VALUATION OF INTERNET-BASED BUSINESSES

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VALUATION OF INTERNET-BASED BUSINESSES

By

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LIST OF ABBREVIATIONS

ABBREVIATION	FULL NAME
B	Beta
CAPM	Capital asset pricing model
CPM	Cost per mile
DCF	Discounted cash flow
DDM	Dividend discount model
EDI	Electronic data interchange
EPS	Earnings per share
EVA	Economic value added
FCF	Free cash flow
FV	Future value
g	Growth rate
GDP	Gross domestic product
IPO	Initial public offering
IRR	Internal rate of return
IS	Information system(s)
IT	Information technology(ies)
JSE	Johannesburg Stock Exchange
MVA	Market value added
NPAT	Net profit after tax
NPV	Net present value
NPVGO	Net present value of growth opportunities
NSF	National Science Foundation
P/B ratio	Price – Book ratio
P/E ratio	Price – Earnings ratio
PDA	Personal digital assistant
PV	Present value
r	Required rate of return
R&D	Research and development
R_E	Return on equity
R_M	Return on the market
ROE	Return on equity ratio

ABBREVIATION	FULL NAME
S&P	Standard and Poor 500
SMEs	Small and medium enterprises
SMMEs	Small, medium and micro enterprises
TCP/IP	Transmission Control Protocol/Internet Protocol
USA	United States of America
WACC	Weighted average cost of capital

EXECUTIVE SUMMARY

This study investigates the valuation of Internet-based businesses. In particular the influence of the implementation of an e-business strategy on the value of a business by focussing on its financial performance, will be determined. Although the valuation of businesses in general has been researched extensively, research on the valuation of Internet-based businesses produced contradictory findings. No consensus could be reached regarding the most appropriate valuation approach to be used. Some research findings indicated that the discounted cash flow approach was the most appropriate while others stipulated that a new valuation approach should be developed. Many authors state that the move to include an e-business strategy is natural, and that businesses cannot afford not to include some form of e-business strategy. Previous research has also shown that by including an e-business strategy, it is possible to improve efficiency of the business and ultimately increase profitability. However, there was no emphasis on how the e-business strategy will influence the business valuation.

In order to establish whether an e-business strategy will create value for a business, an empirical investigation was undertaken. Based on the literature review, the primary objective of the study was formulated to determine and analyse the value of Internet-based businesses at the various stages of Internet presence, with the purpose of establishing whether value creation by implementing an e-business strategy took place. A positivistic research paradigm was adopted in the study to test 10 statistical relationships. A judgement sample of four businesses was drawn to be investigated. Based on the importance of the food retail industry, the food and drug retail industry (retailers and wholesalers subsector) as classified by the Johannesburg Stock Exchange (JSE) was selected. The businesses selected were Shoprite Holdings Limited, The SPAR Group Ltd, and Pick n Pay Stores Ltd. The well-known click-only business, Kalahari.net, is a subsidiary of Naspers and therefore Naspers Ltd (media industry, broadcasting and entertainment subsector) was included in the study. Based on a proposed e-business model as developed by the researcher, Shoprite was classified as a brick-and-mortar

business with limited online presence, SPAR as a brick-and-click business with interactive online presence, PnP as a brick-and-click in the e-commerce stage, and Naspers as an online business in the e-commerce stage. To ensure reliability and validity of the data sources, method triangulation was used to calculate the FCFs that were required for the various valuations. Five valuations per year for each business from 2004 to 2011 were calculated.

For the study, ten research hypotheses were formulated. Four research hypotheses focused on whether relationships exist between the changes in valuations of businesses at various stages of the e-business model over an eight-year period. Six research hypotheses were formulated to establish whether relationships exist between the valuations of businesses at different e-business model stages.

The empirical results revealed that positive relationships exist between at least three of the five valuations of each business, except for Naspers (online business in the e-commerce stage). None of the relationships tested for Naspers (online business in the e-commerce stage) were statistically significant. It was also found that relationships do exist between the valuations of Shoprite (brick-and-mortar business with limited online presence) and SPAR (brick-and-click business with interactive online presence), Shoprite (brick-and-mortar business with limited online presence) and PnP (brick-and-click business in the e-commerce stage), and SPAR (brick-and-click business with interactive online presence) and PnP (brick-and-click business in the e-commerce stage). None of the relationships investigated between the valuations of Shoprite (brick-and-mortar business with limited online presence) and Naspers (online business in the e-commerce stage), SPAR (brick-and-click business with interactive online presence) and Naspers (online business in the e-commerce stage), and PnP (brick-and-click business in the e-commerce stage) and Naspers (online business in the e-commerce stage), existed. It was concluded that if a physical business (“brick”) adds an e-business strategy, it is possible to create value for the business over time, but only to a limited extent. Evidence also showed that converting to an online business in the e-commerce stage will not necessarily add value to the business.

The research findings also showed that various valuation approaches should be used depending on the purpose of the valuation and the recipients of the valuation report. Based on the results, it was recommended that a new valuation approach should be developed for the exclusive use of online businesses valuation.

To conclude, it may not be viable for brick-and-mortar or brick-and-click businesses to convert to online businesses in the e-commerce stage. Such conversions may not increase the value of the business when using the discounted cash flow approach in the valuation process. It might be viable for brick-and-mortar businesses and brick-and-click businesses to move up one stage in the e-business model, but such conversion decisions should be made after careful analysis. To conclude, the implementation of an e-business strategy only increase the value of some businesses and business managers should be mindful of this.

KEY WORDS

valuations, valuation approaches, brick-and-mortar businesses, brick-and-click businesses, online businesses, Internet-based businesses, e-business model, e-business model stages

CHAPTER ONE
INTRODUCTION TO THE STUDY

1.1 INTRODUCTION AND BACKGROUND TO THE STUDY

The strength of any country's economy is dependent on the success of the businesses of that particular country. Small, medium and micro enterprises (SMMEs) form a vital part of a country's economy because they can expand in size and create more employment that will in the long run stimulate economic activity. The importance of SMMEs can be seen in their contributions to the country's Gross Domestic Product (GDP). A recent study found that SMMEs contributed between 52% and 57% to South Africa's GDP. (Abor & Quartey 2010:223; Olawale & Garwe 2010:729; 'Small business' 2009:3).

Many of these SMMEs fail within the first few years of their existence. According to Bosch, Tait and Venter (2006:663), approximately 57% of small businesses fail within the first operational year, and 70% to 80% of all new small businesses cease to exist within the first five operational years. According to Olawale and Garwe (2010:729-730), for a SMME to be regarded as an established business, it has to operate successfully for at least 42 months (three-and-a-half years). SMMEs in South Africa employ an estimated 61% of the South African work force (Abor & Quartey 2010:223; 'Small business' 2009:3). It is imperative that these SMMEs grow and prosper to create economic stability (Olawale & Garwe 2010:729-730). Therefore these businesses should develop strategies to increase the value of the business over the long term, that is, to maximise the shareholders' or owners' wealth.

The majority of businesses whether an SMME or a large business, usually start as brick-and-mortar businesses. To ensure future success, businesses need to consider various strategies to improve their profitability (bottom lines). One of the strategies that many of the businesses implement is the introduction of e-business. Hall (2010a:22) emphasises that small businesses are growing at a large rate thanks to the Internet. eBay Inc (hereafter referred to as eBay) reports that the number of small businesses engaging in online trading in

excess of £1 million will be doubled in 2011 (Hall 2010a). Polatoglu (2007:395) states that small businesses globally are starting to realise the value of implementing an e-business strategy. The areas in which the small businesses benefit are marketing research, increased customer base by expanding their geographical touch, more effective customer service and support, and greater flexibility and speed when dealing with customers, suppliers and competitors. Studies conducted by Chandra, Ravi and Bose (2008:4930), Pitta and Fowler (2005a:283-284) and Mora-Monge, Azadegan and Gonzalez (2010:782) emphasise that businesses should realise the importance of implementing an e-business strategy in order to remain competitive in the business environment and to create a competitive advantage, as this industry is growing at a rapid rate.

According to McKay and Marshall (2004:7), the move to include an e-business strategy is natural. Pavic, Koh, Simpson and Padmore (2007:320) warn that businesses cannot afford not to include some form of e-business strategy. From a business perspective, the importance of including an e-business strategy can be summarised as follows (McKay & Marshall 2004:7):

- The business environment implements various information technologies and is therefore highly interconnected.
- Businesses can provide better service to all their internal and external stakeholders.
- Substantial internal efficiencies can be achieved by providing timeous and accurate information to the relevant stakeholders.
- Substantial external efficiencies can be achieved by improving communication with the stakeholders.

The main advantages businesses which have implemented an e-business strategy are that their brand names (that is brand equity) are well known, and that a strong customer base exists. (Kennedy & Coughlan 2006:518; Ko & Roztocki 2009:6). According to Willmott (2010:534), brand equity as an intangible asset of a business, is neglected when determining the market capitalisation of a business and therefore the importance of branding is

underestimated when focusing on shareholder value. For large businesses, especially for those with a strong brand name, it is suggested that they can increase their market reach by conducting business overseas. One example of a large business that has implemented an e-business strategy successfully is Dell. Dell is one of the top five "Most Admired" businesses, and has improved its rankings in the Fortune 500 and the Fortune Global 500 (Turban, King, Viehland & Lee 2006:2-3). In 2008, three of the top ten online businesses were Dell, Hewlett Packard and Apple. The advantage that Dell had was the low-cost Internet-based sales to consumers and businesses. Unfortunately Dell lost that advantage to Apple, which has successfully integrated its online business with highly productive brick-and-mortar stores (Jackson 2008:54).

However, SMEs can also implement e-business strategies that are part of the so-called new economy. The new economy refers to new high-growth industries using the latest technology (the Internet, digital technology and information, and communications technology) to enable them to be major contributors to the economic growth of a country (Combe 2006:2; Investopedia 2011). Levis (2009:5) describes the new economy as a globally integrated, electronically networked economy that is highly competitive According to Klopper, Berndt, Chipp, Ismail, Roberts-Lombard, Subramani, Wakeman, Petzer, Hern, Saunders and Myers-Smith (2006:388), the new economy is a result of digitisation, where transactions, from purchasing to banking, are done electronically. Li (2007:2) identifies two major changes in the business environment of the new economy, namely the increase of intangible or informational elements of products and/or services offered, and the increase in the number of informational activities in relation to the number of physical activities that need to be performed in a business. If one considers the characteristics of a new economy, it is important to realise that the profit and loss distribution of new economy businesses will not be in the form of a normal distribution. The distribution can be bimodal or even multimodal (Zarzecki 2011:110-111).

Klopper *et al.* (2006:340, 388) agree with Shepard (1997) who identifies two major trends that define the new economy, namely the globalisation of

businesses and the rapid development in information technology. Robinson (2000:1-3) concurs with Shepard (1997) with regard to the major trends and also points out two key factors to individual success, namely education and training. Other aspects of the new economy identified by Pavic *et al.* (2007:320) and Robinson (2000:1-3) are increased business growth, major technological advances, job creation, lowering of costs, and structural changes in businesses.

The benefits for SMMEs include the reaching of otherwise unreachable market areas and competing for business with the larger businesses (Bosch *et al.* 2006:635; Parkin 2008:18; Turban *et al*. 2006:25-27). Many SMEs (small and medium-size businesses) have realised the various opportunities e-business can create, which include marketing at a fraction of the cost of traditional marketing, lower overhead costs, and access to support networks that can assist, manage and grow the SMEs (Hafeez, Keoy & Hanneman 2006:807; Parkin 2008:33). Day and Bens (2005:160-162) concur with the previous authors regarding the benefits, and stress the fact that these benefits are also true for all businesses implementing e-business strategies to conduct transactions with other businesses and not only with customers. Amit and Zott (2001:494) contend that entrepreneurial start-ups and corporate ventures can benefit extensively from implementing an e-business strategy.

Unfortunately there is little evidence that SMEs are in fact adopting e-business strategies, especially in developing countries. The main e-business strategy implemented by many SMEs is that of having an official website and using electronic mail (e-mail). The main reason given for the lack of e-business adoption is the lack of skills and technical knowledge (Polatoglu 2007:395-396). A study by Pavic *et al.* (2007:320-321) finds that SMEs in the UK are adopting the Internet, but that the SMEs are reluctant to implement e-business strategies. The authors add that SMEs can create an online presence by using the Internet for market research, advertising, and communication with customers and potential customers. It is possible for SMEs to operate their online presence using mobile technologies such as personal digital assistants (PDA); therefore expensive technology is not required at the start-up. (Pavic *et al.* 2007:335). In their research, Ramsey, Ibbotson, Bell and Gray (2003:261) have found that the

majority of the SMEs studied used an e-business strategy as a stand-alone activity, and that this strategy was not included in the overall business strategy. The main finding was that 68% of the respondents used the Internet to provide business details (excluding product and price information), 59% used the Internet to communicate with customers, 20% used the Internet to convey product and price information, and only 10% used the Internet for online orders. No payments were allowed on any of the home pages (Ramsey *et al.* 2003:259). Taylor and Murphy (2004:288) found that SMEs need to consider the implementation of e-business strategies because SMEs are an important source for economic growth. Furthermore, it was stated that e-business strategies should be used to take advantage of growth opportunities, to generate profits and to create wealth for the relevant stakeholders. The barriers to the implementation of e-business strategies, according to Marasini, Ions and Ahmad (2008:637), were as follows:

- cultural, for example, resistance to change;
- financial, for example, high initial set-up costs;
- technical, for example, security and privacy issues;
- access, for example, lack of training opportunities and networking;
- sharing of knowledge, for example, intellectual property; and
- awareness, for example, lack of proven best practice or potential.

It is important to realise that SMEs can benefit from implementing more aggressive e-business strategies. According to a study conducted by Interland (Turban *et al.* 2006:609), 28% of small businesses surveyed expected at least a 75% increase in their annual sales. Polatoglu (2007:402-403) investigated the implementation of an e-business strategy by the largest online bookstore, Pandora, in Turkey. One of the main findings of the study was that Pandora was highly successful in creating synergies between the online and physical stores and providing more value and convenience to customers. Therefore the traditional brick-and-mortar business changed to a brick-and-click business.

One example of a brick-and-click business in South Africa is the Pick n Pay Group, with 869 physical stores as well as online shopping available from the home page of the Pick n Pay Group (Pick n Pay – Inspired by You 2011; Profile's Stock Exchange Handbook October 2011 – January 2012 2011:272). Formal retail businesses, such as the Pick n Pay Group, are important in the business environment as these businesses will match the needs of the businesses to those of the customers, to the benefit both parties involved. These businesses sell products such as groceries, household products and electrical products. (Klopper *et al*. 2006:264, 272).

According to Kurtz and Boone (2006:138), online sales of apparel, prescription medicines, home appliances and home products, which are provided by most retailers, will continue to grow. Chirnside, the CEO of the online and mobile service provider PayU, confirms the belief that customers are becoming more knowledgeable about online buying. He comments on the results of the MasterCard Online Shopping Survey, indicating that 58% of Internet users engage in online buying. PayU has had a growth of 78% year on year, and the business has processed approximately 65% of the total value of e-commerce transactions in South Africa. Chirnside also believes that if businesses want to remain a going concern in the dynamic business environment, the Internet domain should be part of the business strategy. (Trust fuels online shopping growth 2012). According to Novitzkas, the chief executive of Kalahari.com, the e-business strategy using mobile phones (mobi-sites) is growing at an exceptionally fast rate. He further states that for a country to be regarded as having reached a significant e-commerce milestone, online retail sales need to contribute more than 1% of total retail sales. The online retail sales in South Africa were at 0.4% of total retail sales in July 2011. (Moorad 2011). The Internet economy was worth R59 billion in 2011 and contributed 2% towards South Africa's GDP. It is estimated the contribution from the Internet economy will grow by 0.1% per year and that it should reach 2.5% by 2016. (SAinfo reporter 2012). Novitzkas also states that when thinking of online retail in South Africa, one immediately associates such transactions with Kalahari.net. Customers can shop from Kalahari.net, and this site is automatically redirected to Kalahari.com. (kalahari.net now available via kalahari.com 2011). If one

considers the growth and the expected growth of online shopping in the USA, it is a definite opportunity that retailers need to seize.

Forrester Research Inc forecast that online spending in the USA will increase from US$202 billion in 2011 to US$226 billion by 2016. Their results also showed that online retail sales were expected to grow at 10.1% annually over the five-year forecast (Rueter 2012). The results of research by Cicso Systems showed that global online retailing would increase by 13.5% per annum over the next three years. In South Africa, approximately 50% of online sales have resulted from a combination between online searching and social media content. Botes, the executive director of Business Partners, has also stated that e-commerce can be a key driver for SME growth in terms of skills development and job creation, and that South Africa has great potential to take advantage of e-business strategies (E-tailers need to engage consumers 2012). The positive online sales trend has taken place in various industries if one considers the IMRG Capgemini e-Retail Sales Index. The index includes more than 100 e-retailers, such as Furniture123, Home & Cook, Marks & Spencer, Serenata Flowers, The Body Shop and Woolworths. The IMRG (Interactive Media in Retail Group) is the e-retail industry association in the UK, and Capgemini is a provider of consulting, technology and outsourcing services. The March year-on-year results are as follows:

- 13% change for beers, wines and spirits;
- 15% change for clothing, footwear and accessories;
- 14% change for electrical products;
- 48% change for gifts;
- 22% change for health and beauty products/services; and
- 11% change for other retail categories. (‘As e-retail market rebounds’ 2012).

As is evident from the year-on-year results, online sales are not restricted to certain industries. Therefore retailers need to be proactive to remain competitive in the dynamic business environment, by implementing some form of e-

business strategy. Krishnamurthy (2003:46) states that businesses should carefully evaluate all the implications of becoming a brick-and-click business. The author also maintains that the level of doing business online will vary from simply having an online presence to trading of products and/or services using the Internet. Studies conducted by Day and Bens (2005:160, 167) and Oliva, Sterman and Giese (2003:112-113) agree with Krishnamurthy (2003:46) that it is essential for all businesses to carefully assess the positive and negative potentials of Internet opportunities. The results of the study indicated that only those brick-and-click businesses that had succeeded as brick-and-mortar businesses in terms of customer retention, growth and profitability, would benefit from having an e-business strategy. Therefore an e-business strategy should not be seen as a quick fix for growth and financial problems.

Many businesses go one step further and become an online business, such as Kalahari.net, Amazon.com, search engines (such as Google and Yahoo!) and the various social networks (for example Facebook and Twitter). An online business implies that the business does not have physical business premises where customers can go to buy products and/or services. Águila-Obra, Padilla-Meléndez and Serarols-Tarrés (2007:187) and Yao (2004:54) point out that changes in technology, especially the development of the Internet, have created new opportunities for businesses to seize, to be highly innovative but to remain viable (Skinner 2010:410). Amit and Zott (2001:493-494) agree with the previous authors and add that an e-business strategy has the greatest potential to create wealth.

Williams (2009a) states that online web surfing is so popular that many people are turning to home-based businesses. Another reality is that social networking is one of the fastest growing industries, and the growth rate, as evident in the increase in the number of Internet users, is still escalating at a rapid pace. Several mergers and acquisitions of online businesses took place in the last decade. The business eBay acquired Skype Technologies in 2005 for US$2.6 billion, and other acquisitions include the purchase of DoubleClick and YouTube by Google, Aquantive by Microsoft, and MySpace by News Corporation. (Farzad, Elgin & Yang 2005). In 2007 the value of the more than 1 150

transactions that were executed where one online business acquired another online business amounted to approximately US$30 billion (Katz & Zangrilli 2007:1).

According to 'Enthusiasm for Google' (2006), it is imperative that a method should be found to value the shares of online businesses. Many authors (Athanassakos 2007:12, Kemper 2010:44-46, McCutcheon 2008:79-80 and PricewaterhouseCoopers as cited in Hall 2011a) argue that the traditional valuation approaches are inadequate to value online businesses, but some authors (Ashuri, Lu and Kashani 2011:17 and Riihimäki 2009:32) disagree, and contend that the traditional valuation approaches can be used although some adjustments need to be made. The question one can ask is whether an e-business strategy will increase the value of brick-and-click businesses in the same way as the values of online businesses increased in a relatively short period. To summarise, will the valuation of brick-and-mortar businesses increase if e-business strategies are implemented (thus transformed into brick-and-click businesses) and will the value of brick-and-click businesses differ when implementing e-business strategies with various levels of online activity?

Various valuation models (such as the dividend discount model, the Gordon model and the residual income method) described in theory can be used to determine fair market-related values for brick-and-mortar businesses. Brick-and-click businesses do not pose a major problem, because the traditional valuation methods can still be implemented, although some changes may be necessary, especially in terms of determining the various income streams. However, when considering online businesses such as the search engine Google, certain obstacles (for example no dividend policy) are encountered when trying to use the traditional valuation methods. Therefore the main aim of this research is to determine whether the valuation of brick-and-click and online businesses will differ during the various stages of their Internet presence, that is, from having a presence on the Internet (customers can view only a catalogue and business details) to trading (customers can order items and make the necessary payments on the website).

1.2 LITERATURE OVERVIEW

Firstly, the concepts used in this study will be clarified. The second section will focus on previous research done in this field of study.

1.2.1 Concept clarification

A number of concepts will be used in the study, and because various definitions can be found in literature, it is imperative to clarify each concept. The concepts that will be clarified are electronic commerce (e-commerce), electronic business (e-business), brick-and-mortar businesses, brick-and-click businesses and Internet-based businesses.

(a) E-commerce versus e-business

It is important to understand the difference between e-commerce and e-business, because while many authors use these two concepts interchangeably, other authors differentiate between them. Kinder (2002:131), Klopper *et al.* (2006:388) and Zarzecki (2011:106) do not make a distinction between e-commerce and e-business. Kinder (2002:131) and Klopper *et al.* (2006:388) define e-commerce as commercially purposive systems that can be used to search, assessment and conduct dealings using various types of media, while Zarzecki (2011:106) describes e-commerce as the application of electronic exchanges of information, either processed or unprocessed, from one entity to another. All these activities are supported by information and communications technologies.

Botha, Bothma and Geldenhuys (2008:3) distinguish between e-commerce and e-business. E-commerce is when customers use the Internet to locate products and/or services as well as for the placement of an order and payment of the order for products and/or services. E-business is a more inclusive concept and includes e-commerce; electronic data interchange (EDI), competitor analysis and Internet-based business process re-engineering. According to Schneider (2007:5) and Papazoglou and Ribbers (2006:2), e-commerce refers to the buying of products and/or services using the Internet and also includes activities such as trading between two or more business. These authors refer to e-commerce in its broadest context that also includes business activities involving

Internet technologies (Internet, World Wide Web, wireless transmissions and personal digital assistants).

Combe (2006:1) describes e-commerce as the buying and selling, and marketing and servicing of products and services using computer networks, while e-business is the use of the Internet, intranets and extranets to assist the commercial processes. According to Turban *et al.* (2006:4), e-commerce is the process that involves the buying, selling and/or exchanging of products, services and/or information using computer networks such as the Internet. The definition of e-business includes e-commerce, but it also extends to the servicing of customers, collaborating with business partners as well as performing transactions electronically within the business.

Jelassi and Enders (2005:4) also distinguish between e-commerce and e-business. E-commerce involves the use of the Internet or any other telecommunications network for the purpose of selling products and/or services online, while the concept e-business is a broader concept that refers to the execution of business activities within the business (micro environment) as well as with businesses outside the business (market and macro environment) using the Internet. McKay and Marshall (2004:4) conclude that e-commerce is the commercial transactions that take place in the business using the Internet. E-business, on the other hand, is described as the use of information and Internet technology to achieve effectiveness as well as to create strategic opportunities through the use of information technology to change current market and industry structures. In the present study, the definition used for e-commerce will be the buying and selling of products and/or services using the Internet. The definition for e-business will be all the e-commerce activities as well as the serving of customers and the collaboration with business partners. Internet-based businesses refer to businesses only engaging in some form of Internet activity. These activities include trading of products and/or services, sharing of information using the Internet as a platform, and focusing on online-marketing (for example banners on websites).

(b) Brick-and-mortar businesses

Brick-and-mortar businesses refer to traditional businesses that are engaged in various business activities from physical premises (Combe 2006:413; Lee, Kang, Lee & Lee 2002:16; Parkin 2008:228). According to Botha *et al.* (2008:280), brick-and-mortar businesses conduct business with their customers in the physical world, from physical brick-and-mortar buildings. The explanation given by Turban *et al*. (2006:5) with regard to this type of business is the off-line business performance of a business by using physical selling agents to facilitate the selling of products, while Klopper *et al.* (2006:390) define brick-and-mortar businesses as solely offline businesses. McKay and Marshall (2004:10) describe brick-and-mortar businesses as businesses that present the products and/or services on offer to their customers using factories, warehouses, office blocks, retail stores and a sales force. Kotzab and Madlberger (2001:441) refer to brick-and-mortar businesses as stationary retailers that have physical assets in stores and warehouses (distribution facilities). Brick-and-mortar businesses can thus be described as businesses that sell products and/or services from physical business premises. Brick-and-mortar businesses may have an Internet presence, but the presence will only be there to provide general information regarding the business and its operations, and is not used as an online distribution channel of products and/or services.

(c) Brick-and-click businesses

A number of names can be found in the literature for this category of business, and include click-and-mortar businesses, clicks-and-bricks as well as bricks-and-clicks businesses. According to Parkin (2008:230), click-and-mortar businesses describe businesses that are engaged in various business activities from some physical premises as well as online. The ‘mortar’ of click-and-mortar refers to the business activities that take place at some physical location and the ‘click’ refers to online activities using the Internet. Another term used by Parkin (2008:230) is clicks-and-bricks. Botha *et al*. (2008:280) explain brick-and-click businesses as multichannel stores where the websites of the businesses are extensions of the conventional distribution channels to engage in online transactions.

Combe (2006:413) and Klopper *et al.* (2006:390-391) describe click-and-mortar businesses as businesses that offer a mix of online and offline commerce possibilities. The emphasis of the click-and-mortar business definition provided by Turban *et al*. (2006:5) is on the fact that the primary business is done in the physical world, but some business is done electronically. McKay and Marshall (2004:10) state that clicks-and-bricks businesses use their sales force to interact directly with the customer either over the Internet or in person. According to Krishnamurthy (2003:73), brick-and-clicks businesses have both physical premises and an online presence. Dennis, Harris and Sandhu (2002:287-288) describe brick-and-click businesses as multi-channelled businesses combining online and off-line activities in a hybrid strategy, while Lee *et al.* (2002:16) refer to click-and-mortar as traditional retailers with an online distribution channel. For the purpose of the present study, the term brick-and-click businesses will be used. Some form of monetary transactions should take place online for a brick-and-mortar business to be regarded as a brick-and-click business.

(d) Online businesses

As in the case of the brick-and-click businesses, numerous names can be found in literature for online businesses. These names include dot-coms, pure dotcom, Internet pure-play, Internet companies" and e-tailers as well as surf-and-turf businesses. According to Combe (2006:414), dot-coms are businesses that use the Internet for trading purposes. Virtual businesses, as defined by Turban *et al*. (2006:5), conduct business purely online and no physical contact takes place between the business and the customer. McKay and Marshall (2004:10) and Krishnamurthy (2003:73) define the pure dotcom or Internet pure-play businesses as businesses that present the products and/or services on offer to their customers using the web page(s) of the business and therefore no face-to-face interaction between the sales force and customers takes place. Zarzecki (2011:106) describes an Internet company as a business whose basic activity is based on using the Internet for creating income. Kotzab and Madlberger (2001:443) refer to e-tailers as businesses with no physical stores while marketing products to customers using the Internet. Lee *et al.* (2002:16)

agree with Kotzab and Madlberger (2001:443) regarding the definition of e-tailers, and add that e-tailers may have physical promotional outlets.

One of the advantages a brick-and-click business has over an Internet-based business is the brand image of the physical store. Research done by Doong, Wang and Foxall (2010) has found that brick-and-click businesses can more easily attract consumers because of brand loyalty. For the purpose of the present study, the researcher will use online businesses when referring to businesses that use only the Internet for trading purposes.

(e) Internet-based businesses

In the previous sections (see 1.2.1(c) and 1.2.1(d)), brick-and-click and online businesses were described and clarified. Klopper *et al.* (2006:266) define the selling of products directly to the final consumer using the Internet as e-tailing, which is an activity performed by both brick-and-click and online businesses. The various concepts described are summarised in Table 1.1.

TABLE 1.1: SUMMARY OF CONCEPTS

CONCEPT	DESCRIPTION
E-commerce	Trading of products and/or services using the Internet
Brick-and-mortar business	Business selling products and/or services from physical business premises.
Brick-and-click business	Business having both physical premises and an online presence
Online business	Business using the Internet only for trading purposes

Source: Researcher's own construct.

For ease of discussion, Internet-based businesses will refer to all the businesses that use the Internet for trading; therefore it will refer to both brick-and-click and online businesses.

1.2.2 Previous research in the field of business valuation

Numerous studies have been conducted with regard to the valuation of businesses. In 2007, Spratt (2007) conducted a study to determine whether South African online businesses trade at a premium over brick-and-mortar businesses when a buyout or listing occurs. The major limitations found were that no published research was available on the valuation of online business, and that the majority of the online businesses were privately owned which implies that the financial information for these businesses was not available. This research focused on the asset pricing methodologies that included the asset pricing schools of thought, the earnings and market-based valuation, revenues valuation, equity and yield valuations, discounted cash flow valuation and subscriber-based valuation. According to this research, traditional valuation methods cannot be implemented to determine fair market-related values of online businesses because online businesses have high operating costs and very steep growth trends.

Damodaran (2000:8) investigated the traditional valuation model and found that a number of obstacles made it rather difficult to implement these models when businesses had negative earnings. Furthermore, the lack of comparable businesses that were properly valued also created a big stumbling block in the valuation process. A number of solutions to these problems were provided by Damodaran (2000:10-16) and are summarised in Table 1.2.

TABLE 1.2: VALUATION OBSTACLES AND POSSIBLE SOLUTIONS

OBSTACLE	POSSIBLE SOLUTION
Negative earnings	• Normalise earnings by replacing negative earnings with normalised earnings • Estimates of revenues and margins should never be negative and should be over a time period • Reduce leverage over time if negative equity earnings are caused by a too high debt level and not by operating problems

No history or comparable data	• Use historical data of comparable businesses but
	  • businesses should be similar in nature,
	  • stable in the industry/sector and
	  • in the same life cycle stage as the Internet-based business to be valued

No comparable businesses	• Information should be updated in order to use the most recent information available to obtain a realistic overview

Source: Adapted from Damodaran 2000:8-22.

Jansen and Perotti (2002:1-10) examined the previous research conducted on the valuation of online businesses. The research highlighted the financial measures used when valuing online businesses and the key value drivers of valuation. This study followed the same route as other studies in the sense that it investigated the accounting information, various ratio analyses and real options to determine fair market-related values. Some non-financial key drivers were also discussed, and included the market value of an online business in relation to the web traffic of such a business, as well as the website usage. The concluding remarks from these authors are that the results showed no persuasive support for the new valuation methods to be adopted when valuing online businesses. Forbes (2006:439, 446) also investigated previous research done in the field of valuing online businesses. The focus of the research was on the value of the business when the founder of the business was retained in the business, and it was found that whether the founding entrepreneur remained in the business or not, the value of the business remained fairly constant.

A study conducted by Mazurencu-Marinescu and Nijkamp (2008:72-79) highlighted the need for an appropriate valuation model for Internet-based businesses, with specific reference to online businesses and businesses in the information and communication technology sector in emerging markets. The major reason provided was that the traditional valuation methods found in literature were rather complex, because many of the variables required for the traditional methods were not available. The authors pointed out that many Internet-based businesses had emerged since the year 2000, and suggested that the value of these businesses lay in the attainment of new operational excellence levels, customisation, customer and supplier integration and productivity. The authors described the cost approach, the market approach and the income approach as valuation methods, and with each of these approaches an attempt was made to identify the various factors that would influence them. Mazurencu-Marinescu and Nijkamp (2008:81, 88) mention that one of the greatest challenges was to determine the required rate of return to be used in the valuation process, because it is extremely difficult to estimate this rate using the historical data of the business. These authors concur with Damodaran (2000:8-22) that the main problems with the valuation of online businesses revolve around uncertainty, the lack of relevant data, and the lack of knowledge regarding the business and the environment in which it operates.

As stated previously, determination of the required rate of return, also known as the discount rate, seems to be problematic because intangible assets are not traded publicly, and therefore no required rate of return is available for this asset class. This implies that one will not be able to determine the riskiness of these assets. (Schauten, Stegink & De Graaff 2010:801). The study by Schauten *et al.* (2010:809) also shows that the required rate of return on intangible assets is higher than the weighted average cost of capital (WACC) of the business, as well as higher than the levered or unlevered cost of equity for the business as a holistic entity.

According to Uzma, Singh and Kumar (2010:369, 374-375) and Ali, El-Haddadeh, Eldabi and Mansour (2010:18-20), most online businesses use the discounted cash flow approach (DCF) to determine the value of their

businesses. From this perspective, Uzma *et al*. (2010:366-374) have discussed the expected cash flow, the project risk and intangible risks, the difficulty in determining the riskiness (beta values) of intangibles assets using the capital asset pricing model (CAPM), and the possibility that the riskiness of intangible assets may change over time. Although there are numerous shortcomings, Uzma *et al.* (2010:375) have found that the use of the DCF is the preferred method, and that a fair value of this asset class can be shown on the balance sheet. Steiger (2008) argues that the DCF valuation method is based on numerous assumptions, and that if the underlying assumptions are not correct, an incorrect valuation of businesses will result. Ali *et al*. (2010:31-32) state that to overcome the shortcomings of the DCF, the DCF should be supplemented with sensitivity analysis, scenario analysis and/or Monte Carlo simulations. Although scenario analysis will solve one of the shortcomings of the sensitivity analysis, the valuator will determine a range of outcomes (that is, a minimum and maximum value) and not a precise market-related value. Mazurencu-Marinescu and Nijkamp (2008:88) and Damodaran (2000) have identified uncertainty as one of the major problems in the valuation process, but Ali *et al*. (2010:31-32) suggest that Monte Carlo simulations should be used to minimise uncertainty in the calculation.

Research carried out by Stubeji (2010:44) has also found that the internal value of equity capital is not always reliable. A further finding is that the market value of the businesses under investigation could be higher than the true value as a result of an expected takeover. Stubeji (2010:44) therefore suggests that the businesses investigated should be compared to foreign businesses, to ensure more realistic market values.

Schwartz and Moon, as cited by Valkanov (2001:1-5), are of the opinion that the basic foundation of an online business valuation model must take into account the uncertainty of the forecasting of future cash flows. The growth rate is another uncertainty that needs to be considered when conducting valuations. Valkanov (2001:5) summarises the model developed by Schwartz and Moon as follows:

- There are three sources of uncertainty, namely revenues, the growth of the revenues and the variable cost.
- The variances of all the processes decline to zero or to a fixed number over time and the time period is specified.
- Other unavoidable expenses such as taxes and depreciation are taken into account.
- If cash flows remain negative, the business is declared bankrupt.
- The value of an online business, and therefore its share prices, can be determined using risk neutral valuation.

The results of the study conducted by Schwartz and Moon (2000:62-75) showed that it is possible for online businesses to yield extremely high valuations; however, tor these high valuations to be true and fair, two prerequisites need to exist. The first prerequisite is that the early growth rates should be adequately high, and the second prerequisite is that there should be enough volatility in the growth rate over a period of time (Wyler & Moon 2000). From this summary one can also conclude that there are too many assumptions and prerequisites to always ensure a fair market-related valuation.

Demers and Lev (2001:331-334) conducted research in order to develop a model to explain the market values of online businesses during 1999 and 2000. This model included financial and non-financial variables. The non-financial variables included in the model were the reach of the business, the stickiness of the business's website, and customer loyalty. The results provided evidence that the reach of the business and the stickiness of the website do have an influence on the share price of an online business, but that customer loyalty (measured by web traffic) does not play a significant role. Another important finding was that the changes in investors' perceptions of the future performance of online businesses influenced the share prices of the businesses.

Although a study conducted by Huang and Van Mieghem (2009) focused on offline ordering behaviour, they concur that web traffic can be used to forecast customer behaviour. Furthermore, Huang and Van Mieghem (2009) agree with

Demers and Lev (2001:356) that the stickiness of websites can provide a good indication of customer behaviour even though new and existing customers may portray different behaviour. A study by Keating, Lys and Magee (2003:191) focused on the importance of financial measures as used in the residual income model to non-financial measurements. The focus of the study was therefore to include information in the valuation process that was not yet captured in the accounting system that would otherwise have been left out.

Many studies focus on the measuring of the intangibles of a business. An article by Watson (2010:132) considers the *knowledge economy* in which SMEs operate. It is argued in the article that various types of intangibles are of utmost importance to SMEs, and that some of these intangibles are more easily identified and valued than others. Lev states, as cited in Watson (2010:133), that intangibles should be regarded as one of the key drivers of economic activity. If businesses do not report and value intangibles correctly, underinvestment in such assets will occur. This implies that the value of these businesses will not be correct because the market values will exceed the book values. The end result is that the use of financial statements is of limited use when businesses are valued. Damodaran (2006) also states that intangibles such as brand names, patents, trademarks and copyrights, should be valued and incorporated in the valuation process. This author also argues that the various valuation models generally do not fully integrate the value of such intangibles into the final value of a business. Léger (2010:420-421) concurs that it is imperative that the valuation of intangible assets should be done, and that it is becoming more important to be done correctly as businesses are becoming more dependent on the use of the Internet (and Internet business partners) to provide improved customer service. According to Kemper (2010:44-46), who agrees with the previous authors, the traditional valuation methods do not take into account flexibility or intangible assets.

Oliva *et al.* (2003:93-96) have examined the traditional valuation method known as the Gordon model. This model assumes that the net income that the investors will receive will grow at a constant rate of return. Unfortunately this method is not applicable for high-growth businesses, as the major assumption

of this model is that the required rate of return must be greater than the growth rate; and as cited in Spratt (2007:34), online businesses have extremely high growth rates. To overcome this problem of the required rate of return having to be greater than the constant growth rate, the following model was developed by Oliva *et al*. (2003:94):

$$V = \text{MAX}(\text{Breakup value}, \text{EPV of profit} \times \text{Pre IPO Discount})$$

where:

- V is the greater of the salvage value (breakup value) or the present value of the expected profits (EPV of profit)
- Pre IPO discount is the reduction in the market value for privately held businesses

All the assumptions used in the discussion for developing the equation by Oliva *et al.* (2003:94-96) are based on estimates. The salvage value at some future point in time, the expected present value of profit, the discount factor and the initial public offering (IPO) discount are all forecasts or estimates, and therefore all difficult to determine.

