the IDC were used. Permission to use the IDC as a subject of the study was acquired. Written consent was obtained from each respondent for their participation in this study. The participation letter in Appendix C which explained the purpose and aim of the study, inviting the respondents to take part in the study, nature of participation, their allowance to withdraw from the study, potential benefits and inconveniences anticipated, anonymity of the data, incentives and payment matters, ethics, and sharing of study findings with the respondents will be sent with the questinniare to all respondents.

Participation was strictly done on a voluntary basis. The respondents were requested to sign the consent to participate in the study form in which they declare that they have read and understood the study, had sufficient opportunity to ask questions, participate voluntarily and can withdraw anytime, are aware that the findings will be anonymous, and have received copies of the informed consent agreement in Appendix B. The right and privacy of the respondents were fully respected. The reference material in the study was fully acknowledged.

## 4.8 SUMMARY

The research design that the study was to follow was discussed, and it was explained that quantitative research design would be used. The research design uses statistical analysis and is used to quantify opinions, attitudes, and behaviour, and can provide for large quantities of information. The quantitative research was found to be suitable for the study, since it involves techniques used to measure opinions and the study aims to assess the opinions of the employees of IDC.

The research methodology was highlighted as having three sections, which are the research instrument, data, and the analysis. The research instrument to be used to collect data for the study is the questionnaire. A questionnaire seemed to be a fitting method, as it can be used to collect data from a large group of

people. It was further noted that the questionnaire allows the respondents a level of confidentiality and can be easily analysed to get results.

The questionnaire includes Likert scale questions. A Likert scale was found to be suitable, since it measures attitudes of the respondents. The scales on the Likert scale can range between five-point scales and seven-point scales. The five-point scales will be used for the study to allow the respondents to have a wide range of responses to choose from. The questionnaire will be distributed with a link through SurveyFace v1_1_0. SurveyFace was found to be suitable, since it is free and can easily collect and analyse data.

The importance of the reliability of the instrument was discussed to ensure that the instrument is indeed reliable. It was noted that reliability is confirmed when the instrument can perform same tests and still come with the same results. To ensure reliability, the respondents were selected accordingly so that their responses can be reliable and credible. The reliability measure of the instrument was done through Cronbach's alpha. Cronbach's alpha is used to calculate the average split-half coefficients, where 1 means maximum reliability, and 0 means that reliability does not exist. The data collecting instrument for the study was tested, and it was found to be 0.850, which translates to good; thus, the instrument is reliable.

Validity is confirmed when the measurement used measures only what it is intended to measure. To ensure the validity of the study, it was decided that the research be conducted amongst suitably qualified respondents in the IDC regional offices and SBUs.

The IDC has a total of 828 employees. For this study, a non-probability judgement sampling was used in selecting respondents of the study. The sampling method is used when the researcher is of the opinion that only suitably qualified respondents may be involved in the study.

A sample of 340 P-Band employees of the IDC was selected for the study. The reasoning for the sample was based on the involvement of the respondents in the funding process and on their experience, skill, and knowledge in the field of study.

Descriptive and inferential statistics were described for data analysis. The descriptive statistics can be used to give a description of the collected data and the inferential statistics used to decide on how the collected data can be generalised to the total population of the study. After the data has been described and generalised, it was exported to Excel then to SPSS for analysis. The data was then presented in tables, graphs, and figures. The explanation to their content was given.

The independent t-test and ANOVA were mentioned as being able to determine whether employees with different characteristics may have different perceptions. Therefore, the t-test and ANOVA were found to be suitable, since the characteristics of the employees are different and the tests will be able to indicate whether their perception may differ.

The limitations identified in the methodology were described as that the contact list that the researcher had may have changed such that employees may have been added or even removed from the list. Furthermore, the questionnaire used to collect data was not open for the respondents to make own comments and/or contributions on the subject matter; the respondents could only respond with options available on the questionnaire. Some respondents were not able to respond timeously due to their travelling duties and limited internet access when they were not in the office. Finally, the regression analysis will not be performed since the analysis of the data will not consider relationships.

Ethical considerations in relation to the study were narrated. Ethical considerations are implemented to ensure that the research process does not cause any harm to the respondents and that no adverse consequences are suffered by the respondents. Therefore, it was found to be unethical to conduct

research without the consent and willingness of the respondents. Ethical clearance was obtained, and reference was made to the ethical clearance certificate obtained for the study.

This chapter provided a basis for the chapter that follows. That chapter will describe the research findings, concentrate on the analysis of the data, and present the results of the study.

# CHAPTER 5
# ANALYSIS OF RESULTS

## 5.1 INTRODUCTION

The objective of this chapter is to present the findings of the quantitative data collected from the questionnaire. The aim of the study was to assess the perceptions of IDC employees on the performance measures used to gauge the performance of the company requesting funding as well as the application, approval, and post-approval processes used. The objectives of the study were to understand traditional performance measures generally used to assess the performance of companies and EVA, to investigate the roles and performances of selected DFIs as well as the pre- and post-funding process of the IDC, and to assess the employees' perceptions on the adequacy of performance measures and funding processes used at the IDC.

The foregoing chapter discussed the research methodology employed in this study. This chapter will analyse the results of this study. The chapter starts off by presenting the statistical analysis, then describing the characteristics of the sample, followed by the descriptive statistics results of the dimensions. Then the effect of employee characteristics on the perceptions of IDC employees on the performance measures used to gauge the performance based on the independent t-test and ANOVA test will be discussed. The sections that follow present the findings of the study.

## 5.2 STATISTICAL ANALYSIS

As stated in Section 4.3, an online survey was created on SurveyFace and sent to respondents for them to fill in the questionnaire. The content of the consent to participate and the respondent's information sheet were copied as contents of the email that was sent to the respondents. The content on confidentiality, benefits, ethics, and contact information of the researcher and the supervisor formed part of the content of the email. The data was then exported to Microsoft

Excel and then to SPSS version 24 for analysis. The internal consistency of the instrument, that is, its internal reliability was measured using Cronbach's alpha and was found to be very reliable.

Descriptive statistics and inferential statistics were used to analyse the data. On categorical variables, the descriptive statistics were presented in the form of frequencies and percentages whilst for continuous variables the presentation was done using means and standard deviations. The descriptive statistical analysis was used to describe the features of the collected data. For each construct, composite variables were created by finding averages of each construct or sum depending on the scale.

There were two types of scales used. The mean was used for variables with a five-point Likert scale. In the case where the Likert scale ranged from 1 (not to any extent at all) to 5 (to a very large extent), a mean of at least 3.5 meant the variables impact to a large extent; 2.5 to 3.49 (to some extent), and less than 2.5 meant to a little extent or not to any extent at all. A Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree) meant those with a mean of at least 3.5 meant they were in agreement, 2.5 to 3.49 were neutral, and not more than 2.5 were in disagreement. For the nominal variables, a 0 was given to 'no' and a 1 to 'yes'. The sums of the items that make up a construct were used to determine the level of acknowledgment.

The independent t-test was used for the variables with only two categories and the ANOVA for variables with more than two categories. In this case, the observations were randomly selected, and the central limit theorem was used to achieve normality, since the sample size was more than 30. The central limit theorem states that "as the sample size (the number of values in each sample) gets large enough, the sampling distribution of the mean is approximately normally distributed. This is true regardless of the shape of the distribution of the individual values in the population" (Levine, Szabat & Stephan, 2016:255). The independent t-test produces two results; one for when variances are equal and the other when equal variances are not assumed. The Levene's test of

homogeneity of variances was used to determine whether group variances were equal. In a case where the test was significant, information on equal variances not assumed was presented, and where the test was not significant, information on equal variances was presented.

The measure of effect size was used to determine any significant relationship. According to Gravetter and Wallnau (2013), a measure of effect size is used to calculate the measure of absolute magnitude of treatment effect, calculated separately from the size of the samples used in the study. The effect size indicates the amount of influence changing the conditions of the independent variable had on dependent scores (Heiman, 2015). It is the influence that the independent variable had on dependent scores. *Cohen's d* was used to measure the effect size using the formula:

$$d = \frac{M_1 - M_2}{\sqrt{S_p^2}}$$

where $M_1$ is the mean score for the first group; $M_2$ is the mean score for the second group, and $\sqrt{S_p^2}$ is the standard deviation of the pooled variance. According to Gravetter and Wallnau (2013), Cohen (1988) proposed the following guidelines, where if d = 0.2, then it is a small effect; if d = 0.5, it is a medium effect; and if d = 0.8, it is a large effect.

As mentioned earlier, ANOVA was used to determine the mean difference between more than two groups. If the two variances do not differ, then there is homogeneity between the groups. For ANOVA, the measure of effect size is denoted by eta-squared ($\eta^2$), where eta-squared indicates the amount of variance in dependent scores that is affected when the levels of a factor are changed (Heiman, 2015). According to Heiman (2015), eta-squared is calculated as follows:

$$\eta^2 = \frac{SS_{between}}{SS_{Total}}$$

The $SS_{between}$ is the between-groups sum of squares, which indicates the differences in the means from the different levels of an independent variable, and the $SS_{Total}$ is the total sum of squares, which indicates the total differences in all scores. Further, $\eta^2$ indicates the amount of the total differences in the scores that is connected to differences in sample means or how the manipulation of the independent variables can be associated to the variability of the dependent variable (Jackson, 2014).

ANOVA has the same assumptions as the independent t-tests, but in addition, the variances of the groups should be equal (homogeneity of variance). The Levene's test of homogeneity of variance was used to test for equal variances across groups. In the case where the test was violated, the Welch test was used instead of the F-ratio. According to Pallant (2013), the Welch test is a robust test of equality of means that is preferable when the assumption of equality of variance is not met. Post-hoc tests were further done in cases where the means were different. Post-hoc tests (or post-tests) are additional tests performed after ANOVA to determine the exact significance of the mean differences. When the variances were equal, Tukey B was applied for the post- hoc analysis. If the assumption of homogeneity of variance was not met, the Games-Howell test (GH test) was applied as a post-hoc test to determine whether differences really existed. The GH test is applied where variances are unequal and also takes into account unequal group sizes, and according to q-distribution, it is a pairwise procedure which extends the Tukey-Kramer test and is useful for when sample sizes are greater than five (De Muth, 2014).

All the tests were performed at the 5% level of significance, and the p-value approach was applied to make a decision. The p-value of a test is the probability of assessing a test statistic at least as extreme as the computed one, considering that the null hypothesis is true (Keller, 2015). The p-value was compared to the level of significance, and a p-value that is less than 0.05 would lead to differences in mean scores, that is, the test will be significant.

## 5.3 CHARACTERISTICS OF THE SAMPLE

The employees in this study were selected from the IDC contact list. The study sampled employees in the P-Band of the IDC's regional offices and SBUs. Based on the IDC's 2014 Annual Report, 340 employees fall in the P-Band. During the selection, it was however found that the 340 included staff members in support departments such as Human Resources, Administration, and Information Technology; as such, it was determined that those could not be involved in the study. About 248 employees were identified as being from the regional offices and SBUs; thus, those considered suitable were sent the questionnaire. Only 123 employees responded to the questionnaire. Therefore, the respondents consisted of 123 employees in the professional staff (P-Band) amongst P-grade employees at the IDC regional offices and SBUs who are actively involved in the assessment of funding applications.

As mentioned in Chapter 4, the employees were selected in the sample due to their knowledge, skill, and experience in the financing industry and because they were directly involved in the assessment of the funding applications and the ultimate presentation to the committees for a decision on whether to grant funding or not. Table 5.1 shows the characteristics of the sample based on the biographical and demographical information gathered through questions (Q) 1-8 of the questionnaire. The discussion for Q-9, the last in the biographical and demographical information, follows in Section 5.4.

