An assessment of factors influencing the valuation of retail petroleum companies

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Student number: 21157154
ABSTRACT

The valuation of a firm differs from stakeholder to stakeholder. The valuation method and outcome of an economist, accountant, investor and owner will differ. Valuations are based on either historical data or forecasts made from historical data and do not contain a comprehensive set of elements other than financial factors to evaluate a company. The current climate in which the retail petroleum companies operate is highly competitive and is regulated by certain laws and regulatory organisations. As this sector is so competitive retail companies change hands quite a lot either through buy and sell transactions, registering of new sites by franchising or white sites. Because of this the need arose to do an evaluation on the valuation factors of these companies. Retail petroleum companies are very specialised and therefore other non-financial factors may have just as much influence on the valuation as financial factors.

This paper sets a framework to incorporate non-financial factors such as strategic and operational factors into the valuation of retail petroleum companies to deliver a more compressive valuation outcome.

Numerous studies were done on either the petroleum industry or specific companies within the industry and their valuations, but a gap in the literature existed on the crucial factors influencing retail petroleum companies. A similar framework was developed by Cassone in 2005 but for production companies in the United States. This study provides a step by step framework to managers and valuators of retail petroleum companies to include non-financial factors into the valuation process.

This study consists of 5 chapters. Chapter 1 provides the nature and the scope of the study as well as the research problem and objectives. Chapters 2 and 3 provide a literature review on the retail petroleum industry in South Africa, valuation and lastly assess both financial and non-financial factors that may influence the valuation outcome. Chapter 4 entails a content analysis and provides steps to the new framework for
valuations based on the discounted cash flow model and lastly Chapter 5 includes a summary of the study and recommendations for future research.

KEYWORDS:
Business valuation, key factors, petroleum retail, fuel price, white sites, valuation approach, valuation framework
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15 November 2017

RE: CONFIRMATION OF LANGUAGE EDITING

I, A Geldenhuys, hereby confirm that the language editing of "An assessment of factors influencing the valuation of retail petroleum companies" by J Smith (21157154) was done by myself.

For any further queries please feel free to contact me.

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Kind regards
Anele Geldenhuys
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ABBREVIATIONS

AMEF  African Mineral and Energy Forum
B-BBEE  Broad-Based Black Economic Empowerment
BFP  Basic Fuel Price
BP  British Petroleum
CEE  Capital Employed Efficiency
CEF  Central Energy Fund
DME  Department of Minerals and Energy Resources
DOE  Department of Energy
EBIT  Earnings before interest and taxes
FCF  Free Cash Flow
FOB  Free On Board
FRA  Fuel Retailer Association of Southern Africa
HCE  Human Capital Efficiency
IBLC  In Bond Landed Cost
IEA  International Energy Agency
IFRS  International Financial Reporting Standards
IP  Illuminated Paraffin
KPI  Key Performance Indicator
<table>
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<th>Acronym</th>
<th>Full Form</th>
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<tr>
<td>NPASA</td>
<td>National Ports Authority of South Africa</td>
</tr>
<tr>
<td>OPEC</td>
<td>Organisation of Petroleum Exporting Countries</td>
</tr>
<tr>
<td>PASA</td>
<td>Petroleum Agency of South Africa</td>
</tr>
<tr>
<td>PETROSA</td>
<td>Petroleum Oil and Gas Corporation of South Africa</td>
</tr>
<tr>
<td>PPI</td>
<td>Producer Price Index</td>
</tr>
<tr>
<td>PPM</td>
<td>Parts Per Million</td>
</tr>
<tr>
<td>RAF</td>
<td>Road Accident Fund</td>
</tr>
<tr>
<td>SAFDA</td>
<td>South African Fuel Dealers’ Association</td>
</tr>
<tr>
<td>SARS</td>
<td>South African Revenue Services</td>
</tr>
<tr>
<td>SCE</td>
<td>Structural Capital Efficiency</td>
</tr>
<tr>
<td>SFF</td>
<td>Strategic Fuel Fund</td>
</tr>
<tr>
<td>TFN</td>
<td>Truck Fuel Net</td>
</tr>
<tr>
<td>ULP</td>
<td>Unleaded Premium</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>VAIC</td>
<td>Value Added Intellectual Coefficient</td>
</tr>
<tr>
<td>WACC</td>
<td>Weighted Average Cost of Capital</td>
</tr>
<tr>
<td>WPC</td>
<td>World Petroleum Council</td>
</tr>
<tr>
<td>ZAR</td>
<td>South African Rand</td>
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CHAPTER 1: NATURE AND SCOPE OF THE STUDY

1.1 Introduction

The retail petroleum industry is a highly competitive industry and therefore the main focus shifted to generating optimal profits and creating wealth for the involved stakeholders (Van Eeden, 2005:1). There is currently a very high number of role players in the market which leads to a lot of retail petroleum companies changing hands due to a suppliers’ price war in the market. In order for companies to evaluate their ability to create growth and value, it is no longer sufficient for companies to measure their growth and value creation using basic and accounting orientated performance indicators (KPI’s) such as growth in sales, net profit and net asset value (Cassone, 2005:1). Owners and management of companies need a more comprehensive valuation of companies to indicate their true value. As the accounting oriented KPI’s are no longer sufficient as a measure of value of the company on their own, more emphasis is placed on triple bottom line reporting and Broad-Based Black Economic Empowerment (B-BBEE) compliance in South Africa (Ntim, 2015:8). These two factors add to the value creation and market value of the company as stated by Ntim, (2015:4). A formal process of business valuation is therefore required by the companies to determine a reasonable value of their business (Modica, 2006:187).

In order to establish a reasonable value for these companies’ in the process of general management, measuring the true growth or value of a business, business valuations are of the utmost importance. According to Stanvliet (2012:1) the need for business valuations arise as a result of buy-sell transactions, litigation claims, taxation calculations and the measuring of company value to name but a few. There are currently a few valuation methods available when determining the value of a company, however these methods mainly focus on the financial and monetary information of a company to determine the value and not on other non-financial factors (Cassone, 2005:2).
1.2 Problem statement

There are many other factors that may influence the valuation of companies that are not financial or monetary of nature but rather strategic and operational in nature (Cassone, 2005:1). These non-financial factors may influence the value of a company in a very competitive industry such as the retail petroleum industry and this need to be considered in the valuation process. By including these strategic and operational factors into the valuation framework it will enable owners and managers of retail petroleum companies to make a more comprehensive and accurate informed decision based on industry specific factors influencing valuations. By analysing a company’s strengths and opportunities within the market, critical information can be obtained about the future value of the entity.

Some of the non-financial factors that will be researched and assessed within the industry will include but is not limited to:

- Ownership,
- B-BBEE scorecard and compliance,
- Key persons,
- Leadership and management,
- Client base and loyalty,
- Client service,
- Product quality and availability,
- Purchase and supply agreements,
- Key strategic partnerships and alliances,
- Intellectual capital.

To incorporate these factors into an industry specific valuation framework, new methodologies and valuation processes are required. In order to incorporate these factors into a new valuation framework, the valuation methods available was researched and assessed to identify possible areas of improvements and adjustments to account for the non-financial factors.
From above it can be determined that there is a need for an industry specific valuation framework for the retail petroleum industry.

1.3 Objectives

The outcome of this study will be led by a primary as well as secondary objectives.

1.3.1 Primary objective

The establishment of a valuation framework based on critical factors influencing the value of retail petroleum companies.

1.3.2 Secondary objectives

The secondary objectives of this research study were to:

- Determine which critical factors are industry specific.
- Determine the reliability of these critical factors.
- Determine the measurability of these critical factors.
- Draw conclusions on these factors.

1.4 Research questions

The purpose of this study is to research and determine the critical financial and non-financial factors influencing the business valuation of petroleum retail companies in South Africa and the effect that these factors have on the valuation models and valuation of such companies. The research questions asked to determine the above mentioned are as follows:
• How do factors influencing business valuations differ from industry to industry?
• Which of these factors are critical to the retail petroleum industry?
• What are the critical financial and non-financial factors influencing the business valuation of petroleum retail companies in South Africa?
• How do these critical factors influence the valuation of petroleum retail companies?
• What are the current valuation models/methods available for business valuations?
• Which valuation model/method is most suitable for the petroleum retail industry?
• How does this model/method need to be adjusted to account for industry specific critical factors identified?

1.5 Research methodology

In order for the researcher to achieve the objective set out above, an empirical investigation and literature review will be done.

1.5.1 Literature review

The literature review conducted will study the theoretical aspects of the factors influencing business valuations as well as the models and methods available to conduct business valuations. These theoretical aspects will be obtained and compared from published academic journals to ensure reliability of information gathered. Key words used and for the gathering of information were “business valuation”, “valuation models” “petroleum industry”, and “valuations”.