A study by Bartov, Mohanram and Seethamraju (2002:322, 345) has considered the valuation process from an IPO perspective. The first important finding of the study was visible differences, at prospective stage, between valuations of Internet-based businesses and brick-and-mortar businesses. IPOs of brick-and-mortar businesses are influenced by earnings, while negative cash flows are significant for Internet-based businesses. The authors conclude that in valuation, financial variables are more important for brick-and-mortar businesses, while non-financial variables are more important for online businesses. The second major finding was that at the end of the first trading day, large differences were found between the initial business valuations and IPO stage and the value as given by the relevant stock market.

McCutcheon (2008:79-80, 89-90) argues that it is of vital importance that the intellectual assets of a business should be valued correctly. This author

therefore proposes that EVVICA^{TM} (Estimated Value Via Intellectual Capital Analysis) should be used by businesses to determine a likely rate of return on the development of new products. This programme uses a probability adjustment to conventional net present value (NPV) valuation. It should be noted, though, that the use of such a programme is still in its infant stage.

Ko and Roztocki (2009:1-27) conducted a study by focusing on the financial performance of brick-and-mortar, brick-and-click and online businesses. Financial performance was measured by calculating five profitability ratios and two cost ratios. The purpose of this study was two-fold. The first set of hypotheses focused on whether brick-and-click businesses have higher profitability and cost ratios than similar sized brick-and-mortar businesses in the same industry. The second set of hypotheses focused on whether brick-and-click businesses have higher profitability and cost ratios than similar sized online businesses in the same industry. The results indicated that brick-and-click business achieved the highest profitability ratios, that their cost structure are comparable to that of brick-and-mortar businesses and that brick-and-click businesses can achieve higher levels of efficiency than online businesses. The difference between this study and the current study is that the current study is focusing on the influence of e-business strategies on business valuation, and not on the financial performance of the business.

A study by Hafeez *et al.* (2006:806-828) investigated the business performance of businesses that implemented aggressive e-business strategies with those that did not implement aggressive e-business strategies. The findings indicated that overall business performance was enhanced by implementing successful e-business strategies which were embedded in the overall business strategy. The study further revealed that to enhance e-business implementation, it is important that the business should include an Internet-enabled supply chain. Ramsey *et al.* (2003:251) concur that it is imperative that the business strategies and the information technology strategies should be aligned. With regard to businesses not adopting an e-business strategy, greater attention should be given to the supply chain strategy because it is the main contributor to business performance (Hafeez *et al.* 2006:820-822).

The research of Lin, Jang and Chen (2007:235) has indicated that e-service initiatives have a positive influence on the valuation of a business, and that the future benefits to be realised are greater than the future costs to be incurred. When considering the timing of entering the market, it was found that the pioneers and first movers into the industry obtained the greatest benefit from implementing an e-business strategy. The early followers into the industry did not obtain any competitive advantage, although the late entries into the industry did manage to create a competitive edge. Therefore the authors recommended that businesses considering implementing an e-business strategy should either be one of the first entrants into the industry or wait and learn from the mistakes of the other entrants into the industry. (Lin *et al.* 2007:236-237).

It is clear that there are various views regarding the valuation of online businesses. All the research that has been done has focused on online businesses with share capital. The question that still needs to be answered is how to determine the value of an online business that does not issue shares or pay any dividends. The fact that no definite answer could be found in existing studies concerning the valuation of online businesses at the various stages of Internet presence, indicates that this is an area that needs to be researched.

1.3 PROBLEM STATEMENT

All businesses, whether profit-oriented or not, will have a financial department or section focusing on the finances of the business. The most important goal of the person(s) responsible for the finances of the business is to create value for the shareholders (or owners of the business if no shares are issued). Many authors state that the primary goal of all financial managers is to maximise the share price of the business (Els 2010:3; Gitman, Beaumont Smith, Hall, Lowies, Marx, Strydom & Van der Merwe, 2010:14). Hillier, Ross, Westerfield, Jaffe and Jordan (2010:9) phrase the primary goal of financial management slightly differently by saying that it is important to maximise the market value of the existing owners' equity. The way in which this can be achieved is firstly through the buying of assets to create cash flow, and secondly through the issuing of various financial instruments (such as shares and bonds) to raise additional cash (provided the cash inflow exceeds the cash outflow) (Hillier *et al*. 2010:4).

Therefore, whether the form of ownership is a sole proprietorship, close corporation, partnership, private company or public company, the primary goal of financial management will remain the same, namely to maximise the wealth of the owners.

Determining the fair market value of a business that does not have share capital (does not issue shares) is not a complex task. The balance sheet of the business will provide an adequate view of the business's value to the owners; this specific financial statement presents all the non-current assets, current assets, intangible assets (such as goodwill and patents), owners' equity, non-current liabilities and current liabilities of the business (Els 2010:34-41). The value can only be regarded as fair if the intangible assets are valued correctly.

According to Hillier *et al.* (2010:13-15), the online business Google was worth more than US$130 billion in 2010. Most online businesses such as Google, Amazon.com and eBay do not pay dividends to the shareholders. The reason the shareholders accept non-payment of dividends is their conviction that they will receive dividends at some future date, or that they will be compensated in another way, currently unknown to them. The shareholders also believe that the business will be taken over by another business through a merger process, and that the shareholders will be compensated in cash or with shares in the newly merged business. (Hillier *et al*. 2010:136).

It is important to realise that online businesses such as the search engine Google and social networks such as Facebook and Twitter, will have tangible assets, such as property and equipment. What these businesses value most is their intangible assets. These intangible assets include knowledge of employees and the technology implemented in the business. According to Rutterford, Upton and Kodwani (2006:374-375), these intangible assets will have a profound influence on the true value of the business when combined with the tangible assets (non-current and current assets). These authors further argue that intangible assets on their own will not create value for the business, but the value of intangible assets is embedded in the organisational context and strategy of the business. Botha *et al*. (2008:12) agree that the value of a

business does not lie in the tangible assets, but in the intangible assets, which include the employees, the ideas, and the strategic aggregation of the key information-driven assets (for example the Internet and the web presence). Sander and Kõomägi (2007:6) support Botha *et al.* (2008:12-13) and identify other factors, such as a high level of economic and technological uncertainty, illiquidity of investments, the use of complex financial contracts and staged financing as hurdles, when valuation of businesses is mainly based on intangible assets.

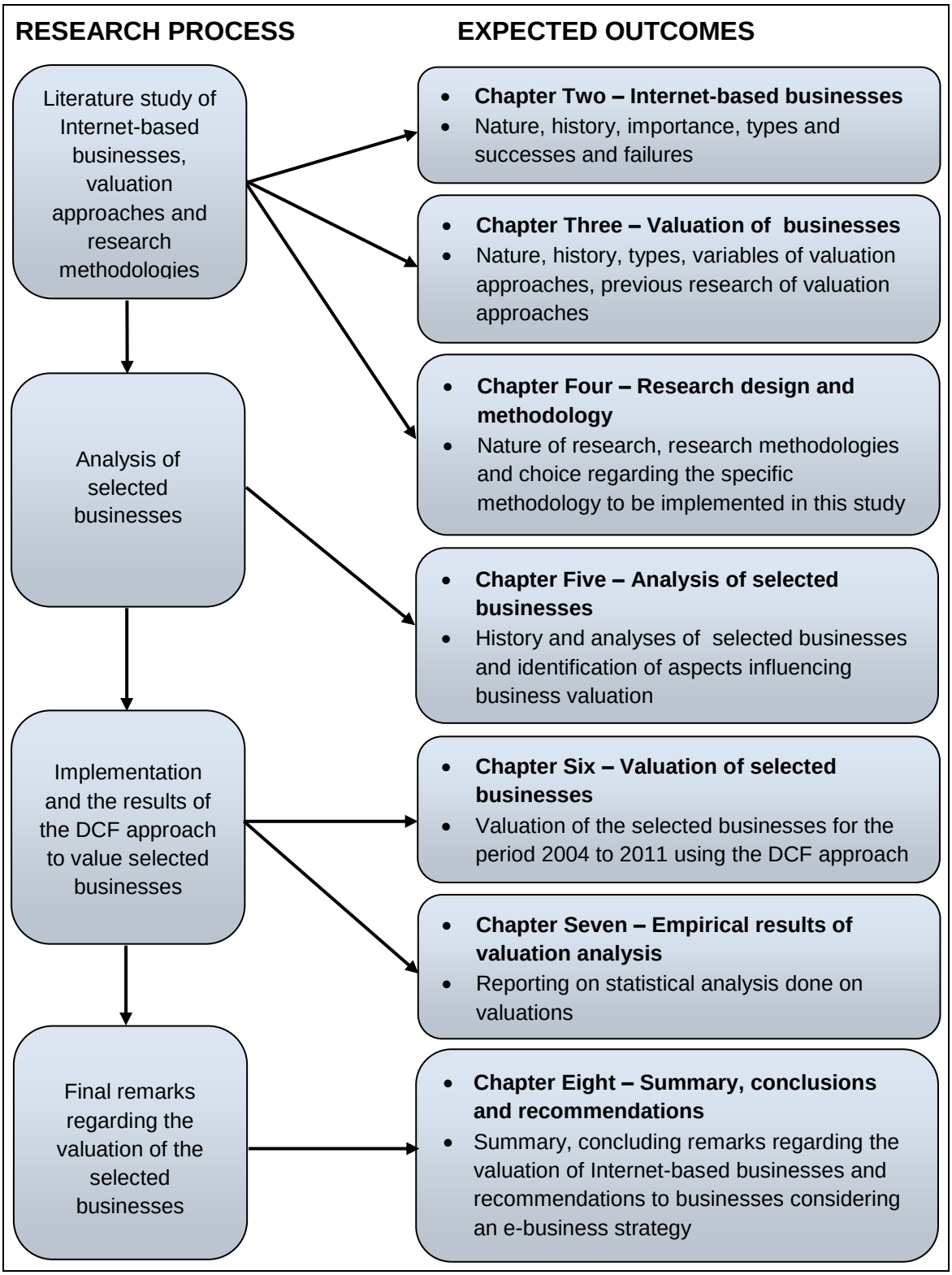
If one considers the valuation methods found in literature, such as the dividend discount model, the zero dividend growth model, the Gordon model, the variable dividend growth model and the residual income model, one needs to determine the future dividends. All the existing valuation methods make use of current and/or future dividends to determine the current share price. Clearly, if a business does not pay dividends, it poses some problems when attempting to use these valuation methods. Furthermore, to implement these valuation models, one needs a required rate of return. Determining the required rate of return to be used in these valuations is a complex task. Therefore the problem statement for the proposed study can be formulated as follows:

> *Does the value of Internet-based businesses differ during the various stages of Internet presence?*

1.4 CONCEPTUAL FRAMEWORK OF THE RESEARCH DESIGN

Figure 1.1 depicts the steps that will be followed in order to address the problem statement identified above. The various steps of the conceptual framework illustrated in Figure 1.1 will be discussed in the following sections.

FIGURE 1.1: CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

1.5 RESEARCH OBJECTIVES

In the previous sections, the problem to be investigated has been discussed. The researcher has identified the areas that need to be investigated, and the primary and secondary objectives of this study can now be stated in the following section.

1.5.1 Primary objective

The primary objective of this study is to determine and analyse the value of Internet-based businesses at the various stages of Internet presence, to determine the value creation of an e-business strategy.

1.5.2 Secondary objectives

To help achieve the primary objective of the study, the secondary objectives of the study are the following:

- Conduct a literature review on the various types of Internet-based businesses.
- Provide an overview of the different valuation methods by considering the literature and previous research regarding the valuation of brick-and-mortar and Internet-based businesses.
- Identify and implement the appropriate research methodology for this study in order to achieve the overall primary objective.
- Analyse the selected businesses by providing an operational and financial overview, an analysis of events, and a determination of what factors may have influenced the value of the businesses over an eight-year period from 2004 to 2011.
- Apply the DCF approach to the selected businesses to determine the values for the businesses for each of the eight years.
- Analyse the results of the business valuation to determine the extent of value creation of an e-business strategy.
- Make recommendations based on the valuation of the Internet-based businesses over the eight-year period, at the different Internet presence stages, to prospective businesses considering an e-business strategy, by

indicating prospective benefits.

1.5.3 Research questions

Based on the problem statement, primary and secondary objectives, the following research questions are formulated:

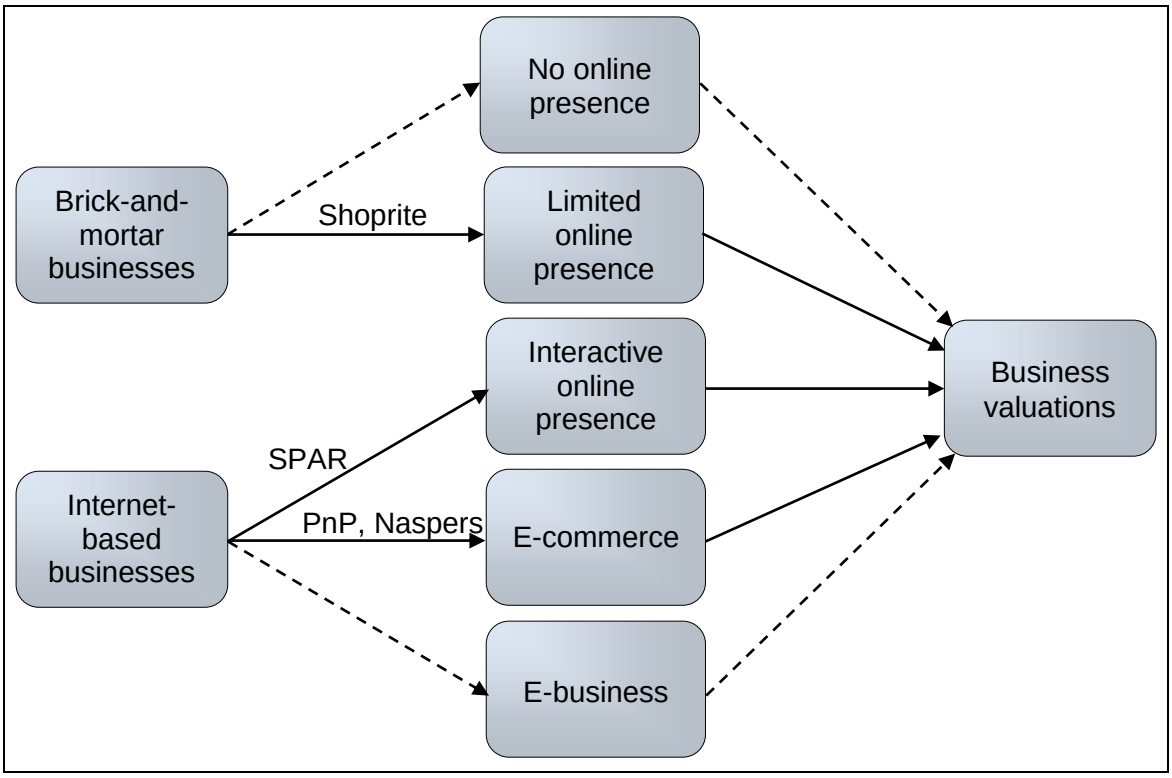
- What are the various types of Internet-based businesses in the business environment?
- Which valuation approaches should be used for brick-and-mortar and Internet-based (brick-and-click and online) businesses?
- What are the components of the various valuation approaches?
- Which of the components of the various valuation approaches are difficult to be determined?
- What are the limitations of the various valuation approaches?
- What information is necessary to perform a business valuation?
- What factors will influence the value of a business?
- Which valuation approach is the most used in the business environment?
- What are the different e-business stages of an e-business model?
- What is the influence on the business value when implementing an e-business strategy?
- How will the business value change when the business progresses to the various e-business stages?
- To what extent, if any, will the business value differ at the different stages of e-business as presented in the e-business model?
- How will the implementation of an e-business strategy influence the value of the business over time?

1.5.4 Research hypotheses

In order to achieve the primary objective of the study, a number of research hypotheses were formulated. The hypotheses were formulated to determine whether the changes in the valuation of businesses using different e-business strategies according to the e-business model stages (see Chapter Two) are similar. As all public companies listed on the Johannesburg Stock Exchange

(JSE) have some form of Internet presence and online communications with customers, the no online presence stage will not be tested. Figure 1.2 illustrates the possible combinations of the types of business and business valuations over a period of time at the various e-business model stages.

FIGURE 1.2: BUSINESS VALUATIONS AT VARIOUS E-BUSINESS MODEL STAGES

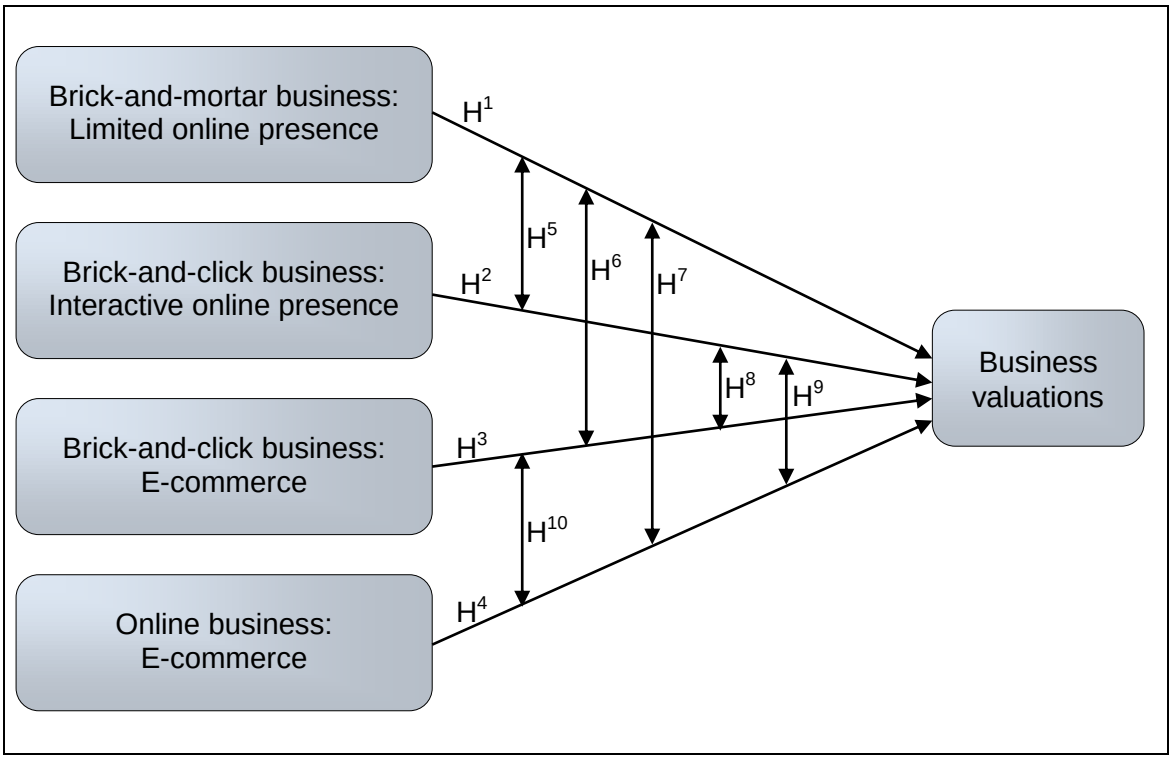


Source: Researcher's own construct.

For the study, one brick-and-mortar business and three Internet-based businesses were valued. Shoprite Holdings Limited is a brick-and-mortar business with limited online presence. One of the three Internet-based businesses is the SPAR Group Limited which is classified as a brick-and-click business with interactive online presence. The remaining two Internet-based businesses, namely Pick n Pay Stores Limited (classified as a brick-and-click business) and Naspers Limited (classified as an online business) are in the e-commerce stage of the e-business model. Each of the four businesses was valued over an eight-year period as from 2004 to 2011. For each business, the valuations were then compared to determine whether any change occurred in

the valuation over the eight-year period. The valuations of the four businesses were also compared with one another to determine whether the e-business model stages played a role in the valuation of each business. Therefore Figure 1.2 can be revised and is presented as Figure 1.3.

FIGURE 1.3: REVISED MODEL OF BUSINESS VALUATIONS AT VARIOUS E-BUSINESS MODEL STAGES



Source: Researcher's own construct.

Based on Figure 1.3, the research hypotheses are stated as follow:

H^1: There is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence over a period of time.

H^2: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence over a period of time.

H^3: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses in the e-commerce stage over a period of time.

H^4: There is a statistical significant relationship between the changes of the business valuations of online businesses in the e-commerce stage over a period of time.

H^5: There is a statistical significant relationship between the changes of the business valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses with interactive online presence over a period of time.

H^6: There is a statistical significant relationship between the changes of the business valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses in the e-commerce stage over a period of time.

H^7: There is a statistical significant relationship between the changes of the business valuations of brick-and-mortar businesses with limited online presence and online businesses in the e-commerce stage over a period of time.

H^8: There is a statistical significant relationship between the changes of the business valuations of brick-and-click businesses with interactive online presence and brick-and-click businesses in the e-commerce stage over a period of time.

H^9: There is a statistical significant relationship between the changes of the business valuations of brick-and-click businesses with interactive online presence and online businesses in the e-commerce stage over a period of time.

H^{10}: There is a statistical significant relationship between the changes of the

business valuations of brick-and-click businesses in the e-commerce stage and online businesses in the e-commerce stage over a period of time.

1.6 RESEARCH DESIGN AND METHODOLOGY

The specific research paradigm to be adopted in this study is one of the secondary objectives to be completed to ensure the achievement of the ultimate primary objective. In the study, a complete chapter will be devoted to discussing the research methodologies available. This chapter will also include the choice of research design and methodology, as well as the motivation for the specific research design and methodology chosen. The following section outlines the envisaged research design and methodology to be implemented.

1.6.1 Secondary research

The aim of secondary research is to collect appropriate and up-to-date secondary data to be used in a study. According to Myers (2009:122) and Zikmund (2003:136), secondary data is data that has been collected already for a purpose other than the one to be studied. Cooper and Schindler (2008:104) define secondary data as interpretations of primary data. Secondary data will be collected by conducting an extensive literature review on Internet-based businesses in terms of nature, types, history and importance as well as business successes and failures. A comprehensive literature research on the valuation of businesses will also be conducted. Aspects that will be covered include the nature and history of the valuation approaches, the various traditional valuation approaches, and the variables of the valuation approaches. Previous research on valuation in general and online businesses valuation will be included. The secondary sources that will be studied include books, journals, newspapers and information from Internet websites. Secondary data will be obtained from international and national data searches. The inter-library loan facilities of the library of the Nelson Mandela Metropolitan University (NMMU) will be used. The researcher will also conduct searches on EBSCO, Emerald, ScienceDirect and Google Scholar. Other online databases available will also be consulted. The library of the NMMU will be approached to assist in finding

relevant and up-to-date publications on the various individual topics to be investigated.

The secondary data gathered will be presented in two chapters. The first literature chapter (Chapter Two) will address the issue of Internet-based businesses. The nature, history and the importance of online businesses will be discussed. The various Internet-based business categories, namely brick-and-click and online businesses, will be described. Some Internet-based business successes and failures will be highlighted. It is important to note that research from a business perspective in e-business will be followed.

The second literature chapter (Chapter Three) will focus on the various valuation approaches that can be used to determine the fair value of brick-and-mortar businesses, brick-and-click businesses and online businesses. The nature, history and various types of the valuation approaches will be addressed. The different variables required to apply the valuation approaches will be described. Previous research in the field of valuation will be discussed. The chapter will conclude with previous research on the valuation of online businesses. Aspects such as the approaches followed in the valuation process, the intrinsic values and the income generation of online businesses will be discussed.

Numerous studies from an accountancy perspective (such as Ali *et al.* 2010; Bartov *et al*. 2002; Farooq, Ullah, Alam & Shah 2010; Holland 2009; Schauten *et al.* 2010; Steiger 2008; Uzma *et al.* 2010) on the valuation of intangibles exist. A few studies with regard to the valuation of online businesses exist where businesses such as Google, Amazon.com and Facebook are valued. These studies focused only on valuing these businesses using the DCF approach, although there is no consensus on the applicability of the DCF approach when valuing online businesses. Chapter Three (sections 3.5.2 and 3.6.1) will provide more detail regarding the issue of applicability of the various valuation approaches when valuing online businesses. One important distinction between the proposed study and the previous studies is that this study will value one online business, two brick-and-click businesses and one

brick-and-mortar (with Internet presence only) over an eight-year period (2004 to 2011). The purpose will be to establish whether the value of the business will differ at various Internet presence stages. The choice of the four businesses will be motivated and fully explained in Chapter Four.

1.6.2 Primary research

As this study is focusing on valuation of businesses, existing sources (such as annual reports) will be used to source the required data. The collected data from secondary sources will be analysed and reworked into a usable format for the valuation process. Therefore the main purpose of this study is not to collect new primary data.

This section will focus on the appropriate research paradigm to be adopted in this study. The population, sample, sampling method, the measuring instrument, data collection and data analysis to be implemented will also be described. Chapter Four of the study will discuss the various research paradigms, population, sample, sampling methods and measuring instrument to be adopted in this study. The data collected will be used in the analyses and valuation of the selected businesses which will be reported on in Chapters Five (overview of selected businesses), Six (values based on the DCF approach results) and Seven (report on statistical data analysis of valuations).

(a) Research paradigms

Two paradigms can be distinguished, namely the positivistic and the phenomenological research paradigms. The positivistic paradigm is known as quantitative, objectivist, scientific, experimentalist or traditional research, while the phenomenological paradigm is known as qualitative, subjectivist, humanistic or interpretive research (Collis & Hussey 2003:47; Cooper & Schindler 2008:164).

The positivistic paradigm emphasises the quantification of the data collected and analysed. It is a deductive strategy where relationships between theory and research are tested. The aim of the phenomenological paradigm, on the other hand, is to emphasise content and to develop new theories instead of testing

existing theories. Furthermore, if one considers the principal orientation of the research to the role of theory in relation to research, the positivistic paradigm uses deductive reasoning, and existing theory will be tested. The phenomenological paradigm differs from the positivistic paradigm in the sense that inductive reasoning is used, and a new theory will be generated rather than deductive reasoning and theory testing. This paradigm creates theory, and different categories are developed as a result of the analysis of the data collected. (Bryman & Bell 2007:28, 157, 404; Creswell 2009:3-4).

Myers (2009:5) states that one of the benefits of qualitative research is that it allows the researcher to comprehend the context in which decisions and activities are undertaken. According to Cooper and Schindler (2008:162), the purpose of quantitative research is to measure consumer behaviour, knowledge, opinions or attitudes, while qualitative research focuses on how and why things happen the way they do. For the purpose of this study, a positivistic paradigm will be followed. A positivistic paradigm will be adopted because four businesses (one brick-and-mortar and three Internet-based businesses) providing consumer services (three in the food and drug retail industry and one in the media industry) will be valued by reworking secondary quantitative data into more easily understandable information. A more detailed discussion of the research methodology will be provided in Chapter Four.

(b) Population, sample size and sample selection

Population or universe are described as all people or group of entities that may be part of the research because of a number of similar characteristics (Quinlan 2011:143; Zikmund, Babin, Carr & Griffen 2010:387). With regard to the population of the present study, the businesses that are public companies listed on the JSE will form part of the population. The reason for the businesses to be public companies is the accessibility to the businesses' annual reports. Private companies and businesses with other forms of ownership do not make their annual reports available to the public. The population is restricted to public companies in South Africa, because the data required for the valuations, such as the annual reports, are not available for foreign public companies and the

financial statements available are not standardised in the same manner as the South African financial statements.

A sample is a subset consisting of only a few people or group of entities selected from the population (Quinlan 2011:143; Zikmund *et al.* 2010:387). The researcher will analyse and value four businesses using secondary data; one brick-and-mortar business with limited online presence and no online trading taking place via the Internet (Shoprite Holdings Limited) and three Internet-based businesses where some form of actual online trading is conducted via the Internet (The Spar Group Ltd and Pick n Pay Stores Ltd as brick-and-click businesses and Naspers Ltd as an online business). All four businesses to be valued are in the consumer services sector. Three of the four businesses are in the food and drug retail industry (retailers and wholesalers subsector), while the fourth business is in the media industry (broadcasting and entertainment subsector). The food and drug retail industry (retailer and wholesalers subsector) comprises four businesses, three of which will be included in the study. A detailed discussion and motivation of the businesses included in the study will be given in Chapter Four.

Saunders, Lewis and Thornhill (2009:213) distinguish between probability and nonprobability sampling. Probability sampling refers to the selection of a representative group from the population, and each member of the population has an equal opportunity to be included in the group selected. In contrast, in nonprobability sampling, the researcher makes little attempt to obtain a representative sample and the participants will not have an equal opportunity to be included in the sample. Cooper and Schindler (2008:169-170) and Zikmund *et al.* (2010:396) further identify three types of nonprobability sampling, namely purposive sampling, snowball sampling and convenience sampling. In purposive sampling, participants are selected for their unique characteristics and experiences. Snowball sampling occurs when one participant refers the researcher to other possible participants who have similar unique characteristics and experiences. In convenience sampling, the researcher selects readily available individuals as participants.

A variety of businesses from various sectors and industries can be found on the JSE. The retail consumer services, with specific reference to the food and drug retail industry, were selected as they are of growing importance to all consumers, as highlighted in the literature. Three of the four businesses from the food and drug retail industry will be included in the study. The business not included in the study is the holding company of one of the included businesses. One media company, also in the consumer services sector, was selected because the principal activities of the company were embedded in technology and Internet-based activities. Therefore the media company was selected using nonprobability sampling. For the purpose of this study, judgement (purposive) sampling was used to select the companies to be valued as all the companies in the sample were required to have some form of e-business strategy.

(d) Data collection

The collection of secondary data was explained in section 1.6.1. To collect the secondary data, the relevant annual financial reports from 2004 to 2011 were obtained from the four companies' websites. The McGregor BFA Fin24Expert package was also used to extract the required data for the business valuations. Data was also gathered from the South African Reserve Bank, the Johannesburg Securities Exchange, and other sources of available public information that might influence the market value of the businesses. The collection of the secondary data took approximately one month. The researcher collected all the secondary data.

The reliability and validity of quantitative research are very important. Reliability is a measurement of the internal consistency of a measuring instrument. Internal validity refers to the extent that a variable is truly responsible for any variance in the dependent variable. External validity is the extent to which the results can be generalised beyond the selected sample. (Zikmund *et al.* 2010:274, 277, 305). The reliability and validity of the secondary data collected will be discussed below when addressing the issue of trustworthiness. The usual reliability measurements could not be used to determine reliability because no measuring instrument or interview guide was used. Therefore, to ensure the reliability and the validity of the data captured in the database

created by the researcher for the valuation process, experts in the field of accounting were asked to verify the data collected as well as calculations, to ensure correctness. All the valuations of all the businesses were calculated using two methods as the two methods should yield the same result. This is known as triangulation. Triangulation occurs when different data collection methods are used within the same study to ensure that the data is indeed reliable and valid. The data collection can be done over different times or from different sources. (Gray 2009:36; Saunders *et al.* 2009:146). All the equations used in the valuation process were included in the Microsoft Excel Spreadsheet. The equations and all the calculations done by the researcher were checked by two independent accountants, one being a chartered accountant working in practice and one academic with a Masters-degree in accounting with specific reference to valuations.

(e) Data analysis

The secondary quantitative data collected was transformed into usable data to calculate the valuations of the businesses over an eight-year period. The valuations of the businesses were calculated for each business and for all eight years. For each business, the change (growth) in the business valuations over the period investigated was determined. The valuations of the various businesses were also compared with one another over the investigating period. The Pearson's product moment correlation coefficient was calculated to assess the strength of the relationship between the valuations of the four businesses. As stated by Gray (2009:488) and Saunders *et al*. (2009:451, 460), the Pearson's product moment correlation coefficient is used to assess the strength of a relationship between numerical data. The t-test is used to determine whether significant differences exist between two sets of data and this test can also be used with sample size smaller than 30 (Oates 2006:261, Saunders *et al.* 2009:457). The one-sample t-tests were used to determine whether statistically significant differences exist between the five valuations of each of the businesses used in the investigation. The dependent t-tests were used to establish whether there were significant differences between the valuations of the businesses. According to Gray (2009:473), Saunders *et al.* (2009:457) and Oates (2006:262), dependent t-tests are used to determine whether statistically

significant differences exist between two sets of data by comparing the means of the two groups using a measure of the spread of the scores. The dependent t-tests were implemented as the valuations used in the analyses were calculated using the same valuation approach. An analysis of the events as recorded in the annual reports of the sample businesses was also provided as these events might have influenced the valuation of the businesses. If such events were found, these events would be linked to the valuations of that particular year for the business in question.

1.7 SCOPE OF THE STUDY

The study will focus on the primary research objective, which is to determine whether retail businesses focusing on e-business strategies have greater opportunities to increase the value of the business. Therefore businesses are categorised into brick-and-mortar, brick-and-click and online businesses. Business types are also linked to the various e-business model stages.

1.8 CONTRIBUTION OF THE STUDY

Businesses can be categorised into brick-and-mortar, brick-and-click as well as online businesses. Although the main aim of the study is to determine whether the values of Internet-based businesses will increase after implementing an e-business strategy, brick-and-mortar and Internet-based businesses (brick-and-click and online businesses) will be included in the study since comparisons will be made between the values of the selected businesses over time. The research will thus aim to establish whether the benefit of implementing an e-business strategy can be seen in the valuation of businesses to assist in future strategic decision-making regarding the various e-business strategies.

1.9 STRUCTURE OF THE RESEARCH

The study will be divided into the following seven chapters. Chapter One will indicate the scope of the study and methods used. Aspects to be included are: problem identification; aim of the study; the importance of the study; a brief overview of the research methodology; and the division of the content to follow in the subsequent chapters.

Chapter Two will address the topic of Internet-based businesses. The nature, history and importance of Internet-based businesses will be discussed. Internet-based businesses will be classified into brick-and-click and online businesses. Online businesses include all the businesses that use only the Internet for all transactions, namely, click-only businesses, Internet search engines, Internet social networks and other businesses (such as auctions and blogs). A historical overview of each type will be given. Several Internet-based businesses' success and failure stories will be given.

Chapter Three will focus on the nature of valuation where various valuation concepts, the purpose of valuation, valuation of businesses of different sizes and the valuation of real estate will be discussed. The history of valuation approaches will also be touched on. Overviews of the different valuation approaches available to determine the value of brick-and-mortar and brick-and-click businesses will be given. The approaches to be discussed include the dividend discount method; the zero growth model; the constant growth method; the non-constant growth method; the free cash-flow valuation model; price ratios; the economic value-added performance measurement (EVA) also known as the residual income model; the market value-added (MVA) performance measurement; and the real options approach. The variables of the valuation approaches will also be identified. An overview of previous research in the field of valuation will be provided. The chapter will conclude with a discussion on the valuation of online businesses.

The method of the study will be discussed in Chapter Four. The research design, the research methodology, data collection and data analysis chosen will be discussed in detail.

Chapter Five will provide an analysis of the four selected businesses. An operational and financial overview of each business will be provided, and the events that may have influenced the market value of the businesses will be discussed. The main events of each business will be tabulated. Each business will also be categorised according to the e-business model stages, as proposed in Chapter Two, based on the activities as found on the websites of the

businesses.

The valuation of the four selected businesses will be reported in Chapter Six. The assumptions as well as the estimates used in the valuation process will be discussed and motivated. Five valuations for each business will reported on. These valuations are the valuations using the R157 government bond as the risk-free rate for single and multiple period valuations, valuations using the R153 government bond as the risk-free rate for single and multiple period valuations and the valuations as calculated by McGregor BFA Fin24Expert. The share prices of the businesses will also be provided.

The purpose of Chapter Seven is to discuss the statistical analysis of the five valuations and share prices. Basic descriptive statistics such as the mean, median, minimum, maximum, range and standard deviation will be provided and discussed. T-tests will be conducted to test the research hypotheses as formulated in Chapter One. The one-sample t-test and the dependent t-test will be implemented to test the research hypotheses.

Chapter Eight will conclude with a summary of the study and conclusions drawn from the results of the valuation. Recommendations will be made regarding the benefit of implementing an e-business strategy for all businesses in terms of value creation. The contribution made by the study will be highlighted. The limitations and future research areas will also be provided.