**Table 5.1: Characteristics of the sample**

| Variable | Category | Frequency | % |
|---|---|---|---|
| Q-1: Current position within the IDC | Account Manager | 22 | 17.9% |
| | Senior Account Manager | 17 | 13.8% |
| | Senior/Regional Officer | 17 | 13.8% |
| | Dealmaker | 17 | 13.8% |
| | Senior Dealmaker | 21 | 17.1% |
| | Other | 29 | 23.6% |
| | **Total** | **123** | **100.0%** |
| Q-2: Gender | Male | 60 | 48.8% |
| | Female | 63 | 51.2% |
| | **Total** | **123** | **100.0%** |
| Q-3: Age (in years) | 20-29 years | 36 | 29.3% |
| | 30-39 years | 52 | 42.3% |
| | 40 years and above | 35 | 28.5% |
| | **Total** | **123** | **100.0%** |
| Q-4: Highest academic qualification | Certificate/Diploma | 14 | 11.4% |
| | Bachelor's Degree | 33 | 26.8% |
| | Honours Degree | 49 | 39.8% |
| | Master's Degree | 27 | 22.0% |
| | **Total** | **123** | **100.0%** |
| Q-5: Loan assessment experience at previous employer before joining IDC | At most 2 years | 48 | 40.0% |
| | 3-5 years | 35 | 29.2% |
| | More than 5 years | 37 | 30.8% |
| | **Total** | **120** | **100.0%** |
| Q-6: Loan assessment experience whilst working at the IDC | At most 2 years | 44 | 35.8% |
| | 3-5 years | 39 | 31.7% |
| | More than 5 years | 40 | 32.5% |
| | **Total** | **123** | **100.0%** |
| Q-7: Loan applications processed in a year | 1-6 loan applications | 45 | 37.2% |
| | 7-9 loan applications | 44 | 36.4% |
| | 10 and more applications | 32 | 26.4% |
| | **Total** | **121** | **100.0%** |
| Q-8: Average value per loan that you process in a year | R1m-R10m | 24 | 19.5% |
| | R11m-R20m | 46 | 37.4% |
| | R21m-R30m | 19 | 15.4% |
| | R31m and more | 34 | 27.6% |
| | **Total** | **123** | **100.0%** |

From the questionnaire in Appendix A and Table 5.1, it can be seen how certain of the categories in Qs 1, 3, 4, 5, 6, 7, and 8 were grouped. This was done because one of the cells had less than five observations. According to Hair Jr. et al (2014), for ANOVA to be done, the bare minimum is that each cell should be more than the number of independent variables. In this case, the independent variables were 10 (number of dimensions). Thus, appropriate groups were grouped to have a sample size of at least 10.

According to Table 5.1, all the respondents responded to Q-1 and indicated their current position. There were equal proportions of senior account managers, senior/regional officer, and dealmakers. Therefore, close to 30% of the respondents were either account managers (17.9%; n=22); senior account managers (13.8%; n=17); 13.8% (n=17) were senior/regional officers or dealmakers (13.8%; n=17) and senior dealmakers (17.1%, n=21), whilst 'other' was 23.6% (n=29). Therefore, the study was well responded to by employees holding different positions at the IDC.

The responses to Q-2 highlighted that there was an almost equal distribution of gender composition, with 48.8% of the respondents (n=60) which were males and 51.2% (n=63) were females. It can be observed that women and men seem to be almost equally involved in funding applications at the IDC. This is not in line with the national gender distribution, where 56.6% are males and 43.4% are females.

According to the responses to Q-3 regarding the age, 29.3% (n=36) were aged 20-29 years and 42.3% (n=52) were aged 30-39 years, whilst 28.5% (n=35) were 40 years and above. Thus, close to 70% of the respondents were aged below 40 years. Therefore, it seems that the ages seem to be symmetrically distributed. The majority of the respondents were found to be between 30 and 45 years old.

Based on the responses to Q-4 regarding the highest academic qualification, 11.4% (n=14) have a Certificate/ Diploma; Bachelor's degree holders were 26.8% (n=33); and respondents with Honours degrees were close to 40% at

39.8% (n=49). Those with Master's degrees made up 22% of the respondents (n=27). No responses were received for the category Doctoral/PhD holders. Therefore, it seems that few respondents did not have degrees as seen by the approximately 89% degree holders and only 11% Certificate/Diploma holders. This is considered a positive spin, since it shows that the responses received are from respondents, the majority of whom are qualified with degrees and therefore can make a meaningful contribution to the study.

The responses to Q-5 indicated that 40% (n=48) of the respondents had at most two years' experience of loan assessments at previous employers, whilst 29.2% (n=35) had 3-5 years, and 30.8% (n=37) had more than five years' experience in loan assessment at previous employers. Therefore, it seems that the respondents will be able to give meaningful input to the study because they have been assessing loans even from their previous employers. Moreover, the responses to Q-6 regarding loan assessment experience at the IDC indicated that 35.8% (n=44) had at most two years' experience; 31.7% (n=39) had 3-5 years; and 32.5% (n=40) had more than five years' experience. It can thus be concluded that in both questions, more than 30% of the respondents had more than 5 years' experience of assessing loans, making them well experienced and knowledgeable to respond to the questionnaire.

According to responses to Q-7 regarding the number of loan applications processed in a year, 37.2% (n=45) had processed 1-6 applications, 36.4% (n=44) had processed 7-9 applications, whilst 26.4% (n=32) had processed 10 or more applications. Thus, the majority of the respondents processed more than six loan applications per year, giving them a fair knowledge of the funding process, hence enabling them to respond meaningfully to the questionnaire.

The responses to Q-8 regarding the average value of loans processed per year indicated that 19.5% (n=24) of the loans were between R1 million and R10 million in value; 37.4% (n=46) were between R11 million and R20 million; 15.4% (n=19) were between R21 million and R30 million; whilst 27.6% (n=34) were more than R31 million in value. Thus, more than 40% of the respondents dealt with average

values per loan of more than R20 million. The outcome is important, since it shows that respondents are involved in the processing of a large number of loan applications and higher-value funding applications. Therefore, this will have a relevant and meaningful contribution to the study.

## 5.4 DESCRIPTIVE STATISTICS OF THE DIMENSIONS

There were 10 dimensions assessing the perceptions of IDC employees on the performance measures used to gauge the performance of the company requesting funding as well as the application, approval, and post-approval processes used. The dimensions are based on question 9-18 of the questionnaire, and they are as follows:

- *Q-9: IDC disciplines worked on during the DD*
- *Q-10: Aspects on business funding*
- *Q-11: Level of use of ratios as performance measures*
- *Q-12: Level of addition of ratios as performance measures*
- *Q-13: Level of agreement of ratios as performance measures*
- *Q-14: Aspects about Economic Value Added (EVA)*
- *Q-15: Activities to reduce the chances of a company defaulting on IDC loans*
- *Q-16: Activities used to monitor company performance to ascertain ability to repay the loan*
- *Q-17: Aspects on impairments on loans from the IDC*
- *Q-18: Aspects to reduce the impairment rates on loans*

The descriptions of the dimensions are discussed in the sections that follow.

### 5.4.1 IDC disciplines worked on during the Due Diligence

According to Q-9, the respondents were requested to indicate the discipline they work on during the DD. The options were between finance, marketing, and technical disciplines, and the respondents could choose all that are applicable.

In the analysis of the responses received, three statements were created for the areas where a 1 was a ‘yes’ and 0 was a ‘no’ if a particular discipline was in use. The level of use for the IDC disciplines they work on during due diligence is shown in Table 5.2 below.

**Table 5.2: IDC disciplines worked on during due diligence**

| Tools | Level of acknowledgement | | Rank |
|---|---|---|---|
| | Yes | No | |
| Q9A. The IDC discipline/s you work on during the due diligence is marketing | 73.2% (90) | 26.8% (68) | 1 |
| Q9B. The IDC discipline/s you work on during the due diligence is technical | 55.3% (68) | 44.7% (55) | 2 |
| Q9C. The IDC discipline/s you work on during the due diligence is finance | 44.7% (55) | 55.3% (68) | 3 |

It was noted that the marketing discipline is being used for due diligence by 73.2% of the respondents, the technical discipline by 55.3%, whilst the finance discipline is only being used by 44.7% of the respondents. The majority of the respondents are therefore not using the finance IDC discipline during the DD.

Although fewer respondents work on the finance discipline during the DDs, it has been highlighted in Chapter 3 that the financial paragraph should also be included in the submission to the relevant committee when considering funding applications. Therefore, the respondents doing the finance discipline during the DDs have the important role of assessing the application, calculating the performance measures, and writing the financial paragraph for the committee.

### 5.4.2 Aspects on business funding

Based on Q-10, the respondents were requested to indicate their level of agreement on the eight aspects of funding and their responses were measured on a five-point Likert scale ranging from 1 to 5, where 1 was strongly disagree and 5 strongly agree. In this case, strongly agree and agree were considered as

those in agreement, whilst strongly disagree and disagree were considered as those in disagreement. Thus, a mean of 3.5 and above meant respondents were in agreement, whilst a mean below 2.5 meant they were in disagreement. The aspects are shown in Table 5.3 below

**Table 5.3: The level of agreement of aspects on business funding**

| Statement | Level of agreement | | | | | Mean |
|---|---|---|---|---|---|---|
| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | |
| Q10A. A company that requires more funding needs to go through a more stringent assessment process than a company that requires less financing. | 29.3% (36) | 10.6% (13) | 24.4% (30) | 31.7% (39) | 4.1% (5) | 3.29 |
| Q10B. The application assessment process should be the same for all companies regardless of the amount of funding required. | 13.0% (16) | 47.2% (58) | 4.1% (5) | 6.5% (8) | 29.3% (36) | 3.08 |
| Q10C. A company which has put in an own contribution, therefore not requiring 100% IDC funding, is less likely to default. | .8% (1) | 58.2% (71) | 7.4% (9) | 32.0% (39) | 1.6% (2) | 3.25 |
| Q10D. A company granted a loan at a high interest rate is more likely to default. | 2.4% (3) | 35.8% (44) | 6.5% (8) | 40.7% (50) | 14.6% (18) | 2.71 |
| Q10E. A company with a longer term loan is more likely to default. | .8% (1) | 4.9% (6) | 30.9% (38) | 25.2% (31) | 38.2% (47) | 2.05 |

| Statement | Level of agreement | | | | | Mean |
|---|---|---|---|---|---|---|
| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | |
| Q10F. A company with a higher loan amount is more likely to default. | - | .8% (1) | 35.0% (43) | 24.4% (30) | 39.8% (49) | 1.97 |
| Q10G. The companies deliberately neglect repaying loans provided by Development Finance Institutions. | 1.6% (2) | 43.9% (54) | 22.8% (28) | 28.5% (35) | 3.3% (4) | 3.12 |
| Q10H. The IDC needs stricter post-funding monitoring on loans. | 41.5% (51) | 42.3% (52) | 4.9% (6) | 8.9% (11) | 2.4% (3) | 4.11 |

The analysis of the responses showed that 83.8% were in agreement with the statement in Q-10H that the IDC needs stricter post-funding monitoring on loans. The respondents had agreement levels of 59% on Q-10C regarding *"a company which has put in an own contribution, therefore not requiring 100% IDC funding, is less likely to default"*. The policy of not funding 100% is applied by African DFIs as stated in Section 3.2.3; therefore, it appears to be a normal practice. Furthermore, 60.2% agreed with Q-10B on the same funding process regardless of the funding required. Although the respondents were in agreement, the overall mean is close to three, indicating that the opinions of respondents were uncertain on whether the same application process should be followed for all applications.

There were mixed reactions to aspects of Q-10A regarding different assessments for higher and lower funding applications, Q-10G regarding companies neglecting to repay DFIs, and Q-10D defaults caused by companies with a higher interest rate as evidenced by means of 3.29, 3.12, and 2.71 respectively, which are close to three indicating neutrality. Therefore, the proportions for those who agreed were almost the same with those who disagreed. Thus, overall the respondents tend to be neutral on the aspects, since there was no majority agreeing nor disagreeing.

However, 63.4% disagreed with aspects of Q-10E that a company with a longer-term loan is more likely to default, and 64.2% disagreed with aspects of Q-10F that a company with a higher loan amount is more likely to default. This is also supported by means of 2.05 and 1.97 respectively, which are close to 2, indicating disagreement. Thus, the respondents did not think that a longer-term loan or a higher loan amount loan will cause a company to default.

### 5.4.3 Level of use of ratios as performance measures

According to Q-11, the respondents were requested to indicate which of the eight ratios they used as performance measures in evaluating funding applications. The levels of use are given below in Table 5.4.

**Table 5.4: Level of use of ratios as performance measures**

| Tools | Level of acknowledgement | | Rank |
|---|---|---|---|
| | Yes | No | |
| Q11G. Structure ratio | 100.0% (123) | - | 1 |
| Q11F. Income Security Cover | 99.2% (122) | .8% (1) | 2 |
| Q11E. Outside funds to cash-flow | 95.1% (116) | 4.9% (6) | 3 |
| Q11B. Return on Equity | 81.1% (99) | 18.9% (23) | 4 |
| Q11C. Return on Assets | 80.3% (98) | 19.7% (24) | 5 |
| Q11A. Earnings Per Share | 54.1% (66) | 45.9% (56) | 6 |
| Q11D. Return on Capital Employed | 45.1% (55) | 54.9% (67) | 7 |
| Q11H. Economic Value Added (EVA) | 4.5% (5) | 95.5% (106) | 8 |

Based on the above table, all the respondents agreed that they used the *structure ratio*. Close to 100%, that is, 99.2% indicated that they use the *income security cover* ratio, whilst 95.1% use *outside funds to cash flow*; 81.1% use *return on equity*; 80.3% use *return on assets*; and 54.1% use *earnings per share*. On the other hand, 95.5% are not using EVA, and 54.9% are not using *return on capital employed*. Therefore, EVA is not mostly used by the respondents. Although the results indicate that the respondents use traditional performance measures, it

has been established in Chapter 2 that the traditional performance measures used are not useful in the assessment of funding applications, as they are unable to indicate the complete performance of the company. Furthermore, it was found that an indicator of future performance is important in the assessment of funding applications, and therefore the traditional performance measures fail to provide such information.