1.5.2 Empirical investigation

This research study made use of a literature review and empirical study to gather information. The empirical study consisting of qualitative content analysis will be done.
The empirical study will include the analysis and assessment of factors that influence the valuation of companies in general and through the assessment determining factors which are critical in the establishment of an industry specific valuation framework. These critical factors will then be analysed in the established framework for valuations of retail petroleum companies by using the financial and non-financial factors of a specific company within the industry.

1.6 Expected contribution of the study

There are numerous studies and research available on the factors influencing the valuation of businesses in general as well as on the relevant models used to perform business valuations. The factors included in these studies performed on business valuation are mainly based on financial factors. The petroleum industry is a specialised and unique industry and therefore this study is specifically aimed to investigate the specific factors influencing the valuation of retail petroleum companies. Furthermore, this study is aimed to establish a valuation framework and to test and evaluate the critical factors identified on a valuation model for retail petroleum companies.

1.6.1 Contributions to organisations

The establishment of a valuation framework based on critical factors influencing the value of retail petroleum companies should serve as a basis for owners of retail petroleum companies in determining a reasonably fair value for their organisation when decisions on mergers, acquisitions and selling of petroleum retail companies are made. This framework and factors influencing the value could also contribute in the valuation of such companies by financial institutions, auditors, business valuators and consultants.
1.6.2 Contributions to literature

The establishment of a sector specific valuation framework should contribute to the current literature to provide academics with sufficient literature to conduct industry specific company valuations.

1.7 Limitations of the research

The retail petroleum industry is a highly competitive industry in South Africa with a lot of different key role players in the market. With the competitive nature of this specific industry, owners of such companies are very secretive about their companies in general, as well as the factors that contribute towards their successes and downfalls. The competitive and secretive nature of the industry, along with the absence of a public platform where these companies are required to report or disclose their information, could result in an inaccurate or a complete absence of quantitative figures in the study. The full reliability and accurateness of the outcomes of valuations are extremely dependent on the assumptions made by the valuator.

1.8 Layout of the study

The layout of this study will consist of five chapters in total and will contain the following:

CHAPTER 1: NATURE AND SCOPE OF THE STUDY

Chapter 1 will serve as the introduction chapter of the mini-dissertation. The background on valuations will be discussed along with the need for industry specific valuation factors and models. This chapter will also contain the problem statement, research objectives and the research methodology.
CHAPTER 2: PETROLEUM RETAIL OUTLETS AND VALUATIONS

Chapter 2 contain the review of literature on the retail petroleum industry, factors influencing business valuations and valuation models. The literature review will focus on current business valuation literature and the integration thereof in business practices.

CHAPTER 3: CRITICAL FACTORS INFLUENCING VALUATION

In chapter 3, the critical factors influencing valuations of retail petroleum companies are identified and the impact of these factors is discussed based on results obtained from qualitative research methods.

CHAPTER 4: EFFECTS OF CRITICAL FACTORS ON THE VALUATION OUTCOMES

In chapter 4, the results of the empirical study evaluate the effect the critical factors, identified in chapter 3, has on the valuation model of petroleum retail companies.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

This chapter concludes the study with a review of findings based on set out objectives in chapter 1 and recommendations for future research.
CHAPTER 2: PETROLEUM RETAIL OUTLETS AND VALUATIONS

2.1 Chapter introduction

The purpose of this chapter is to give an overview of the retail petroleum industry and to assess business valuations and the different approaches available for business valuations. This chapter consists of a literature review and assessment of a wide and comprehensive range of published research of valuation methods and factors influencing the valuation methods.

2.2 The retail petroleum industry

The retail petroleum industry is a specialised and competitive industry not only in South Africa but worldwide. The success and failure in this industry is based on the ability to make operational and strategic decisions.

2.2.1 Introduction to the petroleum industry

The growth of the internet and globalisation over the last decade led to a major expansion in all economic sectors and thus leading to more competition in all sectors including the retail petroleum industry (Cebanov & Mattsson, 2014:1). As the petroleum industry is such a specialised industry, there are many factors influencing not only the valuation of such companies but also the day to day operations and decision making by managers. The petroleum industry consists of unique factors and characteristics that sets valuations and operations within this industry apart from other industries (Cebanov & Mattsson, 2014:2, Bhaskaran & K Sukumarna, 2016: 91). These factors are illustrated in Figure 1 and include but are not limited to availability, exploration and production of fossil fuels, economic growth, price volatility, energy policies, oil prices, exchange rates competition, technological advances, human capital deficit, cost containment, health, safety and