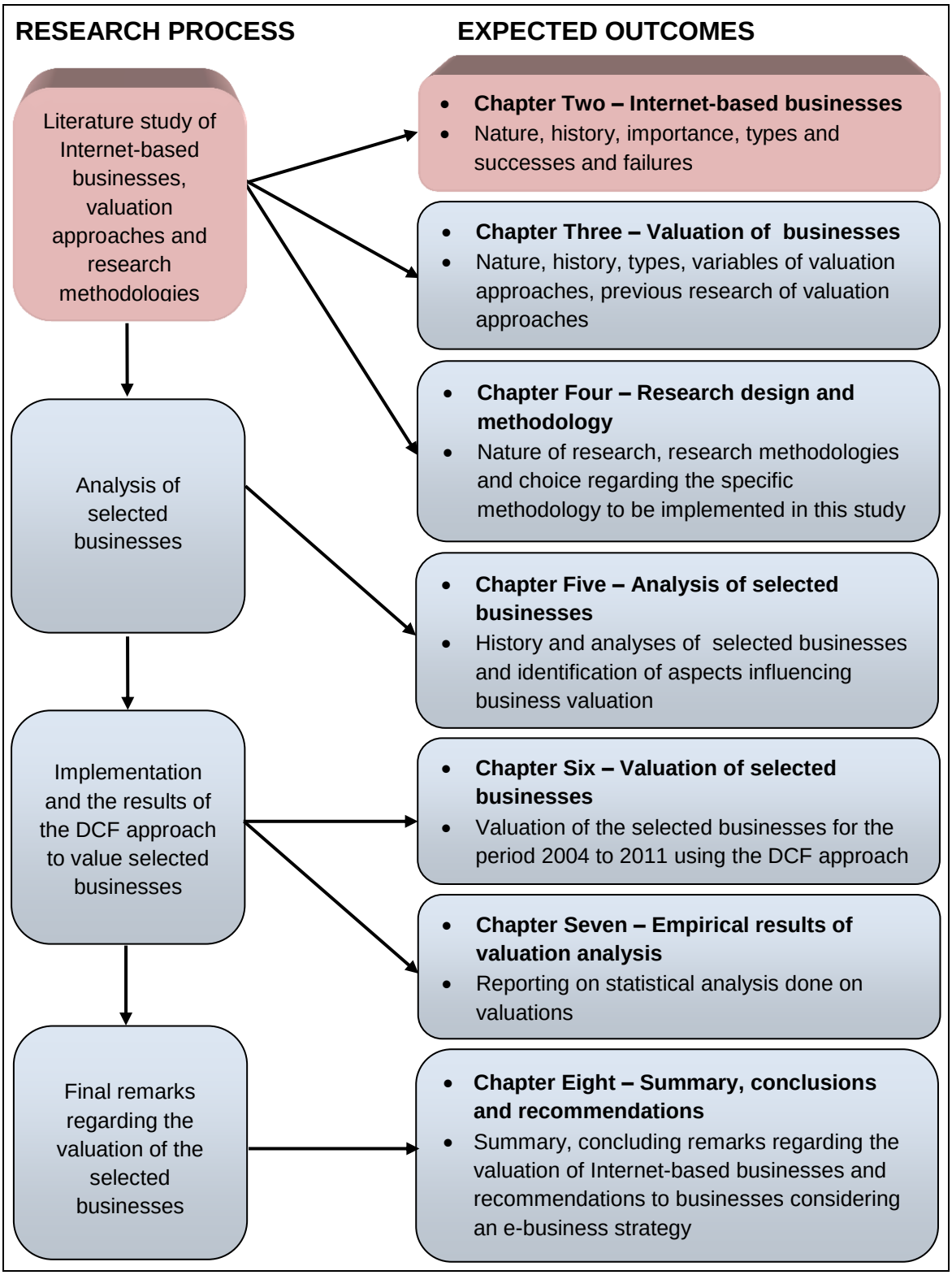
CHAPTER TWO
INTERNET-BASED BUSINESSES

2.1 INTRODUCTION

In Chapter One the importance of business valuation was highlighted. It was furthermore stated that various methods are available to be used by businesses to determine fair market-related values for these businesses, in particular brick-and-mortar and brick-and-click businesses. Some of the reasons found in literature why brick-and-mortar businesses add online presence are in order to remain competitive and to maintain or, to increase their market share. Many businesses have an online presence only in providing the business details and a product or service catalogue, whether through a conscious decision or whether due to the nature of the business itself. Therefore it is important for owners, shareholders and future investors to be able to determine the possible future benefit of implementing such an e-business strategy, whether in terms of business performance or business value.

The primary objective of this study is determine whether the valuation of Internet-based businesses will differ at the various stages of online presence since it is important for owners, shareholders and future investors to obtain fair market-related values to assist the investment decision-making process. One of the secondary objectives that were formulated to assist in achieving the primary objective is to discuss the various types of Internet-based businesses. For the purpose of the study, Internet-based businesses refer to all businesses that have some e-business strategy, whether it is online presence only, or using the Internet extensively for all trading. These businesses will include brick-and-click and online businesses. Online businesses include all businesses with an e-business strategy, specifying that all transactions will be done using the Internet. Reference to online businesses includes businesses such as click-only businesses, Internet search engines, Internet social networks, blogs and auctions. Figure 2.1 is reproduced from Chapter One to illustrate the applicability of this chapter regarding the conceptual framework of the research process.

FIGURE 2.1: CHAPTER TWO AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

Therefore, this chapter will focus on Internet-based businesses. Issues relating to Internet-based businesses that will be included are the nature, types, history, e-business model stages and importance of Internet-based businesses. It will conclude with an overview of various success and failure stories of online businesses.

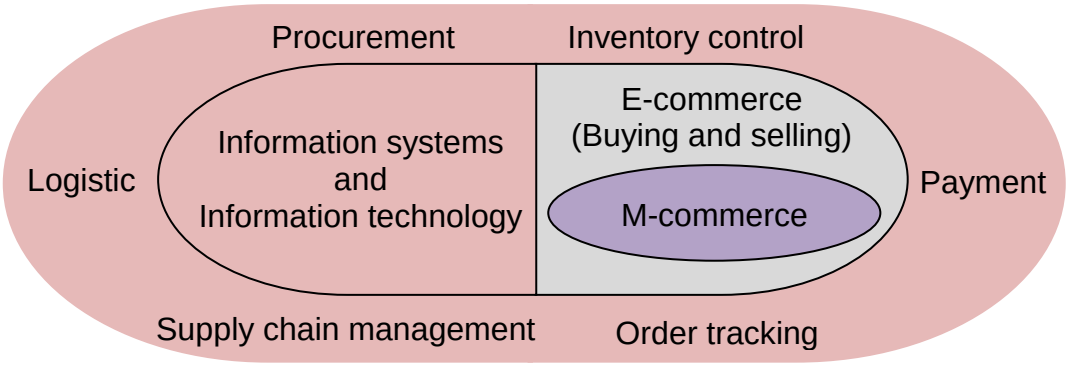
2.2 NATURE OF INTERNET-BASED BUSINESSES

As already mentioned, a distinction is made between e-commerce and e-business. According to McKay and Marshall (2004:4-5), Papazoglou and Ribbers (2006:2-3) and Strauss and Frost (2009:5), e-commerce refers to the commercial transactions required to generate income using the Internet and other computer-mediated activities. E-business uses information technologies (IT), information systems (IS) and Internet technologies:

- to assist commercial transactions with customers with the purpose of improving business performance;
- to conduct e-learning; and
- to assist electronic transactions within the business. (Borges, Hoppen & Luce 2008:883; Botha *et al*. 2008:3; Papazoglou & Ribbers 2006:2-4; Strauss & Frost 2009:5; Turban *et al*. 2006:4).

Combe (2006:1-2) and Li (2007:9-10) state that the main difference between e-commerce and e-business is that e-business includes procurement, logistics, supply chain management, payment, inventory control and order-tracking activities. Therefore e-commerce is regarded as a subset of e-business. Jelassi and Enders (2005:4) agree with Combe (2006:1-2) that e-commerce is a subset of e-business, and that mobile e-commerce (also known as m-commerce) is a subset of e-commerce. M-commerce is the use of mobile technology, such as PDA and cell phones to conduct business (Klopper *et al*. 2006:408). The relationships between e-business, e-commerce and m-commerce are illustrated in Figure 2.2.

FIGURE 2.2: RELATIONSHIP BETWEEN E-BUSINESS, E-COMMERCE AND M-COMMERCE



Source: Adapted from Jelassi and Enders 2005:5; Li 2007:9-10; McKay and Marshall 2004:5; Strauss and Frost 2009:5.

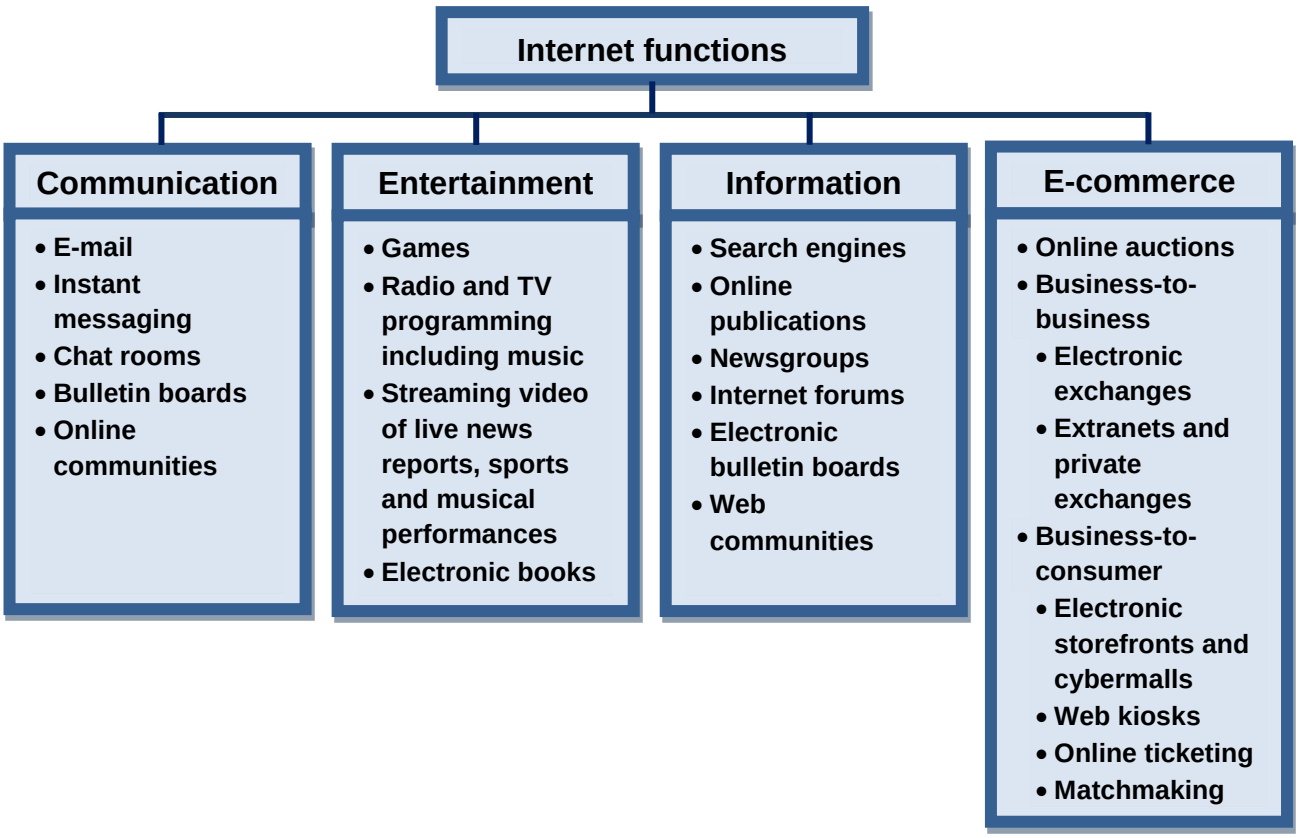
It is important to distinguish between e-business and e-marketing. As mentioned earlier, e-business is much more than buying and selling using the Internet as a platform; it includes dealings with current and potential customers and business partners (Bosch, Tait & Venter 2011:563). E-marketing forms part of the e-business strategy (Klopper *et al.* 2006:388) because it refers to mass marketing to current and potential customers (Botha *et al*. 2008:128, 152). Parkin (2008:4-5) describes e-marketing as being the same as marketing but with the difference that it focuses on customers whose attitudes and behaviours are based on their online experiences. According to Strauss and Frost (2009:6), e-marketing is the use of information technology to create communication with customers, with the aim of improving customer relations that will provide the business and its stakeholders with monetary and non-monetary benefits. The online experience refers to the use of digital technology and peer-to-peer collaboration.

Brick-and-click and online businesses (collectively referred to as Internet-based businesses) make use of e-business. Therefore a discussion of the various categories of Internet-based businesses, as well as the history of the Internet, is necessary, as the Internet is the main building block of all online transactions.

2.3 TYPES OF INTERNET-BASED BUSINESSES

In the previous chapter, reference was made to brick-and-mortar businesses, brick-and-click businesses, and online businesses. This section will focus only on businesses that use the Internet for trading purposes; therefore the focus will be on the various types of Internet-based businesses. Kurtz and Boone (2006:121-124) identify four functions of the Internet, namely, e-commerce, information, communication, and entertainment. Figure 2.3 provides a summary of the functions.

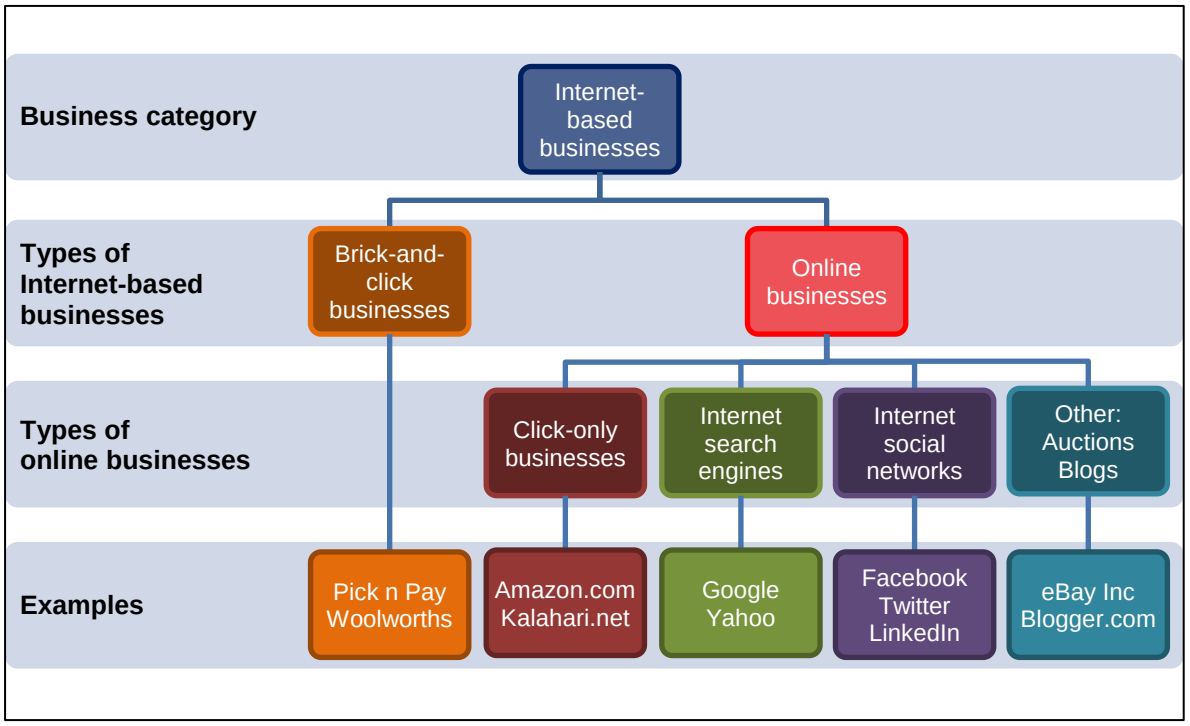
FIGURE 2.3: FUNCTIONS OF THE INTERNET



Source: Adapted from Kurtz and Boone 2006:121.

For the purpose of the present study, Internet-based businesses will be classified based on the extent of Internet usage (two types of Internet-based businesses) and the purpose for which the Internet is used (four types of online businesses). Figure 2.4 illustrates the various types of Internet-based businesses as used in the study.

FIGURE 2.4: TYPES OF INTERNET-BASED BUSINESSES



Source: Researcher's own construct.

An overview of various types of Internet-based businesses, namely brick-and-click and online businesses where online businesses include click-only businesses, Internet search engines, Internet social networks and other types will be provided in the sections to follow. Examples of the various types of businesses will also be discussed.

2.3.1 Brick-and-click businesses

Brick-and-click businesses are the expansion of the traditional brick-and-mortar businesses into the e-business environment. Williams (2009b:239-240) states that the purpose of adding the click-option to the established brick-and-mortar retail businesses is to use the click-option as competence-enhancing and sustaining force in the industry. As described by Combe (2006:413), Ko and Roztocki (2009:3), Parkin (2008:230) and Turban *et al.* (2006:5), brick-and-click businesses trade from physical premises in the same way as the traditional brick-and-mortar businesses, but online trading using the Internet is also taking place. Therefore, brick-and-click businesses use multiple distribution channels to reach their target market(s) by adding an online channel to the conventional

distribution channels (Botha *et al.* 2008:280; Dennis *et al.* 2002:287-288). To be regarded as a brick-and-click business, the click-option needs to be used to perform some form of monetary transaction.

The respondents in a study by Wadsworth, Little, Wheat and Swartz (2006:27) stated that brick-and-mortar retailers were more confusing than click-only retailers, and click-only retailers were regarded as providing excellent value, which was not the case with brick-and-mortar retailers. It was also found that shopping comfort, sales assistance and store prestige were highly regarded by customers, irrespective of whether the businesses were brick-and-mortar or click-only. Therefore, brick-and-click retailers should take the best from both types of business to maximise customer perceptions.

The importance of the inclusion of an e-business strategy on financial performance is highlighted by research done by Ko and Roztocki (2009:1-27). Rosencrance, as cited by Ko and Roztocki (2009:3), estimated that online sales would grow by 14% per annum from 2008 until 2012, while the growth of sales from physical premises would only increase by 2.6% per annum. Oliva *et al.* (2003:83) state that many brick-and-mortar businesses use the 'get big fast' strategy, which is the implementation of an e-business strategy to create brick-and-click businesses. Unfortunately not all the brick-and-click businesses implementing e-business strategies have been successful. A discussion of the business successes and failures can be found in section 2.7.

The pricing strategy of brick-and-click businesses should also be carefully evaluated. If the two distribution channels, that is the brick-and-mortar channel and the online channel, are allowed to be in direct competition with one another, different pricing strategies may be followed. However, if the online channel is regarded as an extension of the brick-and-mortar channel, then the same pricing strategy should be followed. It is also important to realise that customers will use the distribution channel which will yield the greatest benefit to the customer (Yan 2008:49-51). In the banking industry, banks provide incentives to clients to make use of the online channel (for example online banking and the use of automated teller machines) rather than conducting over-the-counter

transactions inside the bank itself. The incentives used include the pricing strategy of transactions (over-the-counter transactions are more expensive) and the availability of the automated teller machines. (Allen, Clark & Houde 2009:2-4).

One the Africa's largest and most successful brick-and-click retailers is the Pick n Pay Group. In 2011, the Pick n Pay Group consisted of 500 corporate stores and 379 franchise outlets. Using the ten-year compound annual growth with the year 2002 as the base year, the turnover growth was 14.3% while the trading profit growth was 14.9%. The headline earnings per share increased by 10.4%, and the net asset value per share for the group grew by 14.5%. (Pick n Pay Integrated Annual Report 2011 2011:2-3, 7). Pick n Pay Group was a traditional brick-and-mortar business, but in June 2001 the business launched online shopping to their customers, and therefore the business transformed to a brick-and-click business (Creating a new generation 2012). A more detailed analysis of the Pick n Pay Group is provided in Chapter Five.

2.3.2 Click-only businesses

Click-only businesses refer to all online businesses where products and/or services are trading using the Internet (Krishnamurthy 2003:73). Therefore click-only businesses do not have physical premises where customers can buy products and/or services. One well-known example of a click-only business is Amazon.com.

Jeff Bezos founded Amazon.com in 1994. The purpose of this business was to sell books online, although it was not the first online bookstore on the Internet. Bezos decided on books and music because they are standardised products customers will know. Amazon.com went public in May 1997. Unfortunately Amazon.com made losses in the early years, and only in 2004 did the business report a consistent trading profit. Investors and lenders provided the required finance during the difficult years. The long-term debt of Amazon.com amounted to US$1.5 billion in 1999. The major reasons for the early cumulative losses of Amazon.com were a number of issues including overspending on marketing and advertising, poor investments, business growth which was too rapid, and

high technology costs. (Amazon.com, Inc. 2004; Combe 2006:294; Krishnamurthy 2003:102, 122-123; Levis 2009:86-91).

The customer base of Amazon.com grew at a remarkable rate. As from December 1997 to December 2001, the growth rate of new customers was approximately 1 547%, as the number of new customers increased from 1.5 million to 24.7 million. The growth rate of repeat customers for the period 1998 to 2000 was nearly 22%, as the number of repeat customers increased from 64% to 78%. One of the reasons cited by Bezos for this tremendous growth was that the customers using the Internet were exclusively early adopters who were willing to participate in new opportunities. (Amazon.com, Inc. 2004; Krishnamurthy 2003:104; Levis 2009:91).

Amazon.com's sales reached US$16 million in the first quarter of 1997, although losses amounting to US$3 million were still made. The initial public offering (IPO) brought in US$54 million in equity, and Amazon.com was then valued at US$548 million. The business was also in a position to obtain credit to the value of US$75 million for expansion purposes. The sales increased rapidly after the IPO, and sales more than doubled to US$148 million at the end of 1997. One of the successful strategies Amazon.com used was to become customer-centric by providing advice to customers, based on their previous online purchases. (Levis 2009:95, 98-99). In December 2000, the share price was US$19.88 (Stone 2000).

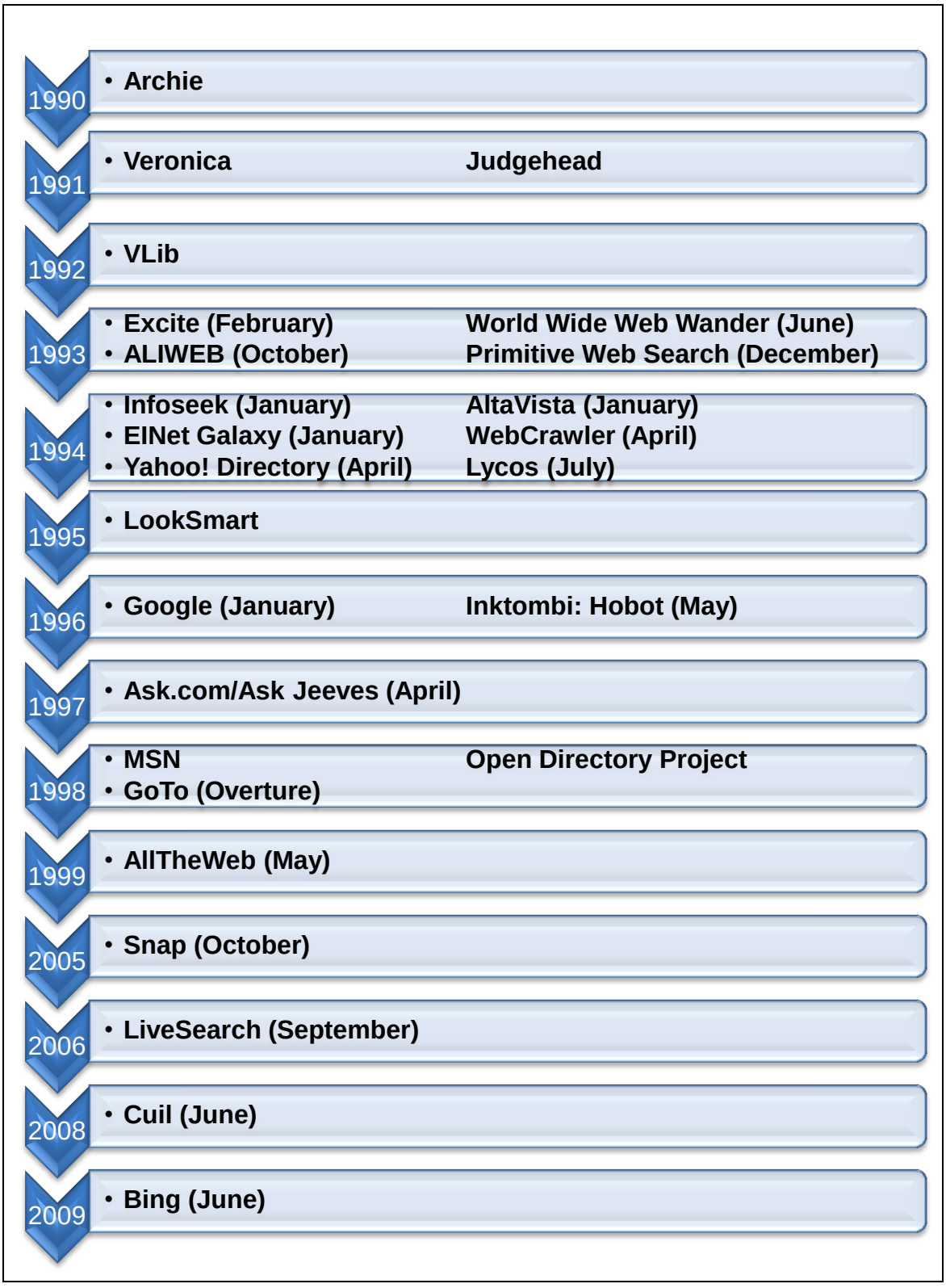
A well-known South African online business is Naspers Ltd. Naspers Ltd can be regarded as an online business as it is a multinational media group with principal operations in Internet platforms, pay-television services and the provision of related technologies and print media. Naspers Ltd does not have a physical store where customers can engage in some form of monetary transactions. Naspers Ltd has business interests focusing on Internet operations in China, India, Southern Asia, Russia, Eastern and Western Europe, the Middle East, Latin America and Africa. The pay-television services are offered in South Africa by MultiChoice South Africa (MCSA) and to sub-Saharan Africa by MultiChoice Africa (MCA). Irdeto provides protection

solutions to subscriber platform operators and other providers of digital content. Naspers Ltd is also responsible, through Media 24, for the publication of newspapers, magazines and books in Africa, and has print interests in Brazil and China. (Naspers Fact Sheet 2012). Therefore Naspers Ltd is not only a brick-and-mortar business, but has extensive operations in the click-environment as well. The revenue of Naspers Ltd increased by 127.9% from R19 790m in 2007 to R45 103m in 2011. The headline earnings per share increased from 965c in 2007 to 1 612c in 2011, which is a 67.0% increase. (Naspers Integrated Annual Report 2011 2011:5). An overview of Naspers Ltd is given in Chapter Five.

2.3.3 Internet search engines

Internet search engines include all the online businesses whose primary function is to find information on the web (Bellis 2011; Krishnamurthy 2003:163). A search engine is an automated mechanism that sorts and identifies information on the web. The information is sorted according to key words, where a key word refers to a single word or a short phrase. (Parkin 2008:147-148). Different users use search engines in different ways. One of the ways people use search engines is to conduct economic transactions. Other people use search engines to improve online accessibility to their business websites (Jansen & Mullen 2008:115). Figure 2.5 provides a timeline based on the year of creation of the different search engines as from 1990.

FIGURE 2.5: TIMELINE BASED ON YEAR OF SEARCH ENGINE CREATION



Source: Adapted from The history of search engines – An infographic 2010; Wall 2010.

Google is an example of a search engine; it was founded in 1998 by Sergey Brin and Lawrence Page. Advertising.com was sold to AOL in June 2004, and because of Advertising.com linkage with Google, the deal was made at US$435 million. (Bellis 2011; Farzad *et al.* 2005; Google, Inc. 2003; History of search engines 2011). On 19 August 2004 Google had its first IPO of 22.5 million shares at US$85 per share, and a price-earnings ratio of 118. The value of the IPO was determined by using the IPO auction model instead of the Wall Street book-building method. The original plan was to sell 28.3 million shares at a price between US$108 and US$135 per share, but it was dropped to a share price range from US$85 to US$95 after negative publicity in the Playboy Magazine. The value of Google was US$23 billion. The shares were offered in a Dutch auction. (Bodie, Kane & Marcus 2008:60; 'Enthusiasm for Google' 2006; Ritter 2007; Schneider 2011:3; Wall 2010). On 16 September 2004 a secondary share offering to the value of US$4.2 billion was announced (Farzad *et al.* 2005). In January 2004, the search engine Yahoo! acquired AlltheWeb and AltaVista (Google history 2011; History of search engines 2011).

On 11 January 2006, Google's share price was US$475, and it plummeted to US$343 on 14 February 2006. The share price then increased, and on 24 October 2006 it escalated to US$473.31, which was an 11% increase over a five-day period. Google was valued at US$145 billion. According to analysts, it was estimated that the share price could reach US$520 at the end of 2006. Septet Systems sold advertisements through Google, and the income generated was divided between the two businesses. In 2006 is was reported that Google controlled approximately 70% of all the search advertising online, and between 8% and 12% of online payments were made using Google Checkout, while 3% to 4% were using eBay's PayPal. (Holahan 2006). YouTube was acquired by Google on 6 October 2006 for US$1.65 billion, and DoubleClick on 13 April 2007 at a cost of US$3.1 billion (Shifrin 2006; Wall 2010).

In 2008, Google had a search-query share of 60% in the USA, followed by Yahoo! with 23% and MSN Live with 10%. In the UK, the picture was very different as Google had a search-query share of 90%. In China, Google was not

so popular, as Baidu was dominating the search-query market (Parkin 2008:147-148). On 25 June 2009 all the major search engines crashed; the reason for this crash was an overload of searches on that day (History of search engines 2011).

During August 2010, Google acquired Like.com, which is an online shopping site where customers can buy clothing accessories. Other transactions took place when Google bought the social media website Slide for US$182 million and Jambool (purchase price not known). (Hall 2010b:22-23). Google also acquired BeatThatQuote.com for £37.7 million (Ashford 2011a).

With the entrance of the various social networks, Google devised a different strategy to encourage the employees to increase income. The employees were informed that 25% of their annual bonuses were at stake if the required performance was not achieved. (Ingram 2011).

The largest search engine in Russia, Yandex, offered 52.17 million shares in its IPO on NASDAQ on 20 May 2011. The share price range was from US$20 – US$22, thus the offering was approximately US$1.1 billion. The market capitalisation of Yandex would be US$6.7 billion. Yandex's revenue for the first quarter of 2011 was US$137 million, which was 65% higher than for the same period in 2010. (Geron 2011a).

2.3.4 Internet social networks

Internet social networks are the online social interaction amongst individuals using information technology. People using these social networks communicate with other people they know or do not know. Experiences and opinions regarding a wide array of aspects are shared with other people. The greater the trust amongst people, the more detailed will be the information shared. The value of social networks is therefore embedded in the trust that individuals place in the social network in terms of privacy and in the reputation of the social network without face-to-face contact. (Adali, Escriva, Goldberg, Hayvanonych, Magdon-Ismail, Szymanski, Wallace & Williams 2008:1; Bhuiyan, Jøsang & Xu 2010:207-211; Boyd & Ellison 2008:211; Clemons 2009:46; Wirtz, Schilke &

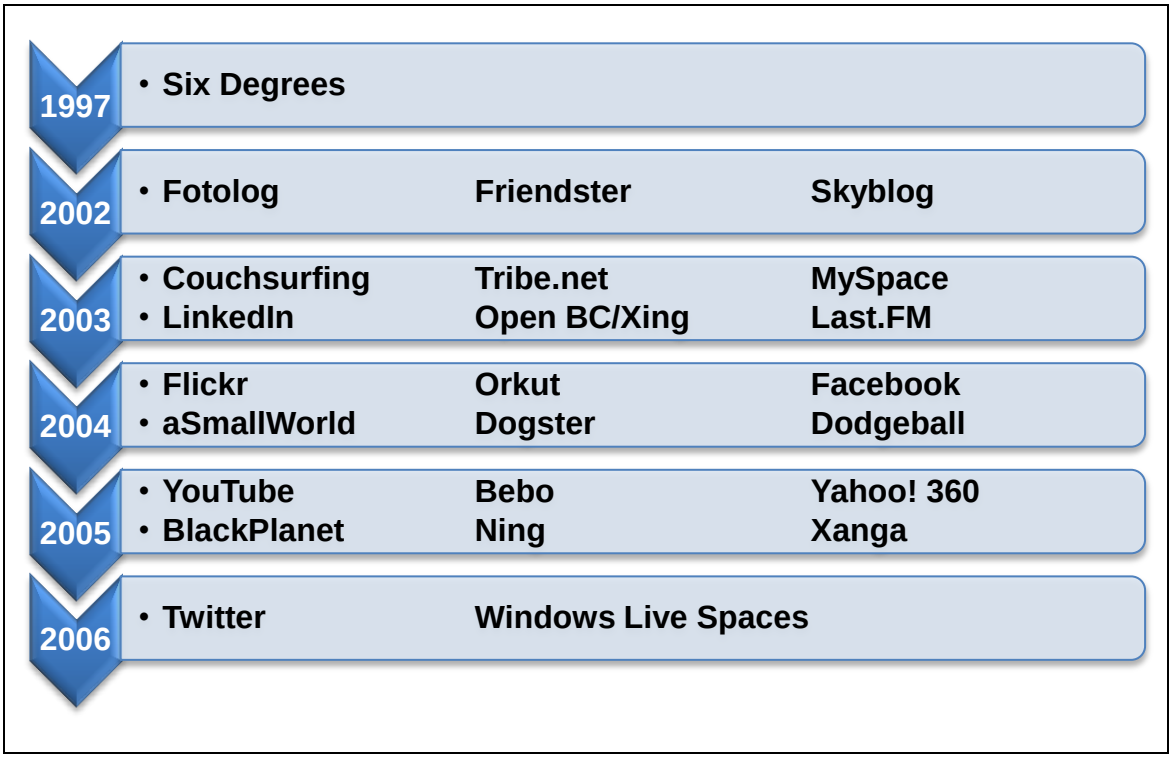
Ulrich 2010:276). Social networks are defined by different authors (see Beer 2008:517-519; Boyd and Ellison 2008:211) in different ways.

Social networks can be used in the corporate environment to gauge customers' opinions that can be used to improve customer relationships (Ellison, Lampe & Steinfield 2009:6-9; History of social networking websites 2011). According to Gneiser, Heidemann, Klier, Landherr and Probst (2010:1) and Joinson (2008), the use of online social networks has not only increased tremendously in the public sphere, but also in the corporate environment. Furthermore, Wirtz *et al.* (2010:281) state that social networks are not a "fun tool" any more, but have changed into a medium that professionals can use to interact and establish new contacts. Boyd and Ellison (2008:212) highlight the following social networking developments:

- Facebook was developed in 2004 for use at Harvard University. In 2005 the high school networks were launched and during the beginning of 2006 the corporate networks were implemented. Facebook was opened to everyone during the latter half of 2006.
- BlackPlanet was originally started in 1999 but relaunched in 2005.
- CyWorld was launched in China in 2006 and in the US in 2006.

If businesses use social networks to conduct business, it is possible to increase income generation, which will have a positive influence on the valuation of such businesses (Goyal 2011). Various social networks exist, and include Six Degrees, Frienster, MySpace, LinkedIn, Facebook, YouTube and Twitter. Twitter is a free online social network enabling individuals to communicate with other individuals. This communication is known as a tweet. (Adali *et al*. 2008:5). Figure 2.6 provides a timeline of the various social networks based on their year of creation.

FIGURE 2.6: TIMELINE OF INTERNET SOCIAL NETWORK CREATION



Source: Adapted from Acar 2008:62-65; Boyd and Ellison 2008:212; History of social networking websites 2011; Schneider 2011:294.

News Corp bought MySpace in 2005 for US$580 million, but sold it for a mere US$38 million in 2011 to Specific Media, which was founded in 1999 (Gneiser *et al.* 2010:2; Hall 2011b; Rose 2011:51; Rosenbush & Scott 2006:5). The social network MySpace concluded a deal in 2006 with Google, in which Google was required to pay MySpace US$300 million per year for three years for Google to be the exclusive search engine provided on MySpace (Gillette 2011; Johnson 2011; Rosenbush & Scott 2006:5).

LinkedIn was founded in 2003. The focus of LinkedIn is to connect business contacts. The relationships formed on this social network help the users to find other employment, employees, or business opportunities. This social network has been profitable since 2006. (Hall 2011c; Schneider 2011:295-295). In 2008 LinkedIn was valued at £500 million, which was the highest-valued social network. The network also extended its market more deeply into Europe, and the networking and business knowledge-sharing opportunities are remarkable.

(Savvas 2008). LinkedIn raised US$353 million with the first IPO. LinkedIn indicated that an IPO is planned to raise US$175 million after they acquire CardMunch, a business specialising in supplies technology for scanning and transcribing business cards (Ashford 2011b). The expected share prices were between US$32 and US$35, but the market opened at US$83 (Savitz 2011). In 2008, LinkedIn was ranked 193rd in the world, based on the amount of traffic attracted to the site. In LinkedIn's case, on average 500 million pages of view per month were obtained. (Papacharissi 2009:200).

Renren, one of China's social networks, raised US$743 with their first IPO in May 2011. The share price was between US$12 and US$14. The underwriters of the IPOs estimated that the value of Renren was 67 times sales, while Facebook was valued at 25 times sales. A noteworthy comment made by the founder of IPOScoop.com was that high technology deals such as LinkedIn and Renren IPOs could price the shares above market value. (Geron 2011a, 2011b). The share price of Renren increased by 29% during the first few months of 2011 (Miller 2011).

Another concern raised by analysts in the technology industry is the development of a second technology bubble, especially after LinkedIn was valued at US$10 billion in May 2011 and the share price reached a level of US$120 per share. The Financial Times Deutschland also questioned the valuation of Facebook in 2008, then valued at US$15 billion. One of the main reasons given for this concern was that revenue models for online businesses are not clear-cut as in the case of brick-and-mortar or brick-and-click businesses. (Gneiser, Heidemann, Klier & Weib 2009; Hall 2011d).

Facebook was created by Zuckerberg in 2004, but the Winklevoss twin brothers claimed that their idea of Facebook was stolen by Zuckerberg. In 2004 the court ruled that Zuckerberg was to pay the Winklevoss brothers a settlement of US$65 million as US$20 million cash and shares in Facebook to the value of US$45 million. During 2008 the two brothers filed a claim that the shares were overvalued when the negotiations were originally concluded. In June 2011 all

claims against Zuckerberg were dropped, and a release to all claims was signed by the two brothers. (Ashford 2011c; Helft 2011).

Microsoft obtained a minority interest of 1.6% in Facebook at a cost of US$240 million. The market value of Facebook in 2007 was US$10 billion, and Microsoft was seeking to obtain a 5% stake in Facebook at a cost of US$500 million. In 2008, serious questions were raised in terms of the valuation of Internet-based businesses, especially when Facebook was valued at US$15 billion. Facebook generated income to the value of US$280 million, but the business did not break even. (Gneiser *et al.* 2010:2; Hempel 2009:2; Holahan, Hof & Ante 2007:4; McGirt 2007:129). From July 2009 to November 2009, the share price of Facebook increased by 42%, with share capital estimated at around US$9.5 billion. In 2010, Facebook was valued at US$33.7 billion, and based on the price private investors were willing to sell, one share was valued at US$76. (Williams 2010).

In May 2011 it was announced that Facebook would acquire Snaptu, which is a social networking site for non-smartphone users. The value of this transaction was estimated to be between US$60 million and US$70 million. Prior to this acquisition, Facebook also bought Beluga (messaging service company), ReI8tion (advertising group) and Pursuit (recruiting network). (Hall 2011e). Google launched a Google+ button, which is similar to the “like” button of Facebook, and wanted to compete against Facebook in the social media industry (Hall 2011f).