### 5.4.4 Level of addition of ratios as performance measures

Q-12 indicates that the respondents were requested to indicate which ratios, as performance measures, can be added to those currently being used when evaluating funding applications. The levels of addition as acknowledged by a yes are shown below in Table 5.5.

**Table 5.5: Level of addition of ratios as performance measures**

| Tools | Level of acknowledgement | | Rank |
|---|---|---|---|
| | Yes | No | |
| Q12H. Economic Value Added (EVA) | 65.9% (81) | 34.1% (42) | 1 |
| Q12D. Return on Capital Employed | 48.0% (59) | 52.0% (64) | 2 |
| Q12A. Earnings Per Share | 30.1% (37) | 69.9% (86) | 3 |
| Q12B. Return on Equity | 26.0% (32) | 74.0% (91) | 4 |
| Q12F. Income Security Cover | 24.4% (30) | 75.6% (93) | 5 |
| Q12C. Return on Assets | 19.5% (24) | 80.5% (99) | 6 |
| Q12E. Outside funds to cash-flow | 16.3% (20) | 83.7% (103) | 7 |
| Q12G. Structure ratio | 15.4% (19) | 84.6% (104) | 8 |

Based on the above responses, about 65.9% were in agreement that EVA should be added as a ratio of performance measure. However, since most of the respondents are using the other measures already, the percentage of addition was below 50% for the rest of the ratios. Based on earlier levels of use of ratios, it was found that the majority of the respondents are not using EVA, and this dimension indicates that the majority of the respondents would like EVA to be added to the ratios as part of the performance measures currently used to assess

funding applications. Therefore, the addition of EVA to other performance measures being used may be beneficial to the IDC because the literature review in Chapter 2 indicated that EVA can give the future financial performance of the company.

### 5.4.5 Level of agreement of ratios as performance measures

Based on Q-13, there were three aspects on the level of agreement of ratios as performance measures on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A mean of 2.49 and below indicated that respondents were not in agreement, 2.5 to 3.49 indicated that they were neutral, and above 3.5 indicated that the respondents were in agreement. The information is shown in Table 5.6 below

**Table 5.6: The level of agreement of ratios as performance measures**

| Statement | Level of agreement | | | | | Mean |
|---|---|---|---|---|---|---|
| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | |
| Q13A. The use of performance measures is important when assessing funding applications. | 39.0% (48) | 59.3% (73) | .8% (1) | .8% (1) | - | 4.37 |
| Q13B. Performance measures at loan assessment stage may assist in reducing loan impairments. | 36.6% (45) | 47.2% (58) | 16.3% (20) | - | - | 4.20 |
| Q13C. More performance measures are needed when assessing funding. | 36.6% (45) | 18.7% (23) | 37.4% (46) | 4.9% (6) | 2.4% (3) | 3.82 |

The above analysis of the responses indicated that all means were close to 4, indicating that the respondents were in agreement. About 98.3% of the respondents were in agreement with Q-13A that the use of performance measures is important when assessing funding applications; 83.8% were in agreement with Q-13B that performance measures at loan assessment stage might assist in reducing loan impairments; and 55.3% were in agreement with Q-13C that more performance measures are needed when assessing funding. It can be concluded that the respondents are in agreement that performance measures are important in assessing funding applications, and when used at the assessment stage of application, they may reduce impairments. Furthermore, respondents agreed that more performance measures should be added during the funding assessment.

### 5.4.6 Aspects about Economic Value Added

According to Q-14, the respondents were requested to indicate the level of agreement on aspects related to EVA using a five-point Likert scale, where 1 was strongly disagree and 5 was strongly agree. The information is shown in Table 5.7 below.

**Table 5.7: The level of agreement of aspects about Economic Value Added (EVA)**

| Statement | Level of agreement | | | | | Mean |
|---|---|---|---|---|---|---|
| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | |
| Q14A. I know about EVA. | 25.2% (31) | 22.8% (28) | 45.5% (56) | 6.5% (8) | - | 3.67 |
| Q14B. I have experience in the calculation of EVA. | 11.4% (14) | 12.2% (15) | 45.5% (56) | 29.3% (36) | 1.6% (2) | 3.02 |
| Q14C. EVA can measure the future performance of the company. | 9.8% (12) | 42.3% (52) | 20.3% (25) | 27.6% (34) | - | 3.34 |

| Statement | Level of agreement | | | | | Mean |
|---|---|---|---|---|---|---|
| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | |
| Q14D. EVA is not adequate when used on its own. | 19.5% (24) | 39.0% (48) | 28.5% (35) | 4.9% (6) | 8.1% (10) | 3.57 |
| Q14E. I would recommend EVA be added to existing ratios when assessing funding applications in the IDC. | 12.3% (15) | 53.3% (65) | 31.1% (38) | .8% (1) | 2.5% (3) | 3.72 |
| Q14F. I would like the IDC to investigate EVA further. | 13.8% (17) | 57.7% (71) | 26.0% (32) | - | 2.4% (3) | 3.80 |

The respondents were in agreement on the following aspects with means close to 4 and agreement levels of more than 50%:

- *Q-14F: "I would like the IDC to investigate EVA further" (71.5%)*
- *Q-14E: "I would recommend EVA be added to existing ratios when assessing funding applications in the IDC" (65.6%)*
- *Q-14D: "EVA is not adequate when used on its own" (58.5%)*

The aspect *"EVA can measure the future performance of the company"* as Q-14C had an agreement level of 52.1% and a mean of 3.34. Close to 48% of the respondents were neutral on Q-14A regarding the aspect that they know about EVA and Q-14B that they have experience in the calculation of EVA. It is noted that the respondents seem not to be sure on aspects relating to EVA in terms of knowledge and use. However, the respondents have indicated that they would like the IDC to investigate EVA and determine whether it will be suitable when added to other ratios being used. It was indicated in Chapter 2 that EVA is able to give the future prospects of the performance of the company; therefore, the information may be useful to committees when deciding whether to grant funding or not.

### 5.4.7 Activities to reduce the chances of companies defaulting on loans

Based on Q-15, there were four activities that the respondents were asked regarding whether the activities reduce the chances of a company defaulting on IDC loans. Their responses were measured on a five-point Likert scale that ranged from 1 (not to any extent at all) to 5 (to a very large extent). A mean of 2.49 and below indicated that respondents were acknowledging that the factor causes company defaulting, 2.5 to 3.49 indicated that to some extent, and above 3.5 indicated that the respondents were in agreement that the factors reduce the chances of a company defaulting on IDC loans. The information is shown below in Table 5.8.

**Table 5.8: The level of extent on aspects on reduction chances of a company defaulting on IDC loans**

| Statement | Level of extent | | | | | Mean |
|---|---|---|---|---|---|---|
| | To a very large extent | To a large extent | To some extent | To a little extent | Not to any extent at all | |
| Q15A. A shorter turn-around time on loan applications and approvals. | 1.6% (2) | 5.7% (7) | 16.3% (20) | 48.8% (60) | 27.6% (34) | 2.05 |
| Q15B. Different performance measures being used for different loan amounts. | 17.9% (22) | 5.7% (7) | 9.8% (12) | 39.8% (49) | 26.8% (33) | 2.48 |
| Q15C. Different approval processes for different loan amounts. | 30.1% (37) | 43.9% (54) | 13.0% (16) | 8.1% (10) | 4.9% (6) | 3.86 |
| Q15D. Different Due Diligence's for different loan amounts. | 37.4% (46) | 28.5% (35) | 2.4% (3) | 10.6% (13) | 21.1% (26) | 3.50 |

The analysis of the responses indicated that about 74% of the respondents were agreeing with Q-15C that different approval processes for different loan amounts can reduce the chances of a company defaulting on loans to a large extent and 65.9% were agreeing with Q-15D that different DDs for different loan amounts can reduce defaults. This was supported by means of 3.86 and 3.5 respectively, which are close to 4 (to a large extent). Therefore, the findings indicate that the respondents are in agreement that the different DD processes and approval processes for different loan amounts can reduce the chances of defaulting.

It was revealed that 76.4% of the respondents disagreed with Q-15A that a shorter turnaround time on loan applications and approvals could reduce loan defaulting, and also 66.6% of the respondents disagreed with Q-15B that different performance measures being used for different loan amounts could reduce loan defaulting. The means of the two aspects were 2.48 and 2.05 respectively, which were close to two. Thus, it can be concluded that the use of different performance measures for different loan amounts and a shorter turnaround time on loan application and approvals will not reduce the chances of companies defaulting on loan amounts.

### 5.4.8 Activities used to monitor company performance to ascertain the ability to repay the loan

Based on Q-16, there were four activities that can be used to monitor company performance to ascertain ability to repay the loan. Their responses were measured on a five-point Likert scale that ranged from 1 (not to any extent at all) to 5 (to a very large extent at all). A mean of 2.49 and below indicated that respondents were in agreement that the activity cannot be used to monitor company performance to ascertain ability to pay the loan, 2.5 to 3.49 indicated to some extent ,and above 3.5 indicated that the respondents were in agreement that they can be used to monitor company performance to ascertain its ability to repay the loan. The information is shown below in Table 5.9.

**Table 5.9: The level of extent on activities used to monitor company performance to ascertain ability to pay the loan**

| Statement | Level of extent | | | | | Mean |
|---|---|---|---|---|---|---|
| | To a very large extent | To a large extent | To some extent | To a little extent | Not to any extent at all | |
| Q16A. Quarterly submission of management accounts | 33.6% (41) | 27.0% (33) | .8% (1) | 36.9% (45) | 1.6% (2) | 3.54 |
| Q16B. Quarterly meeting with the IDC to verify that the company performance is on track | 73.9% (82) | 3.6% (4) | .9% (1) | 18.9% (21) | 2.7% (3) | 4.27 |
| Q16C. Annual submission of financial statements | 56.6% (69) | 38.5% (47) | .8% (1) | 3.3% (4) | .8% (1) | 4.47 |
| Q16D. Annual mini-Due Diligence to confirm that performance is on track | 76.2% (93) | 11.5% (14) | 4.1% (5) | 5.7% (7) | 2.5% (3) | 4.53 |

The analysis of the responses indicated that all activities had means above 3.5, indicating that the respondents were in agreement that the activities can be used to monitor company performance to ascertain the ability to repay the IDC loans. About 87.7% agreed with Q-16D that the activity annual mini-DD to confirm that performance is on track can be used to monitor company performance to ascertain the ability to repay the IDC loans. It had a mean of 4.53, which is close to 5 (to a very large extent). The other aspects had the following levels of extent:

- *Q-16C: Annual submission of financial statements (95.1%)*
- *Q-16B: Quarterly meeting with the IDC to verify that the company performance is on track (77.5%)*
- *Q-16A: Quarterly submission of management accounts (60.6%)*

The aspects had means of 4.47, 4.27, and 3.54 respectively, which are close to 4, indicating that the respondents acknowledged that the activities can be used to monitor company performance to ascertain the ability to repay the IDC loans. The study revealed that the respondents are in agreement that the annual mini-DDs, annual submission of financial statements, quarterly meetings, and submission of management accounts can be used to monitor the performance of the company after funding.

### 5.4.9 Aspects on impairments on loans from the IDC

Based on Q-17, the respondents were given five statements to determine their level of agreement on impairments on loans measured on a five-point Likert scale, where 1 was strongly agree and 5 was strongly disagree. A mean of 2.49 and below indicated that respondents were in disagreement on the aspect and a mean of 3.5 and above meant that they were in agreement. The information is shown in Table 5.10.