**Figure 1: Business risks for oil and gas companies**

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Source: F Aliyeva, (2012)
```

According to Lenzner, (2012) oil is one of the most prominent factors influencing the stock exchange, producers, wholesale and retail suppliers, consumers, financial investors, traders and hedge funds. The main oil companies operating in South Africa (excluding
“white sites and smaller private wholesalers) are SASOL, Total, British Petroleum (BP), Shell, Chevron, PetroSA, Engen and Afric Oil (SAPIA, 2017).

The petroleum sector is dependent not only on the amount of oil produced but also on how many reserves are extracted. According to Cebanov and Mattsson, (2014:1) renewable energy growth has an effect on the value of individual retail petroleum companies as it is a threatening substitute product.

The retail petroleum company is highly competitive and regulated and trades mainly in diesel (500 ppm, 50ppm and 10ppm), petrol (ULP 93 and ULP 95), illuminated paraffin (IP) and lubricants by way of filling stations. The selling price of petrol is regulated by government where the selling price of diesel is dependent on the buying power of each company as well as the competition in the specific area in which it trades. The fuel industry in South Africa is divided into specific zones (Appendix A and B) from which a base price (grid price) and pump price is determined.

Petrol prices in the retail industry is fixed and regulated by the Central Energy Fund on behalf of the Department of Minerals and Energy on a monthly basis. South African refineries are price takers as the BFP (internationally linked) is used to determine retail prices for petrol and recommended wholesale and retail prices for diesel. This results in South African refineries having to compete with international refineries which do not have to adhere to such strict and costly labour laws. Even though supply and demand has an influence on the retail prices, the crude oil prices affects the petrol prices substantially. The petrol and crude oil prices have a direct influence on one another as seen in Figure 2, as crude oil is international refineries’ biggest input costs and the crude oil is USD based, thus a weakening of the ZAR will result in an increase of the South African petroleum prices.
2.2.2 Regulation and laws in the petroleum industry

The petroleum industry in South Africa is governed and regulated by law. These regulations which control retail petrol prices differ from the deregulated environment in which Western countries trade (Matsho, 2010:38). Barriers of entry to market and competition is extremely high, therefore the need for regulation and laws.

The most common acts regulating the industry are as follows:

- Petroleum Products Act of 1977,
- Central Energy Fund Act of 1977,
- Customs and Excise Act of 1964

• Mineral and Petroleum Resources Development Act, No 28 of 2002,
• National Energy Act, 2008 ,
• National Environmental Management Act, 1999,
• Petroleum Pipelines Act, 2003 and
• Petroleum Pipelines Levies Act.

International governing organisations involved in the petroleum industry:

• Organisation of Petroleum Exporting Countries (OPEC) – The main objective of OPEC is to unify petroleum policies and to ensure stability to the oil market (OPEC mission) (OPEC, 2017).
• International Energy Agency (IEA) – The main focus of the IEA is energy security, economic development, environmental awareness and engagement worldwide by ensuring reliable, clean energy. South Africa is not currently a member but countries from which imports are done forms part of the IEA (IEA. 2017).
• World Petroleum Council (WPC) – The WPC is a non-political, non-advocacy organisation promoting the sustainable management of the usage of petroleum resources worldwide.

National governing organisations involved in the petroleum industry:

• Central Energy Fund (Pty) Ltd (CEF) – The mission and vision of the CEF entails the financing, development and implementation of sustainable energy within Africa. As seen in Figure 3, PetroSA, PASA, SSF forms part of the CEF structure. These organisations aim to effectively develop oil and petroleum resources in South Africa and promote the exploration of natural oil and manage crude oil trading and storage (CEF, 2017).
• South African Petroleum Industry Association (SAPIA) – SAPIA aims to promote the petroleum industry in South Africa by adding value to industry as well as insuring economic growth (SAPIA, 2017).
• Fuel Retailer Association Of Southern Africa (FRA) – The association aims to monitor and govern all aspects of fuel distribution and sales in South Africa (FRA. 2017).
• South African Fuel Dealers’ Association (SAFDA) – The main aim of SAFDA is to act as a liaison for new and existing retailers in South Africa for legal, pricing, labour, supply and B-BBEE requirements (SAFDA, 2017).
• National Ports Authority of South Africa – Regulates and determines the cargo margin payable for the import of petroleum products.

**Figure 3: Group structure of CEF**

*Source: SAPIA, (2017)*
2.2.3 Fuel price structure

Petroleum prices are calculated based on international and domestic elements.

The first element, the international element, is known as the Basic Fuel Price (BFP). (Department of Energy, 2017). In the early 1950's the first South African refinery was established and with this came the “In Bond Landed Cost” (IBLC). The BFP replace the IBLC in 2003 as the IBLC lost credibility as it could not track the international market on a consistent basis. The BFP formula is used to calculate the most realistic price for which a South African importer can import a liter of fuel with similar quality from an international refinery on a sustainable basis. The BFP is revised on every first Wednesday of the month based on previous month’s exchange rate fluctuations and international price movements. The price fluctuations for 2017 are reflected in Table 1.

Table 1: Basic fuel price for 2017

<table>
<thead>
<tr>
<th>2017 RSA c/litre</th>
<th>Petrol 93 Unleaded</th>
<th>Petrol 95 Unleaded</th>
<th>Diesel 0.05% Sulphur</th>
<th>Diesel 0.005% sulphur</th>
<th>Illum Paraffin</th>
<th>Maximum Refinery gate price (MRGP)</th>
<th>Exchange Rate Rand/US$</th>
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<td>JAN</td>
<td>577.870</td>
<td>591.870</td>
<td>569.630</td>
<td>572.030</td>
<td>574.128</td>
<td>772.323</td>
<td>13.8687</td>
<td>53.45</td>
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<tr>
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<td>588.630</td>
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<td>548.670</td>
<td>538.630</td>
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<td>12.9148</td>
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<td>MAY</td>
<td>585.670</td>
<td>597.670</td>
<td>568.630</td>
<td>573.030</td>
<td>565.128</td>
<td>782.495</td>
<td>13.5105</td>
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<td>JUN</td>
<td>560.670</td>
<td>572.670</td>
<td>545.630</td>
<td>550.030</td>
<td>543.128</td>
<td>723.884</td>
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<td>512.128</td>
<td>684.649</td>
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<td>633.030</td>
<td>621.128</td>
<td>792.428</td>
<td>13.6210</td>
<td>56.86</td>
</tr>
</tbody>
</table>

Source: Department of energy, (2017)
Elements that affect the BFP is shown in Figure 4 and include elements a-g discussed below:

**Figure 4: Different reference markets used to determine the BFP**

![Map showing different reference markets](image)

*Source: Department of Energy, (2017)*

a) International market spot prices

The component that has the most influence on the BFP is the price that a South African importer would pay for importing physical product on international markets. The FOB prices differ as the product quality and availability from different locations worldwide has an influence on these prices. The FOB price of petrol is calculated
as 50% of the Singapore spot, 95 octane unleaded petrol and 50% of the spot price for premium unleaded petrol from the Mediterranean. The FOB price of diesel is calculated as the quoted spot price market premiums, plus 50% of the price of Mediterranean gas oil and 50% of the price of Arab Gulf gas oil.

b) Freight costs
Costs for freight are published by the World Scale Association. These costs include the transportation of refined petroleum products to the South African coastal ports from the Mediterranean, Singapore and the Arab Gulf in a 50:50 ratio. Also included in freight costs is 15% premium for the transportation of fuels.

c) Insurance costs
Include in the BFP is insurance costs equal to 0.15% of the FOB and freight costs of importing fuel.

d) Cargo dues
This cost is calculated in terms of ruling National Ports Authority of South Africa. This is a contract tariff for petroleum and related products ranging between R18-R19 per kiloliter for the 2017 calendar year (NPASA, 2017.)

e) Coastal storage
This cost is included in the BFP, which include costs for handling and storage facilities at the coastal terminals and is escalated annually in June based on the movement of the producers price index (PPI).

f) Ocean loss allowances
The generally accepted percentage of normal evaporation and leakage loss is 0.3% of petroleum products, shipping and insurance costs. These losses cannot be insured against and is absorbed financially by the buyer.

g) Lastly included in the BFP is a finance charge of 2 percentage points below the prime rate of Standard Bank of South Africa for financing 25 days stock.

In conclusion the BFP is calculated by considering the above mentioned elements and converting it to South African cents per liter according to the ZAR/USD exchange rate.
The second element, namely domestic elements, are considered to arrive at a final pump and grid price for petroleum product in each different pricing zone (Appendix A). The following are elements that influence the domestic wholesale and retail prices of petroleum products:

a) Cost of transportation

Transportation costs recover the cost of transporting these products from the nearest coastal harbor to the specific inland depot for serving a specific zone. The major ports used for shipping of petroleum products are Cape Town, East London, Port Elizabeth and Durban as seen in Figure 5. The most economical way of transport to a specific pricing zone from the ports are used: Zone A use mainly railroads, Zone B use mainly roads and Zone C use mainly pipelines for transportation. This element is the most influential in the determining of petroleum prices and explains why regulated petrol prices differ throughout the country. This cost is also known as the “zone differential”.

*Figure 5: Port map of South Africa*

![Port map of South Africa](source: Transnet, (2015))
b) Delivery costs

Delivery costs or service differentials absorbs the actual costs of storage and handling at the different depots and includes the costs of distribution to the end users at either retailers or other wholesalers. Within South Africa there are a number of refineries as indicated in Figure 6.

Figure 6: South African Refineries

Source: SAPIA, (2017)
c) Wholesale margin