The value of Facebook in January 2011 was estimated to be US$50 billion and that of the founder, Mark Zuckerberg, to be US$12 billion. The 2012 IPO is expected to be more than twice as much as Google’s IPO in 2004. (Rose 2011:51; Williams 2011). The IPO is rumoured to value Facebook at US$100 billion. Since Facebook will have more than 500 investors, the financial accounts need to be made public after the 2012 IPO. (Hall 2011g).

To conclude the discussion on social networks, the question is whether to invest in social media businesses. According to Hall (2011h), there are seven aspects that need to be considered before investing in social network businesses:

- Investors drive up the share price.
- Consider the timing of the IPO.
- The law of a country may require the business to go public.
- Evaluate the business model implemented.
- Determine the value of the business to current investors.
- Investigate opportunities that may appear when the business moves through the business life cycle.
- Compare the risks and returns of the IPO timing.

2.3.5 Other types of Internet-based businesses

Many Internet-based businesses organise and manage online auctions where sellers can trade their products to the buyer with the highest bid offer. An online auction is similar to a traditional auction with the one exception that the sellers and the potential buyers are not physically present at a specific auction site. Advantages of online auctions include the broadening of the online audience (global sellers and buyers) and the ease with which a specific auction can be found online, using search engines. Examples of online auctions are eBay, Amazon.com Auctions, Yahoo! Auctions and Onlineauctions.com. (Krishnamurthy 2003:89; Strauss & Frost 2009:251).

eBay was created by Pierre Omudyar to act as an intermediary to allow sellers and buyers of products to interact with the purpose of trading. According to Krishnamurthy (2003:136), eBay can be regarded as a massive classified advertisement page where buyers can find products they would like to buy. eBay is an auction house because buyers bid on available products, and the highest bidder at the close of the bid period will win the bid. The main income stream for eBay is a listing fee and a sliding percentage of the final selling price (Schneider 2011:309). One advantage of eBay is that the seller of products will

incur the shipping cost to the buyer. Various services are offered by eBay (Krishnamurthy 2003:137-138):

- Billpoint is an online bill payment service to ensure the seller receives payment for products sold on eBay Auctions.
- Half.com sells pre-owned products at fixed-prices.
- eBay International trades in countries outside the USA to overcome legal and financial barriers.
- eBay Motors sells vehicles, motorcycles and auto parts. Other services are also provided, such as financing, inspections, insurance, vehicle shipping, and title and registration of vehicle to the new owner.
- eBay Stores allows sellers to create customised shopping destinations, and buyers can purchase products at a fixed price or at an auction.
- eBay Professional Services provides information on professionals and freelancers in various fields such as web design, accounting and technical support.
- eBay Local Trading assists trading within the USA in specific regions, which leads to lower shipping costs associated with delivery of products.
- eBay Premier is a speciality site focusing on collectors' items ranging from fine arts and antiques to fine wines and rare collectibles.
- eBay Live Auctions provides access for customers to leading auction houses in the world.

Amazon.com introduced Amazon.com Auctions on 30 March 1999, to be in direct competition with eBay. At the same time, Sharper Image started auctioning new and existing merchandise (1 March), Cyberian Outpost started trading online (16 March), eBay made a deal with American Online (AOL) (25 March) to the value of US$75 million to promote eBay auctions, and PriceLine.com went public (30 March). (Krishnamurthy 2003:118).

A web log, better known as a blog, is a personal website of an individual. Parkin (2008:121) and Strauss and Frost (2009:8) describe a blog as an electronic public journal where an individual can publish information and other interested

parties can then make comments on the blog regarding the information provided on the blog. Schneider (2011:296) defines a blog as a website containing commentary on current events or specific issues as provided by various individuals.

A new addition to e-business is social apponomics. Although not much is written about the new phenomenon, the purpose of social apponomics is to change online traffic to customer lifecycle management. (Anderson, Harter, Hagen & Plenge 2011).

2.4 HISTORY OF INTERNET-BASED BUSINESS

The majority of businesses start as brick-and-mortar businesses, meaning that customers need to present themselves at the physical business premises for a commercial transaction to take place. A further development was the creation of brick-and-click businesses (Combe 2006:5, 54). According to Turban *et al.* (2006:90), brick-and-click businesses use a website as a trading platform in conjunction with the physical store. Therefore these businesses offer their customers a choice of concluding a commercial transaction at the physical business premises, or concluding a commercial transaction via the Internet on the web site of the business.

Another type of Internet-based business which was addressed in section 2.3 is that of online business. Although online businesses have physical business premises, these premises are merely an administrative office of the business, not a physical location where customers can interact with the business's sales team. Therefore all interactions between the online business and the customer are facilitated by using the Internet. (Botha *et al.* 2008:280; McKay & Marshall 2004:10; Turban *et al.* 2006:5).

Table 2.1 summarises the history of the Internet and the adoption of e-business by businesses and individuals. The history of the Internet is important because e-business would not be able to exist without the Internet.

TABLE 2.1: HISTORY OF THE INTERNET AND E-BUSINESS ADOPTION

DECADE	ACTIVITY
1960's	• Introduction of mainframe computers in a few large businesses. • Initial users of the Internet are technical staff of the government and academic researchers. • IT specialists responsible for data processing. • Few end users have direct access to computer technology. • Packet Switched Network is developed. • ARPAnet, commissioned by the United States (US) Defence Department, is developed to promote networking research among academics and researchers.
1970's	• Computer-sharing network with electronic mail (e-mail) is successfully developed. • Bill Gates and Paul Allen form Microsoft. • Direct access via dumb terminals linked directly to mainframe. • More end users have direct access to computer processing. • Improved data processing. • Increased number of mainframe computers in a large number of businesses
1980's	• National Science Foundation (NSF) provides seed money for Computer Science NETwork to connect United States computer science department. • Defence Department establishes Transmission Control Protocol/Internet Protocol. • Number of Internet computer hosts increased from 500 to 28 000. • Development of first personal computers and database technologies. • Private leased lines for private networking. • Networking between branches of multinational corporations. • Trade between large businesses using expensive and technically complex inter-organisational systems. • Personal computers in some businesses linked using networking. • Number of Internet computer hosts breaks 100 000.
1990's	• World Wide Web accessible from the Internet. • NSF lifts restrictions on commercial use of the Internet. • High Performance Computing Act, authored by then-Senator Gore, is signed into law.

TABLE 2.1: HISTORY OF THE INTERNET AND E-BUSINESS ADOPTION (cont)

DECADE	ACTIVITY
1990's cont	• President Clinton and Vice President Gore get e-mail addresses. • Mosaic, a graphical "Web browser" developed by Marc Andreeson at the NSF-funded National Center for Supercomputing Applications, is released. Traffic on Web explodes. • Number of Internet computer hosts exceeds 1 000 000. • White House goes on-line with "Welcome to the White House". • US Internet traffic now carried by commercial Internet service provider. • Netscape becomes the world's most popular Web browser with first IPO. • Amazon.com is launched. • Adoption of Internet by businesses. • Many private households have access to personal computers and Internet. • Electronic communication and interaction between businesses and between businesses and customers possible. • More employees have access to computer technology. • Rapid development of computer networks. • Increase in number of networked personal computers and knowledgeable employees. • Yahoo! one of the world's leading search engines. • Google is founded. • Number of Internet computer hosts nears 56 000 000.
2000's	• Increase in m-commerce. • Number of Internet computer hosts more than 148 000 000. • Approximately 12% of US households with broadband connections. • Between 50%-60% of US households with broadband connections.

Source: Combe 2006:11, 22-25; Cram 2001:5; Jelassi and Enders 2005:13; Krishnamurthy 2003:5-6; Li 2007:14; McKay and Marshall 2004:6-7; Parkin 2008:11-12; Schneider 2011:11-12; Turban *et al.* 2006:11, Wall 2010.

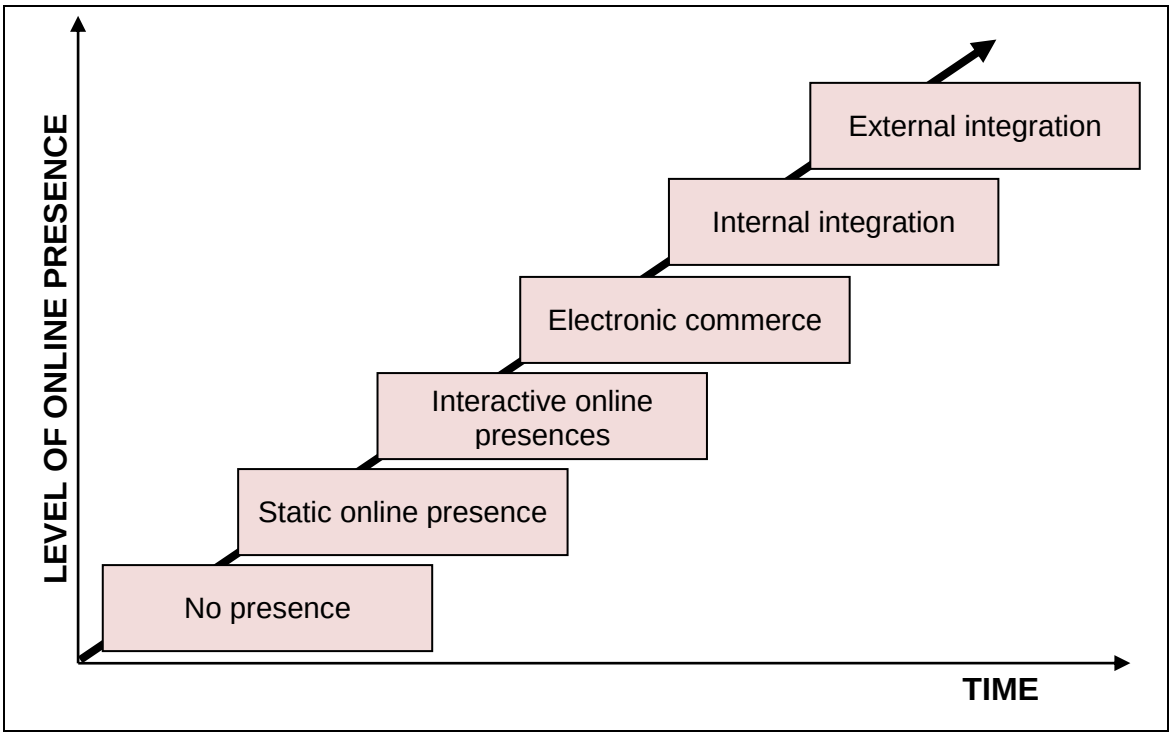
2.5 E-BUSINESS MODEL STAGES

As the Internet evolved over time and businesses starting adopting the use of the Internet as a tool for doing business, various e-business models were developed. A business model, regardless of whether it is a model for a brick-and-mortar or Internet-based business, can be described as what the business is doing and how the business is generating income to create value (Taulli 2009; Weill, Malone, D'Urso, Herman & Woerner 2004:5; Wirtz *et al.* 2010:274). Shafer, Smith and Linder (2005:204, 206-207) concur with Taulli (2009), Weill *et al.* (2004:5) and Wirtz *et al*. (2010:274), but also state that it is important not to only create value but also to capture the value created. Osterwalder, Pigneur and Tucci (2005:5) define a business model as:

> *a conceptual tool containing a set of objectives, concepts and their relationships with the objective to express the business logic of a specific firm. Therefore we must consider which concepts and relationships allow a simplified description and representation of what value is provided to customers, how this is done and with which financial consequences.*

The e-business model usually consists of a number of stages. McKay and Marshall (2004:10-13) divide the business uses of the Internet into various stages. Therefore the extent of online presence can be linked to the various e-business model stages. Figure 2.7 illustrates the various stages for an e-business model based, as defined by McKay and Marshall (2004:11-13), on the extent to which the Internet is used in the business.

FIGURE 2.7: E-BUSINESS MODEL STAGES AS DESCRIBED BY MCKAY AND MARSHALL



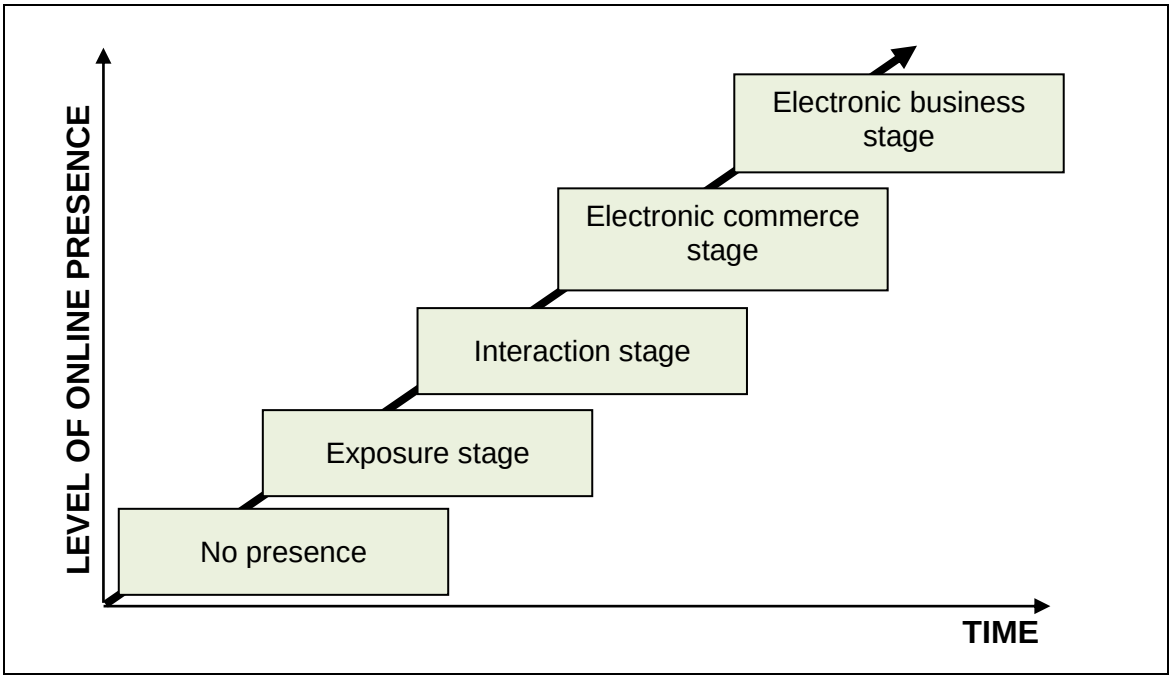
Source: Adapted from McKay and Marshall 2004:11.

The first stage of an e-business model, as illustrated in Figure 2.7, is no presence on the Internet, which can be the result of a number of reasons, which can include that a web presence is too expensive and that there are too many risks and security issues associated with e-business. The static online presence refers to business providing basic information regarding the business and its operations. No commercial transactions take place, as information is disseminated only to potential customers, employees and business partners. The third stage is when businesses and customers begin to interact with one another over the Internet. It is possible for customers to place orders on the websites, but the transaction is usually not concluded on the website. The e-commerce stage is where the commercial transactions will start and finish using the Internet, but additional resources will be required to deal with 24x7 trading and distribution of customers' purchases. The internal integration state occurs when duplication of activities is eliminated, and intra-organisational IT and IS initiatives and investments are integrated. The final stage is integration of the

internal and external business processes to establish relationships with customers and business partners. (McKay & Marshall 2004:12-13).

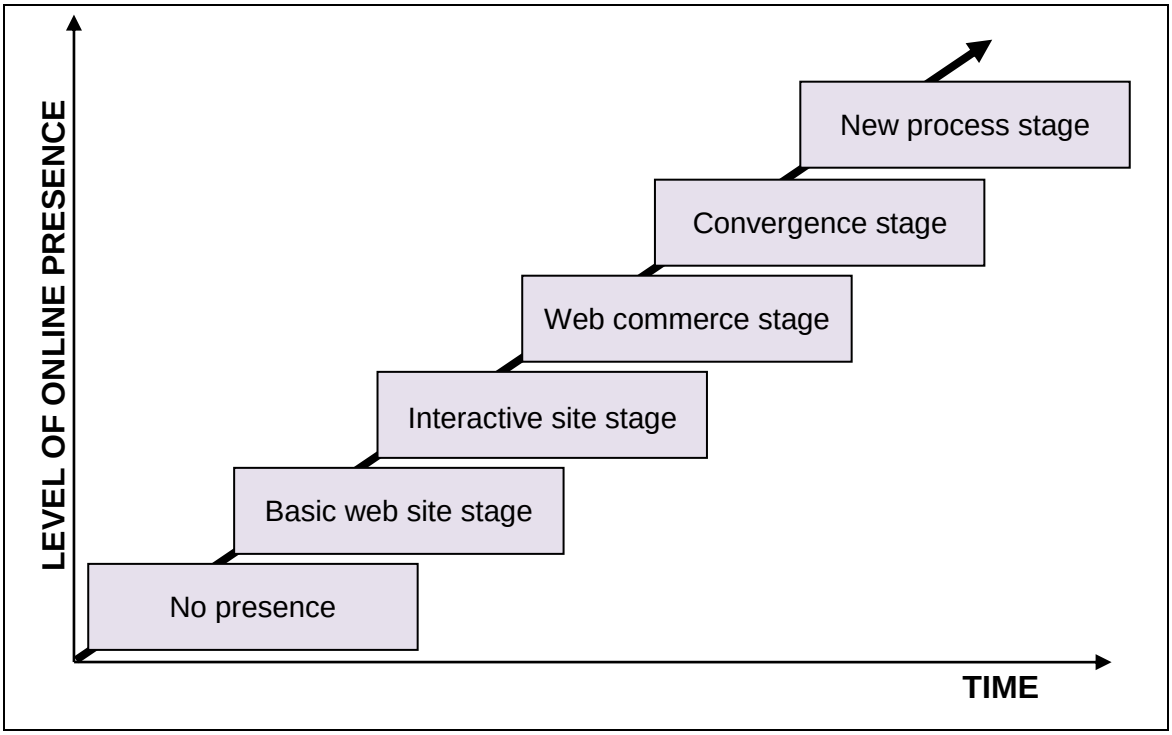
Botha *et al.* (2008:7) point out that the Internet provides individuals and groups of people with a flexible platform to deliver information-based services to any person with Internet access. Botha *et al.* (2008:8-9) and Turban *et al.* (2006:671) agree with McKay and Marshall (2004:11-13) that businesses go through a number of stages before reaching the e-business stage. According to Botha *et al.* (2008:8-9), the stages are the exposure stage, the interaction stage, the e-commerce stage, and then finally the e-business stage. The stages of Turban *et al.* (2006:670-671) are basic web site, interactive site, w-commerce site, convergence, and the new process. Figures 2.8 and 2.9 illustrate the e-business model stages as defined by Botha *et al.* (2008:7-9) and Turban *et al.* (2006:670-671) respectively.

FIGURE 2.8: E-BUSINESS MODEL STAGES AS DESCRIBED BY BOTHA



Source: Adapted from Botha *et al.* 2008:7.

FIGURE 2.9: E-BUSINESS MODEL STAGES AS DESCRIBED BY TURBAN

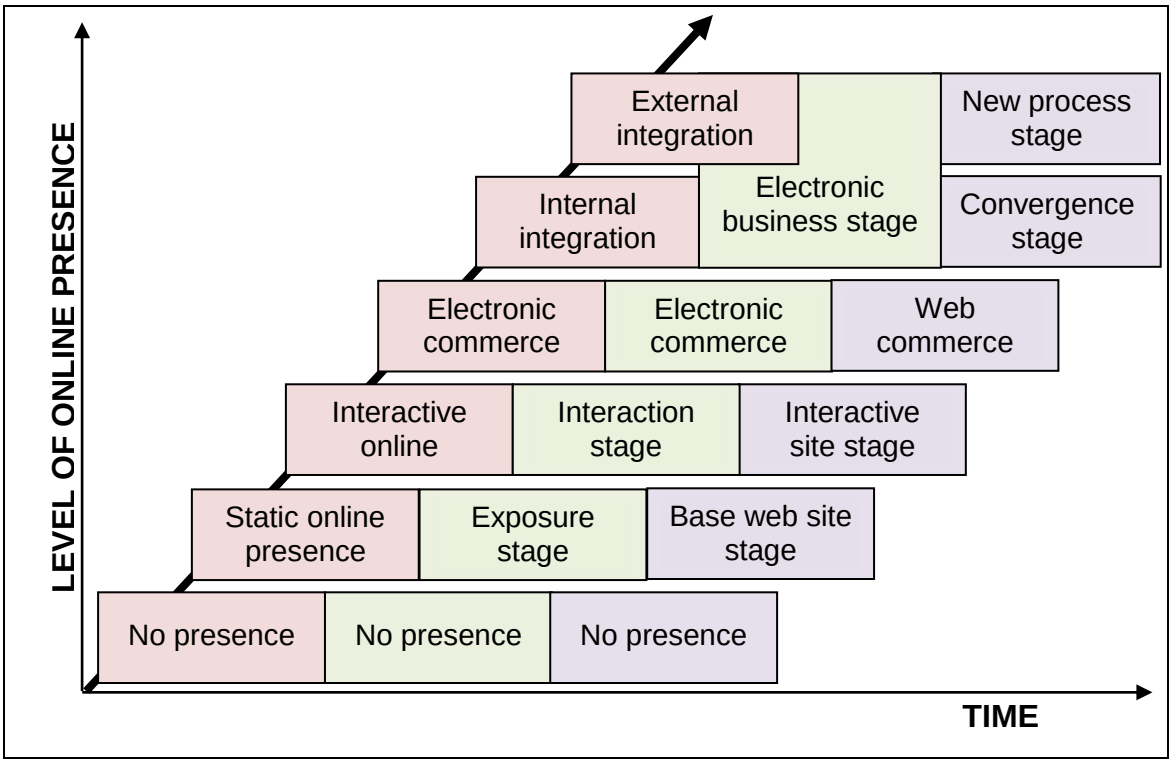


Source: Adapted from Turban *et al.* 2006:670-671.

The exposure and the basic website stages correspond with the static online presence stage of McKay and Marshall (2004:11-13). This stage is an information-giving stage since potential customers can obtain information regarding the business on the website. The second stage is the interaction or interactive site stage and corresponds with the interactive online presence stage of McKay and Marshall (2004:11-13). During this stage the business is actively interacting, using two-way communication with customers. The third stage is the e-commerce or w-commerce site stage which corresponds with the e-commerce stage of McKay and Marshall (2004:11-13), where the customers' order and pay for products and services. The final stage is the e-business stage which corresponds with the internal and external integration stages of McKay and Marshall (2004:11-13), and with the convergence and new processes stage of Turban *et al*. (2006;670-671). The e-business strategies are fully integrated with the overall business strategy (Botha *et al.* 2008:8-9; Turban *et al.* 2006:670-671).

Figure 2.10 shows the various stages in e-business as described by Botha *et al.* (2008:7-9) McKay and Marshall (2004:11-13) and Turban *et al.* (2006:670-671), and it illustrates the various authors' stages compared with one another.

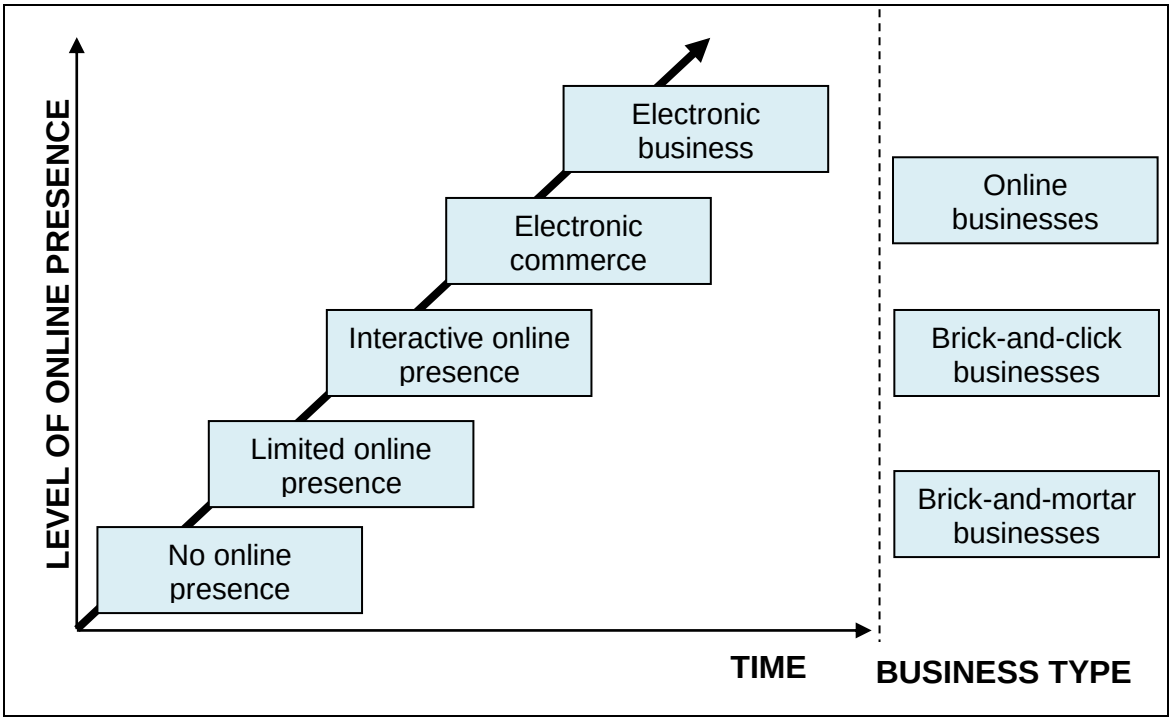
FIGURE 2.10: COMPARISON OF E-BUSINESS MODEL STAGES



Source: Researcher's own construct.

The e-business model stages that will be used in this study will be a combination of the stages discussed by Botha *et al.* (2008:7-9) McKay and Marshall (2004:11-13) and Turban *et al.* (2006:670-671). Therefore the proposed e-business model stages are illustrated in Figure 2.11, and the type of business associated with each stage is also identified.

FIGURE 2.11: PROPOSED E-BUSINESS MODEL STAGES



Source: Researcher's own construct.

Considering the descriptions of each of the stages of the e-business model as provided by the various authors, it is possible to link a specific business type to each of the various stages. The following descriptions of each stage will be used for the purpose of this study. The first stage depicted in Figure 2.11, no online presence, implies that the business has no official website although the business details may be listed in an online directory. The second stage is limited online presence. Business details and a product and/or service catalogue are available to the public via the official business homepage. No trading takes place at this stage as its focus is only to share information. Interactive online presence, as the third stage, includes synchronous information sharing with customers, and customers having the opportunity to communicate with the business via the official homepage of the business. In the fourth stage, customers place orders via the official homepage of the business, and the payment and delivery of the orders may be outsourced to a third party. The final stage of e-business is where customers place orders via the official homepage of the business, and the payment and distribution are coordinated by the business itself. There is also full electronic collaboration between the

customer and the business, and between the business itself and the business partners.

It is important that each stage of the e-business model comprises certain elements, regardless of the stage of e-business adoption. Teece (2010:43) describes the combination of these elements as the organisational and financial architecture of a business. The six elements that need to be incorporated into each stage, with the focus to create customer value, attract payments and transform payments to profits, are:

- the selection of technologies and features that needs to be embedded in the product and/or service;
- the determination of the benefits the customer will receive when consuming or using the product and/or service;
- the identification of the market segments to be targeted;
- the confirmation of the availability of the income streams; and
- the designing of the mechanisms to capture the value created by each target market. (Teece 2010:173).

Taulli (2009) concurs with Teece (2010) regarding the identified e-business elements, but adds that it is important to ensure a differentiation strategy to make the e-business unique and to ensure adequate and realistic pricing.

Zhu and Kraemer (2005:61) are of the opinion that there is scepticism regarding the value of e-business and information technology, especially if one considers the high initial costs that are incurred when implementing an e-business strategy. These authors argue that it is imperative to determine whether e-business strategies contribute to the value of businesses.

Lee *et al.* (2002:15-16) explain that the extraordinary growth rates of the share prices and market capitalisation of online businesses resulted in astoundingly high business valuations. Therefore the brick-and-mortar businesses implemented e-business strategies and transformed into brick-and-click

businesses, to see whether these businesses could capitalise on the high growth rates experienced by the online businesses. The purpose of the Lee *et al.* (2002:15-35) study was to determine whether brick-and-mortar, brick-and-click and online businesses (e-tailers) experienced differences in revenue and income over a three-year period (1999 – 2001) that was linked to four e-business stages. The findings showed that online businesses in the late exploration stage had positive revenue but negative income impacts on their business value. In the break-even stage, online businesses had positive revenue and insignificant income impacts on their business value, while in the growth stage, both positive revenue and income impacts on the business value occurred. Regarding the brick-and-mortar and brick-and-click businesses, it was found that the driving factor of business value in 2000 was income, and in 2001 it was both revenue and income. It was also found that click-and-brick businesses outperformed brick-and-mortar business in terms of revenue, income, income/revenue, share prices, and market capitalisation. Furthermore, the revenue effect in 2001 was significantly higher for brick-and-click businesses than for brick-and-mortar businesses. (Lee *et al.* 2002:15-35).

According to Zhu and Kraemer (2005:62), most of the studies which focus on e-business address the issue of whether an e-business strategy should be adopted. Another issue identified by these authors is that there is a lack of evidence showing the usage and impact of performance of a business that has implemented an e-business strategy. It is also important to take note of the different economic and regulatory environments in which the businesses operate, because developed and developing countries may have different regulations to adhere to (Zhu & Kraemer 2005:62). The present study will focus on the gap identified by Zhu and Kraemer (2005:62) by quantifying businesses' valuations at different e-business model stages, in order to determine the value creation benefit of e-business strategies.

2.6 IMPORTANCE OF INTERNET-BASED BUSINESSES

According to McKay and Marshall (2004:13) and Pitta and Fowler (2005a:290; 2005b:266), the benefits businesses, whether brick-and-click or online, can achieve by using the Internet, include:

- increased income by selling directly to the customer over the Internet;
- growth in market share by entering into new markets nationally and globally;
- increased customer retention when the Internet is used to add value to the products and services sold; and
- reduced costs by completing activities more efficiently when using appropriate Internet technologies.

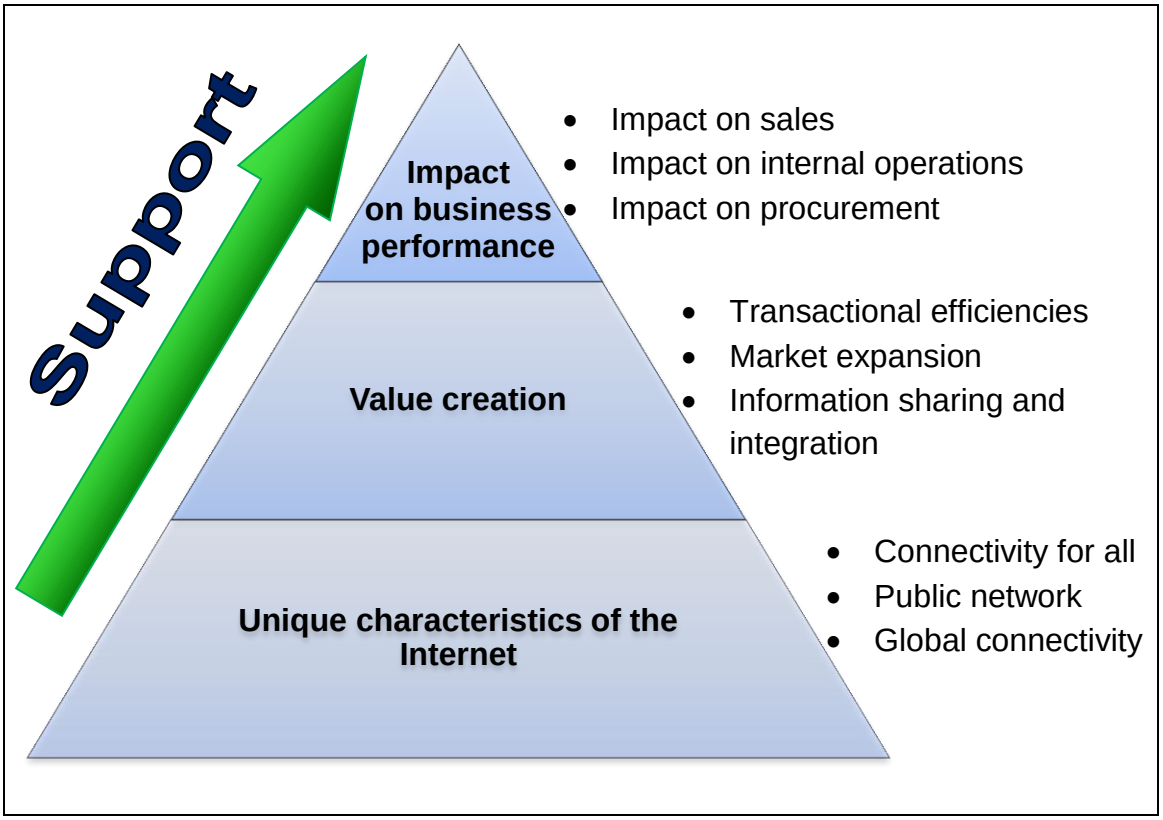
Bosch *et al.* (2011:565-566), Botha *et al*. (2008:5) and Papazoglou and Ribbers (2006:1, 12-14) concur that the use of the Internet can lead to major cost savings, increased business efficiency, better time management of businesses, improved customer service and more extensive customer reach. Enhanced customer service and therefore improved customer relations can be expected as an end result, since one-on-one relationships with individual customers are possible at a low cost to the business. Léger (2010:406) suggests that the intangible assets, such as the relationships with suppliers, also influence the value of a business. It is therefore important to value the use of the Internet in the form of an e-business strategy.

Research by Schramm-Klein, Wagner, Steinmann and Morschett (2011:509) emphasises that multichannel systems (traditional and online outlets) of retailers have a positive impact on customer loyalty and trust, as well as on the image of the retailer. If the multichannel retailing is fully integrated, then long-term customer profitability is possible. The customers will also be more willing to use all the channels (traditional and online outlets) for purchases because loyalty and trust are established between the customer and the e-business retailer. Jackson (2008:53) and Kennedy and Coughlan (2006:524, 526) concur with Schramm-Klein *et al.* (2011:509) that both the customer and the e-business retailer can benefit from multichannel retailing.

According to Zhu and Kraemer (2005:65), the unique characteristics of the Internet create the opportunity for retail businesses to improve business financial performance, which has a potential to increase businesses values. These authors stress the fact that only those retail businesses that use e-

business strategies that include value-chain activities, will benefit financially from these strategies (Zhu & Kraemer 2005:70). Figure 2.12 illustrates the potential value creation based on the unique characteristics of the Internet for retail businesses.

FIGURE 2.12: BUSINESS VALUE CREATION USING THE INTERNET



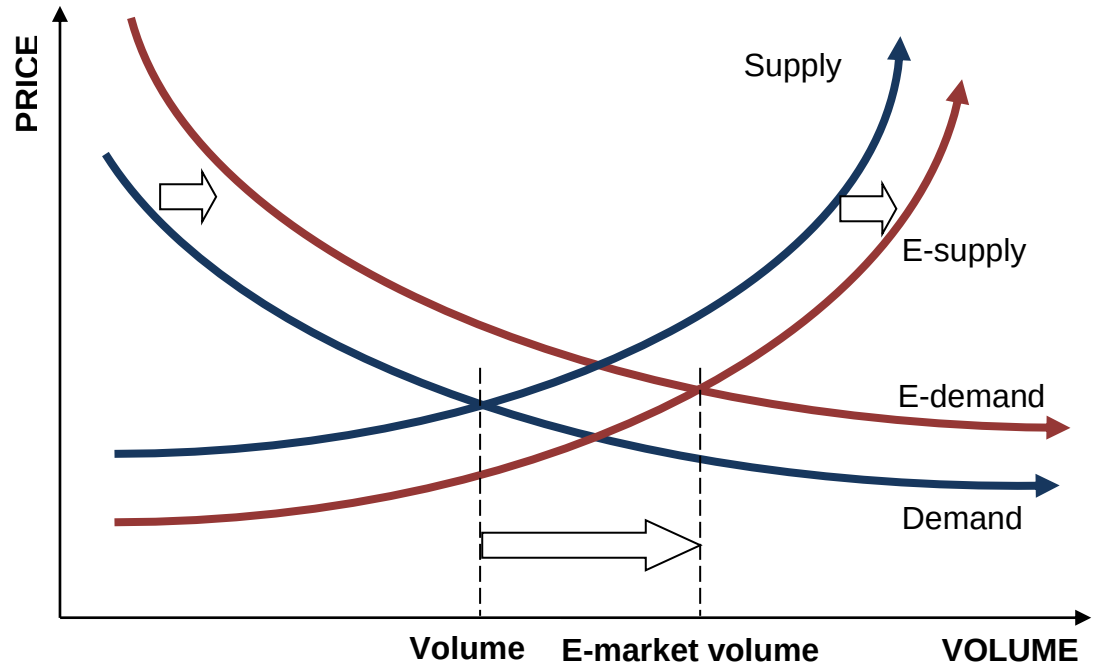
Source: Zhu and Kraemer 2005:65.

From Figure 2.12 it is evident that if the unique characteristics of the Internet are effectively and efficiently applied within an e-business strategy, it is possible for a business to create value which will be reflected in the business's performance. Therefore there should be a positive net effect on business value, as business performance directly influences cash flows and share price, which are two of the main elements used for business valuation (depending on the approach used).

Krishnamurthy (2003:29) indicates six areas where businesses will benefit when conducting business over the Internet. These areas are the increased value

creation for customers, reducing operation inefficiencies, improving operations in the supply chain, increased interaction with other businesses and/or customers, quicker responses to and from other businesses and customers, and operating in a global marketplace. Jelassi and Enders (2005:19-20) also propose that the underlying principle of e-business lies in increased value creation, which is a result of lower costs and increased customer interaction. Figure 2.13 illustrates the benefit of e-business.

FIGURE 2.13: BENEFIT OF E-BUSINESS WHEN CONSIDERING DEMAND AND SUPPLY



Explanations:	
Supply	Supply by brick-and-mortar and brick-and click businesses
Demand	Demand for brick-and-mortar and brick-and-click businesses' products/services
Volume	Volume supplied by and products/services demanded from brick-and-mortar and brick-and-click businesses
E-supply	Supply by online businesses
E-demand	Demand for online businesses' products/services
E-volume	Volume supplied by and products/services demanded from online based businesses

Source: Adapted from Jelassi and Enders 2005:20.