**Table 5.10: The level of agreement of aspects on impairments on loans from the IDC**

| Statement | Level of agreement | | | | | Mean |
|---|---|---|---|---|---|---|
| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree | |
| Q17A. Impairments affect the sustainability of the IDC. | 28.7% (29) | 68.3% (69) | 2.0% (2) | 1.0% (1) | - | 4.46 |
| Q17B. Loans granted on specific contracts/orders may reduce the chances of impairments. | 35.0% (43) | 46.3% (57) | 7.3% (9) | 11.4% (14) | - | 4.05 |
| Q17C. An own contribution by the company may reduce the chance of loan impairments | 16.3% (20) | 43.1% (53) | 25.2% (31) | 15.4% (19) | - | 3.60 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Q17D. Regular portfolio monitoring after approval may assist in reducing impairments. | 42.3% (52) | 55.3% (68) | 2.4% (3) | - | - | 4.40 |
| Q17E. Early intervention on non-performing loans may reduce impairments. | 73.2% (90) | 22.0% (27) | 4.9% (6) | - | - | 4.68 |

All means were above 3.5, thus indicating agreement. The levels of agreement were as follows:

- *Q-17D: Regular portfolio monitoring after approval may assist in reducing impairments (97.6%)*
- *Q-17A: Impairments affect the sustainability of the IDC (97.0%)*
- *Q-17E: Early intervention on non-performing loans may reduce impairments (95.2%)*
- *Q-17B: Loans granted on specific contracts/orders may reduce the chances of impairments (81.3%)*
- *Q-17C: An own contribution by the company may reduce the chance of loan impairments (59.4%)*

It can be concluded that the majority of the respondents were in agreement about the above-mentioned activities that can be used to reduce impairments on loans. The respondents therefore seem to be concerned about the impairment rate and are in agreement that measures must be put in place to address the impairment rate.

### 5.4.10 Aspects reducing the impairment rates on loans

Q-18 highlights that the respondents were given four aspects to determine whether they can reduce the impairment rates on loans. The aspects were measured on a five-point Likert scale, where 1 was ‘not to any extent at all’ and 5 was ‘to a very large extent’. A mean of 2.49 and below indicated that

respondents were in disagreement that the aspects reduce the impairment rates on loans, 2.5 to 3.49 indicated to some extent, and above 3.5 indicated that the respondents were in agreement that the aspects reduce the impairment rates on loans. The information is shown below in Table 5.11.

**Table 5.11: The level of extent of aspects reducing the impairment rates on loans**

| Statement | Level of extent | | | | | Mean |
|---|---|---|---|---|---|---|
| | To a very large extent | To a large extent | To some extent | To a little extent | Not to any extent at all | |
| Q18C. Monthly site visits by the IDC | 24.4% (30) | 52.0% (64) | 1.6% (2) | 12.2% (15) | 9.8% (12) | 3.69 |
| Q18D. Post-investment monitoring be performed by the loan originator | 33.3% (41) | 42.3% (52) | 1.6% (2) | 1.6% (2) | 21.1% (26) | 3.65 |
| Q18A. Adding Economic value added (EVA) as a performance measure | .8% (1) | 30.9% (38) | 6.5% (8) | 40.7% (50) | 21.1% (26) | 2.50 |
| Q18B. Lower interest rates be charged on loans granted | .8% (1) | 30.1% (37) | 4.1% (5) | 46.3% (57) | 18.7% (23) | 2.48 |

The analysis of the responses indicated that Q-18C on the aspect of monthly site visits by the IDC had a level of extent of 76.4% and a mean of 3.69, whilst Q-18D on the aspect post-investment monitoring be performed by the loan originator had a level of extent of 75.6% with a mean of 3.65. It can be concluded that the respondents were in agreement that the issues can reduce the impairment rates on loans. On the other hand, 61.8% were in disagreement with Q-18A that adding EVA as a performance measure will reduce impairment rates of loans, and 65% were in disagreement with Q-18B that lower interest rates can be charged on loans granted in order to reduce the impairment rates on loans.

## 5.5 INDEPENDENT T-TESTS TO DETERMINE THE EFFECT OF EMPLOYEE CHARACTERISTICS ON THEIR PERCEPTIONS

The independent t-test was used to determine group difference mean scores by gender and by those who worked with the finance discipline during due diligence. The following dimensions were used: A=IDC disciplines worked on during due diligence; B=Aspects on business funding; C=Level of use of ratios as performance measures; D=Level of addition of ratios as performance measures; E=Level of agreement of ratios as performance measures; F=Aspects about EVA; G=Reducing chances of a company defaulting on IDC loan; H=Activities used to monitor company performance to ascertain ability to pay the loan; I=Aspects on impairments on loans from the IDC; and J=Aspects reducing the impairment rates on loans.

As mentioned earlier on, the composite variables for the Likert scale were found by averaging and that for the yes/no nominal scales by summing up the number of yes to get the level of acknowledgement. The p-value approach was applied to determine the 5% level of significance. Thus, a p-value less than 0.05 will lead to rejection of the null hypothesis, indicating that it is significant, and if it is less than 0.01, then it is highly significant. The results of the tests are discussed in the next subsections.

### 5.5.1 Difference in mean score by gender

Based on Q-2, the respondents were requested to indicate their gender. Regarding the test for equality of variances, all dimensions had p-values greater than 0.05 except for dimensions of *"I=Aspects on impairments on loans from the IDC"* and *"J=Aspects reducing the impairment rates on loans"*, where p-values were 0.006 and 0.038 respectively. Thus, the variances for males and females were different, and in this case, statistics under equal variance not assumed were not presented. In terms of homogeneity of means, that is equality of means, all p-values were more than 0.05. on all dimensions as shown in Table 5.12 below

**Table 5.12: Comparing the mean scores by gender**

| | Levene's test for equality of variances | | | t-test for equality of means | | | |
|---|---|---|---|---|---|---|---|
| | Equal variances … | F | Sig. | T | Df | Sig. | Mean difference |
| A | … assumed | .855 | .357 | -.205 | 121 | .838 | .143 |
| | … not assumed | | | -.206 | 120.904 | .837 | |
| B | … assumed | .005 | .942 | -.480 | 121 | .632 | -.030 |
| | … not assumed | | | -.478 | 113.891 | .634 | |
| C | … assumed | 2.624 | .108 | 1.068 | 121 | .287 | .271 |
| | … not assumed | | | 1.071 | 120.635 | .286 | |
| D | … assumed | 1.309 | .255 | .066 | 121 | .948 | .022 |
| | … not assumed | | | .066 | 116.585 | .948 | |
| E | … assumed | .070 | .791 | -.135 | 121 | .893 | -.015 |
| | … not assumed | | | -.135 | 120.775 | .893 | |
| F | … assumed | .001 | .973 | 1.249 | 121 | .214 | .081 |
| | … not assumed | | | 1.247 | 119.433 | .215 | |
| G | … assumed | .041 | .840 | -1.703 | 121 | .091 | -.298 |
| | … not assumed | | | -1.705 | 120.964 | .091 | |
| H | … assumed | .392 | .533 | .127 | 120 | .899 | .019 |
| | … not assumed | | | .127 | 116.354 | .899 | |
| I | … assumed | 7.925 | .006 | 1.700 | 121 | .092 | .126 |
| | … not assumed | | | 1.689 | 111.175 | .094 | |
| J | … assumed | 4.390 | .038 | -.258 | 121 | .797 | -.041 |
| | … not assumed | | | -.256 | 112.384 | .798 | |

Gender did not have an impact on the perceptions of employees on performance measures and funding processes. The mean scores on dimensions by gender showed no difference, and thus they were interpreted in a similar way by both males and females. Gender is not a determinant in distinguishing or assessing perceptions on performance measures and funding processes at IDC.

### 5.5.2 Difference in mean score by respondents who used the finance discipline during DD

Based on Q-9, the respondents were asked to indicate whether they used the finance IDC discipline during DD. Independent t-tests were done to determine whether there was a difference between those who used the finance discipline during DD or not. As such, the assumption of equal variance was met for all the dimensions; thus, equal variances were assumed, since the p-values were more than 0.05 as per Table 5.13 below.

**Table 5.13: Comparing the mean scores by finance IDC discipline used during due diligence**

| | Levene's test for equality of variances | | | t-test for equality of means | | | |
|---|---|---|---|---|---|---|---|
| | Equal variances … | F | Sig. | T | Df | Sig. | Mean difference |
| B | … assumed | 1.201 | .275 | -.669 | 121 | .505 | -.043 |
| | … not assumed | | | -.691 | 119.954 | .491 | |
| C | … assumed | 1.006 | .318 | .366 | 121 | .715 | .094 |
| | … not assumed | | | .369 | 119.067 | .713 | |
| D | … assumed | 1.927 | .168 | .587 | 121 | .558 | .199 |
| | … not assumed | | | .596 | 120.254 | .553 | |
| E | … assumed | .285 | .595 | 1.397 | 121 | .165 | .159 |
| | … not assumed | | | 1.397 | 115.724 | .165 | |
| F | … assumed | .670 | .415 | .966 | 121 | .336 | .063 |
| | … not assumed | | | .977 | 119.390 | .331 | |
| G | … assumed | .044 | .834 | .332 | 121 | .741 | .059 |
| | … not assumed | | | .330 | 113.659 | .742 | |
| H | … assumed | 1.173 | .281 | -.592 | 120 | .555 | -.089 |
| | … not assumed | | | -.597 | 118.305 | .552 | |
| I | … assumed | .678 | .412 | .064 | 121 | .949 | .005 |
| | … not assumed | | | .064 | 111.481 | .949 | |
| J | … assumed | .571 | .451 | .954 | 121 | .342 | .152 |
| | … not assumed | | | .967 | 120.067 | .336 | |

Looking at the test for the difference between the mean scores, that is, the independent t-tests, all p-values were greater than 0.05, indicating that the use of the finance discipline during due diligence did not impact on the perceptions of employees on performance measures and funding processes. There were no differences in mean scores and thus the dimensions were interpreted in a similar way by those who used the finance discipline during DD and those who did not.

## 5.6 ANOVA TESTS TO DETERMINE THE EFFECT OF EMPLOYEE CHARACTERISTICS ON THEIR PERCEPTIONS

The ANOVA was used to determine whether there was a difference between the current position, loan assessment experience working at the IDC, number of loan applications, and average value per loan. As mentioned earlier, composite variables were created. In terms of nominal scales (yes/no), the composite variable was created by adding up the number of yes responses. The maximum score on all Likert-type questions was 5. The maximum score on use of IDC discipline during due diligence was 3, and the maximum number of score on the use and addition of ratios as performance measures was 8. The 5% level of significance was also used, and the p-value approach was used to determine significance.

### 5.6.1 Differences in means by current positions in the IDC

The current position within the IDC was grouped into six groups. These were Account Manager, Senior Account Manager, Senior/Regional Officer, Dealmaker, Senior Dealmaker, and Others. The ANOVA test results are shown in Table 5.14.

**Table 5.14: Test of homogeneity (ANOVA) of current position**

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q9. Number of IDC discipline/s you work on during the due diligence | Between Groups | 5.583 | 5 | 1.117 | 1.851 | .108 |
| | Within Groups | 70.564 | 117 | .603 | | |
| | **Total** | **76.146** | **122** | | | |
| Q10. Aspects on business funding | Between Groups | 1.340 | 5 | .268 | 2.293 | .050 |
| | Within Groups | 13.675 | 117 | .117 | | |
| | **Total** | **15.016** | **122** | | | |
| Q11. Level of use of ratios as performance measures | Between Groups | 8.239 | 5 | 1.648 | .824 | .535 |
| | Within Groups | 234.054 | 117 | 2.000 | | |
| | **Total** | **242.293** | **122** | | | |
| Q12. Level of addition of ratios as performance measures | Between Groups | 25.174 | 5 | 5.035 | 1.483 | .201 |
| | Within Groups | 397.330 | 117 | 3.396 | | |
| | **Total** | **422.504** | **122** | | | |
| Q13. Level of agreement of ratios as performance measures | Between Groups | 2.235 | 5 | .447 | 1.139 | .344 |
| | Within Groups | 45.906 | 117 | .392 | | |
| | **Total** | **48.141** | **122** | | | |
| Q14. Aspects about Economic Value Added (EVA) | Between Groups | 1.426 | 5 | .285 | 2.332 | .047 |
| | Within Groups | 14.308 | 117 | .122 | | |
| | **Total** | **15.734** | **122** | | | |
| Q15. Reduction chances of a company defaulting on IDC loans | Between Groups | 5.819 | 5 | 1.164 | 1.228 | .301 |
| | Within Groups | 110.908 | 117 | .948 | | |
| | **Total** | **116.727** | **122** | | | |
| Q16. Activities used to monitor company performance to ascertain ability to pay the loan | Between Groups | 3.282 | 5 | .656 | .975 | .436 |
| | Within Groups | 78.107 | 116 | .673 | | |
| | **Total** | **81.389** | **121** | | | |
| Q17. Aspects on impairments on loans from the IDC | Between Groups | .665 | 5 | .133 | .774 | .570 |
| | Within Groups | 20.108 | 117 | .172 | | |

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| | **Total** | **20.773** | **122** | | | |
| Q18. Aspects reducing the impairment rates on loans | Between Groups | 2.428 | 5 | .486 | .623 | .683 |
| | Within Groups | 91.237 | 117 | .780 | | |
| | **Total** | **93.665** | **122** | | | |

The major difference was found to be between the dealmakers and the senior account managers. The dealmakers had the lowest mean of 3.42, whilst the senior account managers had the highest mean of 3.76. The dealmakers were neutral on aspects about EVA, whilst the senior account managers were in agreement on the dimension. Thus, the senior account managers were more in agreement than any other group, and the researcher can conclude that they agree on knowing about EVA, have experience in its calculation, its use as a performance measure, and are willing to learn more about EVA.