The costs associated with this element are paid to oil companies for usage of their branded pumps through which products are sold and is regulated by government. The wholesale margin is calculated by a chartered accountancy firm through a thorough cost and financial investigation into the profitability of wholesales. The margin is calculated on an industry wide level and is not entity specific. The norm for return on investment of wholesales is 15% before interest and taxes.

d) Retail margin
The Department of Minerals and Energy (DME) determines this fixed margin on the basis of actual costs incurred for the distribution of fuel by a filling station. The DME takes into consideration all costs incurred in running the driveway like overheads, rent, labour, etc. This margin was introduced as an incentive for filling stations to strive for efficiency.

e) Fuel taxation, customs and excise levies
Fuel taxation is determined by the minister of finance and is announced in the annual budget speech. These taxes take effect yearly during the April price increase (SARS, 2017). The current fuel levy on all petroleum products is 315 cent per liter and all taxes and levies are payable by manufacturers to SARS.

f) Road accident Fund (RAF)
A fixed rate of 163 cent per liter is payable to the RAF for third party compensation to victims in case of motor vehicle accidents.

g) Equalisation fund levy
The equalisation fund levy is statutory as regulated by the Minister of Mineral and Energy Affairs in cooperation with the Minister of Finance (Central Energy Fund Act, No 38 of 1977). This levy is used to fund and smooth out price fluctuations of liquid fuels and crude oil.

h) Slate levies
Motorists pay this levy according to the Petroleum Products Act, 1977, No 120 of 1977) as a recovering of funds owed to oil companies as a result of time delay in the adjustments of pump prices.

i) Demand side management levy (ULP95)
This specific levy was introduced in 2006 to decrease the usage of the higher octane petrol in the inland as this leads to higher and unnecessary octane waste.

j) IP tracer dye

IP tracer dye is injected in to illuminated paraffin to detect the unlawful mixing of paraffin into diesel products.

k) Pipeline levy

According to the Petroleum Pipelines Levies Act, No 28 of 2004 a special levy is raised for the usage and expansion of pipelines.

Table 2 shows the 2017 petroleum prices after all above-mentioned factors have been taken into consideration.

**Table 2: 2017 Petroleum prices**

<table>
<thead>
<tr>
<th>2017 petroleum products prices in cents per litre</th>
</tr>
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<tr>
<td><strong>YR2017</strong></td>
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<tr>
<td><strong>COASTAL</strong></td>
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<tr>
<td>95 LRP (c/l)</td>
</tr>
<tr>
<td>95 ULP (c/l)</td>
</tr>
<tr>
<td>Diesel 0.05% (c/l)</td>
</tr>
<tr>
<td>Diesel 0.005% (c/l)</td>
</tr>
<tr>
<td>Illuminating Paraffin (c/l)</td>
</tr>
<tr>
<td>Liquefied Petroleum Gas (c/kg)</td>
</tr>
<tr>
<td><strong>GAUTENG</strong></td>
</tr>
<tr>
<td>93 LRP (c/l)</td>
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<tr>
<td>93 ULP (c/l)</td>
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<td>95 ULP (c/l)</td>
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<tr>
<td>Diesel 0.05% (c/l)</td>
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<td>Illuminating Paraffin (c/l)</td>
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<td>Liquefied Petroleum Gas (c/kg)</td>
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**Source:** SAPIA, (2017)
Table 3 indicates the domestic elements in cent per liter that affects the 95 octane unleaded petrol prices in South Africa.

**Table 3: Elements affecting the ULP 95 petrol price 2017**

<table>
<thead>
<tr>
<th>2017 (RSA c/litre)</th>
<th>BFP</th>
<th>Fuel tax</th>
<th>Customs excise</th>
<th>Equalization fund levy</th>
<th>Road accident fund</th>
<th>Transport cost</th>
<th>Petroleum products levy</th>
<th>Wholesale margin</th>
<th>Secondary Storage</th>
<th>Secondary distribution</th>
<th>Retail margin</th>
<th>State levy</th>
<th>Delivery cost</th>
<th>DSML</th>
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<td>154.00</td>
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<td>0.330</td>
<td>35.600</td>
<td>17.900</td>
<td>17.300</td>
<td>176.400</td>
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<td>154.00</td>
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**Source: Department of Energy, (2017)**

Table 4 indicates the domestic elements in cent per liter that affects the 500 ppm diesel prices in South Africa.
### Table 4: Elements affecting diesel 500 ppm price 2017

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*Source: Department of Energy, (2017)*

Table 5 indicates the domestic elements in cent per liter that affects the 50 ppm diesel prices in South Africa.

### Table 5: Elements affecting diesel 50 ppm price 2017

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</table>

*Source: Department of Energy, (2017)*
2.2.4 Franchising versus “White sites”

Currently there are approximately 4600 retail filling stations registered in South Africa (SAPIA, 2017). These filling stations are either company owned or dealer owned. Licensing of retail and wholesale sites are regulated by the Department of Energy. The DOE prohibits a manufacturer and wholesaler from holding a retail license. Wholesalers and manufacturers are allowed to franchise retail sites to independent dealers and only supply these franchised sites with products. Throughout South Africa there are independent, unbranded filling stations known as white sites.

White sites are becoming more popular and prominent in South Africa because of the wholesale and marketing margins added by wholesales while franchising and branding a filling station as well as the B-BBEE requirements when obtaining a franchise site. When a retailer enters into a franchising and supply agreement with a wholesaler, a high level B-BBEE certificate is required and a premium is added to the purchasing price per liter fuel bought from them for branding costs and equipment replacement. Contracts are signed forcing the retailer to only buy from the specific wholesaler at a higher margin to absorb advertising, branding, interest and contract costs. When signing these contracts, white sites are obtaining the bigger market share in the industry especially in the retail of diesel products. Selling prices of petrol is regulated but the selling prices of diesel are not. This gives the white sites the opportunity to draw more clients with lower prices on diesel as they do not have to pay the wholesale margin and they are free to buy from which ever wholesaler offers the best price at a specific time. The buying power of white site is extremely important in all products, the lower the diesel purchase price the lower the selling price, the more customers. As the petrol selling price is fixed, the lower the purchase price, the higher the gross profit. As a result of this, white sites are highly profitable when owners/managers manage to buy the best quality product, at the best possible price at the correct time.

Franchised retail includes but is not limited to: BP, Exel, Engen, Sasol, Shell and Total.
White site retail brands include but are not limited to: Econo Petroleum, Forever Fuels, MBT Petroleum, Puma Energy, Q4 Fuels, Quattro Fuels, Quest Petroleum and Viva Energy.

2.3 The need for valuations

The main purpose of a business valuation is for owners, managers and investors of businesses to determine an overall value or worth of the business (Cassone, 2005:6). Knowing the value of one’s business is not only important when it comes to actions such as selling the business, the death/illness of an owner, litigation, estate planning or in divorce cases of owners, but also in the day to day decision making processes in the business (Vorster, 2013:42, Durham, 2016:24, Morris, 2015:9). Owners and managers of businesses have a broad understanding of business valuations and methods but do not have the necessary skill set to understand all the aspects and concepts involved in business valuations (Durham, 2016:24). Managers making business decisions that requires any form of resource allocation does an analytic financial calculation to determine the worth or value of such a decision (Luehrman, 1997:132). These calculations are a form of valuations of certain areas of a business that contribute to the total valuation of the business.

The most popular way to determine the worth of a business is to calculate the value per share issued in the business (Cassone, 2005:6). This value is determined by the selection of a specific method of valuation. According to Cassone (2005:10) the key to making successful strategic decisions is in determining an accurate valuation for the business. Every valuation has the same key factors even though the valuation itself differs (Morris, 2015:9). The three main factors identified by Morris (2015:9) includes the economic outlook of the business, the nature of the business as well as the history of the business.
The need for business valuations is becoming more evident and crucial in small businesses (Barson, 2017:98). It is important for owners and managers of businesses to keep the emotion and expectations out of the valuation process and focus on the actual financial and economic factors involved in the valuation process to ensure an accurate outcome. According to Barson (2017:99) the valuation of businesses is partially art, partially science. This statement means that different valuators may have different outcomes as their methods differ as well as the factors used in the valuation process. Barson (2017:99) also states that even though the valuations may differ, they will not differ materially. With the current economic situation in South Africa and the world, valuations have become a very important factor in any business and this has led to valuations becoming a very specialised field (Vorster, 2013:42).

According to Bhaskaran and Sukumarna (2016: 92), cash flow, risk characteristics and growth determines the value of a company. To create value, managers has to identify and manage financial, efficiency and growth drivers in the company. Bhaskaran and Sukumarna (2016:92) also states that growth and profitability are two of the major considerations and determinants of the value of a company. The wealth created by the value drivers for stakeholders is reflected by market value of the company’s shares.

### 2.4 General aspects of valuations

In the process of evaluating a business there are certain areas that needs to be addressed to ensure that the correct valuation approach is followed (Vorster, 2013:42). It is important to note that these areas differ in each company and therefore different areas needs to be investigated and assessed (Van Eeden, 2015:7).

Every retail petroleum company in the world differ in size, ownership, earnings, financial structures, reserves, diversity of products offered and investment portfolio, and this effects the valuation model used as well as the outcome (Bhaskaran and Sukumarna, 2016:91). The primary value of a company depends on the quality and quantity of product
available, the sales price as well as the cash flow and earnings of a company. Value creation for stakeholders lies in the ability of a company to distribute funds to its owners through the cash flow generated by operations and external fundraising.