Online businesses can only realise these benefits if value for the customers is created. According to Krishnamurthy (2003:49-50), online businesses should

use the six C's to create value. The first C is Commerce, which will help the Internet-based business to generate income. It is important that the traditional marketing mix (product, price, promotion and place) should still be applied. Communication, as the second C, is vital in developing a relationship between the Internet-based business and the customer. Communication technologies such as electronic mail (e-mail), discussion boards and instant messaging can be implemented to enhance the customer relationship. Thirdly, Connectivity will help the online business to reach potential and existing customers in locations which are usually not accessible. Connectivity will also assist customers to communicate with other customers and employees of the online business. The online business should be aware of the value elements of the fourth C, Community. These value elements include informal socialising, learning from other customers and employees, the ability to work together within a business and with other businesses, and having topical discussions in discussion forums. The fifth C is Content, which can be used to provide information regarding the business itself and products and/or services on offer. The last C, namely Computing, is the provision to customers of computing tools such as package tracking services and real-time updates on inventory regarding a particular product.

According to Lin and Kulatilaka (2007:893-394), businesses needs to adapt to the current technological developments to remain competitive. One important aspect that the authors stress is that investment in the latest technology will have an influence on the value of the business. Kamel and Hussein (2001:119) emphasise that the use of technology is not only important for businesses, but also for government, in order to improve customer interaction.

2.7 INTERNET-BASED BUSINESS SUCCESSES AND FAILURES

The following two sections provide a brief overview of a number of successful or failed Internet-based businesses.

2.7.1 Business successes

A number of Internet-based businesses have been highly successful. These businesses include eBay, Google, Yahoo!, Verisign, AOL, Checkpoint, Gap,

Best Buy, Lands' End and Office Depot. (Jackson 2008:53; Kurtz & Boone 2006:469; Turban *et al.* 2006:11). Williams (2009b:228) states that the success of the Internet-based businesses is generally not founded on offering lower prices to beat the competition. Lower prices can be offered in a sustainable manner because these businesses have the skills to adjust to the prevailing market conditions effectively and efficiently.

The business Land's End allows customers to develop a virtual three-dimensional personal model, given the customer's own hair colour, height and shape. Customers can then dress the model in different styles, to see which clothing styles are best suited to him/her Customers can also interact directly with a customer-service representative while designing clothing for a better fit. Based on these fittings, the site provides the customer with personalised buyers' tips on how to dress. (Kotler & Armstrong 2001:29; Wirtz *et al.* 2010:285). Some of the reasons cited by Office Depot for their success are their well-established brand name, low-cost buying, and an extensive distribution network that enables customers to collect purchases at their convenience (Kurtz & Boone 2006:469). A number of small Internet-based businesses have also proved to be successful. Since 2007, the small Internet-based business Online4baby doubled its turnover to £4m (Hall 2010a).

Many Internet-based businesses have the first-mover advantage, which meant being the first business to enter a specific niche market and capitalising on that entrance. Examples of these Internet-based businesses include:

- eBay as the first Internet-based auction market;
- Blogger.com as the first website to provide blog hosting services;
- Yahoo! as the first Internet directory; and
- Apple Computer as the first computer with a Windows desktop, mouse, hard floppy disk, floppyless laptops and wireless technology (Turban *et al.* 2006:592).

Some Internet-based businesses were late movers into the market, but managed to outperform the first and early movers. Examples of these Internet-

based businesses include Intel, AOL and Google (Turban *et al.* 2006:592). Therefore, for Internet-based businesses to be successful, whether first or late movers, implies that they created value for the customer. Value is created when the performance of a specific product or service exceed the perceptions the customer have of that product or service (Krishnamurthy 2003:47).

According to Whitman as cited in Krishnamurthy (2003:138), there are three reasons why eBay is successful. The first reason is that eBay could not exist without the Internet because no business in the vicinity of the customer can provide the customer with the product required. Therefore a new consumer business model was developed. The second reason provided was that the new consumer business model was created to be profitable. The third reason is that eBay was developed in such a way that the business could grow and still be profitable. One growth strategy that eBay is implementing is that of m-commerce. (Krishnamurthy 2003:149).

One of South Africa's most well-known Internet-based business successes is that of Mark Shuttleworth. In 1995 he started his own Internet-based business, Thawte, a business specialising in digital security certificates. In 1999 he sold Thawte to Verisign for a staggering US$575 million (McLeod 2011; Parr 2010).

2.7.2 Business failures

Unfortunately not all Internet-based businesses have been profitable and have therefore disappeared. A study conducted by Lee *et al.* (2002:20) over a three-year period from 1999 to 2001 focusing on Internet-based businesses, found that in the USA 15 of the 22 businesses used in the study ceased to exist by the end of the study for various reasons. These vanished businesses included the following:

- CDNow was acquired by Bertelsmann.
- Cybershop closed its operations in April 2000.
- FatBrain.com was acquired by Barnesandnoble.com in November 2000.
- Go2Net was acquired by InfoSpace in October 2000.

- i-Mall mergerd with Excite@home in July 1999.
- OnSale merged with Egghead.com in November 1999 and Egghead.com delisted from NASDAQ on 10 April 2001.
- PCOrder.com merged with Trilogy Software in October 2000.
- Preview Travel merged with Travelocity in March 2000.
- VitamanShoppe.com delisted from NASDAQ.
- eToys closed its operations in April 2001.
- Peapod was acquired by Royal Ahold in April 2000. (Lee *et al.* 2002:20).

Other examples of unsuccessful Internet-based businesses include eToys, Xpeditor, Boo.com Walt Disney, Hollywood Entertainment, Levi Strauss and Pets.com (Levis 2009:103; Sandoval 2000; Turban *et al.* 2006:11). According to Kamalabadi, Bayat, Ahmadi and Ebrahimi (2008:590) and Krishnamurthy (2003:4-5), reasons for the closure of Internet-based businesses include lack of customer loyalty, inefficient development of a customer base, underestimation of human behaviour, and the underestimation of well-established business alliances.

The online business, eToys, was founded in 1997 with the vision of becoming the premier family-oriented site on the Internet. During 1998, the number of its employees increased from 13 to 235. Unfortunately the business accumulated a deficit of US$17.5 million, and had debt to the value of US$274 million. eToys closed down during April 2000. (Mahoney & Weisman 2001; Metz 2001:163). The rival business, Toys Я Us, also implemented an e-business strategy. Although its initial e-business attempt was disastrous because of a lack of knowledge regarding packing and shipping products to customers, the business found a workable and successful solution by entering into a partnership with Amazon. Amazon is responsible for the fulfilling of orders, while Toys Я Us uses the relationship with its suppliers and its brand name to enhance the relationship with its target market. (Bicknell 2000; Metz 2001:163).

Pets.com was the first dot.com business to close down. Amazon.com invested US$60 million in this business, which they lost in the end. One of the major

reasons for Pets.com's closure was that they required external funding to cover their losses. (Levis 2009:103-104).

The search engine Excite started in February 1993. Excite was bought by @Home in January 1999 for US$6.5 billion, and was renamed Excite@Home. In October 2001 Excite@Home filed for bankruptcy and was bought by InfoSpace from the bankruptcy court for US$10 million. (Wall 2010).

Boo.com launched its opening in November 1999. In January 2000 sales targets were not reached. The strategy followed by Boo.com was to retrench100 employees and to reduce product prices for to 40%. After the chief executive officer left the business, attempts were made to sell Boo.com to other retailers and to obtain more funding from shareholders. Because both these strategies failed, Boo.com announced in May 2000 that the business would be liquidated. Reasons that contributed to the failure of Boo.com included: too many different currencies and languages to cope with; extensive use of man-hours to deal with distribution issues and the various courier services; excessive use of graphics, movies, audio and videos; ineffective advertising campaigns; and poor management quality. (Krishnamurthy 2003:129).

Other Internet-based businesses, such as Citibank, Sony, Chemdex and Netscape, lost the first mover advantage to other Internet-based businesses that entered the market at a later stage. Citibank invented the automatic teller machines (ATMs) but Cirrus developed the ATM protocols. Sony created the Betamax videotape format but Matsushiata's VHS format took over the market. Chemdex was the first digital exchange, but after declining growth the owners closed the business after spending US50 million. Netscape, as the first Internet browser company, dominated the market until Microsoft Internet Explorer entered the Internet browser market. (Stone 2000; Turban *et al*. 2006:292).

According to Gillette (2011), the social network MySpace is no longer an Internet-based business to be concerned about. MySpace was developed by Chris de Wolfe and Tom Anderson and launched in August 2003. In December 2008, MySpace had 75.9 million unique visitors in the USA alone. The number

of visitors dropped to 34.8 million in May 2011. The income stream for MySpace was in the form of advertising, which declined drastically owing to the lower number of visitors. News Corp bought MySpace and Intermix, the parent company of MySpace, in 2005, for US$580 million. In February 2011, News Corp wanted to sell Intermix for US$100 million, but could not find a buyer. Since the inception of the business, 30% of the USA employees and 66% of the employees at the international offices have been retrenched. Some of the reasons offered for the fall of MySpace are the rapid change in technology, the unpredictability of consumer behaviour, and the influence of peers on users of social networks. (Gillette 2011). LinkedIn was valued at US$6.4 billion in June 2011 (Gillette 2011). Kurtz and Boone (2006:125) state that the main income stream of MySpace was the selling of advertisements, but it was not successful. To enhance the income stream, MySpace decided to charge customers for the services rendered, which had initially been free, but only approximately 6 000 customers out of a 9-million customer base were prepared to pay for the service.

Other Internet-based businesses mentioned by Kurtz and Boone (2006:125) that failed are iHarvest.com, Furniture.com, Kozmo.com and SwapIt.com. iHarvest.com did not provide a unique service for a fee, as both Netscape and Internet Explorer provided customers with a browser plug-in at no cost. Furniture.com sold furniture online, but the main problem was shipping large and bulky furniture to customers. Many delivery and courier businesses did not transport such products, and those that did were very costly. Some of the reasons for failure included the free-of-charge shipping of products, shipping products to customers but not billing the customers for the products, and lack of tracking orders (Metz 2001:163). Kozmo.com rented movies by delivering the movies to the customer’s home. The costs outweighed the income stream, and the business model was flawed in the sense that it could never be sustainable. The SwapIt.com used the concept of trade-in of old compact disks (CDs) and video games. The only income stream for this business was the shipping and handling charges, which were also not sustainable (Kurtz & Boone 2006:125).

One of the main reasons why the Internet-based businesses failed in the inception stage was that the basic services were offered free to customers. A typical case was MySPace. Once the Internet-based businesses realised that the income levels were not sufficient to be sustainable, it was difficult to convert the basic services from a free service to a service for subscribers only, where the subscribers had to pay a fee to receive the service. (Krishnamurthy 2003:59). Oliva *et al.* (2003:85) cite low prices and large infrastructural investments as possible reasons for failure, as the Internet-based businesses were not able to provide enough capital through retained earnings for growth and expansion, and therefore had to acquire external capital. Kennedy and Coughlan (2006:526) recommend that businesses considering implementing an e-business strategy, should evaluate the possibility of portal participation until established in that specific market, as this will assist in rapid development and will minimise the uncertainty and new-entrant risk.

The major reason for the failure of so many of the so-called dot.com businesses after the 2000 dot.com crash, is that these businesses could not process the customers' orders quickly enough, or provide prompt delivery of processed orders. Another reason cited for failure is that many of the businesses' websites were unable to handle the large number of orders placed, as the systems in place were not reliable or proven workable. (Levis 2009:81). Borges *et al.* (2008:883) concur, and furthermore state that the businesses that failed did not take into account critical factors for strategic and operational success. Arend (2006:372) agrees that a major issue contributing to failure and not addressed by businesses was that of strategic management. Another reason provided by Spaulding (2009:38-49) why Internet-based businesses failed was that no trust relationship was built between the business and the customers. According to Adali *et al.* (2008:1), there are many dimensions to trust that need to be considered. Dhillon, Coss and Hackney (2001:163) believe that disruptive technologies can also lead to business failures. Disruptive technologies are defined as technologies used in businesses that result in bad product and services performance. Other reasons for failure of some Internet-based businesses were that these businesses underestimated the cost of customer

acquisition and retention, since the click-through referral fees were extremely high for start-up Internet-based businesses (Jackson 2008:54).

2.8 SUMMARY

The purpose of Chapter Two has been to achieve the secondary objective, as stated in Chapter One, to give an overview of Internet-based businesses. The first issue addressed in this chapter was the nature of Internet-based businesses. A distinction was made between e-commerce, e-business, m-commerce and e-marketing.

Internet-based businesses were classified into five main categories, each of which was discussed. The discussion provided a historical overview of brick-and-click businesses, click-only businesses, Internet search engines and social networks, and other types of businesses (such as auctions and blogs) were mentioned.

Another issue that was outlined was the history of Internet-based businesses. A timeline of the Internet was provided, as e-business cannot exist without the Internet. The various stages of an e-business model, according to various authors, were provided. These stages were used to construct an e-business model to illustrate the types of business that are associated with the different e-business stages.

The importance of an e-business strategy for all businesses was stressed. The chapter concluded with some Internet-based business successes or failures, and the probable reasons for the failures were also given.

Chapter Three will focus on the various traditional valuation approaches that can be used to value brick-and-mortar and brick-and-click businesses. Variables that are needed for valuation purposes will be identified. Chapter Three will give an overview of previous research in the field of valuation, and on the valuation of Internet-based businesses.

CHAPTER THREE
VALUATION OF BUSINESSES

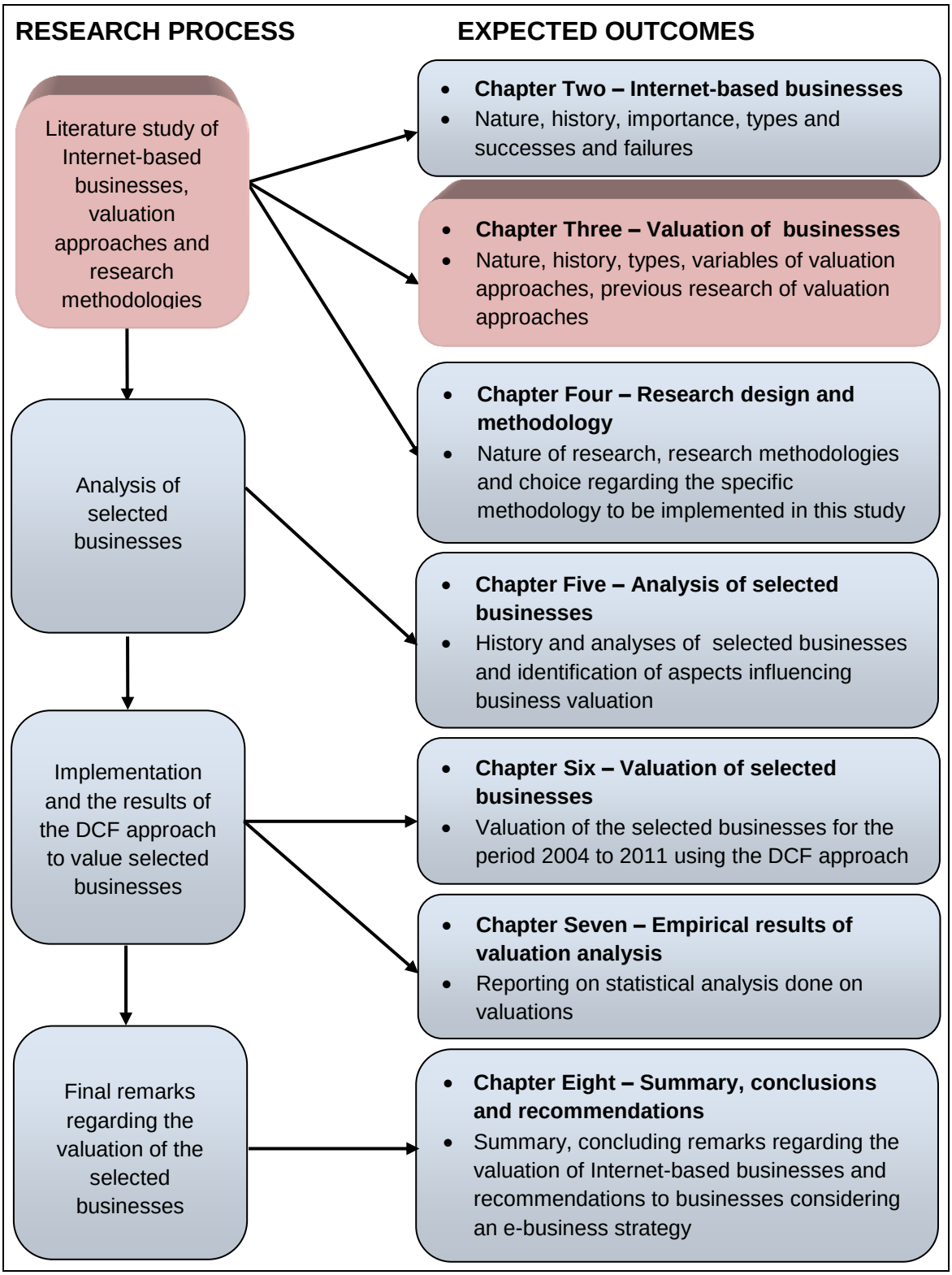
3.1 INTRODUCTION

Chapter Two discussed Internet-based businesses. The focus was on the nature of this type of business and how it differs from brick-and-mortar businesses in terms of trading. The importance of the Internet-based businesses in the business environment was also highlighted, and it was concluded that it is important to correctly value Internet-based businesses. A secondary objective of this study is a detailed discussion of the various traditional approaches to business valuation. In literature, one finds that there are various valuation approaches. For ease of reference, instead of using the words methods and models, reference will be made to valuation approaches. In the study, reference is made to shares, which refers to ordinary shares only.

In the financial literature, many business valuation approaches are discussed. Various authors, such as Lundholm (2001), Plenborg (2002) and Uzma *et al.* (2010) have carried out research to determine which approach is the most appropriate in various situations. Previous research has shown that the discounted cash flow (DCF) is the most preferred approach used by businesses to conduct market valuations of large businesses, although it has many shortcomings. According to Huang and Van Mieghem (2009), for Internet-based businesses, it is important to keep track of the browsing and the conversion ratio (that is from browsing to committing online) as this data gives an indication of future sales.

In Chapter One a number of secondary objectives were identified to give effect to the primary objective of the study. These objectives were incorporated into the conceptual framework of the research process. Figure 3.1, which is reproduced from Chapter One, illustrates where this specific chapter fits into the research process.

FIGURE 3.1: CHAPTER THREE AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

This chapter will address the issue of valuation in terms of the nature of valuation, and what the market-related value of a business is. The purpose of valuation will be addressed. The valuation of businesses of different sizes and the valuation of real estate will be discussed. A brief history of valuation approaches will be provided, as well as the development of the various valuation approaches. A discussion of the various approaches available to business valuation will follow.

The valuation approaches to be included in the discussion are the dividend discount model (DDM), the zero growth model, the constant growth model, the non-constant growth model, the free cash flow valuation model, the price ratios (price-earnings ratio, price-book ratio, book value per share and the liquidation value per share), the economic and market value added performance measurements, and real options. A summary that will highlight the unknown variables and the variables necessary to each approach will follow. The applicability of various valuation approaches will be included in the discussion. The last section will include previous research on the topic of valuation.

3.2 NATURE OF BUSINESS VALUATION

To start the discussion on the nature of valuation, a brief overview of valuation and its associated concepts will be followed by a discussion on the purposes of valuation. Then the question whether small, medium and large businesses should follow different valuation approaches when determining the market values, will be addressed. The valuation of real estate has many similar variables, such as the valuation approaches of shares. Therefore the approaches that can be used when valuing real estate will be described.

3.2.1 Valuation concepts clarification

According to Els (2010:257) and Marx, De Swardt and Nortjé (2003:98), one needs to differentiate between par value, market value, book value and economic value, when referring to the value of a share. The par value, also known as face value, of a share is the value of that share when it was issued in the primary market for the first time (Els 2010:257; Marx *et al*. 2003:98).

The market value of a share is determined by the law of economics, which is demand and supply. Els (2010:257) and Marx *et al*. (2003:98) define market value as the monetary value that buyers are willing to pay for a specific share and sellers are willing to accept for that specific share. Marx *et al*. (2003:98) furthermore state that two concepts that are related to market value are that of market capitalisation and market value added. Market capitalisation is equal to the number of shares times the market value per share, while market value added is the monetary value by which the share price increases over a specified period. Gitman *et al*. (2010:308) describe the market value of a share as the equilibrium price as a result of the interactions of multiple buyers and sellers. This equilibrium price has been reached after both buyers and sellers have taken all the available information into account. French (2004:534) and Pallister and Isaacs (2003:321-322; 332) define market value as the value of an asset if it were sold on the open market at the current market price, where the market price refers to the price of the asset in the open market. Furthermore it is important to note that certain assets, such as shares, have two market prices, namely a buying price and a selling price. The market price, known as the middle price that is quoted in the press, is equal to the average of the buying and selling prices. Grajkowska (2011:179-201) concurs with the above descriptions of market value, but adds that the buyer and seller are under no obligation to trade the asset, and that both the buyer and seller have equal knowledge about the asset that may be traded.

According to Smith (2009:102), the market value for a property is important to the investment process, as it determines the amount the investor will pay for the property, and ultimately it will influence the maximisation of the investor's wealth. If one considers the criteria as identified by Lind (1998:172), then the following definitions of market value are correct:

- No indication is given to the cautiousness and knowledge of buyers and sellers.
- No reference is made to willing buyers and willing sellers.
- The price referred to is interpreted in terms of the realistic degree of confidence in a price in a certain period.

Els (2010:257) describes book value as the total assets minus liabilities, preference share capital and intangible assets. The economic value (intrinsic value) is the current price of a share, and is based on the future cash flows. When applying the various valuation approaches to determine current prices of shares, one is in fact calculating the economic or intrinsic value of the shares. Marx *et al.* (2003:98-99) explain that there is a difference between the definition of the book value of fixed assets and the book value of shares. The book value of fixed assets is the initial cost of the fixed assets plus the installation costs associated with the fixed assets minus the accumulated depreciation of the fixed assets. The book value of shares is the per share amount that shareholders will receive from the proceeds of selling all the assets of the business at book value after all the liabilities have been paid.

The economic value, also known as the intrinsic value, is the total of all the discounted future cash flows and the increase in the market value (Marx *et al*. 2003:99). Pallister and Isaacs (2003:182) concur that the economic value is the difference between the present value of the all the future cash inflows and the present value of all the future cash outflows.

A discussion by Singh and Saiyid (2008) draws attention to the implication of the subprime crisis on valuation. Many pricing models have used historical data as the trading volumes of shares declined. According to Singh and Saiyid (2008), three valuation approaches, namely the mark-to-market approach, the mark-to-matrix approach, and the mark-to-model approach, can be used when valuing businesses. The mark-to-market approach is applicable to actively traded securities, and is used when the quoted prices of shares are used in the valuation process. The mark-to-matrix approach is used to value less actively traded securities, and makes use of estimates of the credit spread of these securities relative to the credit spread of the more actively traded securities. The reason for the estimation of relationship between the two credit spreads is that actively traded securities are more easily valued than less actively traded securities. Examples of less actively traded securities are emerging market securities, municipal bonds, and asset-backed securities. The third approach, the mark-to-model approach, is the most appropriate approach to be used when

valuing the least liquid securities. This approach values securities based on numerical supposition. Examples of least liquid securities are real estate and private equity investments.

3.2.2 Purpose of business valuation

It is important to realise that the price of a business is linked to the value of the business, and that the price of a business is not the value of the business. Therefore the value of the business will assist in the determining the price of the business if traded. Turban *et al.* (2006:643) describe the purpose of valuation as the determining of a fair market value for a business, where a fair market value is the acceptable price to be paid by an informed buyer and to be received by an informed seller. The market value of a public company can be determined by the current price of the shares. It is also important to note that the value of a business may be different for different buyers. According to Turban *et al.* (2006:643), valuations are done when businesses want to merge or when a business needs to determine an acceptable initial public offering (IPO) price for the shares when listing on a stock exchange. Fernández (2007a:2-3) and French (2004:535-536) identify a number of purposes for business valuation, as it will assist in the following:

- the buying and selling of the business by determination of the highest price (from the buyer's perspective) and the lowest price (from the seller's perspective) for the business to be bought or sold;
- the decision to trade in the company's shares, by indicating whether shares should be bought, sold or held;
- the decision which companies' shares should be included in the portfolio by identifying undervalued shares;
- justifying the price of the shares offered to the general public;
- comparing the value of shares to other securities when dealing with inheritances and wills;
- quantifying the value creation attributable to the executives when considering compensation schemes;
- identifying and stratifying the value drivers of a business or business unit;

- the strategic decisions on the future of the business in terms of whether the business should be sold, milked, merged or grow;
- the decision of whether the business should consider national and international market development (intensify existing markets and enter new markets) and product development (expand the product mix and product lines);
- obtaining debt from external sources; and
- taxation, insurance and accounting purposes.

Léger (2010:408-409) states that it is important to place a fair value on a business, but without the relevant financial and non-financial information it is difficult to do so. The research of Léger (2010:409) considers the expected return on sound investments in cases where e-business activities are included and excluded, to determine whether there are differences in the expected return. One concern that Pennisi and Scandizzo (2006:77) raise is that the traditional cost-benefit approaches to valuation are seriously lacking, although the valuation of businesses (regardless of type of business) is not embedded in one economic theory. The authors add that there is no one valuation method preferred by the various valuators.

3.2.3 Valuation of businesses of different sizes

McGuigan, Krelow and Moyer (2009:278) contend that closely-held businesses, such as small businesses, may not be able to use the traditional valuation approaches. Some reasons are that these small businesses do not issue shares, or that the shares are not actively traded and therefore the value of the shares does not reflect their actual market value. Furthermore, McGuigan *et al.* (2009:278) believe that other factors should be considered when valuing a small business, and include:

- the nature and history of the business;
- the general economic outlook of the economy, sector and industry in which the business operates;
- the earnings and dividend payment capacity of the business;

- the financial condition of the business as per financial statements;
- the book value of the business; and
- the type of shareholders (majority or minority interest and voting or non-voting.

Another major question that needs to be addressed is the valuation of shares of businesses that do not pay dividends. Lasher (2011:371) asserts that these shares do have value, but the value is not based on the current dividend stream. Many businesses prefer not to pay out dividends, and rather to reinvest the earnings to fund growth in the business. The value of the shares is based on the expectation that the shares will pay a dividend at some time in the future. Therefore it is important to distinguish between valuation approaches applicable to businesses of different sizes as measured by their equity capital.

According to Watson (2010:137), when SMEs engage in the valuation of intangible assets for the purpose of inclusion in financial statements, the costs associated with the valuation process should be taken into account. The costs include the time and effort of the owner and/or manager, as well as the fees payable to the professional valuators who are conducting the valuation process.

Parker (n.d.) states that the so-called asking price of an online business is not the actual price that will be paid when it is bought. One factor that sellers of online businesses include in the asking price is the effort put into the business. In reality this effort by the sellers to create the online business will not form part of the price the seller will receive when the selling contract is signed.

3.2.4 Valuation of real estate

When investing in real estate, it is important that an appropriate market value for the real estate needs to be determined. According to Smith (2009:102-103), the use of the correct real estate market value is critical when:

- determining the correct price to pay when acquiring the real estate;
- recording the value of the real estate in the financial statements;

- ensuring that the appropriate insurance for the real estate is taken;
- determining the current return and future returns that the investor will receive when investing in the real estate;
- conducting a feasibility study to evaluate possible development(s) of the current real estate; and
- determining the maximum financing that financiers will be willing to provide to acquire the real estate, or for alterations to the real estate.

Smith (2009:105) identifies four approaches to value real estate, namely the income-capitalisation method, the discounted cash flow method, the construction cost method, and the sales comparison method. The sales comparison method is used when valuing residential real estate, while the other three methods are used to value commercial real estate. The income-capitalisation method aims at converting the payback period (the time taken to recover the initial investment) of the investment into a required rate of return. Smith (2009:106, 122, 128, 134, 139) indicates that the cost of capital will be used, but this rate needs to be adjusted for expiry risk, tenancy risk, nodal obsolescence and maintenance risk. Expiry risk is linked to the length of the leases as stated in the lease agreements between the lessors and lessees. The ability of the tenants (lessees) to pay the rental for the duration of the payback period is referred to as tenancy risk. Nodal risk of a property is calculated by comparing the actual lease rentals with the market rentals of the node in which the real estate is located. Maintenance risk of real estate refers to the technical condition of the real estate, and emphasis is placed on the investment required to convert the real estate into the intended grade of the real estate to be valued.

The discounted cash flow method calculates the risk adjusted value of a real estate's future cash inflows, implying that the net cash inflows for the real estate over its lifetime will be determined. In forecasting the future cash inflows, factors such as lease expiries, real estate market conditions and benchmarked operating costs will be taken into account. To use this method, the correct future cash inflows and discount rate are required. (Smith 2009:142).

According to Smith (2009:147), the construction cost method can also be applied to value real estate. This method is applicable when valuing a new development, an existing development for insurance purposes, or the expansion of an existing development. The main features of the method are to determine the total land costs, total construction costs, total profession fees, total holding costs and total finance costs.

Kooymans and Abbot (2006:200-203) have discussed the estimation of replacement or reproduction costs, where the cost is dependent on technology and on the legislation applicable to the building and the planning of the real estate assets in question. This approach takes the depreciated replacement cost into account, as well as the functional obsolescence of the specific building. According to Roubi and Littlejohn (2004:175), valuation models used in real asset valuation aim to determine whether relationships exist between tangible and intangible property characteristics and property asset values.

3.3 HISTORY OF THE VARIOUS VALUATION APPROACHES

In 1959 Myron Gordon published the first article on how to value a share. The model he presented in this article is known as the Gordon growth model. Gordon (1959:99) states that the basic principle of the model is that when investors invest in a share, they are in fact investing in the possibilities of such a share:

- to pay out dividends (dividend yields);
- to increase in value (capital gains); or
- to pay out dividends and to increase in value.

In this study (Gordon 1959:100-104), three main tasks are undertaken. The three tasks are the explanation of the variation in share prices, testing of the dividend hypothesis, and the testing of the earnings hypothesis. The dividend hypothesis focuses on the dividend stream that the investor foresees receiving in the future, and not only on the current value, while the earnings hypothesis states that the investor buys the earnings per share when a share is purchased. Gordon (1959:101) explains that the growth of dividends is based on retained

earnings. The variation in share prices highlights the fact that investors are concerned with both the dividend the share will pay and the income that the share will earn. The concluding equation to explain the variation in a share price is then the following:

$$P = a_0 + a_1 D + a_2 Y$$

Where P is the price of the share at the end of the period
D is the dividend for the year
Y is the income for the year
a_1 and a_2 represents the value the market places on dividends and earnings

One major limitation of this approach as described by Gordon (1959:101), is that the income for the year can either be the dividend(s) or the earnings per share, but it cannot be both. If one considers that fact that investors invest in a share with the aim of receiving dividends or/and earnings, then this approach is very flawed.

3.4 TRADITIONAL VALUATION APPROACHES

This section will provide an overview of various valuation approaches, as found in the literature.

3.4.1 Dividend discount model

The dividend discount model (DDM) (see Firer, Ross, Westerfield & Jordan 2012:224), also known as the general dividend model (see Hirt & Block 2008:146), the discounted cash flow method (see Els 2010:259), the basic ordinary share valuation model (see Gitman *et al*. 2010:311) and the one-period dividend valuation model (see McGuigan *et al*. 2009:272), is based on the principle that one should determine the expected cash flow that an investor will receive in the future when investing in a specific share. If one considers the DDM valuation process, it is possible for investors to receive cash flows from two different sources. The first source is the change, either positive or negative,

in the share price, and is referred to as the capital gain (loss). The second source is the dividend the investor will receive, provided that the business has declared a dividend to be paid to the investors. (Berk & DeMarzo 2011:252-256; Els 2010: 259; Lasher 2011:359; McGuigan *et al*. 2009:271).

The sources of cash flow that an investor can receive can thus be divided into two categories, namely the capital gain (loss) rate and the dividend yield. The total return that an investor will receive is the sum of the capital gain (loss) rate and the dividend yield. It is important to note that the dividend yield is not determined by one or a few shareholders' actions; the actions of all the shareholders in the market will determine the expected return on the share (Lumby & Jones 2011:376).

The capital gain (loss) rate, the dividend yield and the total return for one share are calculated as follows:

$$Capital\ \ gain\ \ rate = \frac{P_1 - P_0}{P_0} \qquad \text{[Equation 1]}$$

$$Dividend\ \ yield\ = \frac{D_1}{P_0} \qquad \text{[Equation 2]}$$

$$Total\ \ return = \frac{D_1 + (P_1 - P_0)}{P_0} \qquad \text{[Equation 3]}$$

Where P_1 is the price of the share in year one
P_0 is the price of the share in year zero
D_1 is the dividend received in year one

The total return that an investor will receive on one share is only for a one-year period. According to Berk and DeMarzo (2011:253), the expected total return of a share should be equal to the expected return of other available investments carrying the same risk in the market. When investors invest in shares with no intention of selling them now or in the near future, then one cannot assume the

total return to be the fair market-related value of the share. Since investors are interested in the future cash flow of a share, one should then pay particular attention to the possibility of future dividends. Lasher (2011:362) concurs that the intrinsic value of a share is based on the assumptions made about the future expected cash flows. These assumptions are formulated as a result of fundamental analyses of the business and the industry in which the business operates.

Berk and DeMarzo (2011:256) state that the DDM can be used by all investors regardless of the time horizon of the investment. Hillier *et al*. (2010:127) add that the DDM is applicable for both long-term investors and short-term investors. Their rationale is that if a short-term investor wants to sell his/her share, then an investor willing to buy the share needs to be found. The price the willing buyer is prepared to pay is based on the dividends the willing buyer expects to receive in the future.

Whether or not the investors receive their returns in the form of dividends or capital gains is of no concern when using the DDM. To calculate a fair market-related value of a share, the DDM equation can be used, and is formulated as follows:

$$P_0 = \sum_{n=1}^{\infty} \frac{D_n}{(1+r)^n} \qquad \text{[Equation 4]}$$

Where P_0 is the price of the share in year zero
D_n is the dividends received as from year *n* until infinity
r is the discount rate or the required rate of return

The price of a share is then equal to all the future expected dividends discounted by the required rate of return. An assumption of this model is that investors can determine the correct yearly dividends and required rate of return (Hirt & Block 2008:156). As stated by Hillier *et al*. (2010:127), Lasher (2011:297) and Lumby and Jones (2011:373), the value of equity of a business

(which belongs to the investors since shares were issued to shareholders) is the sum of the present values of all the expected future dividends. According to Lumby and Jones (2011:377), it seems that the DDM ignores capital gains (losses), but the approach in fact does include the reasons why capital gains (losses) will occur.

As can be seen in Equation 4, one of the elements of the DDM is the required rate of return. As cash flows are uncertain, one cannot use the risk-free rate of return (r_f) as the required rate of return. The higher the risk of not receiving the cash flow and in this instance a dividend, the higher the return will be. A good measure to use for the required rate of return is the cost of equity capital, which should be similar to the expected return of other available investments with the same risk profile as the share to be valued (Berk & DeMarzo 2011:252).

According to McGuigan *et al.* (2009:272), another issue that makes the valuing of ordinary shares more complex than, for example the valuing of preference shares, is that the dividends of ordinary shares are expected to grow. Preference share dividends and bond coupons remain constant over time, as both the dividends and the coupon payments are expressed as fixed percentages of the par value of the shares or bonds.

If one considers Equation 4, then it is nearly impossible to determine the price of a share if the time horizon is indefinite. To overcome this problem, investors can use a number of different approaches, which will be discussed in the sections to follow. The first three approaches are variations of the DDM, namely the zero growth model, the constant growth model, and the non-constant growth model. More discussions on other approaches will then follow.

3.4.2 Zero growth model

Using Equation 4 to determine the current price of a single share, one needs the estimated dividends forever. If it is expected that there will be no growth in the dividends forever, this implies that $D_0 = D_1 = D_2 = ... = D^{\infty}$. Various authors (see for example Els 2010:260; Gitman *et al*. 2010:312; Hillier *et al*. 2010:128;

Lasher 2011:366) refer to this model as a perpetuity, and it can be formulated as follows:

$$P_0 = \frac{D_1}{r}$$ [Equation 5]

Where P_0 is the price of the share in year zero
D_1 is the constant dividend received forever
r is the discount rate or the required rate of return

Gitman *et al.* (2010:314) state that the zero growth model is highly applicable when valuating preference shares. If one considers the characteristics of preference shares, then it is clear that the shareholders will receive a fixed annual dividend over the infinite life of such shares. A limitation of the zero growth model as identified by McGuigan *et al*. (2009:275) is that this approach is only suitable if the dividend, not the dividend growth rate, remains constant forever.

3.4.3 Constant growth model

Another possibility is that the dividends will grow at a certain rate forever. If one considers Equation 5, then it should be clear that this model will not be applicable because there is no growth possibility for the dividends. Equation 4, on the other hand, can be adjusted to incorporate constant dividend growth. One can then say that the share price today is equal to the sum of the discounted present values of the future dividends adjusted with the growth rate for each year to come, until infinity (Lasher 2011:362-363). As stated by Hillier *et al*. (2010:128), this represents a perpetuity, with the exception that the future dividends will be discounted back to their present values using the difference between the required rate of return (*r*) and the dividend growth rate (*g*) as the discount rate. Hirt and Block (2008:146) as well as Lasher (2011:365) refer to the constant growth model (or constant normal growth model), Jordan and Miller (2009:168) refer to this model as the constant perpetual growth model, Lumby and Jones (2011:379) call it the dividend growth model, and it is also

known as the Gordon Model (Els 2010:261; Gitman *et al.* 2010:313). Therefore it is possible to rewrite Equation 4 to include the constant dividend growth. Gitman *et al.* (2010:313) state that this model is the most widely used valuation approach.

$$P_0 = \frac{D_1}{r - g}$$ [Equation 6]

Therefore

$$r = \frac{D_1}{P_0} + g$$

Where P_0 is the price of the share in year zero

D_1 is the dividend received in year one, where $D_1 = D_0(1 + g)$

r is the discount rate or the required rate of return

g is the dividend growth rate and $g < r$

As stated by Lasher (2011:367), the expected return (*r*) is a reflection of the knowledge of the investors in the business. Jordan and Miller (2009:169) confirm what various authors state (see for example Els 2010:260; Lasher 2011:365; McGuigan *et al*. 2009:276), that when working with the constant growth model, it is important to remember that the growth rate needs to be smaller than the required rate of return. One of the disadvantages of this model is that if the dividend growth rate is greater than the required rate of return ($g > r$), then this model is invalid, and cannot be used. No share will grow indefinitely at a rate greater than the required rate of return, which implies an infinite value.