### 5.6.2 Difference in means by highest academic qualification

The highest academic qualification was categorised into four groups; certificate/diploma, Bachelor's degree, Honours degree and Master's Degree. The assumption of homogeneity of variance resulted in all p-values being more than 0.05 except for three dimensions. The dimensions are "*aspects on business funding*", *"level of addition of ratios as performance measures*" and "*aspects used to monitor company performance to ascertain ability to pay loan*" which had p-values of 0.031, 0.042 and 0.025 respectively indicating that the variances were not equal across the groups. In this case, the Welch robust test for equality of means was used and the Games-Howell post-hoc tests if they are any differences. All dimensions had p-values more than 0.05 indicating that there was homogeneity of means. The ANOVA results of the tests are reported below in Table 5.15.

**Table 5.15: Test of homogeneity (ANOVA) by highest educational qualification**

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q9. Number of IDC discipline/s you work on during the due diligence | Between Groups | 2.596 | 3 | .865 | 1.400 | .246 |
| | Within Groups | 73.550 | 119 | .618 | | |
| | **Total** | **76.146** | **122** | | | |
| Q10. Aspects on business funding | Between Groups | .750 | 3 | .250 | 2.087 | .106 |
| | Within Groups | 14.265 | 119 | .120 | | |
| | **Total** | **15.016** | **122** | | | |
| Q11. Level of use of ratios as performance measures | Between Groups | 3.871 | 3 | 1.290 | .644 | .588 |
| | Within Groups | 238.422 | 119 | 2.004 | | |
| | **Total** | **242.293** | **122** | | | |
| Q12. Level of addition of ratios as performance measures | Between Groups | 23.888 | 3 | 7.963 | 2.377 | .073 |
| | Within Groups | 398.616 | 119 | 3.350 | | |
| | **Total** | 422.504 | 122 | | | |
| Q13. Level of agreement of ratios as performance measures | Between Groups | .670 | 3 | .223 | .560 | .643 |
| | Within Groups | 47.471 | 119 | .399 | | |
| | **Total** | **48.141** | **122** | | | |
| Q14. Aspects about Economic Value Added (EVA) | Between Groups | .869 | 3 | .290 | 2.320 | .079 |
| | Within Groups | 14.865 | 119 | .125 | | |
| | **Total** | 15.734 | 122 | | | |
| Q15. Reduction chances of a company defaulting on IDC loans | Between Groups | .247 | 3 | .082 | .084 | .969 |
| | Within Groups | 116.480 | 119 | .979 | | |
| | **Total** | **116.727** | **122** | | | |
| Q16. Activities used to monitor company performance to | Between Groups | 1.042 | 3 | .347 | .510 | .676 |
| | Within Groups | 80.346 | 118 | .681 | | |
| | **Total** | **81.389** | **121** | | | |

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| ascertain ability to pay the loan | | | | | | |
| Q17. Aspects on impairments on loans from the IDC | Between Groups | .074 | 3 | .025 | .142 | .934 |
| | Within Groups | 20.698 | 119 | .174 | | |
| | **Total** | **20.773** | **122** | | | |
| Q18. Aspects reducing the impairment rates on loans | Between Groups | 4.574 | 3 | 1.525 | 2.037 | .112 |
| | Within Groups | 89.091 | 119 | .749 | | |
| | **Total** | **93.665** | **122** | | | |

It can be concluded that the mean scores do not differ due to highest educational qualification. Thus highest education qualification is not a distinguishing factor in terms of assessing perceptions on performance measures and funding processes. One can conclude that the perceptions were the same regardless of educational level.

### 5.6.3 Differences in means by loan assessment experience at the IDC

The loan assessment experience working at the IDC was divided into three categories, which are at most, two years; 3-5 years; and more than five years. There were differences in mean scores on the dimensions of *"Aspects on business funding"*, *"Aspects about EVA"*, *"Activities used to monitor company performance to ascertain ability to pay the loan"*, "*Aspects on impairments on loans from the IDC"*, and *"Aspects reducing the impairment rates on loans"*, which had p-values of 0.001, 0.037, 0.001, 0.041, and less than 0.001 respectively, thus indicating that the means were different. The ANOVA results of the equality of means test are reported below in Table 5.16.

**Table 5.16: Test of homogeneity (ANOVA) of loan assessment experience working at IDC**

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q9. Number of IDC discipline/s you work on during the due diligence | Between Groups | .060 | 2 | .030 | .048 | .953 |
| | Within Groups | 76.086 | 120 | .634 | | |
| | **Total** | **76.146** | **122** | | | |
| Q10. Aspects on business funding | Between Groups | 1.747 | 2 | .874 | 7.901 | .001 |
| | Within Groups | 13.268 | 120 | .111 | | |
| | **Total** | **15.016** | **122** | | | |
| Q11. Level of use of ratios as performance measures | Between Groups | 5.081 | 2 | 2.540 | 1.285 | .280 |
| | Within Groups | 237.212 | 120 | 1.977 | | |
| | **Total** | **242.293** | **122** | | | |
| Q12. Level of addition of ratios as performance measures | Between Groups | 17.432 | 2 | 8.716 | 2.582 | .080 |
| | Within Groups | 405.072 | 120 | 3.376 | | |
| | **Total** | **422.504** | **122** | | | |
| Q13. Level of agreement of ratios as performance measures | Between Groups | 2.005 | 2 | 1.002 | 2.607 | .078 |
| | Within Groups | 46.136 | 120 | .384 | | |
| | **Total** | **48.141** | **122** | | | |
| Q14. Aspects about Economic Value Added (EVA) | Between Groups | .840 | 2 | .420 | 3.384 | .037 |
| | Within Groups | 14.894 | 120 | .124 | | |
| | **Total** | **15.734** | **122** | | | |
| Q15. Reduction chances of a company defaulting on IDC loans | Between Groups | 5.585 | 2 | 2.793 | 3.015 | .053 |
| | Within Groups | 111.141 | 120 | .926 | | |
| | **Total** | **116.727** | **122** | | | |
| Q16. Activities used to monitor company performance to ascertain ability to pay the loan | Between Groups | 8.700 | 2 | 4.350 | 7.122 | .001 |
| | Within Groups | 72.688 | 119 | .611 | | |
| | **Total** | **81.389** | **121** | | | |

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q17. Aspects on impairments on loans from the IDC | Between Groups | 1.078 | 2 | .539 | 3.284 | .041 |
| | Within Groups | 19.695 | 120 | .164 | | |
| | **Total** | **20.773** | **122** | | | |
| Q18. Aspects reducing the impairment rates on loans | Between Groups | 17.738 | 2 | 8.869 | 14.017 | .000 |
| | Within Groups | 75.927 | 120 | .633 | | |
| | **Total** | **93.665** | **122** | | | |

The experience in loan assessment whilst working at the IDC had an impact on the perceptions of employees on performance measures and funding in these dimensions. Respondents with at most two years' experience were in agreement with aspects about EVA, whilst those with 3-5 years were neutral. Therefore, the respondents with fewer years of experience tend to agree with aspects of EVA as a performance measure.

### 5.6.4 Differences in means by number of loan applications processed

The number of loan applications was divided into three categories: 1-6 loan applications, 7-9 loan applications, and 10 or more loan applications. The test on equality of variance was not violated in all dimensions, as shown by all p-values being more than 0.05, indicating that there was equality of variances within groups. The ANOVA results of the tests are reported below in Table 5.17.

**Table 5.17: Test of homogeneity (ANOVA) of number of loan application process**

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q9. Number of IDC discipline/s you work on during the due diligence | Between Groups | .291 | 2 | .146 | .232 | .794 |
| | Within Groups | 74.155 | 118 | .628 | | |
| | **Total** | **74.446** | **120** | | | |
| Q10. Aspects on business funding | Between Groups | .442 | 2 | .221 | 1.799 | .170 |
| | Within Groups | 14.503 | 118 | .123 | | |
| | **Total** | **14.945** | **120** | | | |
| Q11. Level of use of ratios as performance measures | Between Groups | .085 | 2 | .043 | .021 | .979 |
| | Within Groups | 239.915 | 118 | 2.033 | | |
| | **Total** | **240.000** | **120** | | | |
| Q12. Level of addition of ratios as performance measures | Between Groups | 7.873 | 2 | 3.937 | 1.173 | .313 |
| | Within Groups | 396.028 | 118 | 3.356 | | |
| | **Total** | **403.901** | **120** | | | |
| Q13. Level of agreement of ratios as performance measures | Between Groups | .177 | 2 | .088 | .227 | .797 |
| | Within Groups | 45.930 | 118 | .389 | | |
| | **Total** | **46.107** | **120** | | | |
| Q14. Aspects about Economic Value Added (EVA) | Between Groups | .505 | 2 | .253 | 2.024 | .137 |
| | Within Groups | 14.728 | 118 | .125 | | |
| | **Total** | **15.233** | **120** | | | |
| Q15. Reduction chances of a company defaulting on IDC loans | Between Groups | 1.519 | 2 | .759 | .781 | .460 |
| | Within Groups | 114.679 | 118 | .972 | | |
| | **Total** | **116.198** | **120** | | | |
| Q16. Activities used to monitor company performance to | Between Groups | .295 | 2 | .147 | .213 | .808 |
| | Within Groups | 80.871 | 117 | .691 | | |
| | **Total** | **81.166** | **119** | | | |

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| ascertain ability to pay the loan | | | | | | |
| Q17. Aspects on impairments on loans from the IDC | Between Groups | .257 | 2 | .128 | .754 | .473 |
| | Within Groups | 20.080 | 118 | .170 | | |
| | **Total** | **20.337** | **120** | | | |
| Q18. Aspects reducing the impairment rates on loans | Between Groups | .850 | 2 | .425 | .552 | .577 |
| | Within Groups | 90.775 | 118 | .769 | | |
| | **Total** | **91.625** | **120** | | | |

As such, it can be concluded that the mean scores do not differ due to the number of loan applications. The ratings were the same regardless of the number of loan applications. Therefore, the number of loan applications processed had no impact on the perceptions of employees on performance measures and funding applications processed.

### 5.6.5 Differences in means by average value per loan

The average value per loan was divided into four categories: R1m to R10m, R11m to R20m, R21m to R30m, and R31m and above. The test of homogeneity of variance had all p-values being more than 0.05 except for the dimensions of *"Aspects on business funding"*, *"Activities used to monitor company performance to ascertain ability to pay the loan"*, and *"Aspects reducing the impairment rates on loans"*, which had p-values of less than 0.001, less than 0.001, and 0.002 respectively, showing that the variances were not equal across the categories. The ANOVA results of the tests are reported below in Table 5.18.

**Table 5.18: Test of homogeneity (ANOVA) of average value per loan**

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q9. Number of IDC discipline/s you work on during the due diligence | Between Groups | 2.632 | 3 | .877 | 1.420 | .240 |
| | Within Groups | 73.515 | 119 | .618 | | |
| | **Total** | **76.146** | **122** | | | |
| Q10. Aspects on business funding | Between Groups | 1.062 | 3 | .354 | 3.020 | .033 |
| | Within Groups | 13.953 | 119 | .117 | | |
| | **Total** | **15.016** | **122** | | | |
| Q11. Level of use of ratios as performance measures | Between Groups | 4.493 | 3 | 1.498 | .750 | .525 |
| | Within Groups | 237.799 | 119 | 1.998 | | |
| | **Total** | **242.293** | **122** | | | |
| Q12. Level of addition of ratios as performance measures | Between Groups | 11.388 | 3 | 3.796 | 1.099 | .353 |
| | Within Groups | 411.116 | 119 | 3.455 | | |
| | **Total** | **422.504** | **122** | | | |
| Q13. Level of agreement of ratios as performance measures | Between Groups | 1.343 | 3 | .448 | 1.139 | .336 |
| | Within Groups | 46.798 | 119 | .393 | | |
| | **Total** | **48.141** | **122** | | | |
| Q14. Aspects about Economic Value Added (EVA) | Between Groups | .226 | 3 | .075 | .578 | .631 |
| | Within Groups | 15.508 | 119 | .130 | | |
| | **Total** | **15.734** | **122** | | | |
| Q15. Reduction chances of a company defaulting on IDC loans | Between Groups | 5.448 | 3 | 1.816 | 1.942 | .127 |
| | Within Groups | 111.279 | 119 | .935 | | |
| | **Total** | **116.727** | **122** | | | |
| Q16. Activities used to monitor company performance to ascertain ability to pay the loan | Between Groups | 5.051 | 3 | 1.684 | 2.603 | .055 |
| | Within Groups | 76.338 | 118 | .647 | | |
| | **Total** | **81.389** | **121** | | | |
| Q17. Aspects on impairments on loans from the IDC | Between Groups | .075 | 3 | .025 | .143 | .934 |
| | Within Groups | 20.698 | 119 | .174 | | |
| | **Total** | **20.773** | **122** | | | |

| | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Q18. Aspects reducing the impairment rates on loans | Between Groups | 3.436 | 3 | 1.145 | 1.510 | .215 |
| | Within Groups | 90.229 | 119 | .758 | | |
| | **Total** | **93.665** | **122** | | | |

The dimension *"Aspects on business funding"* had the test of homogeneity of variances having a p-value of less than 0.05. The ANOVA tests resulted in a p-value of 0.033. Since the variances were unequal, the Welch robust test of equality of mean was used, and the p-value was found to be 0.106, indicating that there was no difference in mean scores.