### 2.5 Sensitivity analysis

For the purpose of valuations of businesses, determining if a business can maintain its operating and profit margins over a five year period is important. Therefore a sensitivity analysis is important (Van Eeden, 2005:54). As all valuations are reliant on certain inputs a valuation is extremely sensitive to the reliability and appropriateness of inputs used (Cebanov & Mattsson, 2014:101). Sensitivity analysis are done on inputs of valuations to ensure accurate and reliable outcomes and to show which inputs and assumptions has the greatest effect on the valuation.

### 2.6 Valuation methods and models

Valuation methods and factors influencing the outcomes of valuations differ as there are different methods and models available. Different accounting principles and procedures may lead to different values of similar businesses (Cassone, 2005:3). Even though there are numerous valuation methods available, only the most effective and popular will be discussed briefly.

#### 2.6.1 Discounted Cash Flow Method

The discounted cash flow method is based on the theory that a company’s worth is equal to future cash flows, discounted to a net present value by a factor equal to the weighted average cost of capital of the company (Van Eeden, 2005:43). The discounted cash flow method is suitable for all companies if all assumptions are brought into consideration
when determining the required rate of return and the weighted average cost of capital rate. The steps for the discounted cash flow method are:

**Table 6: Steps to determine discounted cash flow**

1. Forecast Free Cash Flow (FCF)
2. Estimate WACC
3. Use WACC to Discount FCF
4. Estimate Residual (terminal) Value
5. Use WACC to Discount Terminal Value
6. Estimate Total Present Value of FCF
7. Add Value of Non-Operating Assets
8. Subtract Value of Liabilities Assumed
9. Calculate Value of Common Stock

*Source: Anon, (2008)*

Where:

\[
\text{Free Cash Flow (FCF)} = \text{EBIT} \times (1 - \text{tax rate}) + \text{depreciation} - \text{capital expenses} - \text{change in working capital} - \text{change in other assets}
\]

\[
\text{EBIT} = \text{Earnings before interest and taxes}
\]

And

\[
\text{Discounted WACC} = R_d(1-\text{tax})\times(D/V)+R_e(E/V)
\]
Where:

\[ R_d = \text{Cost of debt} \]

\[ D = \text{Market value of total debt} \]

\[ V = \text{Total value of capital} \]

\[ R_e = \text{Required rate of return (Cost of equity)} \]

\[ E = \text{Market value of equity} \]

\[ E/V = \text{Percentage of capital that is equity} \]

\[ D/V = \text{Percentage of capital that is debt} \]

WACC accounts for the risk free rate, cost of debt as well as the risk premium.

This method of valuation is recommended for most companies as it relates the present value of assets, to the expected cash flows generated from these assets in the future (Cebanov & Mattsson, 2014:85). The discounted cash flow method establishes a net present value for a company based on projections of cash flows after taxes, dividends, net operating profits and gross profits (Cassone, 2005:14).

2.6.2 Asset approach

The net asset value approach indicated the market value per share by calculating the value of the adjusted book value of a company's assets and liabilities (Stanvliet, 2011:4). This method will be most suitable in situations where the company is an investment holding or property holding company, the company has an extremely volatile earnings history or where the company is no longer able to continue as a going concern (Van Eeden, 2005:61). An important consideration when using this method is to adjust the balance sheet from accounting value to the true market value of asset and liabilities as
this method’s main focus is not the income statement but the balance sheet (Reilly, 2017:70). The accounting value of assets and liabilities is based on historical costs and depreciation and is not a true representation of actual value of assets and liabilities in the valuation process (Cassone, 2005:15). The asset approach is summed up as the company’s asset at market value, minus the market value of the company’s liabilities and is most suitable for companies that are tangible asset intensive in nature.

Reilly (2017:75) states that it is important to note that value obtained from this method is not the liquidation value of the company as assets are not normally sold at market value during the liquidation process of a company.

2.6.3 Market Approach

The market approach is based on the concept of replacement or substitution value of comparable publically traded companies (Durham, 2016:24). Valuations in this method calculates the market value per share of a company by the comparison of the company to listed entity that is directly comparable (Modica, 2006:195, Stanvliet, 2011:4).

2.6.4 Income Approach

The income approach discounts future expected cash flows (FCF calculation) to calculate the market value per share of a company and includes option pricing for measurement of asset value ((Stanvliet, 2011:4, Reilly, 2017:94). The capitalisation rate is a critical factor in the discounting of cash flows in the income approach (Barson, 2017:100). The income approach is best in situations where the company’s future earning ability looks similar to their current performance.
2.7 Summary

During the literate review done on the retail petroleum industry as set out in this chapter, certain key role-players and factors where identifies that made this industry very unique. These role-players and factors influence the performance of a company. The literature study also focused on the most common valuation methods available and the factors to consider during the different valuation methods of companies. The literature made it evident that valuations of companies and industries differ and the need exists to develop a framework to follow for specific industries.
CHAPTER 3: CRITICAL FACTORS INFLUENCING VALUATIONS

The true value of a company lies not only in its financial performance but in its strategic and operational decision making capabilities. In order for professionals to determine the true value of a company, the internal as well as the external environment needs to be assessed (Li & Yu, 2017:3). It is evident that not only financial factors influence a company’s value but other financial factors has a significant influence as well. The financial and non-financial factors influencing retail petroleum companies will be discussed in term of the effect on franchised sites and white sites. Not only does the retail petroleum industry on its own have unique operating characteristic, but so does white sites and franchised sites.

3.1 Financial factors influencing valuations

Professionals determining the true value of a company and its various business activities must establish the value of specific business capabilities and functions within the business (Goldman, 2002:55). To determine this value certain financial factors are considered.

3.1.1 Reasonability test of financial statements and reports

The analysis of the financial performance and key performance indicators will have a substantial effect on the valuation process and outcomes according to Cebanov and Mattsson (2014:43), thus the reliability of data obtained from financial statements and other financial reports are of the utmost importance. Different accounting approaches and procedures, grouping of accounts and inclusions may lead to different outcomes of valuations of petroleum companies (Cassone, 2005:3). Even though projected cash flows are used in the valuation process, valuators consider externally audited/reviewed financial statements as a sufficient measurement of the reliability of base year figures used. The
same quality and standards are applicable for financial statements and reports used for peer company analysis. Franchised sites in the retail petroleum industry require annually financial statements that have been externally audited.

The basis of all balance sheets is based on the basic accounting principle that:

\[
\text{Total assets} = \text{Total liabilities} + \text{Equity}
\]

Figure 7 indicates the different business processes and how it affects the financial statements used for valuation processes.

**Figure 7: Business activities to financial statements**

<table>
<thead>
<tr>
<th>Business Environment</th>
<th>Business Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor markets</td>
<td>Scope of business:</td>
</tr>
<tr>
<td>Capital markets</td>
<td>Degree of diversification</td>
</tr>
<tr>
<td>Product markets:</td>
<td>Type of diversification</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Competitive positioning:</td>
</tr>
<tr>
<td>Customers</td>
<td>Cost leadership</td>
</tr>
<tr>
<td>Competitors</td>
<td>Differentiation</td>
</tr>
<tr>
<td>Business regulations</td>
<td>Key success factors and risks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accounting Environment</th>
<th>Accounting System</th>
<th>Accounting Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital market structure</td>
<td>Measure and report economic consequences of business activities.</td>
<td>Choice of accounting policies</td>
</tr>
<tr>
<td>Contracting and governance</td>
<td></td>
<td>Choice of accounting estimates</td>
</tr>
<tr>
<td>Accounting conventions and regulations</td>
<td></td>
<td>Choice of reporting format</td>
</tr>
<tr>
<td>Tax and financial accounting linkages</td>
<td></td>
<td>Choice of supplementary disclosures</td>
</tr>
<tr>
<td>Third-party auditing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal system for accounting disputes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers’ superior information on business activities</td>
</tr>
<tr>
<td>Estimation errors</td>
</tr>
<tr>
<td>Distortions from managers’ accounting choices</td>
</tr>
</tbody>
</table>

*Source: Healy & Palepu, (2012:7)*
Included in the reliability of the financial statements the following areas needs to be considered as this has an effect on the outcome of the valuation:

- The dividend policy of company.
- The investment decision making.
- The value of assets, are they shown at accounting value or at market value?
- Capital structures financing policies of the company.

3.1.2 Measuring of goodwill

As set out in IFRS goodwill is recognised in the intangible assets section of the financial statements. Goodwill is calculated in the balance sheet of a company during the process of business combinations or in the acquiring of a business (IFRS 3: Business combinations). The amount of goodwill recognised is calculated as follows:

Goodwill = Consideration received + Amount of non-controlling interests + Fair value of previous equity interests - Net assets recognised

Where:

Consideration received = The value offered and accepted for the purchase of a business.

Non-controlling interest = Minority shareholding

Fair value of previous equity interests = Fair value of all previously owned equity instruments

Net assets recognised = Fair value of assets acquired minus liabilities acquired

The goodwill amount accounted for in the accounting reports need to be revised and amortized each year. In many cases this is not done on a yearly basis and therefore the
3.1.3 Compensation adjustments