As explained by Jordan and Miller (2009:169), it makes economic sense to include the requirement that the dividend growth rate (*g*) must be less than the required rate of return (*r*). Els (2010:260) and Lasher (2011:366) concur that if the dividend growth rate (*g*) is greater than the required rate of return (*r*), then one will get an irrational answer that is not meaningful. Gitman *et al*. (2010:313) contend that another assumption of the constant growth model is that the

business's earnings and dividends will grow at the same rate. This implies that the difference between the required rate of return (*r*) and the dividend growth rate (*g*) will always be constant. It is important to note that the discount rate applicable (in this case the difference between required rate of return and dividend growth rate) will only remain constant if the business has a fixed payout ratio, that is, a fixed percentage of earnings will be paid out to the shareholders of the business.

One advantage of the constant growth model is that the expected price of a share can be calculated for a future date, provided that the dividend, discount rate and growth rate are known. Disadvantages of the constant growth model include that it can only be used for large stable businesses, and that the dividend in year one (that is D_1 as per Equation 6) must be greater than zero. Thus this approach is not appropriate for use on volatile shares. (Gitman *et al*. 2010:313).

Hillier *et al*. (2010:134) further suggest that when valuing businesses, one should not only consider future growth in dividends, but also consider future growth opportunities. Future growth opportunities are opportunities that businesses have, to invest in profitable projects using retained earnings. These authors indicate that when considering growth opportunities, the net present value per share of the growth opportunity (NPVGO) should be determined. The value of businesses with many growth opportunities should be higher than businesses with no or only a few growth opportunities. When businesses pay out all their earnings to shareholders (meaning that the earnings per share are equal to dividends per share) then these businesses are known as cash cows. Cash cows do not have growth opportunities that need to be funded. To value cash cows, the zero growth model (see Equation 5) can be used. When businesses have growth opportunities, then the future cash inflows need to be included in the valuation process. Therefore Equation 5 can be adjusted to include these future cash flows, and is shown below as Equation 7.

$$P_0 = \frac{EPS}{r} + NPVGO$$ [Equation 7]

Where P_0 is the price of the share in year zero
EPS is the earnings per share
r is the discount rate or the required rate of return

The value of a business will only increase when earnings are reinvested in the business to fund the future growth opportunities (EPS), and these future growth opportunities must have positive net present values (NPVGO) (Hillier *et al*. 2010:135, 139).

3.4.4 Non-constant growth model

Another scenario is that the dividends will grow, but at different rates. It is even possible that dividends may not be declared, and thus no dividends will be paid to investors. Jordan and Miller (2009:175) as well as Lasher (2011:368) refer to this model as the two-stage dividend growth model. Some authors (see Els 2010:261) call it the variable dividend growth model; the variable-growth model (see Gitman *et al*. 2010:314); the non-constant growth model (see Hirt & Block 2008:148) or the non-constant growth dividend valuation model (see McGuigan *et al*. 2009:277). The premise on which this model is based, is that the dividend will grow at a certain growth rate (g_1) for a specified period, and then the dividend will grow further at a certain growth rate (g_2 forever) (Lasher 2011:365).

The constant growth model cannot be used for start-up businesses, but the non-constant growth model is suitable for businesses paying higher-than-normal dividends and exceptionally low or no dividends in the first few years of existence. This approach is also suitable for businesses experiencing temporary poor performance periods. Dividends will revert to acceptable levels (similar to industry's dividends) once the competitive advantage has been leveraged out by the competitors. (Els 2010: 261; McGuigan *et al.* 2009:277).

The equation used by Jordan and Miller (2009:175) is the following:

$$P_0 = \frac{D_0(1+g_1)}{r-g_1}\left[1-\left(\frac{1+g_1}{1+r}\right)^T\right]+\left(\frac{1+g_1}{1+r}\right)^T\left[\frac{D_0(1+g_2)}{r-g_2}\right]$$

[Equation 8]

Where P_0 is the price of the share in year zero

D_0 is the dividend just paid or just received in year zero

r is the discount rate or the required rate of return

g_1 is the first dividend growth rate and $g_1 > r$ acceptable

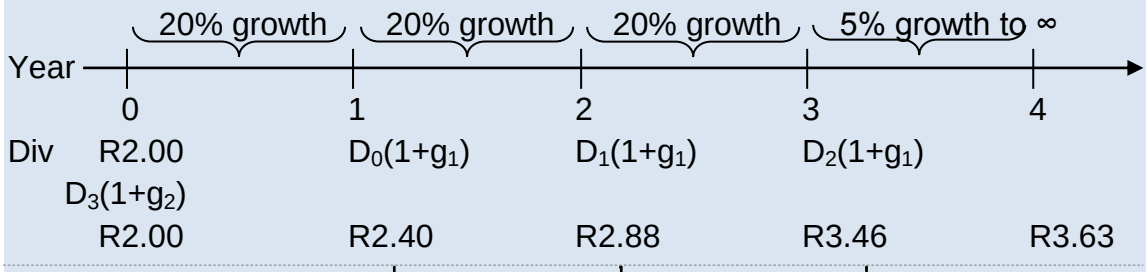
g_2 is the second dividend growth rate and $g_2 < r$

Note: The variable k in the Jordan and Miller (2009:175) is substituted with the variable r to be consistent within all the methods and models.

To visualise the equation, a time line can be drawn as can be seen in Figure 3.2. Assume the dividend just paid is R2.00 and the dividend will grow at 20% for three years. As from year four, the growth rate will decline to 5% forever. The required rate of return is 12% per annum.

From the discussions on the DDM and the three variations of the DDM, it is clear that these approaches make use of many estimates. Therefore many measurement errors may occur when valuing a business. Gitman *et al*. (2010:316) discuss the implications of estimating an incorrect growth and discount rate on share valuation. A suggestion is made that valuators should use estimates rounded to the nearest tenth of a percent. McGuigan *et al*. (2009:273) concur that although the calculations appear to be simplistic, the estimation of the share prices are rather complex in nature because of the various uncertain variables in the valuation approach.

FIGURE 3.2: ILLUSTRATION OF THE NON-CONSTANT GROWTH MODEL



R2.14
R2.30
R2.46
R6.90 This is the present value of the dividends for the first three years

This represents the first part of Equation 8, namely

$$Value\ of\ high\ growth\ periods = \frac{D_0(1+g_1)}{r-g_1}\left[1-\left(\frac{1+g_1}{1+r}\right)^T\right]$$

The present value of the constant growth period is represented by the second part of Equation 8, namely

$$Value\ of\ stable\ growth\ for\ ever = \left(\frac{1+g_1}{1+r}\right)^T\left[\frac{D_0(1+g_2)}{r-g_2}\right]$$

The present value of the constant growth period at the end of the high growth period (year three) is then calculated by using Equation 6 as follows:

$$P_3 = \frac{D_3(1+g_2)}{r-g_2}$$

$$P_3 = \frac{3.46(1+0.05)}{(0.12-0.05)}$$

$$P_3 = R51.90$$

Present value of P_3 with a discount rate of 10% is R36.94. Therefore the current share price is then equal to R43.84 (R6.90 + R36.94).

3.4.5 Free cash flow valuation model

Gitman *et al*. (2010:316) describe this approach as a model that determines the value of a business as the sum of the present values of the expected free cash flows (FCF). The discount rate that is used in the discounting process is the weighted average cost of capital (WACC). FCF is the amount of cash flow available to investors (shareholders and creditors) after the business has met all the financial obligations. These obligations include the payment of operating expenses and investments in net fixed assets and net current assets.

WACC is defined as the expected future cost of funds (equity and debt) in the long term (Gitman *et al.* 2010:801, 812). The main difference between the DDM and its variations and the FCF valuation model, is that the focus is on the expected future FCF, and not on the expected future dividends to be paid. Equation 9 illustrates the equation of the FCF valuation model, also referred to as the discounted cash flow valuation model (DCF), when valuing the business as a holistic entity and when valuing ordinary shares (adapted from the equation as presented by Fernández 2007b:585; Gitman *et al.* 2010:317).

$$V_C = \sum_{i=1}^{\infty} \frac{FCF_i}{(1+WACC)^i} \qquad \text{[Equation 9]}$$

Where V_c is the market value of the business as a holistic entity

FCF_i is the expected free cash flow at the end of each period *i* until infinity

WACC is the weighted average cost of capital to be used as the applicable discount rate

$$Vs = V_C - V_D - V_P \qquad \text{[Equation 10]}$$

Where V_S is the market value of ordinary shares

V_c is the market value of the business as a holistic entity

V_D is the market value of debt

V_P is the market value of preference shares

The FCF valuation model is applicable in a number of situations, namely

- where businesses pay no dividends and therefore no dividend history is available;
- when it is a new business (start-up); and
- when it is only one business unit of a large business that needs to be valued (Gitman *et al.* 2010:316).

3.4.6 Price ratios

A number of price ratios are frequently used, and include the price-earnings (P/E) ratio, the price-book (P/B) ratio, the book value ratio, and the liquidation ratio. Each of these ratios will now be discussed.

(a) Price-earnings ratio

According to Els (2010:264), the price-earnings (P/E) ratio is the most important relative valuation technique because it shows the monetary value that investors are willing to pay in relation to reported earnings per share. Gitman *et al.* (2010:319) refer to this ratio as the price-earnings multiples, while McGuigan *et al.* (2009:278) refer to the price-earnings multiples or to the capitalisation of earnings.

In section 3.4.3, Equation 7 states that the current share price is equal to sum of the discounted EPS and NPVGO. To calculate the P/E ratio, one needs to divide this answer by the EPS.

$$\frac{P}{EPS} = \frac{\frac{EPS}{r}}{EPS} + \frac{NPVGO}{EPS}$$

$$\frac{P}{EPS} = \frac{1}{r} + \frac{NPVGO}{EPS}$$

[Equation 11]

Where P is the price of the share
EPS is the earnings per share
NPVGO is the net present value of the growth opportunities
r is the discount rate or the required rate of return

Another method to calculate the P/E ratio is by using the following equation:

$$P/E\ ratio = \frac{MPS}{EPS}$$

[Equation12]

Where MPS is the market price per share
EPS is the earnings per share

And

$$EPS = \frac{NPAT}{Number\ of\ shares\ issued}$$

Where NPAT is the net profit after tax
Number of shares issued is the number of shares outstanding

When considering Equation 11, it is evident that the P/E ratio is positively related to the net present value of the growth opportunities. This implies that P/E ratios for businesses with strong growth prospects will be higher than for those with low or no growth prospects. It should also be noted that the P/E ratio is negatively related to the discount rate. The discount rate is the required rate of return, and the required rate of return is linked to the risk (as indicated by the beta coefficient) associated with that specific investment opportunity. The higher

the risk associated with the investment opportunity, the higher the required rate of return for that opportunity, and the lower the P/E ratio. (Els 2010:264; Hillier *et al*. 2010:140, 340).

Gitman *et al*. (2010:32) state that one of the advantages of calculating the P/E ratio to determine the value of a business is that it is easy and quick to calculate. It is also highly applicable when valuing privately owned businesses. Privately owned or closely owned businesses do not have minority interests of non-controlling investors, which publicly owned businesses do have, and therefore the P/E ratio is adjusted by added a premium to it when valuing privately owned or closely owned businesses. (Gitman *et al.* 2010:320; McGuigan *et al.* 2009:278). Although it is quick and easy to calculate, Zarzecki (2011:108) points out three limitations of the P/E ratio, namely that the P/E ratio cannot be used when no profits are generated, the income is increasing too fast and it ignores the unique characteristics of each specific business.

McGuigan *et al.* (2009:278) suggest that when valuing minority interest shares, the value of the business as a holistic entity should be determined. A generally accepted and practised principle is to discount the value of the minority interest shares. The major limitation of minority interest shares is that the shareholders do not have any control or very little control, and that the shareholders receive small dividends, if any. Another issue with regard to minority interest shares is the lack of marketability because there is no active market for these shares, and the shareholders are usually the owners of these businesses.

An important statement made by Lasher (2011:372) is that stock markets have a tendency to fix short-term industry P/E ratios. This implies that the P/E ratio is fairly constant, and therefore changes in share prices rely on changes in the latest earnings of the business.

(b) Price-book ratio

The price-book (P/B) ratio is another ratio used in share valuation. This ratio provides an indication of the wealth creation possibility of the specific share. As stated by McGuigan *et al*. (2009:274), shareholders' wealth maximisation is the

most important primary financial goal, therefore the P/B ratio will be a suitable ratio to indicate whether wealth maximisation has occurred. The higher the P/B ratio, the more value management has created for the shareholders. (Els 2010:8, 265).

(c) Book value per share

The book value per share refers to the monetary amount that each ordinary share will receive if all the assets of the business are sold for the book or accounting value. Gitman *et al*. (2010:319) argue that this approach is flawed in that it uses historical data from the financial statements, and that it disregards the future potential earnings of the business. Therefore, book value per share has no relationship with the true market-related value of the business.

(d) Liquidation value per share

The difference between book value per share and liquidation value per share is that the liquidation value per share is based on the current value of the assets of the business. Liquidation value per share is the monetary amount that each outstanding ordinary share will receive after paying all liabilities from the proceeds of selling all the assets of the business at the market-related value. This ratio also ignores the future potential earnings of the business. (Gitman *et al*. 2010:319).

3.4.7 Economic and market value added performance measurements

Economic value added performance measurement (EVA) is the net operating profit after tax, after all capital costs have been deducted. Lasher (2011:102) describes the rationale behind this approach as being consistent with the primary financial goal of shareholders' wealth maximisation. One of the disadvantages of EVA is that it only focuses on current earnings after tax, and does not take the time value of money into account. Therefore the use of EVA may lead to incorrect long-term decisions (Hillier *et al.* 2010:339-339). Fernández (2007b:585) and Gitman *et al.* (2010:466) agree that EVA needs the weighted cost of capital. The weighted cost of capital is dependent on the required rate of return, which is one of the uncertain variables when engaging in valuation (Els 2010:323). A positive EVA implies that the business performance

exceeds the expectations of the shareholders, while a negative EVA means that the business is not creating shareholders' wealth, but is reducing shareholders' wealth. Equation 13 indicates how to calculate EVA.

$$EVA = Earnings\ after\ tax - WACC \times Total\ capital$$ [Equation 13]

Where Total capital is the sum of total equity and total debt

Earnings after tax is calculated by subtracting the tax the business needs from EBIT

WACC is the weighted average cost of capital and is calculated as follows:

$$WACC = w_E R_E + w_P R_P + w_D R_D (1 - T_C)$$

Where w_s is the weight of equity in capital structure

R_s is the cost of ordinary share

w_P is the weight of preference shares in capital structure

R_P is the cost of preference shares

w_D is the weight of debt in capital structure

R_D is the weight of debt

T_C is the company tax rate

The market value of a business is the share price multiplied by the number of shares outstanding. If one considers the equity as per the business financial accounts, then one can find the amount of equity capital invested in the business by the shareholders. Market value added (MVA) had been created by the business if the market value of equity is greater than the book value of equity. When the market value per share is less than the book value per share, MVA will be negative. In effect, MVA is similar to market-book value per share. (Lasher 2011:102).

3.4.8 Real options

Athanassakos (2007:8), Brigham and Daves (2010:489) and Ryan (2007:320) define a real option as an option that is linked to the future cash flows that will be obtained from a capital asset investment made by the business, which is difficult to capture in the most popular investment appraisals such as net present value (NPV), internal rate of return (IRR) and payback and discounted payback periods. Real options refer to the trading of real assets instead of financial assets such as shares (Firer *et al*. 2012:347). Therefore real options as a valuation approach are appropriate to be used when valuing Internet and biotechnology businesses, because share prices are highly volatile (Cuthbertson & Notzsche 2008:309). Gitman and Zutter (2012:483) also refer to real options as strategic options since the decision made usually involves large capital budgeting projects.

A distinction is made between a simple option and a compound real option. A simple option is where there is only one option for changing the expected route of the project, while a compounded real option has a number of routes that can be followed, and some of the routes are dependent on decisions regarding previous routes chosen (Ryan 2007:325). Brigham and Daves (2010:209; 477-479), Cuthbertson and Notzsche (2008:102), Firer *et al.* (2012:350-361) and Gitman and Zutter (2012:483-484) concur with Ryan (2007:325-326) that there are four generic real options, and the specific choice of real options is based on the managerial discretion. The four general real options are as follows:

- the delay option, where the commitment to the project or asset is postponed until a later stage;
- the expansion option, where the commitment towards the project or asset provides opportunities for immediate or future expansion and growth;
- the redeployment option, where the asset can be used in other projects; and
- the abandonment option, where the commitment to the project or asset is withdrawn and the asset will be sold.

Regardless of the specific real option, five variables need to be identified, namely the payoff if the option is exercised, the exercise price, the uncertainty of the future cash flows, the risk-free rate, and the time to exercise. The payoff is either the present value of the future cash flows if the option is executed. The exercise price is the original cost associated with the capital expenditure for the project to be undertaken. The cash flows are at best forecasts, and therefore the cash flows are insecure. The risk-free rate is also uncertain although it is linked to a risk-free government bond with a similar term structure to the real option. The exercise date is also unknown, as the option can either be an American or European option. An America option can be exercised at any point in time up to the exercise date, while the European option can only be exercised on the exercise day. (Ryan 2007:274, 278-279, 328).

According to Ryan (2007:338) and Gitman and Zutter (2012:484), the strategic NPV differs from the traditional NPV in the value of the real options.

$$NPV_{Strategic} = NPV_{Traditional} + Value\ of\ real\ options \quad \text{[Equation14]}$$

Where the project is acceptable when $NPV_{Strategic} > 0$ although the $NPV_{Traditional} < 0$.

The Black and Scholes model (Equation 15) can be used to determine the value of a call option while the value of a put option can be determined by using the modified version of the Black and Scholes model (Equation 16) (Ryan 2007:281, 289, 292).

Black and Scholes model

$$C = N(d_1)P_0 - N(d_2)P_e e^{-rt}$$ [Equation 15]

Where $N(d_1)$ and $N(d_2)$ are areas under the normal distribution given by d_1 and d_2.

P_0 is the cost of the shares

P_e is the exercise price

r is the risk-free rate

t is the time to exercise in days

$$d_1 = \frac{\ln\left(\frac{P_0}{P_e}\right) + \left(r + 0.5\sigma^2\right)t}{\sigma\sqrt{t}}$$

$$d_2 = d_1 - \sigma\sqrt{t}$$

Modified version of the Black and Scholes model

$$p = c - P_0 + PV(p_e)$$ [Equation 16]

Where $PV(p_e)$ is the present value of the exercise price

P_0 is the cost of the shares

c is the cash received on the sale of the call

p is the cash paid for the put

According to Munn (as cited in Ryan 2007:339), when conducting a real option analysis of new investment opportunities, eight steps should be followed. Step one is where management needs to screen the project to see whether it fits into the business's strategic plan. The second step is to conduct a base case NPV analysis. Step three is performing a Monte Carlo simulation by changing the most sensitive variable in the equation as established by the sensitivity analysis in step two. Step four involves determining the real options available for that specific project. In step five, the inputs of the base case NPV analysis and the Monte Carlo simulation are used to calculate a price for the various identified

options. The sixth step focuses on portfolio and resource optimisation, where management should assess the significance of the project when considering the business range of investment opportunities. Reporting is step seven, where the reasons for each recommendation are given in detail. The final step, step eight, is to update the analysis. The analysis should be updated on a regular basis, especially if new investment opportunities come to the fore. The only way to minimise the effects of uncertainty is to update the analysis regularly.

3.5 VARIABLES OF THE VALUATION APPROACHES

Firstly the unknown variables required in the valuation process will be discussed and possible solutions to determine these variables will be identified. Secondly, the variables of the various approaches will be identified and clarification with regard to the usefulness of each for the different types of businesses will be provided.

3.5.1 Unknown variables

The approaches discussed make use of different variables, such as the discount rate (required rate of return which is denoted by r) and the dividend growth rate (denoted by g, g_1 and g_2 in the various equations). One needs to know how to estimate these variables as valuation approaches are only as good as the inputs used in the approaches. Marx *et al*. (2003:108) stress that it is important to determine the dividends, growth rate and required rate of return, as these variables will influence the value of the firm.

According to Els (2010:259), the discount rate and the growth rate can be estimated using a fundamental analysis of macro, market and micro factors. Lumby and Jones (2011:351) also refer to the fundamental analysis that can be used to determine estimates of the future revenues of the business, the costs associated with generating these revenues, and the possibilities of not achieving the estimated revenues and incurring the estimated costs. Lasher (2011:362, 370) concurs that valuation approaches make use of estimated growth rates to forecast future dividends to determine share prices, but comment that it is a rather complex task to correctly estimate these variables.

Exact and precise values are not possible; just an approximation of the share price can be determined.

Hillier *et al*. (2010:75, 131) describe the growth rate *g* to be the sustainable growth rate of a business, which is the highest growth rate a business can grow at without increasing financial leverage. Therefore, the sustainable growth rate is the maximum rate at which a business can grow before additional external finance (interest-bearing debt) is needed, while keeping the debt/equity ratio constant. To calculate the growth rate, one needs the retention ratio and the return on retained earnings. The retention ratio is that part of net profit after tax (NPAT) that is not paid out to shareholders in the form of dividends, but is rather reinvested in the business as retained earnings. According to Hillier *et al*. (2010:131), the historical return on equity (ROE) can be used to determine the return on retained earnings.

According to Lumby and Jones (2011:381), the estimation of the dividend growth rate can be done in two ways. The one method is to use the historical growth rates to determine the average growth rate of dividends, therefore making the assumption that dividends will follow that same pattern as in the past. In many cases, this average growth rate is adjusted to take into account risks that are new to the industry or business. The second method to determine the dividend growth rate, as stated by Lumby and Jones (2011:381), is to calculate the product of the retained earnings of the business and the growing levels of earnings. This method is based on the following four assumptions:

- The business is an all-equity business, therefore there is no debt in the business.
- Only one source of additional investment capital in the form of retained earnings is used.
- The retention ratio, that is, the percentage of NPAT that is reinvested in the business, remains constant over time.
- A constant yearly return is earned on all the investments made, using the retained earnings.

Lumby and Jones (2011:389) conclude by saying that both the methods to estimate the growth rate have serious flaws, and both will yield unsatisfactory results. The authors suggest that the capital asset pricing model (CAPM) could be used, but this model also has its own limitations. One critical element of the CAPM is that the beta values (β) tend to move over time. Beta values are calculated by using regression analysis, and the data used is again historical data. This implies that beta values are based on past relationships between a share's return (R_E) and the return on the market portfolio (R_M). Therefore the different methods will yield different growth rates, and then the problem that arises is to choose which one is correct. Lumby and Jones (2011:389) suggest that the CAPM should be used as the expected growth rate.

3.5.2 Variables and applicability of approaches

Table 3.1 summarises the variables needed for each of the valuation approaches discussed in section 3.4. The applicability of each approach regarding the three categories of businesses, namely brick-and-mortar, brick-and-click, and online, will be provided. The unknown variables that need to be estimated and the shortcomings of the various approaches will also be identified.

TABLE 3:1 SUMMARY OF VALUATION APPROACHES

APPROACH	VARIABLES	TYPE OF BUSINESS	UNKNOWN VARIABLES	SHORTCOMINGS
Dividend discount model	• Discount rate • Future dividends	• Brick-and-mortar business • Brick-and-click business	• Discount rate • Future dividends	• Too many unknown variables • Only usable when dividends are expected to be paid • Market conditions may influence certainty of future dividend payments
Zero growth model	• Discount rate • Dividend in year one OR • Dividend in year zero and dividend growth rate	• Brick-and-mortar business • Brick-and-click business	• Discount rate • Future dividends • Dividend growth rate	• Too many unknown variables • Only usable when fixed amount of dividends are expected to be paid • Market conditions may influence certainty of future dividend payments
Constant growth model	• Discount rate • Dividend in year zero or year one • Dividend growth rate	• Brick-and-mortar business • Brick-and-click business	• Discount rate • Dividend in year one • Dividend growth rate	• Too many unknown variables • Only usable when dividends are expected to be paid • Dividend growth rate must be smaller than required rate of return • Market conditions may influence certainty of future dividend payments
Non-constant growth model	• Discount rate • Dividend in year zero • Dividend growth rates (growth rate should be less than the required rate of return)	• Brick-and-mortar business • Brick-and-click business	• Discount rate • Dividend growth rates	• Too many unknown variables • Only usable when dividends are expected to be paid • Market conditions may influence certainty of future dividend payments
Free cash flow method	• WACC as the discount rate • Expected free cash flow • Market value of ordinary shares • Market value of debt • Market value of preference shares	• Brick-and-mortar business • Brick-and-click business	• Discount rate • Expected free cash flow	• Too many unknown variables • Too many assumptions and estimates • Interest rates and inflation rates may influence market values • Market conditions may also influence market values
Price-book value	• Current share price • Accounting (historical) value of the shares	• Brick-and-mortar business • Brick-and-click business		• Use historical data • Historical data may not always be readily available

TABLE 3:1 SUMMARY OF VALUATION APPROACHES (cont)

APPROACH	VARIABLES	TYPE OF BUSINESS	UNKNOWN VARIABLES	SHORTCOMINGS
Price-earnings ratio	• Discount rate • Market price per share • Number of shares outstanding • Net profit after tax • Earnings per share • Net present value • of growth opportunities	• Brick-and-mortar business • Brick-and-click business	• Discount rate • Net present value of growth opportunities unknown	• Too many unknown variables • Do not take future growth into account • Value of business dependent on performance of business in current market conditions • Cannot be used if no profits were made or when income increases drastically
Book value per share	• Accounting (historical) value of the shares • Number of shares outstanding	• Brick-and-mortar business • Brick-and-click business		• Use historical data • Historical data may not always be readily available
EVA	• Total capital • EBIT • Weight of equity, preference shares and debt • Cost of ordinary shares • Cost of preference shares • Cost of debt • Company tax rate	• Brick-and-mortar business • Brick-and-click business • Online business	• Discount rate	• Unknown variables • Too many assumptions and estimates
MVA	• Market value per share • Book value per share • Number of shares	• Brick-and-click business • Brick-and-click business • Online business		• Use historical data • Historical data may not always be readily available
Real options	• Present value of future cash flows • Present value of capital expenditure • Risk-free rate • Time to exercise	• Brick-and-click business • Brick-and-click business • Online business	• Future cash flows • Capital expenditure • Risk-free rate as discount rate • Time to maturity	• Too many unknown variables • Too many uncertainties

Source: Researcher's own construct.

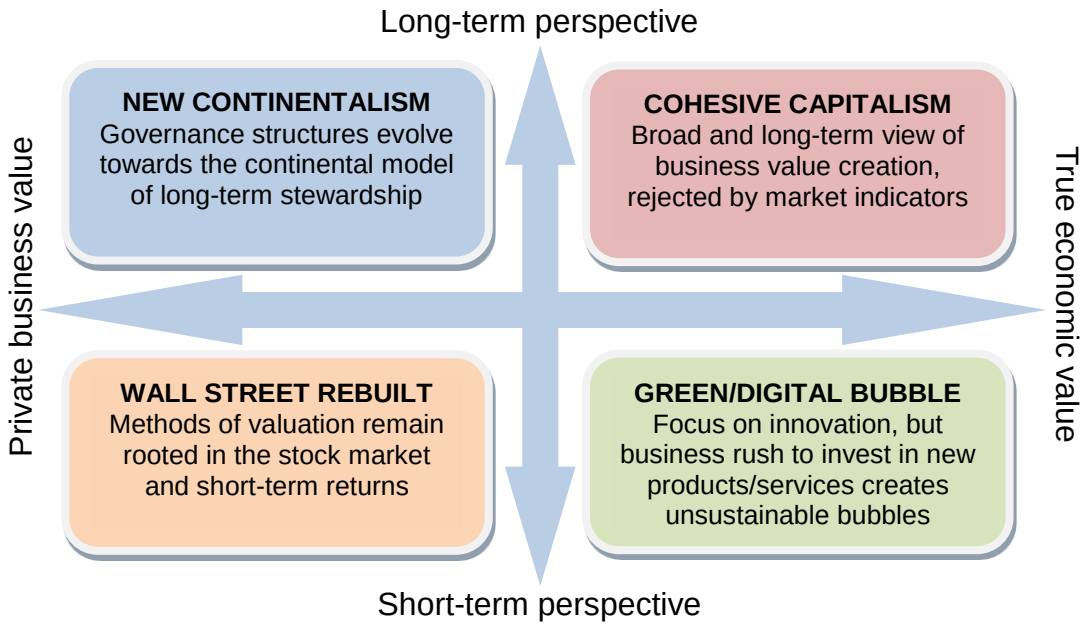
3.6 PREVIOUS RESEARCH ON BUSINESS VALUATION

The first subsection focuses on previous research regarding the use of the various valuation approaches to determine the market value of businesses. The second subsection provides a chronological summary of the years of publication of the previous research.

3.6.1 Research on applicability of the valuation approaches

Rutterford (2010:50-51) states that during the 1950s in the USA, the dividend yield was the most common valuation approach used. The emphasis was on income to be received and on the dividend per share. Another valuation approach used to support the dividend yield was the earnings yield (Rutterford 2010:58). The focus then changed from the dividend yield to the price-earnings ratio. Berthon (2010:354-355) argues that to determine the value of a business, one should not only investigate the financial performance of the business, but should also consider the societal influence of the business. Figure 3.3 illustrates the various scenarios, namely the Wall Street rebuilt, new continentalism, green/digital bubble, and cohesive capitalism, for determining future values of businesses, as developed by Berthon (2010:356).

FIGURE 3.3: FUTURE VALUE SCENARIOS



Source: Berthon 2010:356.

Achleitner, Lutz and Schraml (2010:352-366) have researched the usability of the cost, market, DCF and the real option approach in the valuation of platform technology based entrepreneurial ventures. Uzma *et al.* (2010:365) concur with Achleitner *et al.* (2010:352-366) that all these approaches have shortcomings, but that the DCF approach is the most appropriate approach to be used for entrepreneurial businesses and for the valuation of intangible assets. Riihimäki (2009:31-32) asserts that the traditional scenario-based valuations do not take uncertainties and possible plan changes into account. The recommendation made is that the real option approach in conjunction with the Monte Carlo simulation should be used. Another reason stated for using the real option approach is that it is the most appropriate approach to use when the business environment is characterised by large investment costs and many market uncertainties. Ashuri *et al*. (2011:14) agree with Riihimäki (2009:31-32) that the real option approach should be used when there is excessive uncertainty in forecasting the necessary estimates for valuation purposes. According to Ashuri *et al.* (2011:16), the real option approach is used in various industries such as research and development, manufacturing, retailing, architecture, building technology, construction engineering and management, as well as corporate real estate, but the body of knowledge is still expanding in other industries.

Paxson and Melmane (2009: 249-273) applied the multi-factor competitive real option model to determine the market price of Google and Yahoo!. Numerous assumptions were made to even out the competitive field between Google, as the search engine leader, and Yahoo! as the Internet portal leader. The results of the study showed that the values of both the leader and the follower in each case (Google enters Yahoo! Internet portal field and Yahoo! enters Google search engine field) were far less than expected. (Paxson & Melmane 2009:267-268).

According to Herath and Bremser (2005:55-56), real options are highly successful when evaluating research and development (R&D) investment decisions. It is important that R&D decisions are properly analysed, as these decisions usually involve high costs and a high level of uncertainty, and have a profound impact on the business competitive position in the market. Chang,

Hung and Tsai (2005:339) concur with Herath and Bremser (2005:55-56) that R&D, and especially intellectual property (IP) rights and patents, are very costly, but provide the businesses with growth opportunities and a competitive advantage. Chang *et al.* (2005:339) add that IP, as a knowledge-based asset, is a crucial asset for any high-technology business. These authors recommend the use of real options as a valuation approach instead of the traditional valuation approaches, because these methods do not provide satisfactory results (Chang *et al.* 2005:340). Lagrost, Martin, Dubois and Quazzotti (2010:481) indicate that different approaches can be used to value IP, and that these approaches can be categorised as quantitative and qualitative valuation approaches. The quantitative valuation approach uses numerical information that is measurable, to determine an economic value of the IP. The qualitative valuation approach, however, focuses on the current or intended use of the IP by examining the properties, states or characteristics of the IP. (Lagrost *et al.* 2010:481-482).

Keating *et al.* (2003:199) report that previous valuations of online businesses using the various traditional valuation approaches indicate that different values were obtained. One of the reasons for the different valuations is that the traditional valuation approaches do not incorporate sufficient information about the growth opportunities of online businesses or the intellectual assets of such businesses. This finding is supported by the research of Sudarsanam, Sorwar and Marr (2006:291-292), which states that using the traditional valuation approaches to value a business does not fully reflect the value of intellectual assets in the business valuation. Therefore the recommendation made by Sudarsanam *et al.* (2006:292) is the same as that of Chang *et al.* (2005:339-340) and Herath and Bremser (2005:55-56), that the real option approach should be followed. Sudarsanam *et al.* (2006:306), however, highlight some of the difficulties of the real option approach, and recommend using the Monte Carlo simulation or binomial option models to overcome these difficulties.

According to Ramezani (2011:1137), the cash balances of businesses have grown over the last decade. The question asked is why there is such an enormous increase in cash balances. Based on the free cash flow theory of

Jensen (1986) as cited by Ramezani (2011:1138), businesses prefer to keep excess cash for expansion of businesses rather than to pay it out to shareholders. That study has revealed that the there is a definite increase in cash holdings if valuable real options are present in the business. The question that still remains to be answered is whether the cash holdings are capitalised into the share price of the business. Cash holdings will influence the value of a business.

A large amount of forecasting is required when using the DCF approach to value businesses. All forecasts are based on assumptions, and changes in any one of these underlying assumptions will have a direct impact on the value of a business. One advantage of the DCF approach is the appropriateness of this approach to price initial public offerings (IPOs) of businesses and other financial securities. (Steiger 2008).

As mentioned in the previous section, it is important to use an appropriate discount rate when valuing businesses. Research done by Dastgir, Khodadadi and Ghayed (2010:45) highlight the importance of the discount rate in the valuation process, using the capital cash flow discounted at WACC, the free cash flow discounted at WACC, and the adjusted present value approaches. It was found that using an appropriate discount rate in the capital cash flow approach, the value of a business can be twice as high as the values calculated using the other two approaches.

Schauten *et al.* (2010:799-818) concur with Dastgir *et al*. (2010:45) that it is of great importance to estimate the discount rate as accurately as possible. Therefore the research of Schauten *et al.* (2010:799-800) focuses on determining the required rate of return of intangible assets of various sectors from the Standard and Poor's 500 index (S&P). These authors explain that the risk of intangible assets, as measured by beta (β), and the return on these assets are difficult to be determined because these assets are not actively traded in the public domain. Schauten *et al*. (2010:804-805) tested four hypotheses where the required rate of return was equal to the WACC (hypothesis 1), unlevered cost of equity (hypothesis 2), levered cost of equity

(hypothesis 3) and cost of capital of intangible fixed assets (hypothesis 4). The cost of capital of intangible fixed assets, as the required rate of return, was calculated as the adjusted weighted average return on assets. The authors concluded that the levered cost of equity was the more reliable required rate of return to be used when valuing businesses.

The study of Shauten *et al.* (2010:799-818) focused on eight different sectors, whereas the study by Kemper (2010:43) focused only on the software market. Kemper (2010:43-48) found that the asset value approach, the market value approach and the DCF failed to provide a reliable value for businesses in the software market. Three major limitations of the DCF in the software market were identified as the cost of capital, negative cash flows, and managerial flexibility. The most important limitation of all the traditional valuation approaches is that inadequate risk, if any at all, is taken into account. The author suggested that the real options approach should be used because the software market is relative new, high growth opportunities exist, and cash flows are extremely unpredictable (Kemper 2010.62). The study by Ali *et al.* (2010:18-33) focuses on the valuation of online businesses. The authors contend that the DCF has many limitations when valuing online businesses, which include the predictability of future cash flows in a highly dynamic business environment. Many analysts use the DCF, but enhance this valuation with the use of a sensitivity analysis or a scenario analysis. Ali *et al*. (2010:18-33) suggest that the DCF can be used when valuing online businesses, but warn that there is a need to enrich this valuation process with a simulation such as the Monte Carlo simulation.

According to Fuller and Jensen (2010:59), although investors and managers would like the value of the business to be as high as possible, overvalued shares can have a negative impact on the value of a business. The authors suggest that it is more reasonable for the share price of a business to be traded in a narrow range around the intrinsic business value. Stubeji (2010:23) states that the intrinsic business value may differ from the market value because there are many uncertainties when valuing businesses. The author refers to this intrinsic business value as the real value of the business. One of the obstacles

when using the various valuation approaches where the input data is obtained from the financial statements of the business, is that the financial statements cannot justly reflect all the future growth and earnings potentials of the business. The main reason is that the intangible assets of the business are not always accurately recorded in terms of their value. The author adds that when valuing a business, one should guard against bias data (as many input data items are estimates), uncertain futures, and the ease of obtaining data for valuing businesses. (Stubeji 2010:24).

Garay and González (2010) explain that value creation is also a result of minimising the forecasting risk and the cost of capital, through the recognition and assessment of investment opportunities. They argue that there is evidence that good corporate governance is positively related to market value. Therefore the better the corporate governance of a business, the higher the market value of that business will be.

Many businesses do not pay dividends, but rather reinvest the NPAT in the business. The question arises why businesses follow this route. If one considers the fact that the value of a business's intellectual capital is equal to the value of intellectual assets of that business, then investors are acknowledging the potential of the intellectual capital. Investors will even go a step further to pay a higher price per share than the book value per share, because of this future potential. (Grajkowska 2011:179-201). This future potential of the business can be regarded as the competitive advantage of the business. Therefore it will not make sense if the business reports on the competitive advantage, as this advantage will then be lost. Businesses will only report on these intangible secrets when there is an absolute need for it. Valuators, financial analysts and fund managers regard these intangible secrets as highly significant in the valuation process (Holland 2009:154-155). Abdallah and Maghrabi (2009:116) agree that the know-how of the business needs to be safeguarded because it provides the business with a competitive advantage. They also suggest that these intangible assets need to be valued differently from tangible assets. The reason is that the intangible assets, especially in high-tech industries, are unique assets providing a competitive advantage for the business. It is

unreasonable to expect businesses to share these unique assets or intellectual property with external valuators.