The conclusion that can be reached is that the mean scores do not differ regardless of the average value per loan application amount. Therefore, average the value per loan did not impact on the perceptions of employees on performance measures and funding processes.

## 5.7 SUMMARY

An online survey was created on SurveyFace, and a link in an email was sent to respondents to complete the questionnaire. The data collected from the questionnaire was then exported to Microsoft Excel and then to SPSS version 24 for analysis.

On categorical variables, the descriptive statistics were used and presented in the form of frequencies and percentages, and continuous variables were shown using means and standard deviations. The sums of the items that make up a construct were used to determine the level of acknowledgment.

The independent t-test was used for the variables with only two categories and the ANOVA for variables with more than two categories. In the case where the test was significant, information on equal variances not assumed was presented,

and where the test was not significant, information on equal variances was presented. The measure of effect size was used to determine any significant relationship.

The IDC's internal contact list was used to select the respondents. The link to the questionnaire was emailed to each respondent. Only 123 employees responded to the questionnaire.

The respondents indicated their positions in the IDC. They held different positions such as account managers, senior account managers or dealmakers, senior dealmakers, senior/regional officers, and other positions. The gender was a mix of males and females, where males were 56.6% and females were 43.3. The age groups of respondents showed that 70% were below 40 years. The qualification level of the respondents indicated that 89% held degrees and 11% did not have degrees. For experience in loan assessing responsibilities, it was found that 40% had experience from previous employers and 30% had over five years' experience at the IDC. The majority of the respondents assessed more than six loan applications, and over 40% of the respondents assessed loan application of more than R20 million.

The study identified 10 dimensions to be used in assessing the perceptions of IDC employees on the performance measures and funding processes. The dimensions were: IDC disciplines worked on during due diligence, Aspects on business funding, Level of use of ratios as performance measures, Level of addition of ratios as performance measures, Aspects about EVA, Activities to reduce the chances of a company defaulting on IDC loans, Activities used to monitor company performance to ascertain ability to pay the loan, Aspects on impairments on loans from the IDC, and Aspects on reducing the impairment rates on loans.

The respondents indicated the discipline they work on during the DDs. It was noted that the respondents doing marketing were 73.2%, the technical discipline was 55.3%, whilst the finance discipline was 44.7%. The least number of the

respondents work on the finance discipline when doing DDs. Therefore, the number of respondents who prepare the financial paragraph for the approving committee is less.

The respondents were in agreement that stricter post-investment monitoring be implemented and that there was uncertainty on whether the IDC should keep the same funding process for all funding applications. The study found mixed reactions on whether a different assessment process should be used for higher and lower funding applications, and whether companies neglect repaying loans granted by DFIs, and whether higher interest rate cause defaults. However, respondents indicated that a longer-term loan or a higher amount loan does not cause the company to default.

The study found that 99.2% of the respondents use income security, 95.1% use outside funds to cash flow, and earnings per share at 54.1%. However, 95.5% of the respondents are not using EVA when they assess funding applications. The respondents indicated which performance measures can be added to existing measures used at the IDC. It was noted that 65.9% of the respondents agreed that EVA should be added to other performance measures. The earlier dimension indicates that the majority of the respondents were not using EVA, and this dimension finds that the respondents want EVA to be added.

The respondents agreed that performance measures is vital in loan assessment and they may assist to reduce loan impairments when used at loan assessment stage. The respondents agreed that more performance measures when assessing funding application.

The respondents indicated that they would like the IDC to investigate EVA. However, the respondents seem unsure of the aspects of knowing about and calculating EVA.

The respondents were given four activities and were asked whether their use can reduce the chances of a company defaulting on IDC loans. The respondents

were in agreement that a different DD and approval process for different loan amounts could reduce the chances of a company defaulting after the loan has been granted. However, the respondents do not agree that the shorter turnaround time on loan application and approvals, and different performance measures for different loan amounts can reduce chances on loan defaults.

The respondents were given four activities that can be used to monitor company performance to ascertain its ability to repay the loan. Based on the outcome of the study, it seems that the respondents were in agreement that all the activities, namely, annual mini-DDs, annual submission of financial statements, quarterly meetings, and submission of management accounts can be used to track the performance of the company after funding has been granted.

The outcome of the study indicates that the respondents were in agreement that regular portfolio monitoring after approval might assist in reducing impairments. They were also in agreement that early intervention on non-performing loans may reduce impairments, that loans granted on specific contracts/orders may reduce the chances of impairments, and that an own contribution by the company may reduce the chances of loan impairments

It can be concluded that the respondents were in agreement that monthly site visits and post-investment monitoring performed by the loan originator could reduce the impairment rates on loans. That was proven by the 76.4% and 75.6% responses received on the two matters respectively. However, the respondents did not agree that adding EVA and charging lower interest rates can reduce impairments. This was proven by the 61.8% and 65% responses received on the two matters respectively.

The independent t-test was used to determine group difference mean scores by gender and by those who worked with the finance discipline during due diligence. The composite variables for the Likert scale were found by averaging and that for the yes/no nominal scales by summing up the number of yes responses to get the level of acknowledgement.

The gender of the respondents is not considered a determining factor when assessing perceptions on the performance measures and the funding processes. This is because no differences were identified in the mean scores.

Whether the respondents worked on the finance discipline or not does not have an impact on the perceptions of the performance measures and funding process. This is due to the fact that all p-values were greater than 5% and no differences were found in the mean scores.

The ANOVA was used to determine whether there was a difference between the current position, loan assessment experience working at IDC, annual number of loan applications processed, and average value per loan. The composite variable was created by adding up the number of yes responses.

The respondents were in agreement on all other dimensions, but the difference was spotted between the views of the dealmakers and the senior account managers on the “aspects about EVA”. The senior account managers were more in agreement, whereas the dealmakers were neutral on the dimension. Therefore, the conclusion can be made that the senior account managers are more willing to learn more about EVA.

The highest academic qualification does not have an impact on the perception of the respondents. Therefore the conclusion was that perceptions of the respondents were similar even when they were on different educational level.

The loan assessment experience working at the IDC was found to have an impact on how the respondents viewed the performance measures and the funding process, since there were differences in mean scores in the groups. Furthermore, employees with experience of at most two years were agreement about aspects of EVA as a performance measure.

The number of loan applications processed does not have an impact on the perceptions of the performance measures and funding process. This is because there were no differences found in the mean scores, and the dimensions were rated the same regardless of the number of applications.

There were no differences in the mean scores of the average value per loan. This leads to the conclusion that the average value per loan does not have an impact on the perceptions of the performance measures and the funding processes

The next chapter will focus on conclusions and recommendations of the study.

# CHAPTER 6
# CONCLUSIONS AND RECOMMENDATIONS

## 6.1 INTRODUCTION

In the previous chapters, a thorough literature review was conducted on the subject matter and an empirical study addressing the research aim and objectives was conducted. The penultimate chapter analysed the results of the study.

This chapter is the last chapter of the study and will commence with an overview of background and focus of the study and then conclusions on the context of the study. The conclusions are followed by the limitations of the study. Lastly, the recommendations and suggestions for future studies will be tabled in this chapter.

## 6.2 OVERVIEW OF BACKGROUND AND FOCUS OF THE STUDY

Chapter 1 of the study laid the foundation for the discussion of DFIs, particularly the IDC which is considered to be the largest DFI in South Africa, and performance measures. DFIs in developing economies are owned by the government and are established to make significant contributions to the development and renewal of economies in their countries by providing funding to companies that do not meet requirements of private sector funders.

Section 1.1.1 introduced the IDC as a provider of funding to start-up companies and for expansions with funding from R1 million. The financial paragraph that the IDC uses to analyse the financial position of the company includes the ratios used at the IDC. The traditional performance measures were discussed in Section 1.1.2, and they were found to be inadequate when used alone. Furthermore, the impairment rate at the IDC appears to be increasing and therefore threatening the sustainability of the DFI. The performance measures

being used may be insufficient when used to assess funding applications at the IDC.

The problem statement in Section 1.3 was derived based on Figure 1.1 of the study, which indicated that the impairments rate at the IDC is increasing annually, therefore placing the sustainability of the DFI at risk. A concern was raised about the traditional performance measures, and there were indications that EVA has an advantage over them. EVA can evaluate the realistic current state of the company, can assist the company to perform better, and can be used to calculate the future growth of the company. Hence, the adding of EVA to performance measures already used may be beneficial to the IDC, since it will indicate the future performance of the company.

## 6.3 CONCLUSIONS

The objectives of the study were described in Section 1.4 of the study. This section, based on those objectives, gives the outcome of the study by checking whether the objectives have been met. Therefore, the discussion regarding how the objectives were addressed follows.

### 6.3.1 Conclusion on objective 1

The first objective was to understand traditional performance measures generally used to assess the performance of companies and EVA. The objective was addressed by the literature review conducted in Chapter 2.

It was found that performance measures are useful in the assessment of the company's financial performance; determining the company's financial position; and improving the performance of the company. EPS, ROE, ROA, and ROCE are inadequate traditional performance measures when used on their own, they have weaknesses and limitations as per Section 2.4. They can measure profitability only, and they only show a company's past performance. Their calculation appears not to take the cost of capital into account, and managers can manipulate them easily to give the impression to shareholders that the

company is doing well. Therefore, the traditional performance measures are seen as weak and may not be appropriate for assessing a company's real performance.

EVA emerged as a popular performance measure and presented an opportunity of being added to other measures when assessing performance. Weaknesses and limitations were identified for EVA in Section 2.6. EVA is not appropriate when used on its own; it may not be suitable for all companies, and the calculation is affected by newly acquired assets and their depreciation. This makes EVA an insufficient performance measure to use on its own; therefore, it also needs other traditional performance measures.

The advantages of EVA were that EVA is easy to calculate using financial statements, as only the statement of financial position and the statement of comprehensive income are needed. EVA is known to indicate the company's future performance and is vital for the shareholders and managers to get an indication of the company's future sustainability; it takes the cost of capital into account when determining the profitability of the company as indicated in Section 2.7. Therefore, EVA may be suitable for the assessment of funding applications, since it will be able to indicate whether the company may be profitable to repay the funding granted or not. The performance measures thus seem to be effective when they are used together to give an indication of the company's current and future performance. The use of EVA may therefore become useful to shareholders and management.

Based on the above discussion, it can be confirmed that the first objective of the study has been met and that an understanding of the selected performance measures has been realised. Therefore, the information may be useful to the funding institutions when deciding on the performance measures to use when assessing funding applications to ensure that the company will be sustainable.

### 6.3.2 Conclusion on objective 2

The second objective was to investigate the roles and performances of selected DFIs as well as the pre- and post-funding process of the IDC. This objective was addressed by the literature review conducted in Chapter 3.

The study found that DFIs operate in a more risky environment to uplift communities and create jobs. It was found that European DFIs have an association with about 15 DFIs. The African continent has over 140 DFIs comprising development banks, guarantee funds, and insurance companies. These DFIs, however, are cautious when giving funding, as they want the owners to contribute cash and/or assets. The majority of DFIs in SADC countries are financially unstable due to poor decisions when giving funding to companies that are unable to repay. South Africa has four major DFIs in its portfolio. These include the DBSA, IDC, Land Bank, and NEF. However, for purposes of this study, the DBSA, IDC, NEF, and Sefa – as it is 100% owned by the IDC – were discussed.