Firms around the world have started to adopt an economic value adding approach which integrates economic value added accounting and managerial incentive compensations (Arzac, 2005:8). One of the biggest areas taking into consideration in the valuation process is reasonable compensation to key persons (Barson, 2017:99). In most instances the controlling shareholder or managing director does not receive a salary from the company, but rather takes compensation in forms such as income distribution, dividends or profit sharing (Miller & Blalock, 2017:3). For the purpose of valuations the reasonability of compensation paid to top management needs to be determined. According to Miller and Blalock (2017:3) factors to consider in this specific reasonability test are the individual’s qualifications for the job, nature and extend of the work performed, nature and size of the entity, economic conditions and performance of company, company’s dividend policy, comparable industry salaries and the salary history of the specific company. If the salary is deemed to not be reasonable in comparison with the market and peer companies, the valuation analyst needs to adjust the financial statement item for the compensation paid as this could either lead to the company being over or undervalued. Inaccurate or overstated compensation lead to lower economic value and therefore a lower valuation outcome (Barson, 2017:99). Special attention needs to be place on the fact that in a family owned company, non-family member CEO’s are paid more than family member CEO’s as the latter’s compensation is not linked to performance (McConaugby, 2008:130).
3.1.4 Key performance indicators

Companies collects large amounts of data during the different business processes of which they only use about 10% in decision making and analysis (Cassone, 2005:26). Key performance indicators are those crucial ratios and indicators that analyse the performance of a company such as net operating profits, gross profits, growth and return on equity to name but a few.

3.2 Non-financial factors influencing valuations

Value creation within a firm is the function of identifying and managing the value drivers that makes a company great (Bhaskaran & Sukumaran, 2016:92). Managing these value drivers entails the soft skills and issues within a company which impact the financial factors during valuations.

3.2.1 Availability and quality of products

The availability and quality of petroleum products has an influential outcome on the valuation of a company. Customers tend to buy from a company which always has sufficient amounts of quality product available to the public. In the case of franchised versus “white sites” this is one of the most important factors. A franchised site is bound by contract to only buy from the franchised supplier. If this franchised site is scheduled for a delivery but they run out of fuel, they are obligated to still wait for the contracted supplier even though this could lead to customer loss, due to absence of products. In the case of “white sites”, management is free to source the best product at the best possible price at any given moment. If a site is without product, even for an hour, they could suffer loss of customers which in effect influence their valuation.
3.2.2 Risk

Barson (2017:100) states that risk is reflected by the capitalisation rate determined by the valuator. The higher the capitalisation rate, the higher the risk related to the company. Table 7 shows the business factors and risk premiums associated with them for unlisted companies.

Table 7: Business factors and risk premiums

<table>
<thead>
<tr>
<th>Category</th>
<th>Risk Premium</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6-10%</td>
<td>Established business, strong second-line management, history of stable earnings, predictable future.</td>
</tr>
<tr>
<td>2</td>
<td>11-15%</td>
<td>Established business in a more competitive environment, good second-line management, stable earnings, and more or less predictable future.</td>
</tr>
<tr>
<td>3</td>
<td>16-20%</td>
<td>Business in a highly competitive industry that requires small capital investment to enter, good performance in past years, but uncertain future.</td>
</tr>
<tr>
<td>4</td>
<td>21-25%</td>
<td>Small business that depends on the skill of one or two people, or larger businesses that are highly cyclical, very uncertain future.</td>
</tr>
<tr>
<td>5</td>
<td>26-30%</td>
<td>Small “one-man” business of a personal service nature where the continuity of income is doubtful.</td>
</tr>
</tbody>
</table>

Source: Van Eeden, (2005:52)

According to Table 7, companies in the petroleum retail sector would be in category 2 and 3 as it operates in a highly competitive environment with a more or less predictable future.

3.2.3 Ownership, leadership and management

In today's turbulent and complex markets, it is difficult to achieve strategic advantages and competitiveness (Habbershon et al, 2003:452). The study done on family firms by Habbershon et al, (2003) it shows that business run by families generates unique resources and capabilities contributing to creating economic value to the firm. In an
expansion of the work done by Habbershon et al (2003), Chrisman et al (2003:471) found that by incorporating the vision, intention and behavior of the family throughout a family firm, the value creation motive can be increased. The difference between a good business and an extraordinary business lies in the strategic direction and operational decision making of those in managerial positions (Cassone, 2005:4). Family management succession within a company directly relates to the performance of a company (Smith, 1999:366). Key persons within a company forms part of the management team more often than not. These key persons hold either the relationships that sets the company apart from others, the knowledge base or the skill set necessary. These key persons has a significant effect on the operations of said company and should be adjusted for in the risk rate used during the valuation process.

3.2.4 B-BBEE scorecard and compliance

B-BBEE is becoming an extremely important and evident factor in the South African business environment (Kleynhans & Kruger, 2014:1). The South African government has developed Employment Equity and Affirmative action in the mid-nineties with the enhancement of productivity, the increase of black ownership and management in the private sector, the empowerment of rural communities and skills development of previously disadvantaged groups as their main objectives (Burger & Jafta, 2010:9, Chimhandamba. 2007:18-19). Kleynhans and Kruger (2014:4) states that the B-BBEE scorecard measures and indicates the company’s compliance levels with B-BBEE requirements. The different categories involved in the B-BBEE scorecard are:

- Ownership,
- Management control,
- Employment Equity,
- Skill development,
- Preferential Procurement,
- Enterprise Development and
- Socio-Economic Development.
B-BBEE does not have the same effect on the profitability and competitiveness of all companies in all sectors. There is not a direct correlation between the level of B-BBEE obtained and the performance of all companies (Kleynhans & Kruger, 2014:8). However, this correlation is industry and target market related. For example: If a company’s main target market for clients are government or mine related, B-BBEE and performance are directly correlated as all government procurement and mining industry are obligated to spend at B-BBEE compliant suppliers. The compliance with B-BBEE has a positive effect on most business within South Africa as it holds the opportunity and possibility for new contracts and clients. Therefore it can be said that in the retail petroleum industry in South Africa a B-BBEE compliance certificate is not required but it is most definitely beneficial.

- **White sites:** A B-BBEE certificate is not required for white sites in South Africa as these companies are in most cases owner managed and operated. There are no B-BBEE requirements for the obtaining of white site. However, B-BBEE compliance for a white site can have a substantially positive effect on the value of such a site as it give the white site the opportunity to tender for contracts of government departments, Universities, transporters as well as mining contractors.

- **Franchised sites:** Within South Africa companies such as Shell and Total requires black ownership to obtain a franchising contract (Shell, 2017, Total 2017).

### 3.2.5 Client loyalty and service

Client loyalty can make or break any company but even more so in the fuel industry. It often happens in the industry that a retailer signs one or two big clients that makes up a large percentage of their total sales. This is a significant risk as clients tends to jump fence for a few cents per liter difference in price. One of the major clients for especially retail white sites is Truck Fuel Net (TFN). TFN is a fuel distribution network within South Africa with a contract in most of the districts in South Africa. When TFN either withdraws from a specific site or opens a new site within a certain radius from the current site, sales drop significantly. This is a major business risk.
Customer service, key persons, product quality and availability are the major factors influencing client loyalty in the retail industry.

### 3.2.6 Intellectual capital

Intellectual capital within a company not only refers to inventions and designs but also to knowledge, approaches, computer programs, relationships and decision making capabilities (Tripathy et al., 2014:47). Intellectual capital is of the utmost importance to gain a competitive advantage within a competitive market. Tripathy et al. (2014:47) that the absorption of said intellectual capital in the company leads to a higher valuation outcome of the company. Companies, such as petroleum retail where extensive knowledge is required, faces a challenge in the accounting and recognition of intellectual capital within their firms (Purohit & Tandon, 2015:9). The traditional measurement of performance does not succeed in the measurement of intellectual capital as customer and supplier relationships, efficient management and decision making and knowledge is impossible to measure reliably. Purohit and Tandon (2015:10-11) suggests that intellectual capital be added into the valuation equation by means of a value added intellectual coefficient (VAIC). They further indicate that the VAIC measures the intellectual capital imbedded in corporate success. The equations suggested for VAIC is as follows:

\[
\text{VAIC} = HCE + SCE + CEE
\]

**Where:**

- HCE represents human capital efficiency as a measure of corporate value added,
- SCE represent structural capital efficiency as a measure of corporate value added and
- CEE represents the capital employed efficiency as measure of corporate value added.
3.3 Summary

During the literature review performed, certain financial and non-financial factors were identified that may influence the valuation outcome of companies within the retail petroleum industry. These factors are influential in the business valuation process and need to be accounted for in a specific framework during the valuation process.
CHAPTER 4: EFFECTS OF CRITICAL FACTORS ON THE VALUATION OUTCOMES

4.1 Methodologies used in the establishment of a framework