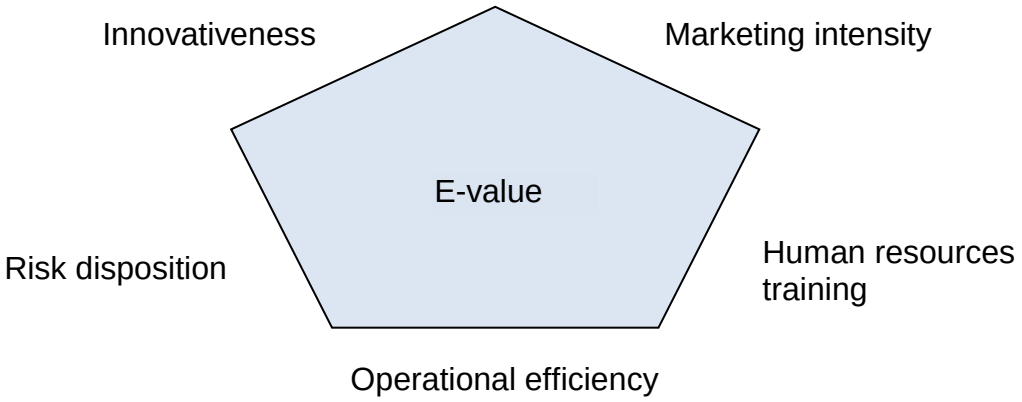
Farooq *et al*. (2010:141-142) are of the opinion that academics prefer to use the DCF and EVA when valuing businesses, whereas valuators prefer to use the less complex approaches such as the P/E and the price-to-book ratios. The research also shows that balance sheets and book values of assets are becoming more significant, while the importance of income statements is becoming less. Another aspect of importance is that the cash flow based approaches may provide erroneous intrinsic values of the business's assets which were a result of the various uncertainties in the valuation process. A study by Francis as cited by Farooq *et al*. (2010:145) compares the intrinsic values of assets using three valuation approaches, namely the DDM, the free cash flow approach, and EVA. This research found that EVA provided the more reliable intrinsic values of the assets. According to Farooq *et al.* (2010:147), the unique characteristics of the various industries are important when valuing businesses, and it is possible for certain valuation approaches to provide more reliable results in certain industries. Farooq *et al*. (2010:157) conclude that much research in the field of valuation is required, and one specific domain of research is the influence of corporate governance in the valuation of equity.

Fernández (2007a:28-29) points out various common errors when undertaking a business valuation. The errors, to mention a few, and the list is not exhausted by any means, include the following:

- the use of the historical beta or the average of betas of the businesses in the same industry;
- the incorrect handling of seasonal working capital requirements;
- the incorrect handling of cash equivalent shares;
- assuming that a business has the same value for all buyers and sellers;
- taking the price of a business as the value of the business; and
- using a valuation from a valuator without having any input in the valuation process.

Mazurencu-Marinescu and Nijkamp (2008:71) are of the opinion that there are many valuation approaches available to value brick-and-mortar businesses, but none of these valuation approaches are focused on the valuation of online businesses in emerging markets. One of the comments made by Mazurencu-Marinescu and Nijkamp (2008:72) is that the initial valuations of some of the online businesses in the USA are unrealistically overvalued, and that the real market value of these businesses was in fact much less. The underlying problem was the lack of reliable data to be used in the valuation process. The authors add that the DCF approach may be used, but that instead of using a simple risk premium, probability-weighted scenarios should be used. The question of what discount rate should be used in the DCF approach still remains unanswered. Various critical indicators that can be used for e-value have been identified by Mazurencu-Marinescy and Nijkamp (2008:85) and are depicted in Figure 3.4.

FIGURE 3.4: CRITICAL E-VALUE INDICATORS



Source: Adapted from Mazurencu-Marinescu and Nijkamp 2008:85.

Krishnamurthy (2003:47) agrees that all businesses need to focus on delivering value to customers. For brick-and-mortar businesses, as discussed in the previous chapter, the four P's (product, price, promotion and place) can be used to create value for the customer. It is furthermore stated that when the business is an online business, then commerce, communication, connectivity, community, content and computing will play a part in creating value for the

customer. All these indicators, see Figure 3.4, have also been highlighted by Mazurencu-Marinescu and Nijkamp (2008:85).

As mentioned previously, the information element of the new economy is highly significant, and is especially true for online businesses. According to Li (2007:37), the importance of the information element is evident in the market capitalisation of businesses and in their physical assets As stated by Athanassakos (2007:1-15), online businesses use the same valuation standards and rules as brick-and-mortar and brick-and-click businesses, but it is essential that the traditional valuation approaches are adapted to address the unique characteristics of online business. Hering, Olbrich and Steinrucke (2006:55-72) emphasise that in evaluating online businesses, the approach used is not as important as the forecasts used. According to PricewaterhouseCoopers, as stated by Hall (2011a), traditional valuation approaches are inappropriate for the valuation of online businesses.

McCutcheon (2008:79) agrees that the DCF approach to valuing businesses does not satisfactorily record the future value of e-businesses, and therefore the market value of the business will not be accurately determined. All these authors have identified a need for a new approach to valuing Internet-based businesses and have therefore suggested that a new valuation approach is required to overcome the various shortcomings.

3.6.2 Summary of findings of previous research on valuation

The findings of previous research on various valuation approaches as discussed in section 3.6.1 are summarised in Table 3.2. The various authors are listed, and the main findings of the research highlighted.

TABLE 3.2: SUMMARY OF PREVIOUS RESEARCH FINDINGS

AUTHORS	YEAR	MAIN FINDING
Keating *et al*.	2003	• Valuations of online businesses using traditional valuation approaches obtained different values owing to lack of information
Krishnamurthy	2003	• Commerce, communication, content, connectivity, community and computing will play a part in creating value for the customer, which will help in value creation
Chang *et al.*	2005	• Real options applicable when valuing IP and high-technology businesses
Herath and Bremser	2005	• Real options successful when evaluating R&D investment decisions • Applicable when there is high level of uncertainty
Hering *et al.*	2006	• The approach used to value businesses is not as important as the forecasts and estimates used in the valuation process
Athanassakos	2007	• Traditional approaches can be used to value Internet-based businesses, but these approaches need to be adapted to take the unique characteristics of these businesses into account
Fernández	2007a	• Valuators make common mistakes when valuing businesses
Li	2007	• Information plays an important part in value creation and needs to be recorded as such
McCutcheon	2008	• DCF approach does not provide a reliable future value for online businesses • New valuation approach for online businesses is required
Steiger	2008	• Many estimates required when using DCF approach, and changes in estimates have a direct impact on business's value • DCF appropriate when issuing IPOs and other financial securities

TABLE 3.2: SUMMARY OF PREVIOUS RESEARCH FINDINGS (cont)

AUTHORS	YEAR	MAIN FINDING
Abdallah and Maghrabi	2009	• Tangible and intangible assets should be valued differently • Difficult to value intangible assets since they are kept confidential because of competitiveness in the market
Holland	2009	• Unreported intangible assets important for valuation process
Paxson and Melmane	2009	• Use multi-factor competitive real option model as it takes more than one factor into account at any one time
Riihimäki	2009	• Scenario-based analysis ignores uncertainties and possible changes in plans • Use of real option approach and Monte Carlo simulation recommended
Achleitner *et al*.	2010	• Cost, market, DCF and real option valuation approaches can be used to value platform technology and intangible assets • All approaches have shortcomings, but DCF most appropriate approach
Ali *et al*.	2010	• Concluded that DCF has too many limitations to be appropriate method to value Internet businesses, but can be used if enhanced by combining it with simulation (such as Monte Carlo simulation)
Berthon	2010	• Financial performance and societal influence important for valuation
Dastgir *et al*.	2010	• Appropriate discount rate in capital cash flow approach can increase value of business twice as high as when using free cash flow and adjusted present value approaches

TABLE 3.2: SUMMARY OF PREVIOUS RESEARCH FINDINGS (cont)

AUTHORS	YEAR	MAIN FINDING
Farooq *et al*.	2010	• Academia and valuators use different approaches when valuing businesses • Balance sheets and book values more important than income statements • Different valuation approaches should be used for different industries
Fuller and Jensen	2010	• Too high share price not feasible for business and share prices vary in a range around the intrinsic value of the business
Garay and González	2010	• Value creation takes place when estimation risk and cost of capital are minimised • Corporate governance influences market value of business
Kemper	2010	• In software market, asset value approach, market value approach and DCF are not acceptable valuation approaches • Recommended that real options approach should be used owing to high growth in software market and erratic cash flows
Lagrost *et al*.	2010	• Different approaches usable to value IP, namely quantitative and qualitative valuation approaches
Rutterford	2010	• Focus changed from dividend and earnings yields to price-earnings ratio
Schauten *et al*.	2010	• Emphasise importance of discount rate by determining rate of return of intangible assets in selected sectors • Highlights that risk and return of intangible assets difficult to determine • Concludes that levered cost of equity is most reliable required rate of return to be used

TABLE 3.2: SUMMARY OF PREVIOUS RESEARCH FINDINGS (cont)

AUTHORS	YEAR	MAIN FINDING
Stubeji	2010	• Intrinsic business value may not be equal to the market value of the business • Input data to the valuation approach may not truly reflect the future growth and earnings potential of business
Uzma *et al*.	2010	• All valuation approaches have shortcomings, but DCF most appropriate approach to be used for entrepreneurial businesses and for valuation of intangible assets
Ashuri *et al.*	2011	• Real option approach used when there is excessive uncertainty in forecasting • Applicable in various industries such as R&D, manufacturing, retailing, architecture, building technology, construction engineering and management and corporate real estate
Grajkowska	2011	• Business may opt not to pay dividends, but investors are willing to invest in such business • Willingness stems from future potential of business
PricewaterhouseCoopers (in Hall)	2011a	• Unique valuation method needed for valuing Internet-based businesses

Source: Researcher's own construct.

From Table 3.2 one can conclude that various valuation approaches can be used, but the majority of the approaches do have limitations that will lead to unreliable valuations. Furthermore, it was found that the DCF is the most used valuation approach for all types of businesses, but it may be necessary to use the DCF in conjunction with Monte Carlo simulations. Another alternative valuation approach to be used is that of real options. Although all the valuation approaches have shortcomings when valuing an online business, it is possible to use these approaches to determine a market value for an online business.

3.7 VALUATION OF INTERNET-BASED BUSINESSES

The section to follow will focus on approaches that were used to value Internet-based businesses, the intrinsic value of Internet-based businesses, and lastly the income generation of this type of business.

3.7.1 Approaches to Internet-based business valuations

A study done by Ho, Liao and Kim (2011) investigated the use of both data envelopment analysis (DEA) and multiple valuation approaches to value Internet-based businesses. The four valuation approaches that were recommended were tested based on the price-to-gross margin ratio of 52 Internet-based businesses. When the valuations were compared to the real prices, it was found the suggested approaches provided a 70% accuracy rate. Athanassakos (2007:1-15) determined that the traditional valuation approaches as discussed in section 3.4 provided very low P/E ratios. The author furthermore argued that high P/E ratios were founded in the lower risks associated with Internet businesses' cash flows, provided that these businesses were successful in the initial phases. Seol (2010:145-162) rejected the use of the Monte Carlo simulation when valuing technologies, such as in the case of Internet-based businesses. Parker (n.d.) stated that to establish the value of an Internet-based business is one of the most difficult tasks a prospective buyer needs to perform. The author identified five ways to conduct an Internet-based business valuation, as follows:

- An asset valuation is when the value of all the assets of a business is determined and the total asset value is then the value of the business. This valuation approach is not applicable to small businesses, regardless of whether the business is a brick-and-mortar or Internet-based business.
- A liquidation valuation involves determining the value of all the assets if the business is forced to sell as quickly as possible.
- Income capitalisation refers to the forecasting of the future income of the business based on historical data and various assumptions. This approach can be used to value large businesses.
- The income multiplier is when the business is sold at a price "so many" times more than earnings. The number of times that need to be used in

the equation will be determined by the benefit the owner will receive. The owner benefits are calculated using the monetary amount the owner will be able to withdraw from the business based on the historical income generation of the website.

- The rule of thumb is when a business is valued based on the value of a similar business. This approach is difficult to use because there are seldom businesses that can be used as a benchmark.

Grajkowska (2011:179-201) also identifies three approaches to value intellectual assets of a business. According to this study intellectual assets include organisational resources, human resources and relational resources. Organisational resources comprise intellectual property, explicit knowledge and other intangibles. Customer and partner values form the basis for relational resources. The three approaches identified by Grajkowska (2011:179-201) are the cost approach, the market approach and the income approach. The cost approach states that the value of intellectual assets is the sum of the amount invested in the development of such assets and the expenses incurred in the creation of such assets. Using the market approach to value intellectual assets is to determine how much a buyer is willing to pay for these assets, and can be based on historical transactions. The income approach determines the present value of all future cash flows that the intellectual assets will bring into the business. It is important to note that intellectual assets may lead to increased cash flows generated by direct income from sales or licensing, cost savings incurred, and additional income earned as a premium brand. Importantly, the author discards the cost and market approaches because these approaches do not take the future benefits of the intellectual assets into account.

According to Kim, Song and Koo (2008:203), strategic positioning of a business has an influence on business performance. This research has shown that businesses following different strategic positioning strategies together with technology resources strongly affect business performance, which will be reflected in the value of the business. Research by Nagam and Kautz (2008:62-64) focused on the relationship between information technology and the performance of the business. An event study method was followed. The findings

showed that if information technology investments announcement are made, then share prices will be influenced and therefore the market value of the business will be affected.

An important aspect that needs to be addressed when valuing Internet-based businesses is that these businesses are extremely rich in intellectual assets. These assets provide the businesses with a competitive advantage and therefore should be kept confidential. The question then is how to value the business without destroying its competitive advantage (Johanson, Koga, Almqvist & Skoog 2009:521). Allee (2008:5-8) agrees that intangible assets, such as professional expertise (intellectual assets) need to be valued, but should be transformed into a more measurable format, such as consulting services, before being valued. The author adds that intangibles assets comprise three dimensions, namely:

- the negotiable forms of value of intangible assets;
- how intangible assets are managed as deliverables; and
- how tangible and intangible assets are transformed into other forms of value and how inputs are used to increase the value of both asset classes.

The literature research by O'Brien and Tian (2008:6) found that there is a negative correlation between market value and earnings. One reason posed for the negative correlation is the use of different valuation approaches, although the various approaches were not mentioned. A further finding was that when investigating the net income in more detail, a positive correlation was found between market value and both gross profit and research and development expenditures.

Kettles and David (2008:2-8) studied the value of investments in social network technologies. The research concluded that businesses should focus on the key features of business platforms for social networking. Once these features were in place, then businesses should be able to use social networking successfully to create a competitive advantage.

3.7.2 Intrinsic values of Internet-based businesses

Google acquired Applied Semantics Inc, an online advertisements upstart, in 2003 for US$102 million. On 17 November 2005 Google's share price exceeded the US$400 per share mark, while the market capitalisation was equal to US$120 billion. The price-earnings ratio was 70. Google was also in negotiations with AOL, where AOL's value was estimated to be approximately US$20 billion. (Farzad *et al.* 2005). On 11 January 2006 Google's share price was US$475 per share, after which it plummeted to US$343 per share on 14 February 2006 and the market capitalisation declined to US$101 billion. Google was not alarmed like other giant Internet-based businesses, namely, Amazon.com, Yahoo! and eBay, which also showed a steep decline in share prices. It was said that some economists suggested that the real value for one Google share was as little as US$188 in the beginning of 2006. In February 2006 a Wall Street Internet analyst determined that the share price of Google should be in excess of US$400, and using the DCF for the following ten years (cash flows from 2006 to 2016), a fair market value for one Google share would be US$413. When using other valuation approaches, the share price reached a level of US$597. The analyst used an 11.5% discount rate when using the various valuation approaches. ('Enthusiasm for Google' 2006).

PricewaterhouseCoopers, as cited by Hall (2011a), stated that it was possible to justify the high valuations of Internet-based businesses, and that extremely high P/E ratios should not always been seen as a business being overvalued. The true value of Internet-based businesses would only be seen in the long term. The attraction and retaining of subscribers would be the justification for such high P/E ratios (Hall 2011a).

eBay bought Skype Technologies for US$2.6 billion in September 2005 (Farzad *et al.* 2005). In 2000, Yahoo! shares were trading at 89 times revenues, and in 2005 the market capitalisation was US$115 billion (Farzad *et al.* 2005; Nerney 2000). In 2008, AOL paid 42.5 times income to acquire Bebo, while Microsoft paid 50 times income to acquire a stake in Facebook (Sadighi 2008:1).

The market capitalisation of DoubleClick in 1999 was US$14 billion, but in April 2005 DoubleClick was acquired by a private equity firm for a little more than US$1 billion (Farzad *et al.* 2005). The IPO value of Groupon, an online network where people can trade products and/or services, is between US$15 billion and US$20 billion (Miller 2011). In the beginning of 2011, Facebook was valued at US$50 billion and in May 2011 the value increased to US$70 billion (Miller 2011). One of the major concerns regarding the valuation of such social media is the income models used to forecast the future cash flows.

Amazon.com started trading on 6 July 1995, and in July 2010 it was regarded as one of the largest online retailers in the world, selling a diverse range of products and services (Webley 2010). On 27 July 2011, it was recorded that Amazon.com's market capitalisation reached US$101.81 billion, and that the shares were trading at an all-time high of US$227.20 per share. The major competitors to Amazon.com are Hewlett Packard and eBay with market capitalisations of US$76 billion and US$43 billion respectively. Over the last five years, Amazon.com's value has increased by nine times, while Apple Inc has increased by at least six times. (Rao 2011; Wilson 2011). Since June 1999 when Amazon.com acquired Alexa Internet, many acquisitions and partnerships followed. Some of the acquisitions include Joyo.com Limited (September 2004), Booksurge LLC (April 2005), Shopbop.com (February 2006), Audible (March 2008), AbeBooks (December 2008), Zappos.com (July 2009), BuyVIP.com (October 2010) and LOVEFilm International Limited (January 2011). (History & Timeline 2011; History of Amazon.com 2008). The latest acquisition by Amazon.com as announced on 19 March 2012 will be that of Kiva Systems, which will be bought for US$775 million in cash (Kucera 2012).

3.7.3 Income generation of Internet-based businesses

Krishnamurthy (2003:51-52) explains that Internet-based businesses generate income from various streams, namely commerce, advertising, fees, sale of consumer information, and credit. Commerce refers to the actual trading of products and/or services. Advertising is also an important income stream, because interested businesses buy advertising space on websites. Internet-based businesses can generate income by asking individual customers and

businesses to pay certain fees. Examples of such fees are subscriber fees, brokerage fees and fees for using technology. eBay, for example, only collect a small fee once a product has been auctioned. A database with consumer behaviour information can also be sold to third parties to generate income. Credit is when the Internet-based business receives payment from customers immediately for products and/or services to be delivered, while the suppliers of the Internet-based business are only paid at some future date. (Krishnamurthy 2003:136). A study by Swatman, Krueger and Van der Beek (2006:66-67) identified five sources of income for online newspapers, namely:

- online edition subscription fees;
- pay per article or per view of individual items in the online edition;
- selling of products related to the information offered in the print and online editions;
- selling of advertising space for print and online editions; and
- selling exclusive banner or text advertising space in the online edition.

It is important to consider the income streams of Internet-based businesses because these businesses have intangible and intellectual assets that can be used to manage the marketing mix. Internet-based businesses also interact and have linkages with one another, and these linkages may be converted into a profitable income stream. It is also critical for the Internet-based businesses to consider the cost of obtaining income. If the cost of attracting customers is very high, then the business should consider whether it is feasible to continue with that specific income stream as the cost may be outweigh the income that is generated. (Krishnamurthy 2003:52).

One should also realise that income streams are merely estimates that are based on assumptions. Krishnamurthy (2003:58-59) has identified four guidelines for forecasting, namely:

- use experts in the field of forecasting;

- scrutinise similar businesses and industries for similarities and differences;
- consider the cyclical nature of the various income streams and how they will affect the business holistically; and
- divide the main aim into smaller issues, and solve each issue individually.

As mentioned, estimates or forecasts are based on assumptions. Therefore there are many pitfalls when estimating forecasts. Some of the pitfalls that should be avoided include a too aggressive growth rate, a growth rate that cannot be justified, the manageability of the growth rate, and the lack of planning for all situations. (Krishnamurthy 2003:59).

Search engines generate income using various methods, such as paid inclusion, pay per click, and pay per sale. Paid inclusion refers to a flat fee or annual fee charged to be included in a search engine. The pay per click occurs when advertisers on search engines pay a certain amount per click on their advertisements. Pay per click advertisements are usually sold in auction style, where the highest bidder will obtain the highest ranking (position number one) on the list. Therefore the amount paid by the advertisers will depend on the traffic to their advertisements from the search engine page. (Wall 2010). Pay per sale occurs when the search engine receives commission on sales that took place using the search engine as a marketing tool (Clemons 2009:47). Spaulding (2009:38) identifies sales, subscriptions and advertisements as the major sources of income for Internet-based businesses.

Fain and Pedersen (2006:12-13) describe the preferred listings as an income generation method where businesses are charged to be placed in a research result based on predetermined keywords. The cost per mile (CPM) involves the cost the advertiser will pay to display an advertisement one thousand times on the Website of the Internet-based business. Cost per click is when advertisers are charged for each click customers make on their link, while cost per action charge is only paid by the advertiser if a transaction takes place.

The Chinese social network Renren generates 42% of their revenue from advertisements and 45% from online games (Geron 2011b). LinkedIn generates income by advertising, job searches, subscriptions and corporate recruitment (Savvas 2008).

3.7.4 Summary of approaches to valuation, intrinsic values, and income generation of Internet-based businesses

A brief overview of the various approaches used to value Internet-based businesses is provided in Table 3.3

TABLE 3.3: SUMMARY OF APPROACHES USED TO VALUE INTERNET-BASED BUSINESSES

AUTHOR	YEAR	VALUATION APPROACH
Parker	n.d.	• Asset valuation • Liquidity valuation • Income capitalisation • Income multiplier • Rule of thumb approach
Athanassakos	2007	• Traditional valuation approaches provide very low P/E ratios
Kim *et al.*	2008	• Determine the strategic position of the Internet-based business
Nagam and Kautz	2008	• Determine relationship between information technology and business performance using event studies
Johanson *et al.*	2009	• Determine the value of intellectual assets giving a competitive advantage without making it known what these assets are (approach to follow still unanswered)
Seol	2010	• Indicates that Monte Carlo simulation is of no use
Gwajkowska	2011	• Cost approach to value intellectual assets (organisational, human and relational resources) • Market approach to value intellectual assets (organisational, human and relational resources • Income approach to value intellectual assets (organisational, human and relational resources
Ho *et al.*	2011	• Data envelopment analysis (DEA) • Multiple valuation approaches which include the price-to-gross margin ratio

Source: Researcher's own construct.

Table 3.4 outlines the intrinsic values and market capitalisation of various Internet-based businesses for the period 1999 to 2011.

TABLE 3.4: SUMMARY OF INTRINSIC VALUES AND MARKET CAPITALISATION OF INTERNET-BASED BUSINESSES

INTERNET-BASED BUSINESS	YEAR	SHARE PRICES AND MARKET CAPITALISATION
Amazon.com	• 1997 (May) • 2000 (December) • 2011 (July)	• IPO of US$54 million • Valued at US$538 million • US$19.98 per share • Market cap of US$101.81 billion • US$227.20 per share (all-time high)
DoubleClick	• 1999 • 2005 (April) • April 2007 (April)	• Valued at US$14 billion • Bought for ,more than US$1 billion • Bought for US$3.1 billion
Facebook	• 2007 • 2008 • 2009 (November) • 2010 • 2011	• Valued at US$10 billion • Market cap of US$15 billion • Market cap of US$9.5 billion • Valued at US$33.7 billion • US$76 per share • Valued at US$50 billion • Value increase to US$70 billion • Shares trading at 25x sales • Valued at an unconfirmed US$100 billion
Google	• 2004 (August) • 2005 (November) • 2006 (January) • 2006 (February)	• US$85 – US$95 per share • Valued at US$23 billion • Share price exceeded US$400 per share • Market cap US$120 billion • US$475 per share • US$188 (Suggested by economist) • US$343 per share • Market cap declined to US$101 billion

TABLE 3.4: SUMMARY OF INTRINSIC VALUES AND MARKET CAPITALISATION OF INTERNET-BASED BUSINESSES (cont)

INTERNET-BASED BUSINESS	YEAR	SHARE PRICES AND MARKET CAPITALISATION
Google Cont	• 2006 (Early) • 2006 (October) • 2010	• In excess of US$400 (Suggested by Wall Street Internet analyst) • US$413 (using DCF with CF from 2006 – 2016) • US$597 per share (using other valuation methods) • US$473.31 per share • Valued at US$145 billion • US$520 per share (Suggested by analysts) • Valued at US$130 billion
LinkedIn	• 2008 • Beginning of 2011 • 2011 (May)	• Market cap of £500 million • US$83 per share • Market cap of US$10 billion • US$120 per share
Skype Technologies	• 2005 (September)	• Bought for $26 billion
Yahoo!	• 2000 • 2005	• Shares trading at 89 x sales • Market cap of US$115 billion

Source: Researcher's own construct.

A summary of the income generation methods of Internet-based businesses as identified from the literature are given in Table 3.5.

TABLE 3.5: SUMMARY OF INCOME GENERATION OF INTERNET-BASED BUSINESSES

AUTHOR	BUSINESS TYPE	INCOME METHODS
Krishnamurthy (2003)	• Online such as Amazon.com and kalahari.net • Search engines such as Google • Auctions such as eBay	• Advertising (buying space on websites) • Commerce (sales) • Credit (business buys on credit but receives cash from customers) • Fees (subscriber fees, brokerage fees, fees for using technology) • Linkages with other websites • Sale of consumer information
Savvas (2008)	• Social networks such as LinkedIn	• Advertising (buying space on websites) • Corporate recruitment • Fees (subscriber fees, brokerage fees, fees for using technology) • Job searches
Clemons (2009)	• Search engines such as Google	• Pay per sale
Spaulding (2009)	• Online such as Amazon.com and kalahari.net • Search engines such as Google • Auctions such as eBay	• Advertising (buying space on websites) • Commerce (sales) • Fees (subscriber fees, brokerage fees, fees for using technology)
Wall (2010)	• Search engines such as Google	• Paid inclusion (flat fee) • Pay per click (fixed amount paid per click on advertisement) • Pay per sale (commission received on sales)
Geron (2011b)	• Social networks such as RenRen	• Advertising (buying space on websites) • Online gaming

Source: Researcher's own construct.

As is evident from the previous discussions, various valuation approaches can be used to determine a complete valuation of a business. In Chapter Two it was pointed out that Internet-based businesses can follow various e-business strategies, which are based on the proposed e-business model stages. It was furthermore shown that one of the benefits of implementing e-business strategies is the enhancement of business performance, which will have an influence on business valuation. Therefore it is important to quantify the benefit of e-business strategies at various e-business model stages in business valuation.

3.8 SUMMARY

The focus of Chapter Three has been on business valuation. Firstly, a brief overview on the concepts of par-, market-, book- and economic values was given. The purpose of valuation was described, and this section explained why valuations of business are necessary. The valuation of businesses of different sizes was also addressed, and it was found that the factors for valuation of large businesses differ from those of small businesses. Some businesses might also opt not to pay dividends, and the valuation of such businesses was also briefly explained. The valuation of real estate was included in the discussion on valuation because there are many similarities between real estate valuation and business valuation where intangible assets form a major part of the valuation process.

A brief section on the history of valuation was provided, and the return that investors receive on their investments were analysed as the dividend yield, the capital yield and total yield (both dividend and capital yields). The fourth subsection was devoted to the various traditional valuation approaches found in the literature. A discussion on the DDM, zero growth model, the constant growth model, the non-constant growth model, the free cash flow valuation model, price-earnings ratio, price-book ratio, book value per share, liquidation per share, economic and market value added performance measurements and real options followed. The relevant equations and/or explanations of each of these valuation approaches were provided.

The unknown variables of each of the valuation approaches were discussed and the limitations of the various approaches were also highlighted. Possible solutions to overcome the limitations were also provided. The variables, known and unknown to the valuators, the applicability of the various valuation approaches to the different type of businesses, and the shortcomings of each approach were summarised in Table 3.1.

The previous research using the traditional valuation approaches as well as the application of some of the valuation approaches in practice were discussed. It was found that the most used valuation approach was the DCF approach. These findings concluded that there is a need for a valuation approach for Internet-based businesses.

An overview of the various approaches used to value Internet-based businesses was provided. Various authors, for example Grajkowska (2011), Ho, *et al*. (2011) and Seol (2010), have different opinions regarding the valuation of Internet-based businesses. Although a number of approaches were identified which might be used for valuation, many limitations and obstacles were also identified that would prevent the determining of a fair market-related value for Internet-based businesses. The chapter concluded with a summary of the identified valuation approaches, the share price and market capitalisation of a number of Internet-based businesses, and the possible income streams of Internet-based businesses, as well as explaining the benefit of implementing e-business strategies on business performance and ultimately business valuations.

The focus of Chapter Four will be the research design and methodology implemented in the present study. The various methodologies and methods will be explained and choices motivated. The population, sample and sampling method will be described. To conclude the chapter, the data collection and analysis will also be addressed.

CHAPTER FOUR
RESEARCH DESIGN AND METHODOLOGY

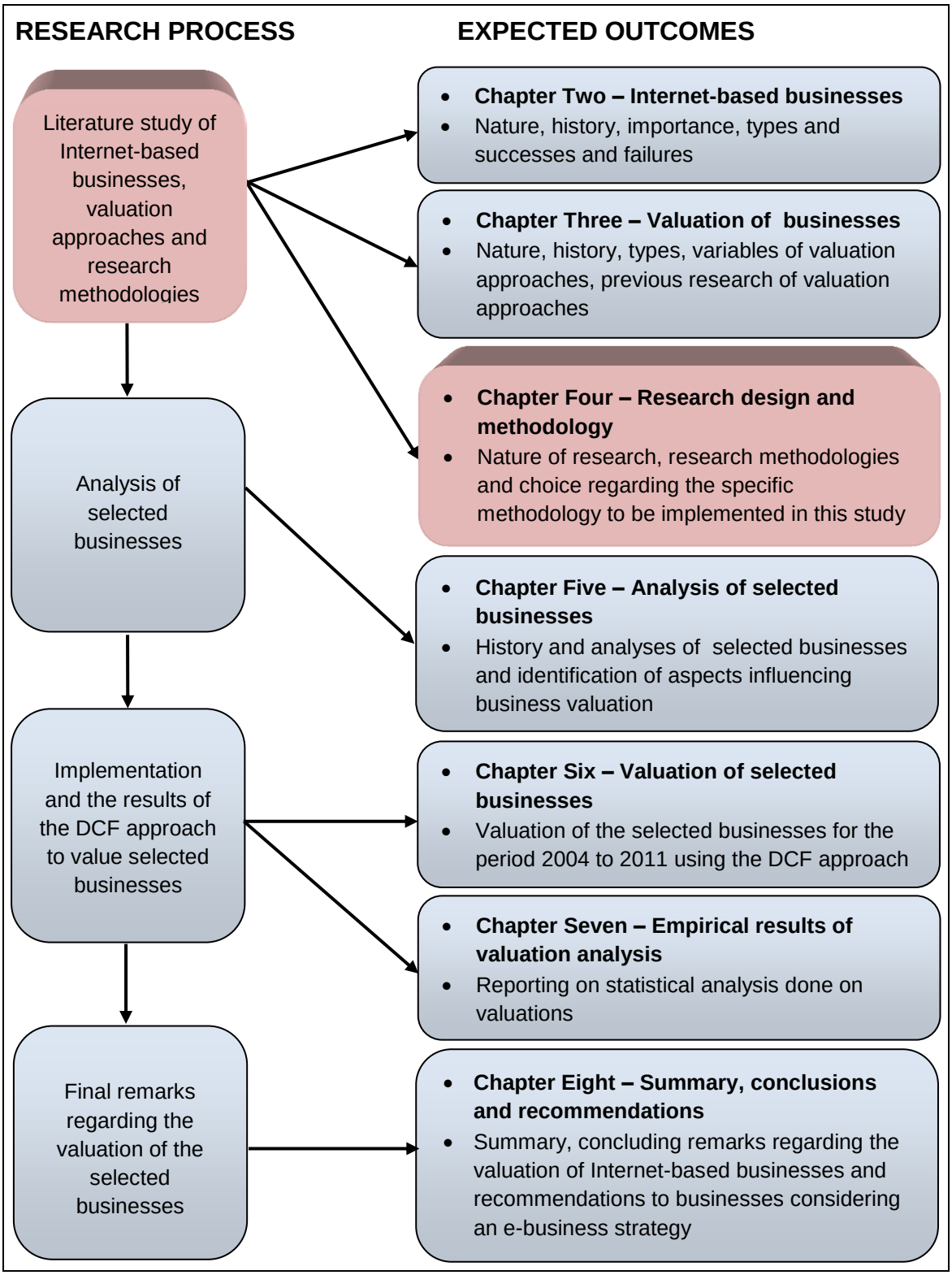
4.1 INTRODUCTION

The focus of Chapter Three was on the various traditional valuation approaches as found in financial literature. It was seen that the most used valuation approach was the DCF approach where free cash flow was discounted. It was furthermore pointed out that all the approaches have shortcomings, especially when valuing a business that did not pay dividends or that had unconventional growth rates. The different categories of Internet-based businesses were discussed in Chapter Two. The purpose of Chapters Two and Three was to achieve two of the secondary objectives as stated in Chapter One.

The problem statement, purpose and objectives of the study were described in Chapter One. To give effect to the third secondary objective, it is important to identify and discuss the various research paradigms, research methodologies, data collection and data analysis methods, from which the most appropriate methodology will be chosen for the study. The place of the chapter in the research design is illustrated in Figure 4.1, which is reproduced from Chapter One.

Therefore this chapter will identify and describe in detail the processes followed during the research. The nature of research and the various research classifications will be described. The different research paradigms will be discussed, and the specific paradigm chosen will be motivated. The data collection, including the population, sample size and sample selection, will be addressed. The last aspect to be covered in this chapter is the data analysis that will be implemented in the study.

FIGURE 4.1: CHAPTER FOUR AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

4.2 NATURE OF RESEARCH

Research is the implementation of appropriate steps to produce original knowledge that will satisfy the users of the research. The implementation of the research steps needs to be performed rigorously, implying that it should be done in a systematic manner and that the results of the research are answering the research questions (Oates 2006:7, 10). Saunders *et al.* (2009:5) and Zikmund *et al.* (2010:5) describe research as knowledge creation to overcome uncertainty in areas such as the business, the market, or the economy. The authors further explain that business research is a scientific means to find the truth regarding business phenomena. Welman, Kruger and Mitchell (2010:2) concur with the previous authors, stating that research is a process and that the aim of this process is to obtain scientific knowledge by implementing different methods and procedures. Collis and Hussey (2003:1) summarise research as a process that enquires and investigates in a systematic and methodical manner with the ultimate aim to increase knowledge.

According to Oates (2006:11-13), research consists of six elements, or the six Ps, namely purpose, products, process, participants, paradigm and presentation. Purpose refers to the reason why the research is conducted, and includes the research questions and primary and secondary objectives (Oates 2006:11). The purpose, or primary objective, of this study is to determine and analyse the value of Internet-based businesses at the various stages of Internet presence, to determine the value creation of an e-business strategy. A number of secondary objectives, research questions and research hypotheses are also presented in Chapter One (section 1.5) to give effect to the primary objective of the study.

The product(s) of research are the ultimate outcome of the research, and may include the contribution the study makes to the field of study, creation of new models or products, conference papers and journal articles (Oates 2006:11-12). The products of the study are encapsulated in the recommendations of the study and will revolve around the primary objective of the study. Therefore the intended product of the present study is to establish whether the benefits of implementing the various e-business strategies can increase the value of a

business. The answer to this statement will assist owners and managers of businesses in making a decision about the extent of an e-business strategy to be implemented. The product(s) of the study will be reported in the final chapter, Chapter Eight.

The process refers to the activities that will be performed, in sequence, in order to reach the purpose of the study, which is the achievement of the primary objective of the study (Oates 2006:12). The process in the format of sequential steps that the study is following, is depicted in Figure 4.1 and is explained in Chapter One (sections 1.4 – 1.6). Chapters Two to Eight represent in detail the process of the study.

The participants of a study are the individuals who will complete a questionnaire or with whom an interview will be conducted. Therefore the participants will be the sample drawn from the population identified for the study (Oates 2006:12). The participants of the study are drawn from a population. The population of the study is listed public companies, and the sample is all the listed public companies in consumer services, retail sector, as classified by the JSE. More detail regarding the population, sample and sampling size will be provided later in the chapter.

The paradigm is the pattern of thinking which will be followed during the research (Oates 2006:13). The pattern of thinking can follow a positivistic paradigm or a phenomenological paradigm, or even a combination of the two paradigms. The study will use a positivistic paradigm.

Presentation of the academic-oriented research can be in the form of a thesis, dissertation, conference paper or journal article (Oates 2006:13). The presentation of the results of the study will first be in the format of a final document, the thesis. The results will also be published in journal articles and presented at conference.

The six elements of research as described by Oates (2006) are nothing more than the research design of a study. Research design is a step-by-step master

plan detailing the methods and procedures to be followed when collecting and analysing data to ensure that the primary objective will be attained (Zikmund *et al*. 2010:66).

4.3 RESEARCH CLASSIFICATIONS

Saunders *et al.* (2009:108) explain research in terms of various philosophies, approaches, strategies, choices, time horizons and techniques and procedures. Table 4.1 summarises the various types of research based on the research categories of Saunders *et al.* (2009:108).

TABLE 4.1: GENERAL RESEARCH CATEGORIES

BASIS OF CLASSIFICATION	TYPE OF RESEARCH
Philosophies	Positivism, realism, interpretivism or pragmatism
Approaches	Deductive or inductive research
Strategies	Experiment, survey, case study, action research, grounded theory, ethnography, archival research
Choices	Mono method, mixed methods or multi-method
Time horizons	Cross-sectional or longitudinal
Techniques and procedures	Data collection and data analysis

Source: Adapted from Saunders *et al.* 2009:108.