The DBSA provides financial and non-financial services, and despite the impairments, it has a sound financial position with infrastructure finance of R12.7 billion and municipal market funding of R1.7 billion by 2014. It recorded impairment losses of R495 million and R1.6 billion in 2012 and 2013 respectively. The NEF's mandate is to grow B-BBEE, and they approved 94 transactions worth R895 million and disbursed R562 million in 2014/15. The impairments were at 19.94% in 2014, and the write-offs were R87.1 million in 2013/14. Sefa caters for SMMEs with approved loans of R822 million in the 2014 financial year, and impairments were 25% in 2014. Although the DFIs are still able to provide funding as per their respective mandates, the impairment rates and write-offs are a concern, as this threatens their sustainability.

The IDC funds industrial development. It approved R13.8 billion funding in the 2013/14 financial year, 329 at W&R in 2014, and impairments at 18.2% in 2014. It was found that although there are systems and procedures in place, the write-offs and impairments at DFIs in South Africa seem to be increasing. For the IDC,

which has the highest funding rate, the impairments may pose a risk of sustainability in future. Therefore, other measures that may assist the DFIs to determine the profitability of the applicant before funding is granted may need to be considered in order to reduce the chances of a company not being able to repay the loan.

According to the foregoing information, the second objective was met and proper investigation into the roles and performance of the DFIs was conducted. Therefore, insight into the roles and operations of the IDC – as the largest DFI in South Africa – and other DFIs have been shared.

### 6.3.3 Conclusion on objective 3

The last objective, which was to assess the perceptions of the employees on the adequacy of the performance measures and funding processes used at the IDC, was informed by aspects of the literature review in Chapter 2 for performance measures and Chapter 3 for IDC funding process. Further, quantitative research was conducted through the questionnaire in Appendix A that was sent to 248 P-Band employees involved in the loan assessment process with 123 respondents. Both the descriptive and inferential statistics were used to analyse the data.

Ten dimensions were used in the study, and a summary of the findings in each of the 10 dimensions of the descriptive statistics are discussed hereunder and conclusions drawn with cross references added in brackets for ease of reference. Responses to questions with mixed reactions or uncertainty have not been included below.

- *IDC disciplines worked on during DDs (Section 5.4.1)*: The study found that the majority of the respondents use the marketing (73.2%) and technical disciplines (55.3%) and do not use the finance discipline (44.7%) during DDs. Since it was established in Sections 1.1.1 and 3.4.2 that the financial paragraph must be included in the submission that goes to the committee considering funding applications, it therefore seems that the financial

paragraph of the funding applications may not be done thoroughly to give the approving committee information on the financial performance of the company applying for funding.

- *Aspects on business funding (Section 5.4.2)*: The study found that 83.8% of the respondents agreed that stricter measures be considered at post-funding monitoring, and 59% agreed that a company that does not require 100% funding and which puts in an own contribution is less likely to default, but 63.4% and 64.2% of respondents respectively do not agree that a longer-term loan or a higher loan amount contributes to a company defaulting. Therefore, the responses indicate that there is concern over the post-funding monitoring, that they may not be sufficient to ensure that the company does not default.
- *Level of use of ratios as performance measures (Section 5.4.3)*: It was found that 99.2% use the *income security cover* ratio, whilst 95.1% use *outside funds to cash flow*. Further, 81.1% use *return on equity*, 80.3% use *return on assets,* and 54.1% use *earnings per share*. This indicates that respondents use a combination of the ratios used by the IDC (Section 2.8) and traditional performance measures (Section 2.3) which were found to be inadequate when used on their own because they may not be able to give the future performance of the company. Furthermore, 54.9% of the respondents are not using return on capital employed, and 95.5% of the respondents do not use EVA. By not using EVA during the assessment of funding applications, the respondents miss the opportunity to calculate the future performance of the company and to use a performance measure that is easy to calculate.
- *Level of addition of ratios as performance measures (Section 5.4.4)*: It was found that 65.9% of respondents agree that EVA be added to other performance measures being used in the funding application assessment. Since it was established in the previous dimension that most of the respondents are already using the other ratios, the percentage of addition was below 50%. Therefore, the adding of EVA to other performance measures will assist during the funding application assessment because it will be able to give the real performance of the company.

- *Level of agreement of ratios as performance measures (Section 5.4.5)*: It was found that 98.3% of the respondents agree that performance measures are important for funding assessment purposes, as they may be used to reduce the chances of loans being impaired. Furthermore, 83.8% of the respondents were in agreement that performance measures at loan assessment stage may assist in reducing loan impairments, and 55.3% of them were in agreement that more performance measures are needed when assessing funding. This therefore indicates that performance measures as a tool to assess funding applications may be beneficial to the IDC and also have a positive contribution in keeping the loan active and not be impaired.
- *Aspects about EVA (Section 5.4.6)*: It was found that 71.5% of the respondents would like the IDC to investigate EVA. Furthermore, 58.5% concurred that EVA might not be adequate when used alone, and therefore, 65.6% suggested the adding of EVA to performance measures currently being used.
- *Factors to reduce the chances of companies defaulting on IDC loans (Section 5.4.7)*: It was found that 74% and 65.9% of respective respondents agreed that different approval processes and DDs for different loan amounts might assist in reducing the chances of the company defaulting. Notably, 66.6% of the respondents do not agree that using different performance measures can reduce the chances of loan defaulting. This therefore indicates that different approval processes may be used for funding applications to assist in the reduction of defaults.
- *Activities used to monitor company performance to ascertain the ability to repay the loan (Section 5.4.8)*: It was found that 87.7% of the respondents agreed that annual mini-DDs, 95.1% indicated the submission of annual financial statements, and 60.6% indicated quarterly management accounts and tracking of performance might assist in monitoring performance. Therefore, after funding has been disbursed and the company has started with operations, then the activities may be used to track performance to avoid the company not repaying the loan.

- *Aspects on impairments on loans from the IDC (Section 5.4.9)*: It was found that 97.6% of the respondents agreed that regular monitoring and early intervention, 59.4% indicated own contribution, and 81.3% indicated loans granted on orders could be used to assist in the reduction of impairments after funding has been granted. Therefore, implementing the suggested activities may reduce chances of impairing the loan; therefore keeping the impairment at the lowest possible rate.
- *Aspects reducing the impairment rates on loans (Section 5.4.10)*: It was found that although 76.4% of the respondents agreed that monthly site visits may be used to reduce the impairment rate, 61.8% did not agree that EVA as a performance measure may reduce impairment rates. This therefore indicates that there has to be constant post-funding monitoring to assist the company to keep to the loan repayments and reduce the chances of the company defaulting and the loan being impaired.

To place the aforementioned findings into context, inferential statistics using the independent t-test (Section 5.5) and the ANOVA tests (Section 5.6) were performed to determine the effect of employee characteristics on their perceptions. The outcome of the independent t-test and the ANOVA was discussed in Section 5.5 and 5.6 above.

From the above information, it can be concluded that the third objective of the study has been met. It can also be concluded that the employees' perceptions regarding the performance measures and the funding process have been assessed.

Based on the discussion in Sections 6.3.1, 6.3.2, and 6.3.3, it can be deduced that all the objectives of the study were met. It can also be concluded that implications to the problem that the study has identified can be recommended. Furthermore, the aim of the study of assessing perceptions of employees on performance measures and funding processing has been met.

## 6.5 LIMITATIONS OF THE STUDY

Taking note of the limitations as discussed in Sections 1.7 and 4.6, it must be noted further that scholarly literature on performance measures used in the IDC was very limited.

In SurveyFace, the consent to participate and the respondents' information sheet could not be sent as attachments, since the email format could not allow attachments to the questionnaire; as such, the consent to participate and the respondent information sheet was sent as contents on the email. Further, the email with the link to the questionnaire could not be formatted to allow for the split of paragraphs and did not look presentable; as a consequence, the email may have been mistaken for a spam email. This may have resulted in some of the other respondents deleting or ignoring the email and therefore not responding to it. Therefore, the tool was found not to be user-friendly and may not be considered for future studies.

## 6.6 RECOMMENDATIONS

The recommendations of the study, based on the research findings and analysis of the results, point to the following implications for the IDC:

- EVA be investigated and possibly be added to other performance measures currently used.
- Monthly site visits to check on the business performance of funded companies be considered as a measure of reducing loan impairment rates.
- The issue of post-investment monitoring being performed by the deal originator be considered, for continuity and to reduce the chances of a company neglecting to repay the loan.
- Different DDs and approval process for different loan amounts be considered as a measure of reducing impairments.

- The conducting of annual mini-DDs be considered, especially for high-risk loans, as a measure that can be used to track performance to ensure the company can meet its loan obligations.

## 6.7 SUGGESTIONS FOR FUTURE STUDIES

The following suggestions are in order for future studies:

- Since this research was based on perceptions of IDC employees, it would be interesting to perform a study on companies applying for funding. The applicants would get an opportunity to express their opinion on the IDC funding assessment process.
- Further research to test the adequacy of EVA when added with other performance measures, on the historical financial statements of funded companies in the IDC, would also be interesting. The results would indicate the overall future financial performance of the company, and the information could be used to assess whether the applications would initially have been approved or not.
- Since the research was done on the IDC performance measures and funding processes, it would be interesting to perform the study on performance measures and funding processes of other main DFIs in South Africa and in SADC countries.

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# APPENDICES

# APPENDIX A: QUESTIONNAIRE

**QUESTIONNAIRE SURVEY: PERSONNEL**

**ASSESSING PERCEPTIONS ON PERFORMANCE MEASURES AND FUNDING PROCESSES AT A DEVELOPMENT FINANCE INSTITUTION IN SOUTH AFRICA**

***Instructions:***

***Please indicate your answer by highlighting in the appropriate box.***

Questions 1-9 are **for statistical purposes only**.

**SECTION A: BIOGRAPHICAL AND DEMOGRAPHIC INFORMATION (Questions 1-9):**

**Q1. Please indicate your current position within the IDC:**

| | |
|---|---|
| Account Manager | 1 |
| Senior Account Manager | 2 |
| Regional Officer | 3 |
| Senior Regional Officer | 4 |
| Deal Maker | 5 |
| Senior Deal Maker | 6 |
| Other (please specify below) | 7 |

**Q2. Please indicate your gender:**

| | |
|---|---|
| Male | 1 |
| Female | 2 |

**Q3. Please indicate your age (in years):**

| | |
|---|---|
| Below 20 years | 1 |
| 20 – 29 years | 2 |
| 30 – 39 years | 3 |
| 40 – 49 years | 4 |
| 50 years and above | 5 |

**Q4. Please indicate your highest academic qualification:**

| | |
|---|---|
| Certificate | 1 |

| | |
|---|---|
| Diploma | 2 |
| Bachelor's Degree | 3 |
| Honours Degree | 4 |
| Masters' Degree | 5 |
| Doctoral Degree/Phd | 6 |

**Q5. Please indicate your loan assessment experience at previous employers before joining the IDC (in years):**

| | |
|---|---|
| No experience | 1 |
| 1 – 2 years | 2 |
| 3 – 5 years | 3 |
| 6 – 10 years | 4 |
| 11 – 15 years | 5 |
| More than 15 years | 6 |

**Q6. Please indicate your loan assessment experience while working at the IDC (in years):**

| | |
|---|---|
| No experience | 1 |
| 1 – 2 years | 2 |
| 3 – 5 years | 3 |
| 6 – 10 years | 4 |
| 11 – 15 years | 5 |
| More than 15 years | 6 |

**Q7. Please indicate the number of loan applications you process in a year:**

| | |
|---|---|
| 1-3 loan applications | 1 |
| 4-6 loan applications | 2 |
| 7-9 loan applications | 3 |
| 10 and more applications | 4 |

**Q8. Please indicate the average value per loan that you process in a year, expressed in Rmillions (m):**

| | |
|---|---|
| R1m – R10m | 1 |
| R11m – R20m | 2 |

| | |
|---|---|
| R21m – R30m | 3 |
| R31m – R40m | 4 |
| R41m – and more | 5 |

**Q9. Please indicate the IDC discipline/s you work on during the due diligence? Tick all that are applicable.**

| | |
|---|---|
| Finance | 1 |
| Marketing | 2 |
| Technical | 3 |

**SECTION B: BUSINESS FUNDING (Question 10 only)**

**Q10. Indicate your level of agreement on the following aspects about funding:**

| | | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| A | A company that requires more funding needs to go through a more stringent assessment process than a company that requires less financing | 1 | 2 | 3 | 4 | 5 |
| B | The application assessment process should be the same for all companies regardless of the amount of funding required | 1 | 2 | 3 | 4 | 5 |
| C | A company which has put in an own contribution, therefore not requiring 100% IDC funding, is less likely to default | 1 | 2 | 3 | 4 | 5 |
| D | A company granted a loan at a high interest rate is more likely to default | 1 | 2 | 3 | 4 | 5 |
| E | A company with a longer term loan is more likely to default | 1 | 2 | 3 | 4 | 5 |
| F | A company with a higher loan amount is more likely to default | 1 | 2 | 3 | 4 | 5 |
| G | The companies deliberately neglect repaying loans provided by Development Finance Institutions | 1 | 2 | 3 | 4 | 5 |
| H | The IDC needs stricter post-funding monitoring on loans | 1 | 2 | 3 | 4 | 5 |