The intended framework will be established by a combination of existing and new theories and techniques in the valuation process. The existing theories were identified during the literature study in chapter 2 of this study. Qualitative content analysis was performed on the literature identified during the literature review. Literature reviewed in Chapter 2 and 3 was systematically analysed to identify replicable and valid inferences. Summative content analysis was used to identify key themes and factors that influence valuations. This was then converted into qualitative data.

4.2 Basic objective of study

The primary objective of this study is:

The establishment of a valuation framework based on critical factors influencing the value of retail petroleum companies.

4.3 Sample selection

The sample of text was selected by researching the key phrases “business valuations”, “valuations”, “petroleum industry” and valuation models.

4.4 Possible themes identified from objective and content analysis

This study is only limited to the retail fuel industry of South Africa but can be expanded to other industries. The following parameters are important for the selection of industry or company:
• Uniformity – To narrow the field of analysis, companies that specialise in only one field of either products or services is used. In this study companies specialising in the retail of fuel.

• Established industry – Each industry is different and changes as it develops over a period of time. Industries such as technological or research and development companies changes too often. The retail fuel industry in South Africa is not a new industry and was established over the years with specific rules and regulations monitoring and regulating the industry.

• Companies with an interest level – For this study the interest level is the highly competitive industry of fuel retailing. These companies are not operated and managed on a similar basis due to key partnership, franchising models and the introduction of white sites over the years.

• Availability of data – Even though financial data of these companies are not easily available industry information, rules and regulations are easily accessible.

• Knowledge of the industry – Additional insight and information through first-hand knowledge from working in this industry on a day to day basis provides additional insight into the operations of the industry.

4.5 Possible factors identified from objective and content analysis

The criteria used to identify possible factors were the valuation of companies and the retail petroleum industry themes. Ownership, B-BBEE scorecard and compliance, key persons, leadership and management, client base and loyalty, client service, product quality and availability, purchase and supply agreements, key strategic partnerships and alliances and intellectual capital were identified as possible key factors from the state hypothesis.
4.6 Selection of the best valuation model for industry based on literature review

Based on the literature study done on the retail industry as well as the valuation methods available, the discounted cash flow model was selected for the assessment based on the following factors:

- The retail petroleum industry is driven by volume and gross profit percentages.
- The industry is established with relative sustainable growth rates.
- The retail petroleum industry is not highly seasonable with different cash flow cycles.
- Capital expenditure is this industry remains fairly consistent through the year.

4.7 Selection of the most influential factors on the industry based on content analysis

A content analysis was done on the retail petroleum industry cased on Chapter 2 and on the main factors influencing the industry in Chapter 3. Based on this, the following areas where identified as key inference areas influencing the valuation of retail petroleum companies:

- Ownership, leadership and management,
- B-BBEE scorecard and compliance,
- Client loyalty and service,
- Intellectual capital and
- Key performance indicators.

4.8 Difference between the old valuation framework and new framework

Table 8 shows a comparison between the old framework used for valuations and the proposed approach in this research. The key difference is the potential to calculate the
current value of a business by including non-financial factors into the traditional framework such as management, client loyalty and B-BBEE compliance. The new framework allows management to compare business models and operations with that of the industry. The strategic and operational environment can be defined and analysed by management to better their decision making process as the impact thereof can be determined. The new framework can also be used to determine weaknesses and strengths within the company and to set a benchmark for future growth.

**Table 8: Difference between old and new framework**

<table>
<thead>
<tr>
<th>Traditional Framework</th>
<th>New Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose: To determine the economic value of a company based on past financial performances.</td>
<td>Purpose: To determine the economic value of company based on past financial performance as well as non-financial factors.</td>
</tr>
<tr>
<td>Analysis the financial performance.</td>
<td>Analyses operational and strategic processes as well as financial performance.</td>
</tr>
<tr>
<td>Factors included: Family owned and managed, attributes of key personnel, client loyalty and B-BBEE compliance.</td>
<td></td>
</tr>
</tbody>
</table>

4.9 Defining the problem

Areas such as decision making abilities, relationship management and B-BBEE compliance are not easily measured in terms of the contribution made to the valuation of companies. These factors may contribute to the profit generation capabilities of the company, but the contribution is not known.

4.10 The business valuation process

The integration of the steps proposed by the research will be discussed in this section.
4.10.1 Step 1: Identify all areas relating to the industry

Information gathered for the step may be gathered from different sources and mediums to ensure a detailed analysis of the industry. A checklist of areas to gather information for the retail petroleum company are:

- History of the industry.
- Current economic factors influencing the industry.
- B-BBEE compliance regulations for the industry.
- Role players in the market.
- International news that may affect the industry.
- Research and development in the industry.

4.10.2 Step 2: Identify all key areas and aspects of the business

Information in this step is gathered internally from key personnel at the entity:

- Determine the ownership of the company.
- Obtain the organisational structure of the entity.
- Identify the different management tiers in the company.
- Analyse the B-BBEE need in the company as well as the compliance status and compliance planning for the future.
- Identify key personnel not included in management (representatives etc.)
- Obtain a full history of the company (financial and non-financial).
- Obtain audited financial statements, management reports as well as budgets.
- Obtain compensation structures of all employees.
- Discuss competition
- Discuss key clients and contracts held.
- Obtain knowledge of key partnership within the company as well as with external parties (suppliers, financing institution etc.)
- Obtain supplier and customer list.
- Obtain list of doubtful debts.
• Discuss any pending and possible litigation.
• Obtain expansion plans.
• Interview key internal and external parties to identify possible risks, weakness and opportunities.
• Obtain restraint of trade agreements.
• Obtain a list of assets and inspect the assets for value.

4.10.3 Step 3: Analyse information gathered

During this step the information gathered in step 1 and 2 is reviewed and analysed to identify areas (financial and non-financial) that may influence the valuation outcome in any way. During this step the reliability and completeness of information gathered needs to be assessed. Key areas identified in this step are now assigned with a score that will be used to alter risk premium in the determination of value. The difference between the traditional framework and the proposed alteration are evident in this step as non-financial factors are included as score (either negative or positive) in the risk premium used to determine the value of a company.

4.10.4 Step 4: Determine the value with the Discounted Cash Flow Method

During this step the actual value of the company is determined after all financial and non-financial factors have been taken into consideration. For the purpose of retail petroleum companies, the Discounted Cash Flow Model is recommended after the risk premium was adjusted as discussed in step 3.

4.10.5 Step 5: Conclude on the valuation

In this step the entire valuation is presented in a structure report that includes all factors considered, assumptions made, valuation model used, adjustments made and the outcome of the valuation.
4.11 Summary

An introduction to the new framework developed is presented in this chapter as well as the methodologies used to arrive at the new framework. The steps to the new framework is set out with a description of each step. The proposed framework include qualitative as well as quantitative factors influencing the valuation of retail petroleum companies.
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The main objective in this study was to establish a valuation framework based on the critical factors that influence the value of retail companies. This framework includes the non-financial factors identified that is not included in the current framework and will be discussed in this chapter. Non-financial factors or soft data can be used in the valuation framework to obtain more relevant and reliable valuations for companies.

This study started with an introduction to study and the set research problems, where after a literature study was performed to give insight on the retail petroleum industry as well as the valuation process and methods available. The South African retail petroleum industry is highly affected by international and local economic performances such as exchange rates and crude oil prices. This specific industry is highly regulated. The retail petroleum industry is extremely competitive and requires constant attention to stay competitive.

5.2 Study findings

Not only financial factors influence the valuation of a company but also non-financial factors such as ownership, B-BBEE, management, intellectual capital and customer loyalty to name a few. It is evident from the literate review that there is a need to analyse industry specific factors that influence the valuation outcomes and to adjust current valuation models to accommodate these factors. The content analysis performed showed certain themes and key factors that needs to be addressed during the valuation process.
5.3 Limitations of the study

The following limitation to the study existed;

- Competitors in the industry are hesitant to make their information available for studies as this is an extremely competitive industry.
- Outcomes of valuations are dependent on information made available to the valuator as well as the assumption made by them.
- No public platform exists for the gathering of information of the petroleum industry.

5.4 Recommendations for future research

Various areas within this research area can be enhanced by further research studies.

- It would be beneficial to extend this study to other specific industries within the retail and wholesale industry as well as in the services industry. The extension of this study into other industries might indicate additional financial and non-financial factors influencing valuation outcomes.