**SECTION C: RATIOS AS PERFORMANCE MEASURES (Questions 11-13)**

**Q11. Does the IDC use the following ratios as performance measures when evaluating funding applications?**

| | **ANSWER OPTIONS** | **YES** | **NO** |
|---|---|---|---|
| A | Earnings Per Share | 1 | 2 |
| B | Return on Equity | 1 | 2 |

| | | | |
|---|---|---|---|
| C | Return on Assets | 1 | 2 |
| D | Return on Capital Employed | 1 | 2 |
| E | Outside funds to cash-flow | 1 | 2 |
| F | Income Security Cover | 1 | 2 |
| G | Structure ratio | 1 | 2 |
| H | Economic Value Added (EVA) | 1 | 2 |

**Q12. Indicate which ratios as performance measures can be added to those currently used when evaluating funding applications. Select all that are applicable**

| | **ANSWER OPTIONS** | |
|---|---|---|
| A | Earnings Per Share | 1 |
| B | Return on Equity | 2 |
| C | Return on Assets | 3 |
| D | Return on Capital Employed | 4 |
| E | Outside funds to cash-flow | 5 |
| F | Income Security Cover | 6 |
| G | Structure ratio | 7 |
| H | Economic Value Added (EVA) | 8 |

**Q13. Indicate your level of agreement on the following aspects about ratios as performance measures**

| | | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| A | The use of performance measures is important when assessing funding applications | 1 | 2 | 3 | 4 | 5 |
| B | Performance measures at loan assessment stage may assist in reducing loan impairments | 1 | 2 | 3 | 4 | 5 |
| C | More performance measures are needed when assessing funding applications | 1 | 2 | 3 | 4 | 5 |

**SECTION D: ECONOMIC VALUE ADDED (EVA) AS A PERFORMANCE MEASURE (Question 14 only)**

**Q14. Indicate your level of agreement on the following aspects about Economic Value Added (EVA)**

| | | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| A | I know about EVA | 1 | 2 | 3 | 4 | 5 |
| B | I have experience in the calculation of EVA | 1 | 2 | 3 | 4 | 5 |
| C | EVA can measure the future performance of the company | 1 | 2 | 3 | 4 | 5 |
| D | EVA is not adequate when used on its own | 1 | 2 | 3 | 4 | 5 |
| E | I would recommend EVA be added to existing ratios when assessing funding applications in the IDC | 1 | 2 | 3 | 4 | 5 |
| F | I would like the IDC to investigate EVA further | 1 | 2 | 3 | 4 | 5 |

**SECTION E: DEFAULTS ON LOANS FROM THE IDC (Questions 15-16)**

**Q15. To what extent can the following activities reduce the chances of a company defaulting on IDC loans?**

| | | Not at all | To some extent | Neutral | To a large extent | To a very large extent |
|---|---|---|---|---|---|---|
| A | A shorter turn-around time on loan applications and approvals | 1 | 2 | 3 | 4 | 5 |
| B | Different performance measures being used for different loan amounts | 1 | 2 | 3 | 4 | 5 |
| C | Different approval processes for different loan amounts | 1 | 2 | 3 | 4 | 5 |
| D | Different Due Diligence's for different loan amounts | 1 | 2 | 3 | 4 | 5 |

**Q16. To what extent can the following activities be used to monitor the company performance, to ascertain its ability to repay the loan?**

| | | Not at all | To some extent | Neutral | To a large extent | To a very large extent |
|---|---|---|---|---|---|---|
| A | Quarterly submission of management accounts | 1 | 2 | 3 | 4 | 5 |
| B | Quarterly meeting with the IDC to verify that the company performance is on track | 1 | 2 | 3 | 4 | 5 |
| C | Annual submission of financial statements | 1 | 2 | 3 | 4 | 5 |
| D | Annual mini-Due Diligence to confirm that performance is on track | 1 | 2 | 3 | 4 | 5 |

**SECTION F: IMPAIRMENTS ON LOANS FROM THE IDC (Questions 17-18)**

**Q17. Indicate your level of agreement on the following aspects on impairments on loans**

| | | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| A | Impairments affect the sustainability of the IDC | 1 | 2 | 3 | 4 | 5 |
| B | Loans granted on specific contracts/orders may reduce the chances of impairments | 1 | 2 | 3 | 4 | 5 |
| C | An own contribution by the company may reduce the chance of loan impairments | 1 | 2 | 3 | 4 | 5 |
| D | Regular portfolio monitoring after approval may assist in reducing impairments | 1 | 2 | 3 | 4 | 5 |
| E | Early intervention on non-performing loans may reduce impairments | 1 | 2 | 3 | 4 | 5 |

**Q18. To what extent can the following aspects reduce the impairment rates on loans?**

| | | Not at all | To some extent | Neutral | To a large extent | To a very large extent |
|---|---|---|---|---|---|---|
| A | Adding Economic value added (EVA) as a performance measure | 1 | 2 | 3 | 4 | 5 |
| B | Lower interest rates be charged on loans granted | 1 | 2 | 3 | 4 | 5 |
| C | Monthly site visits by the IDC | 1 | 2 | 3 | 4 | 5 |
| D | Post-investment monitoring be performed by the loan originator | 1 | 2 | 3 | 4 | 5 |

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE, YOUR INPUTS ARE APPRECIATED**

## APPENDIX B: CONSENT TO PARTICIPATE

UNISA university of south africa

### CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty.

I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the questionnaire.

I have received a signed copy of the informed consent agreement.

Participant name & surname…… (please print)

Participant signature……..Date……

Researcher's name & surname: Petunia Siphiwe Mhlahlo

Researcher's signature:  Date: 14th September 2016

Witness name & surname.....(please print)

Witness's signature…….....Date…....

# APPENDIX C: PARTICIPANT INFORMATION SHEET

## PARTICIPANT INFORMATION SHEET

14th September 2016

Title: "**ASSESSING PERCEPTIONS ON PERFORMANCE MEASURES AND FUNDING PROCESSES AT A DEVELOPMENT FINANCE INSTITUTION IN SOUTH AFRICA"**

**Dear Prospective Participant**

My name is Petunia Siphiwe Mhlahlo and I am doing research with Prof. L Julyan, an Associate Professor in the Department of Management Accounting towards a Master of Philosophy in Accounting Sciences at the University of South Africa. We do not require funding for this research. We are inviting you to participate in a study entitled, "**Assessing perceptions on performance measures and funding processes at a Development Finance Institution in South Africa**".

**WHAT IS THE AIM/PURPOSE OF THE STUDY?**

I am conducting this research to assess the perceptions of the P grade employees on the performance measures used as well as the application, approval and post approval processes in the IDC.

**WHY AM I BEING INVITED TO PARTICIPATE?**

You were selected based on your involvement in the application assessment process in the IDC. Your email address will be obtained from the electronic contact list available on the intranet. There will be about 340 participants.

**WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY / WHAT DOES THE RESEARCH INVOLVE?**

The study involves a questionnaire. Biographical and demographic information is firstly requested. This is followed by questions to determine your opinion on: the IDC application process; performance measures (ratios); as well as defaults and impairments on loans granted by the IDC.

The expected duration of participation will be approximately 30 minutes, the time needed to complete the questionnaire.

**CAN I WITHDRAW FROM THIS STUDY?**

Being in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. You should however note that it will not be possible for you to withdraw once you have submitted the questionnaire.

**WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

The potential benefits for the IDC will be that they will get the opinions of the employees on whether the performance measures and the funding process are proper. The potential benefits to the participant is the opportunity to express their opinions on what they experience during the application assessment and also know the opinions of other employees in the same positions.

**WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?**

No inconvenience or discomfort is foreseen in you participating in the research and are no potential risks have been identified.

**WILL WHAT I SAY BE KEPT CONFIDENTIAL?**

Your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a fictitious code number and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

Your answers may be reviewed by people responsible for making sure that the research is done properly, including the external coder and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

**HOW WILL INFORMATION BE STORED AND ULTIMATELY DESTROYED?**

Electronic copies of your answers will be stored on a password protected computer for a period of five years for future research or academic purposes. Future use of the stored data will be subject to further Research Ethics Review and approval, if applicable. Thereafter information will be deleted and destroyed.

**WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

There will not be any payment or incentive for participating in this study.

**HAS THE STUDY RECEIVED ETHICAL APPROVAL?**

This study has received written approval from the Research Ethics Committee of the College of Accounting Sciences, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

**HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS?**

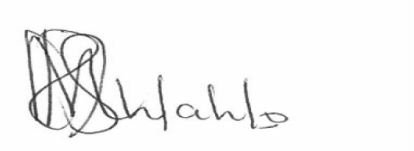
If you would like to be informed of the final research findings, please contact Petunia Siphiwe Mhlahlo on 084 5152 175 or e-mail: psmhlahlo@gmail.com. The findings are accessible for a five-year period.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact me at: 084 5152 175, or e-mail: psmhlahlo@gmail.com.

Should you have concerns about the way in which the research has been conducted, you may contact Prof. Leoni Julyan at 012 429 4821 or e-mail: julyal@unisa.ac.za.

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.



Petunia Siphiwe Mhlahlo

## APPENDIX D: IDC APPROVAL LETTER

19 Fredman Drive, Sandown 2196
PO Box 784055, Sandton 2146, South Africa
Tel: +27 11 269 3000
Fax: +27 11 269 3116
www.idc.co.za

IDC
Industrial Development Corporation

Wednesday, 5th October 2016

Ms Petunia Mhlahlo
Researcher

Dear Madam,

**Re: Approval of research questionnaire**

Pursuant to our letter dated 21 June 2016, we have reviewed the questionnaire you submitted and do hereby grant approval to circulate it to relevant IDC employees.

Kind regards

Phakamile Mainganya
Chief Risk Officer

## APPENDIX E: ETHICS CLEARANCE CERTIFICATE

UNISA university of south africa

**COLLEGE OF ACCOUNTING SCIENCES**
**RESEARCH ETHICS REVIEW COMMITTEE**

Date: 11 October 2016

Ref: 2016_CAS_052
Name of applicant:
Mr P Mhlahlo
Student/Staff #: 36815144

Dear Mr P Mhlahlo

**Decision: Ethics Approval**

---

**Name:** Mr P Mhlahlo
psmhlahlo@gmail.com

**Tile:** Assessing perceptions on performance measures and funding processes at a Development Finance Institution in South Africa

**Qualification:** Postgraduate student research

---

Thank you for the application for research ethics clearance by the College of Accounting Sciences Research Ethics Review Committee for the above mentioned research. Final approval is granted for the completion of the research.

***For full approval:*** *The research ethics application was reviewed in compliance with the Unisa Policy on Research Ethics by the College of Accounting Sciences Research Ethics Review Committee on 11 October 2016.*

*The proposed research may now commence with the proviso that:*

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the College of Accounting Sciences Research Ethics Review Committee . An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

3) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

*Note:*
*The reference number [top right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the College of Accounting Sciences RERC.*

Kind regards,

Ms Lindie Grebe
(Chairperson of CAS RERC)
grebel@unisa.ac.za
(012) 429 4994

Prof Elmarie Sadler
(Executive Dean of CAS)

## APPENDIX F: LETTER FROM EDITOR

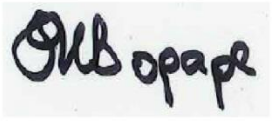

# DECLARATION BY LANGUAGE EDITOR

24 February 2017

TO WHOM IT MAY CONCERN

**DECLARATION: Language Editing of Dissertation**

I hereby declare that I have edited the Master of Philosophy (in Accounting Sciences) dissertation of PETUNIA SIPHIWE MHLAHLO entitled *"**ASSESSING PERCEPTIONS ON PERFORMANCE MEASURES AND FUNDING PROCESSES AT A DEVELOPMENT FINANCE INSTITUTION IN SOUTH AFRICA**"* and found the written work to be free of ambiguity and obvious errors. All changes made by me were made up to 24 February 2017. It is the responsibility of the student to address any comments from the editor or supervisor. Additionally, it is the final responsibility of the student to make sure of the correctness of the dissertation.



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Tel No.: **012 753 3670,** Fax No.: **086 267 2164** and Email Address: **khomotso@letsedit.co.za**