- A case study based research paper can indicate the numeric influence that these factors have on the different valuation methods.
- The development of a petroleum retail industry specific valuation method will be beneficial to not only owners but also to investors and financial institutions.

5.5. Conclusion

Valuations differ in outcome from company to company either because of the method used during the calculations, the assumptions made regarding the company or because of the factors identified that influence the valuation process. Not all companies in all sectors of the market are the same. Therefore it is of the utmost importance to identify the key factors within each company that leads to its success and failures to adjust for these factors during the valuation process. The research done in this study offers insight into some of the factors that influence the valuations of retail petroleum companies. It is
important to approach each valuation done with the knowledge that no two companies are the same and no two companies are influenced by the same factors.
REFERENCE LIST


MATTSSON, V. & CEBANOV, L. 2015. Financial and Strategic Valuation of Lundin Petroleum AB.


## APPENDIX B: FUEL ZONE BY MAGISTERIAL DISTRICTS

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<th>Fuel Zone Magisterial district</th>
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07C  Bethlehem PA038 Free State
08A  Bethulie PB041 Free State
09B  Bizana 2A024 Eastern Cape
11C  Bloemfontein PC042 Free State
10C  Bloemhof VC035 North West
13C  Bochum 7A048 Limpopo
09C  Boksburg RF029 Gauteng
63C  Bolobedu 7B049 Limpopo
11C  Boshof PD020 Free State
09C  Bothaville NA037 Free State
11C  Botshabelo NS470 Free State
09C  Brakpan RG030 Gauteng
10C  Brandfort PE043 Free State
06A  Bredasdorp BM016 Western Cape
09C  Brits RH031 North West
09A  Britstown BN018 Northern Cape
09C  Bronkhorstspruit RJ032 Gauteng
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10C  Carolina RK062 Mpumalanga
05A  Cathcart BX059 Eastern Cape
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01A  Chatsworth LJ473 KwaZulu Natal
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07B  Clanwilliam CA051 Western Cape
08C  Clocolan PF065 Free State
05A  Cofimvaba (St Marks) 2D324 Eastern Cape
08A  Colesberg CC057 Northern Cape
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11C  Dewetsdorp PH077 Free State
12C  Ditsobotla YB078 North West
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13C  Dzanani South (West of Makhado) 9F013 Limpopo
01A  East London CH083 Eastern Cape
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10C  Eerstehoek 6B067 Mpumalanga
08A  Elliot CJ084 Eastern Cape
57A  Engcobo 2F086 Eastern Cape
08C Ermelo RN089 Mpumalanga
04A Eshowe LG088 KwaZulu Natal
05B Estcourt LH087 KwaZulu Natal
10C Excelsior QC091 Free State
09A Fauresmith PK097 Free State
08C Ficksburg PL101 Free State
05A Fort Beaufort CM098 Eastern Cape
07C Fouriesburg PM102 Free State
08C Frankfort PN100 Free State
08B Fraserburg CN096 Northern Cape
15C Ganyesa YC116 North West
05A Gatyana (Willowvale) 2G399 Eastern Cape
05A Gcuwa (Butterworth) 2H025 Eastern Cape
03A George CQ108 Western Cape
09C Germiston RP113 Gauteng
64C Giyani 9R118 Limpopo
06A Glen Grey/Cacadu/Lady Frere 2B111 Eastern Cape
06C Glencoe WB112 KwaZulu Natal
01A Goodwood GP115 Western Cape
19A Gordonia (north of 27o30' latitude) QP014 Northern Cape
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03B Humansdorp CX124 Eastern Cape
05A Idutywa 2E143 Eastern Cape
05B Impendle LM146 KwaZulu Natal
01A Inanda LL144 KwaZulu Natal
57A Indwe DA142 Eastern Cape
57A Ingwavuma 5C147 KwaZulu Natal
04A Ixopo LN145 KwaZulu Natal
11C Jacobsdal PR155 Free State
08A Jagersfontein QL156 Free State
07B Jansenville DB154 Eastern Cape
09C Johannesburg RS157 Gauteng
07B Joubertina GE153 Eastern Cape
04A Keiskammahoek 8B168 Eastern Cape
09C Kempton Park TN175 Gauteng
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69A Kenhardt (west of 20° longitude) PG069 Northern Cape

11C Kimberley JD164 Northern Cape

03A King Williams Town DE169 Eastern Cape

03A Kirkwood GG167 Eastern Cape

09C Klerksdorp RT177 North West

05C Kliprivier LP172 KwaZulu Natal

04A Knysna DG162 Western Cape

09A Koffiefontein QM165 Free State

03A Komga DF170 Eastern Cape

09C Koppies NE178 Free State

09C Koster TU176 North West

05A Kranskop LQ173 KwaZulu Natal

09C Kriel VL478 Mpumalanga

09C Kroonstad NF179 Free State

09C Krugersdorp RU174 Gauteng

15C Kudumane YM350 North West

01A Kuilsrivier GR180 Western Cape

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13C Kuruman (south of 27° latitude) JE166 Northern Cape

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10C Kwamhlanga TF477 Mpumalanga

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07B Laingsburg DL186 Western Cape
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57A Libode 2L188 Eastern Cape
10C Lichtenburg RW195 North West
08C Lindley PT196 Free State
03B Lions River LR190 KwaZulu Natal
03A Lower Tugela LS191 KwaZulu Natal
05A Lower Umfolozi LT192 KwaZulu Natal
62C Lulekani 7N481 Limpopo
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61C  Mapulaneng 7D437 Limpopo
03A  Mapumulo 4V222 KwaZulu Natal
10C  Marico SA226 North West
08C  Marquard PU229 Free State
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10C  Mdutjana (Siyabuswa) TW468 Mpumalanga
61C  Mhala 9T435 Limpopo
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01A  Mitchells Plain BZ479 Western Cape
10C  Mkobola TX469 Mpumalanga
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11C Mokerong 2 (North of Mokopane) 7P438 Limpopo
11C Mokerong 3 (Zebediela area) 7Q513 Limpopo
16C Mokopane (Potgietersrus) (north of tropic of cTaVp1ri4c1orn) Limpopo
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06A Molteno DS213 Eastern Cape
05A Montagu DT205 Western Cape
05B Mooirivier WA220 KwaZulu Natal
04A Moorreesburg GS475 Western Cape
09C Moretele 1 YJ234 North West
09C Moretele 2 YG232 Mpumalanga
01A Mossel Bay DV206 Western Cape
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12B Mount Fletcher 2Q216 Eastern Cape
10C Moutse TY439 Mpumalanga
05A Mpofu (Stockenstroom)(Seymore) FB322 Eastern Cape
57A Mqanduli 2R218 Eastern Cape
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05A Mtonjaneni MG225 KwaZulu Natal
04A Mtunzini LX223 KwaZulu Natal
09B Murraysburg DY209 Western Cape
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16C Musina (Messina) (West of 30° longitude) SQ095 Limpopo
14C Mutale 9B436 Limpopo
63C Namakgale 7N471 Limpopo
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37J Namakwaland Alexander Bay (north of 29° latitude and west of 17° longitude)
32J Namakwaland Central (between 29° and 30° latitude and between 18°30' and 17° longitude)
36J Namakwaland Kleinsee (between 29° and 30° latitude and west of 17° longitude)
35J Namakwaland Port Nolloth (south of 29° latitude and west of 17° longitude)
31J Namakwaland South (south of 30° latitude) N/A Northern Cape
34J Namakwaland Vioolsdrif (north of 29° latitude and east of 17° longitude)
63C Naphuno 7G250 Limpopo
14C Mutale 9B436 Limpopo
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33J Namakwaland Aggeneys (east of 18°30' longitude and north of 30° latitude and west of 17° longitude)
37J Namakwaland Alexander Bay (north of 29° latitude and west of 17° longitude)
32J Namakwaland Central (between 29° and 30° latitude and west of 17° longitude)
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09C Odendaalsrus NG255 Free State
09C Odi YK256 North West
04A Oudtshoorn ED253 Western Cape
02A Paarl EE262 Western Cape
09C Parys NH282 Free State
57C Paulpietersburg MH276 KwaZulu Natal
08B Pearston EF265 Eastern Cape
04A Peddie (Ciskei) 8F285 Eastern Cape
11C Petrusburg QN268 Free State
63C Phalaborwa VF472 Limpopo
09A Philipstown EH266 Northern Cape
08A Phillippines PV284 Free State
58C Piet Retief VA278 Mpumalanga
03B Pietermaritzburg MJ275 KwaZulu Natal
06B Piketberg EJ261 Western Cape
61C Pilgrims Rest SH279 Mpumalanga
01A Pinetown MK272 KwaZulu Natal
05B Polela ML274 KwaZulu Natal
13C Polokwane (Pietersburg) (north of tropic of caVprGic1o4r0n) Limpopo
12C Polokwane (Pietersburg) (south of tropic of caSpFri2c8o0rn) Limpopo
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04A  Port Shepstone MM273 KwaZulu Natal
13C  Postmasburg JG269 Northern Cape
09C  Potchefstroom SJ283 North West
09C  Pretoria SL277 Gauteng
09A  Prieska HD267 Northern Cape
07B  Prince Albert EN264 Western Cape
05A  Queenstown EP290 Eastern Cape
57A  Qumbu 2U291 Eastern Cape
09C  Randburg RZ307 Gauteng
09C  Randfontein SM301 Gauteng
08A  Reddersburg PW306 Free State
08C  Reitz PX304 Free State
03A  Richmond (KZN) MN300 KwaZulu Natal
08A  Richmond (N.Cape) ER299 Northern Cape
63C  Ritavi 9U309 Limpopo
04A  Riversdale ES298 Western Cape
05A  Robertson ET297 Western Cape
57A  Qumbu 2U291 Eastern Cape
09C  Randburg RZ307 Gauteng
09C  Randfontein SM301 Gauteng
08A  Reddersburg PW306 Free State
08C  Reitz PX304 Free State
03A Richmond (KZN) MN300 KwaZulu Natal
08A Richmond (N.Cape) ER299 Northern Cape
63C Ritavi 9U309 Limpopo
04A Riversdale ES298 Western Cape
05A Robertson ET297 Western Cape
09C Roodepoort SN302 Gauteng
08A Rouxville PY305 Free State
09C Rustenburg SP303 North West
09C Sasolburg NR325 Free State
11C Schweizer-Reneke VE330 North West
13C Sekgosese 7J336 Limpopo
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08C Senekal QA331 Free State
12C Seshego 7L338 Limpopo
58C Simdlangentsha VA447 KwaZulu Natal
01A Simonstown GF312 Western Cape
09B Sipangeni (Flagstaff) 2V099 Eastern Cape
08A Smithfield QB333 Free State
07B Somerset East EU319 Eastern Cape
02A Somerset West EV313 Western Cape
09C Soshanguve VB335 Gauteng
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63C Soutpansberg (east of 30° 30' longitude) TD152 Limpopo
16C  Soutpansberg (west of 29° 30' longitude) VH158 Limpopo
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08C  Standerton SS332 Mpumalanga
02A  Stellenbosch EW314 Western Cape
05A  Sterkstroom EX321 Eastern Cape
07A  Steynsburg EY320 Eastern Cape
07B  Steytlerville FA318 Eastern Cape
02A  Strand GC315 Western Cape
04A  Stutterheim FC323 Eastern Cape
12B  Sutherland FD317 Northern Cape
09C  Swartruggens TP327 North West
05A  Swellendam FE316 Western Cape
10B  Tabankulu 2W343 Eastern Cape
05A  Tarka FF342 Eastern Cape
11C  Taung YO341 North West
12C  Thabamoopo 7M351 Limpopo
11C  Thaba'nchu YL349 Free State
12C  Thabazimbi (east of 27° longitude) ST346 Limpopo
13C  Thabazimbi (west of 27° longitude) VJ159 Limpopo
10C  Theunissen NJ347 Free State
67C  Thohoyandou (east of 31° longitude) 9G151 Limpopo
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09C Vereeniging SV379 Gauteng
08A Victoria East 8G387 Eastern Cape
12B Victoria West FR373 Northern Cape
09C Viljoenskroon NN383 Free State
09C Virginia NL382 Free State
57C Volksrust SW380 Mpumalanga
08C Vrede QE386 Free State
09C Vredefort NM384 Free State
05A Vredenburg GK372 Western Cape
09B Vredendal GH371 Western Cape
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12C Vryburg (south of 26°30' latitude) JJ375 North West
17C Vryburg (west of 24° longitude) HG161 North West
06C Vryheid MW377 KwaZulu Natal
13C Vuwani 9D389 Limpopo
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