Research can also be classified according to the purpose, the process, the logic and the outcome of the research. Therefore the research should explain why the study is conducted (purpose), the way in which the data will be collected and analysed (process), the direction of the study (logic) and whether a specific problem will be solved or not (outcome) (Collis & Hussey 2003:10). The research classification of Collis and Hussey (2003:10) will be followed in the study, and is summarised in Table 4.2.

TABLE 4.2: RESEARCH CLASSIFICATION ADOPTED IN STUDY

BASIS OF CLASSIFICATION	TYPE OF RESEARCH
Purpose of research	Exploratory, descriptive, analytical/explanatory or predictive research
Process of research	Quantitative or qualitative research
Logic of research	Deductive or inductive research
Outcome of research	Applied or basic research

Source: Collis and Hussey 2003:10.

The four bases of classification as indicated in Table 4.2 will be discussed by examining the types of research. Each research type adopted in the study will then be contextualised for the study.

4.3.1 Purpose of research

The purpose of the research should be clearly described, and the appropriate type of research should be selected. The types of research include exploratory, descriptive, analytical and predictive research.

The purpose of exploratory research is to investigate phenomena by asking questions surrounding the phenomena. Exploratory research is also useful when not much is known about a phenomenon. (Gray 2009:35). Collis and Hussey (2003:10-11) and Zikmund *et al.* (2010:54) concur with Gray (2009) that exploratory research aims to shed light on unclear circumstances, or to discover ideas that may be likely opportunities for the business to seize. New product development is ideally suited for exploratory research as knowledge is limited concerning the new product and the market reaction to the new product.

Descriptive research aims to provide an image of phenomena by describing them. The phenomena can also be compared to some set standard. Therefore answers to the questions Who, What, When, Why, Where and How will be searched for in descriptive research. Therefore descriptive research will identify and obtain information regarding the characteristics of the phenomena under investigation. (Collis & Hussey 2003:11; Gray 2009:35; Zikmund *et al.* 2010:55).

Analytical research, also referred to as explanatory research, is describing the phenomena on a continuous basis. The phenomena are not only described, but are also analysed by discovering and measuring causal relationships between the variables of the phenomena. (Collis & Hussey 2003:11).

The starting point of predictive research is analytical research. Predictive research is forecasting the possibility that the same or similar phenomena will occur at some future point in time. This forecasting can only be done once the variables of the phenomena are identified and explained. Therefore the main difference between analytical and predictive research is that predictive research is forward-looking, while analytical research focuses on describing and explaining why a phenomenon occurred. (Collis & Hussey 2003:12).

Based on the discussion of the various purposes of research, the most appropriate type of research for the present study is predictive research. The objective of the study is to determine whether e-business strategies at various e-business model stages will increase the value of the business. Based on these results, a forecast on e-business strategy value creation will be made.

4.3.2 Process of research

There are two types of research that are classified according to the processes that are followed during the research, namely quantitative and qualitative research.

Quantitative research is a positivist approach that focuses on research that can be observed and measured objectively. Therefore quantitative research studies human behaviour that is observable. (Welman *et al.* 2010:6-7). Zikmund *et al.* (2010:134) agree with Welman *et al.* (2010:6-7) by explaining that quantitative research achieves research objectives using empirical assessments. Collis and Hussey (2003:13) explain that quantitative research focuses on measuring phenomena quantitatively. These empirical assessments are numerical in nature, and can therefore be measured and analysed by applying statistical tests.

In contrast, qualitative research is an anti-positivist approach, where the research object, the human experience, cannot be separated from the individual who is experiencing the phenomenon. Therefore qualitative research studies human behavioural experience, and not the behaviour of the individual. (Welman *et al.* 2010:6-7). Zikmund *et al.* (2010:133) describe qualitative research as research that focuses on discovering meanings and new insights into phenomena without relying on numerical data. Qualitative research is subjective in nature as it involves examining and reflecting views of humans in the understanding of the social and human activities investigated (Collis & Hussey 2003:13).

The difference between quantitative and qualitative research is summarised in Table 4.3.

TABLE 4.3: DIFFERENCES BETWEEN QUANTITATIVE AND QUALITATIVE RESEARCH

QUANTITATIVE RESEARCH (POSITIVISTIC PARADIGM)	QUALITATIVE RESEARCH (PHENOMENOLOGICAL PARADIGM)
Epistemological position is that of an objectivist	Epistemological position is that of an constructivist or phenomenologist
Evaluate objective data in the form of numbers, therefore numerical data will be measured and tested	Evaluate subjective data produced by the perceptions of respondents or interviewees, therefore text will be observed and interpreted
Research based on hypotheses testing or specific research questions	Research based on finding ideas with general research questions
Methods that are complex and structured are used to reject or not to reject predetermined hypotheses	Methods that are flexible and explorative are used to obtain a better understanding of what is investigated
Focus is on an abstraction of reality by testing hypotheses about social reality	Focus is on the day-to-day social reality and events
Facts are analysed from an outsider's perspective	Facts are analysed from an insider's perspective

TABLE 4.3: DIFFERENCES BETWEEN QUANTITATIVE AND QUALITATIVE RESEARCH (cont)

QUANTITATIVE RESEARCH (POSITIVISTIC PARADIGM)	QUALITATIVE RESEARCH (PHENOMENOLOGICAL PARADIGM)
Research process followed is standard as the collection of facts will not change easily and can be replicated	Research process followed is dynamic, changeable and unique and evolves through the research process
Specific measurement instruments are used to collect specific data, therefore particular data is collected	A wide array of data is collected and the researcher will know what the meaning of content is, once coded and analysed
Data collection is structured with categories provided for responses	Data collection is unstructured in an open format
Large sample sizes	Small sample sizes
Researchers more concerned with reliability of data measurement, therefore reliability high and validity low	Researchers more concerned with validity of data collected, therefore reliability low and validity high
Research is researcher-independent, implying that different researchers will reach the same conclusions based on the same data	Research is researcher-dependent, implying that different researchers may reach different conclusions based on the same data
Researcher is uninvolved and acts as an observer in the research process	Researcher is highly involved in the research process
Generalisation from sample to population	Generalisation from one setting to another

Source: Adapted from Collis and Hussey (2003:55); De Vos, Strydom, Fouché and Delport (2005:75); Gray (2009:200); Welman *et al.* (2010:8-9); Zikmund *et al.* (2010:135-136).

Based on the characteristics of quantitative and qualitative research, the quantitative research approach will be used in the study. Quantitative research will be conducted because secondary data will be analysed and transformed into usable numerical data that can be used to determine the valuations of the selected businesses.

4.3.3 Logic of research

When conducting research a deductive or inductive research approach can be followed; however, these approaches are not mutually exclusive (Gray 2009:15). Deductive research aims at testing existing theories and ideas found in the secondary data reviewed by empirical observation. The theories and the ideas are used to develop a research-specific theoretical or conceptual framework which is tested using various statistical methods. Therefore the general patterns found in the empirical observation will assist in making recommendations regarding the particular. (Collis & Hussey 2003:15; Gray 2009:14; Saunders *et al.* 2009:61). In contrast, inductive research aims at developing theories based on the data explored. The purpose is not to develop a framework to test in the research (Saunders *et al.* 2009:61). As stated by Gray (2009:14-15), the purpose of inductive research is to collect data which will be coded and analysed to determine if any patterns occur in the data that suggest relationships amongst the variables identified. From these findings, it is possible for the researcher to generate generalisations, relationships and theories (Collis & Hussey 2003:15). The main difference between deductive and inductive research is the logic that is used when doing the research; therefore this classification is based on the logic of the research.

According to Robson as cited in Saunders *et al.* (2009:124-125), deductive research involves five sequential stages, namely:

- formulating propositions from theory (known as hypotheses) to be tested about possible relationships between two or more variables;
- expressing how the hypotheses will be measured;
- testing the formulated hypotheses using the methods identified;
- analysing the results of the hypotheses testing; and
- modifying the theory in line with the findings.

Deductive research has several characteristics that are important to ensure quality research. Firstly, causal relationships between variables should be found. The second characteristic is that a structured methodology should be

followed to ensure reliability. Thirdly, the concepts (variables) used to formulate the hypotheses should be measurable quantitatively. Fourthly, reductionism is important, implying that to understand the problem holistically, it is important to understand all the individual elements of the problem. The fifth characteristic is generalisation, meaning that the results should be true for not only the sample selected for the research, but for the population as well. (Saunders *et al.* 2009:125).

Inductive research emphasises a close understanding of the research context, and is less concerned with generalisation. This type of research focuses on collection of qualitative data, and the researcher is part of the research process. One of the issues with inductive research is that the researcher may encounter no useful data patterns and therefore the research can be of no value. (Saunders *et al.* 2009:127).

Deductive research will be used in the study, as a number of hypotheses will be tested. The aim of the study is not develop new theories, but rather to enhance existing knowledge regarding the value creation of e-business strategies for businesses.

4.3.4 Outcome of research

Research can also be classified according to applied and basic research, which is based on the outcome of the research. Applied research refers to research undertaken to improve the understanding of a particular business or management problem, which will result in finding a solution by creating new knowledge, although limited to the problem. The solution found will add value to the businesses for the managers. (Gray 2009:3; Saunders *et al.* 2009:9). As stated by Collis and Hussey (2003:13) and Zikmund *et al.* (2010:6), applied research is searching for a solution for a specific existing problem with which a specific business is struggling.

Basic research is an alternative to applied research and is known as fundamental or pure research. The outcome of basic research is to expand knowledge of processes of business and management, to develop universal

principles regarding the processes investigated, and to add value for the society in general. (Collis & Hussey 2003:13; Gray 2009:3; Saunders *et al.* 2009:9). Collis and Hussey (2003:15) and Zikmund *et al.* (2010:7) explain that basic research is not focused on solving a specific problem, but rather aims to expand the knowledge in the field that is studied for the general good.

Therefore the main differences between applied and basic can be summarised as follows:

- Applied research focuses on finding a solution for a specific issue or problem at hand, whereas the focus of basic research is to expand knowledge in general.
- Both types of research create knowledge. Applied research creates new knowledge which is related to the specific problem, while basic research expands current knowledge with new knowledge of business processes.
- The value of the findings of applied research is practical, relevant, and applicable to the situation where the problem being investigated is occurring, while the value of the findings of basic research is significant and applicable to society in general.

Therefore the findings of basic research are useful to a wider audience, while the findings of applied research are more limited in their usage. If one considers the characteristics of both basic and applied research, the present study can be classified as applied research, because the findings will only be useful for businesses which are evaluating the opportunities to implement e-business strategies or to expand their e-business strategies.

4.4 RESEARCH PARADIGMS

There are two research paradigms that can be adopted in research, namely the positivistic and the phenomenological research paradigms. The positivistic paradigm refers to quantitative, objectivist, scientific, experimentalist or traditional research. The phenomenological paradigm refers to qualitative, subjectivist, humanistic or interpretive research. (Collis & Hussey 2003:47; Cooper & Schindler 2008:164). As stated by Collis and Hussey (2003:55-56),

the data produced by a positivistic paradigm can be qualitative, and the data produced by the phenomenological paradigm can be quantitative. Therefore reference will be made to the positivistic and phenomenological paradigms instead of quantitative and qualitative research.

The emphasis of the positivistic paradigm is on the quantification of the data collected and analysed. Once the data is quantified, explanations of the data can be provided, and the predictions of the phenomena investigated can be made. Therefore the positivistic paradigm follows deductive reasoning to determine whether relationships between theory and research exist. (Bryman & Bell 2007:28, 157, 404; Collis & Hussey 2003:13, 52-54; Creswell 2009:3-4). The positivistic paradigm focuses on the measuring of consumer behaviour, knowledge, opinions or attitudes (Cooper & Schindler 2008:162).

In contrast, the emphasis of the phenomenological paradigm is on the content. Therefore new theories are developed, instead of testing existing theories. This paradigm uses inductive reasoning, and not deductive reasoning, to develop a new theory. Therefore the phenomenological paradigm discovers new knowledge, which is used to create new theories. (Bryman & Bell 2007:28, 157, 404; Collis & Hussey 2003:13, 52-54; Creswell 2009:3-4). A benefit of the phenomenological paradigm is that the researcher can comprehend the context in which decisions and activities are undertaken (Myers 2009:5).

Based on the above discussion and the discussion in section 4.3.2, for the purpose of this study, a positivistic paradigm will be followed. A positivistic paradigm (quantitative research) will be adopted, because business valuations for four businesses (one brick-and-mortar and three Internet-based businesses) providing consumer services (three in the retail industry and one in media industry) will be carried out by transforming secondary quantitative and qualitative data into more easily understandable information. Firstly, the transformed data will be captured in Microsoft Excel (data collection) and the various business valuations will be done. Secondly, the business valuations will be used in t-tests (both one-sample and dependent) to test the hypotheses, as stipulated in Chapter One section 1.5.4.

4.5 DATA COLLECTION

The section to follow will describe the data collection, which will include the population, sample selection, and sampling method.

4.5.1 Population and sample selection

Population or universe is defined as any specifically distinct set of people or a collection of items or entities which is under investigation, having the same or similar characteristics (Collis & Hussey 2003:56; Quinlan 2011:143; Zikmund *et al.* 2010:387). The public companies listed on the JSE will be included in the study's population. As mentioned in Chapter One, the reason for only public companies to be included in the study is that the annual reports of private companies and other forms of ownership are not publicly available. Therefore, to obtain the sampling frame of all the listed South African public companies, the JSE website will be visited, as well as the Profile's Stock Exchange Handbook, which provides a list and details of all the listed companies on the JSE.

As it is not feasible to include all the public companies, the researcher selected a few public companies to be investigated in the study. Such a selected group of entities is known as a sample. Collis and Hussey (2003:56), Quinlan (2011:143) and Zikmund *et al.* (2010:387) describe a sample as a subset of the population. The sample of the study will consist of four businesses. Three businesses will be from the consumer services sector specialising in the food and drug retail industry (retailers and wholesalers subsector) as classified by the JSE, while one business will be from the consumer services sector specialising in media industry (broadcasting and entertainment subsector) as classified by the JSE. The businesses are one brick-and-mortar business with limited online presence (Shoprite Holdings Limited), and three Internet-based businesses where actual online trading is conducted via the Internet (The SPAR Group Ltd and Pick n Pay Stores Ltd as brick-and-mortar businesses and Naspers Ltd as an online business). According to the JSE classification, there are four businesses in the food and drug retail industry (retailers and wholesalers subsector). Only three of the four businesses will be included in the study as Pick n Pay Holdings Limited is established with the main purpose to be

the holding company of Pick n Pay Stores Limited. The holding company does not have any employees. (Profile's Stock Exchange Handbook June 2012 – September 2012 2012:363).

Probability and non-probability sampling methods can be used to select the sample. Probability sampling is when all the respondents have an equal chance of being selected. In contrast, non-probability sampling is when the respondents do not have an equal chance of the being selected to participate in the study. With regard to the three of the four businesses selected from the food and drug retail industry (retailers and wholesalers subsector), non-probability sampling was used as the specific industry was chosen by the researcher based on the e-business strategies implemented by the three companies selected. Regarding the selection of the one business in the media industry (broadcasting and entertainment subsector), non-probability sampling was also used. To be more specific, judgement or purposive sampling was used to select all four companies, which refers to the selection of a respondent based on the personal judgement of the researcher regarding the characteristics of the respondent selected (Oates 2006:98; Zikmund 2010:396). The business selected was chosen since one of the subsidiaries of the business is a well-known South African click-only business, and the basic operations of the business are based on electronic platforms (Naspers Fact Sheet 2012).

4.5.2 Database construction for business valuations

Secondary data from the annual financial statements will be analysed, and transformed into usable data. A database will be constructed with the weighted average cost of capital and the components of the free cash flows for the years 2004 to 2011. The required data and annual financial statements will be obtained from the McGregor BFA Fin24Expert and from the official websites of the selected businesses. The data of the annual financial statements available from McGregor BFA Fin24Expert will be used to ensure that all the statements are in the same format. The annual financial statements obtained from the individual websites will be analysed to determine which events may have had an influence on the performances of the businesses and ultimately on the business valuation. Data will also be gathered from the South African Reserve

Bank, the JSE, and other available public sources of information that may influence the market value of the business. The collection of the secondary data will take approximately one month. The researcher will collect all the secondary data. The discounted free cash flow method, as described in the financial literature (see Chapter Three), will be used to do the valuations of the four selected businesses.

4.6 DATA ANALYSIS

Once the database is completed, the valuations of the four businesses will be done for each year as from 2004 to 2011. Although valuations are usually forward-looking, the aim of the study is to determine the influence of online activity on the business valuation. Therefore historical data will be used for the valuation process. The growth rate of the business valuations will also be compared to see whether there was consistency, and possible events will be identified that may have influenced the various valuations. The correlation among the valuations was also determined by calculating the Pearson's product moment correlation coefficient assessing the strength of the relationship between the valuations of the four businesses. As stated by Gray (2009:579) and Saunders *et al*. (2009:451, 460), the Pearson's product moment correlation coefficient is used to assess the strength of a relationship between two variables. The purpose of t-tests is to determine whether statistically significant differences exist between two sets of data. Different types of t-tests are found in literature, namely the one-sample t-test, the dependent t-test and the independent groups t-test. (Gray 2009:470). Dependent t-tests will be used to compare the valuations calculated using the DCF approach and the valuations calculated by McGregor BFA Fin24Expert with each another. The valuations for each business over the eight-year period will be compared, that is a trend analysis will be done. The valuations of the four businesses will also be compared with one another. The purpose of these comparisons is to establish whether significant differences exist between the valuations of the business. Gray (2009:472-473), Saunders et al. (2009:456) and Oates (2006:262) describe the purpose of dependent t-tests to determine whether statistically significant differences exist between two sets of data. The means of the two groups using a measure of the spread of the scores are used to determine

statistically significance. The one-sample t-test will be used to compare the five valuations of each business with each other.

4.7 RELIABILITY, VALIDITY AND ETHICAL CONSIDERATIONS

The reliability and validity of quantitative research is very important. Reliability is a measurement of the internal consistency of the measuring instrument. Internal validity refers to the extent that a variable is truly responsible for any variance in the dependent variable. External validity is the extent to which the results can be generalised beyond the selected sample. (Zikmund *et al.* 2010:274, 277, 305).

The reliability of the discounted free cash flow method need not be confirmed as it is an existing and established mathematical equation with the components of the equation being consistent. The discounted free cash flow method can be regarded as having construct validity because it is measuring what it is supposed to measure; in this case, the valuation of a business. Therefore the valuation method has face validity, content validity, criterion validity, convergent validity, and discriminant validity. (Zikmund *et al.* 2010:308).

Only the actual values of the mathematical equation will change, and therefore the reliability and validity of the inputs for the discounted free cash flow method need to be confirmed. As no primary data will be collected, the usual reliability measures, namely the Cronbach alpha coefficients, split-halves method or internal consistency method, cannot be used. To ensure that the data used for the valuation process as captured in the database is correct, a person other than the researcher and an expert in accounting will be asked to verify the correctness of the data. All the valuations will be calculated using two different methods as both methods should yield the same result. The same source of data, namely the cash flow statement will be used, but the inputs of the two methods are different. The first method will focus on the cash from assets (also known as the free cash flow) and the second will focus on the cash flow to lenders and the cash flow to shareholders. This is known as triangulation where different sources of data (different items from the cash flow statements) are used to obtain the same results. Gray (2009:36) explains that triangulation

takes place firstly when data is collected over different times, or secondly when data is collected from different sources. Saunders *et al.* (2009:146) state that the purpose of triangulation is to ensure that the data collected is indeed reliable and valid. According to Oates (2006:37), various types of triangulation exist, namely method triangulation, strategy triangulation, time triangulation, space triangulation, investigator triangulation and theoretical triangulation. As two methods of calculating FCF were used, method triangulation is applicable. Method triangulation is when one study uses two or more methods of data collection (Oates 2006:37). The calculations of the valuations will also be confirmed by experts, to ensure reliability of the valuations. One expert is a chartered accountant employed in practice while the second expert is an academic with research experience in business valuations.

The four businesses to be valued are classified according to the e-business model stages, as discussed in Chapter Two. The researcher visited the various websites of the selected sample businesses to determine if, and what, products and services are sold over the Internet. The extent of the e-business strategy of each business will indicate the e-business model stage of the business. To ensure that the classification was done correctly, two experts in the field of e-commerce will be consulted to verify the appropriateness of the classifications.

Ethical considerations are also of great concern for all researchers. As all the data used will be secondary in nature and freely available in the public domain, no ethical clearance needs to be obtained. The researcher subscribed to McGregor BFA Fin24Expert, from which certain financial data was extracted, to be used in the valuation of the selected businesses.

4.8 SUMMARY

The chapter described the nature of research as solving a problem by following several steps in sequence. The purpose of research is thus to create knowledge, either to expand the current knowledge level concerning a specific phenomenon, or to create new theories regarding general phenomena. It is important that the purpose and the product (outcome) of the research are clearly identified, the processes to achieve the product are explained, the

participants and the paradigm of the research are selected, and the presentation of the results is decided on.

The various research classifications were identified and discussed. Each of the categories was contextualised for the study. The study could be classified as predictive, quantitative, deductive and applied research. A distinction was made between positivistic and phenomenological paradigms. The difference between the two paradigms lies in the outcome of each. The purpose of a positivistic paradigm is to test for relationships between variables whereas the purpose of a phenomenological paradigm is to create new knowledge. As the study was quantitative in nature and relationships would be tested, a positivistic paradigm would be followed.

Four businesses were selected for the study, and the valuations for each of the four businesses for eight years from 2004 to 2011 were calculated. The data used was collected from the annual reports of the four selected businesses. The reliability and validity of the data were confirmed. The data was analysed using t-tests (one-sample and dependent) to determine whether there were relationships between the valuations of the individual businesses and between brick-and-mortar, brick-and-click and online businesses. This was done to establish whether the various e-business strategies add value to the businesses.

Chapter Five will provide an overview of the sample. The history and operational overview of the four businesses will be described, and the financial performance of the businesses will be discussed. Attention will also be given to the dividends paid, and the share prices of the selected businesses.

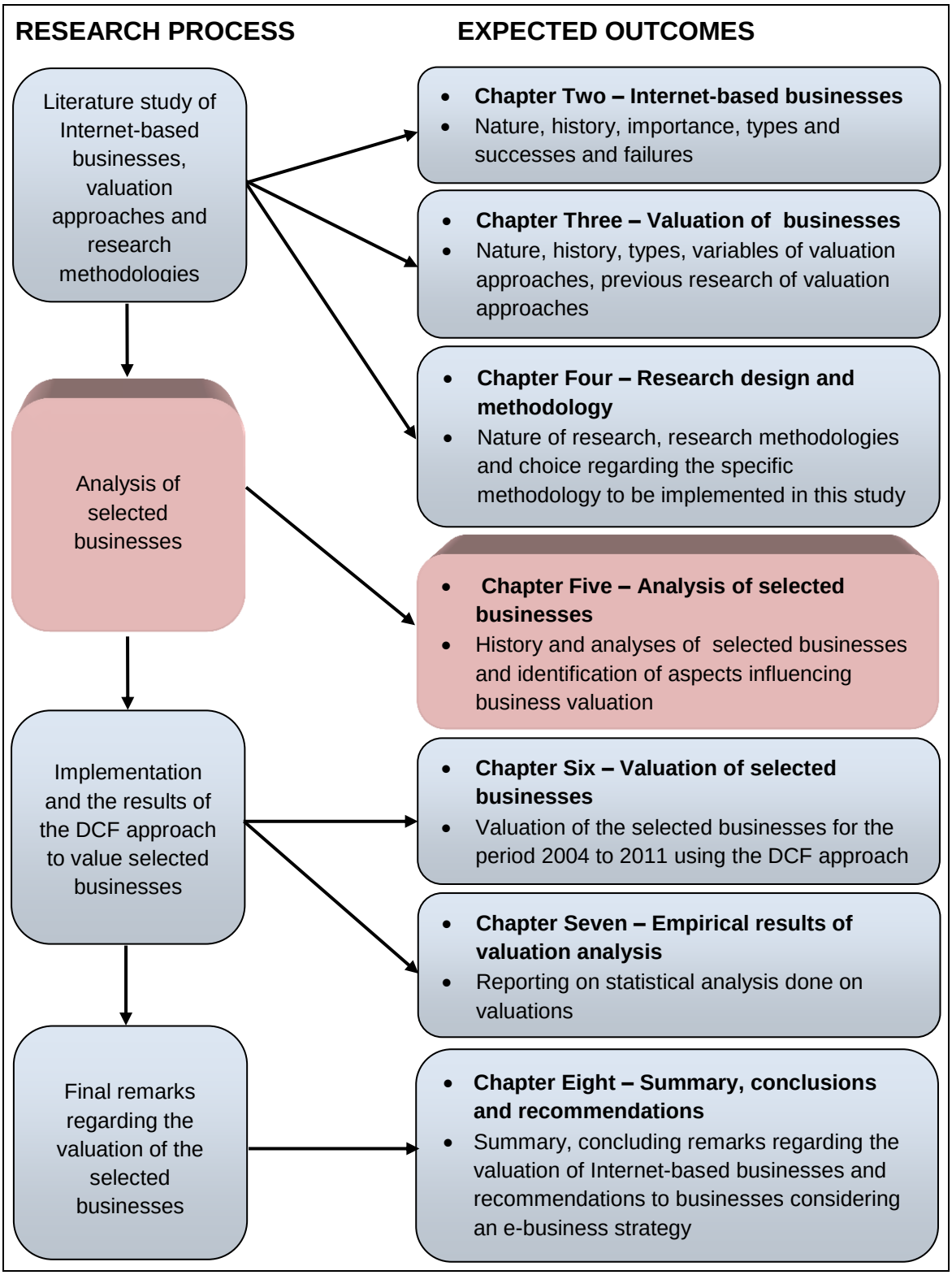
CHAPTER FIVE
OVERVIEW OF SELECTED BUSINESSES

5.1 INTRODUCTION

In Chapter Four this study was classified as predictive, deductive, quantitative and applied research. The research paradigm of the study was also described. The population and the sample for the study were identified, and the appropriate sampling method was discussed.

When investing in a business, whether investing in shares of the business or buying a business, investors will have to analyse the business in question. It is essential for investors to consider the events that have occurred in the business and the business environment in which it operates, as these events may have an influence on the business valuation. It is thus important to provide a description and overview of the selected sample. Therefore Chapter Five will provide an overview of the history, operational issues and financial information for each of the four businesses selected. For each business, a history of the business, an operational and financial overview of the business, and its Internet-based business classification according to the e-business model, will be discussed. To illustrate the purpose of Chapter Five, Figure 5.1 is reproduced from Chapter One.

FIGURE 5.1: CHAPTER FIVE AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

5.2 SHOPRITE HOLDINGS LIMITED

A brief historical overview of Shoprite Holdings Limited (hereafter referred to as "the Group") will be provided. This will be followed by an operational overview, change in the number of stores and store locations of the Group, and a financial overview of the Group. The classification of the Group according to the Internet-based business classification as discussion in Chapter Two will be provided.

5.2.1 History of Shoprite Holdings Limited

Shoprite was launched in 1979 by acquiring eight Cape-based supermarkets at a cost of R1 million. During 1983, the first Shoprite branch outside the Western Cape was opened in Hartswater in the Northern Cape. The number of Shoprite stores grew, and by the end of 1983 the store count stood at 21, with the store opened in Worcester being the 21st. The turnover increased by nearly 600% from the day Shoprite was launched four years earlier. In 1984, Shoprite bought six food stores from Ackermans. The first store launched in the Free State was opened in Bloemfontein during 1986, bringing number of stores owned to 33 national wide. Shoprite also listed on the JSE in 1986 in the consumer services industry, retail super-sector, food and drug sector, and more specifically in the food sub-sector. In 1988 the store extended its reach into the former Transvaal province by opening two stores, the first store situated in Polokwane (Pietersburg). Grand Bazaars with its 27 stores was acquired in 1990 and the store count of Shoprite increased to 72. During 1991 Shoprite bought all 169 Checkers stores, and now owns 241 stores, employing 22 600 employees. In 1995, Shoprite started trading in Zambia. Sentra, a central buying organisation for 550 owner-manager supermarket members, was bought. The Woman of the Year Award was launched in 1996 to celebrate National Women's Day. The year 1997 was also characterised by acquisitions. OK Bazaars, comprising 157 super and hyper-sized stores as well as 146 furniture stores, was added to Shoprite's acquisitions. The Money Markets concept was introduced in 1998 at Shoprite. The Chief Executive, Whitey Basson, received the Cape Business Man of the Year Award. (Shoprite Holdings Limited Annual Report 2004 2004:4).

The Group extended its trading outside South Africa to Zimbabwe and Uganda in 2000, to Egypt and Malawi in 2001, and to Madagascar, Mauritius and Tanzania in 2002. The Group entered the North African market in 2001 through its store in Egypt. During 2002 the Group listed on the Namibian Stock Exchange, and in 2003 on the Lusaka Stock Exchange. Other 2003 events included the opening of stores in Ghana and Angola, and the launching of Usave format stores. In 2010, the Group extended its reach into Africa, especially West Africa, and had more than 140 stores in 15 countries outside South Africa. Wal-Mart entered the South African food retail market in 2011, representing a major foreign direct investment in South Africa. Shoprite and Checkers, individually and combined as a group, were identified by the 2003 Markinor-Sunday Times Top Brands Survey as the most trusted supermarket in South Africa. (Shoprite Holdings Limited Annual Report 2004 2004:4; Shoprite Holdings Ltd Integrated Annual Report 2011 2011:11).

5.2.2 Operational overview of Shoprite Holdings Limited for the period 2004 to 2011

Shoprite was acquired from the Rogut family in 1979, and since then it has grown into a multifaceted business. In 2004 the Group was employing 63 000 employees in 16 countries. The 2004 financial year was characterised by lower inflation, decrease in interest rates and cheaper imports, which created a favourable market for durable and semi-durable products. The year also saw job losses owing to the competitiveness of imported products. Turnover for the year increased by 7.3%, while the market share increased by 5.3%. The South African Rand strengthened against the US dollar and caused imports from other countries to be cheaper, but exports to African countries to be more expensive. There was also a nationwide strike in November 2003 after the implementation of the Sectoral Determination Act which had a negative effect on sales. The revenue generated by the furniture stores increased by 26.0%. The year-on-year sales in South Africa were in 2004 the following: 4.2% increase for Shoprite, 8.0% increase for Checkers and Checkers Hyper, and 26.0% increase for House & Home and OK Furniture. The sales growth for Shoprite and Shoprite Hyper outside South Africa was 20.7%. A number of OK stores lost their franchise status as they did not meet the OK standards. Supplier

participation in using the Shoprite E-Commerce Exchange for orders, claims and information on a daily basis, increased to a level where 85% of total orders by volume and value were processed through the exchange. The dispute between Shoprite and South African Breweries regarding the purchase of OK Bazaars was not resolved. (Shoprite Holdings Limited Annual Report 2004 2004:8-20, 36).

The 2005 financial year comprised 53 weeks instead of the normal 52 weeks. The turnover of the Group for the financial year increased by 11.9%, while the operating profit increased by 27.8%. The individual brands of the Group also performed well, with Shoprite increasing turnover by 13.2% and Checkers increasing their turnover by 9.5%. Unfortunately the turnover growth of the operations outside South Africa was not as promising, as it was 20.2% for 2005 compared to the 26.2% for 2004. The main reason cited for the weaker performance was that the Rand had strengthened against the other currencies, and therefore the affordability of the South African merchandise was reduced. New technology that integrated the Group's national and international stores was implemented during 2005. Replenishment is carried out exclusively by the computer system, which compares the new order with previous year's order to eliminate possible over- or under-ordering. During 2005, Checkers was repositioning itself in the market by targeting higher-income consumers, while Shoprite was still targeting the lower-income consumers. The Mumbai franchise store was also performing very well, given the environment in which it operates. The OK Franchise returned to profitability during 2005, and has 248 members in South Africa and neighbouring countries. The furniture division also performed well during 2005, increasing revenue by 16.5%, and 23 pharmacies inside existing supermarkets were opened. The Group spent R155 million on new stores, and R63 million on information technology. (Shoprite Holdings Limited Annual Report 2005 2005:10-13).

In 2006, Shoprite as a price leader was better positioned than its competitors to profit from the high growth that took place in this market. The results of the 2006 Sunday Times/Markinor Top Brands Survey found that Shoprite was the number-one food retail brand in South Africa. Turnover of the supermarkets

increased by 12.8%, while the market share increased by a mere 0.13%. The international stores improved their performance in rand terms by 20.4%. The Usave brand had a 29.3% growth in turnover from 2005 to 2006. The total number of customers served increased by 10.1%. The first store in West Africa was opened in Lagos, Nigeria, but the store in Egypt was closed owing to the restrictive retailing environment. Properties were sold during 2006, and a capital gains tax to the value of R27 million was paid to SARS. The Group purchased land and buildings to the value of R288 million, spent R516 million on refurbishments, R336 million on new stores, and R185 million on information technology. A total of 40 new members of the OK Franchise were signed up, while 35 contracts were terminated. (Shoprite Holdings Limited Annual Report 2006 2006:12-17, 25).

The financial year 2007 was characterised by low interest rates which encouraged the spending of available funds by consumers. During the first quarter of the year the Group also experienced industrial action. The Group encountered trading limitations with the movement of merchandise between countries, such as different sets of duties and regulations as well as restrictions on trade. The turnover for the Group in South Africa increased by 16.2%, while the turnover for the international stores increased by 28.4%. Usave sales growth was 35.2% while OK Franchise showed a growth of 14.2% in turnover. Cash sales achieved extremely high levels while lenders provided credit facilities before the introduction of the National Credit Act (NCA). Shoprite was selected as Grocery and Convenience Store category winner in the annual Top Brands survey conducted by Markinor and the Sunday Times. Land and buildings were purchased to the value of R308 million, refurbishments amounted to R463 million, R239 million was spent on new stores, and R159 million was used for information technology. The Group also obtained the approval of the shareholders to repurchase shares from Shoprite Checkers (Pty) Ltd and Shoprite Holdings Ltd Share Incentive Trust. The Group was operating for a period of three months under a cautionary notice after Brait Private Equity made a proposal which involved the restructuring of the company, which may have led to a delisting of the Group from the stock exchange. The dispute with South African Breweries regarding the acquisition

of OK Bazaars (1929) Ltd was not resolved. (Shoprite Holdings Limited Annual Report 2007 2007:11-18, 50-51).

A global food shortage, higher inflation and higher fuel prices were some of the external factors the Group had to face during 2008. Despite the negative influence of these factors, the Group increased sales by 22.3%, and the international stores managed to grow sales by 12.4%. One of the main advantages of Shoprite is that it is the cheapest supermarket brand in South Africa. A total of 27 new stores opened during 2008. The Money Markets, targeting mainly the consumers with no bank accounts, helped to maintain and to expand Shoprite's customer base. Shoprite increased turnover by 25.0%, Checkers' turnover growth rate was 15.6%, the OK Franchise turnover growth rate was 17.7%, and the furniture division increased turnover by 5.6%. The low increase in turnover of the furniture division was linked to the implementation of the NCA. The repositioning of Checkers was completed during 2008. An amount of R1.441 billion was spent on property, plant, equipment and intangible assets during 2008, which included investments in new land and buildings (R401.3 million), refurbishments (R458.1 million), new stores (R220 million), information technology (R212.9 million) and normal replacements (R148.7 million). (Shoprite Holdings Limited Annual Report 2008 2008:10-15).

The 2009 financial year was a difficult year for the Group as a result of the global credit crisis. The year was also characterised by many job losses in the business environment. Checkers showed the highest growth during the 2009 financial year. The turnover growth of the supermarkets of the Group was 22.8%, while the non-South African supermarkets grew by 39.9%. Computicket Travel was launched by Checkers. The turnover of Checkers grew by 23.1% and was the fastest growing supermarket chain in South Africa. The OK Franchise showed a turnover growth of 26.5%, and a total of 13 new members were added to the franchise. The turnover of the furniture division also increased by 13.9% and 28 stores were opened. The Group opened a total of 57 new stores during 2009. A total of R1.820 billion was spent on property, plant, equipment and intangible assets. An amount of R347.2 million was spent on land and buildings, refurbishments amounted to R606 million, new stores

were erected at a cost of R334 million, R242.4 million was spent on information technology, and an amount of R290.4 million was used for normal replacements. (Shoprite Holdings Limited Annual Report 2009 2009:8-15).

Food inflation declined from 15.8% in 2009 to approximately 2.2% during 2010. The staple products were also 30% cheaper in 2010 than in 2009. The Group's turnover increased by 13.6% over the last 53 weeks for the 2010 financial year (the reporting for 2009 was done for a period of 52 weeks) while the international stores increased their turnover by 18.0%. During the 2010 financial year, 7 000 job opportunities were created by the Group. Various distribution centres were expanded, including those in Centurion, Gauteng, Cape Town and Durban. A total of R870 million was spent on new stores outside South Africa. OK Franchise reported a turnover growth of 8.9%. The liquor store, Enjoy, was also launched during 2010. MediRite, the pharmacies located inside the Group's supermarkets and hypermarkets, increased by 23% and the revenue reported grew by 60%. MediRite acquired Transfarm Pharmaceutical Wholesalers during 2010. An amount of R870 million was used to purchase land and buildings, R417 million was used for refurbishments, new stores at a cost of R355 million were erected, and R279 million was spent on information technology. A net total of 11 Shoprite stores opened during 2010, a net total of 39 Usave stores were opened, and 35 LiquorShops were opened. Checkers increased their turnover by 19.9%. The strongest growth of 17.3% was reported by OK Furniture and OK Power Express and 15.9% by House & Home, while the overall price deflation in the furniture segments was 5.5%. The Group had a 34.4% market share in June 2010 and an overall 32.6% market share for the year. Shoprite received the Most-loved retail brand in the country award in the annual Top Brands survey conducted by Markinor and the Sunday Times. (Shoprite Holdings Ltd Annual Report 2010 2010:10-22, 35).

The disposable income, especially of the low-income consumers, came under pressure as household debt increased and the cost of essential services increased drastically over the last few years as from 2007 owing to the worldwide recession. The turnover of the Group for 2011 increased by 7.3% when compared to the 2010 growth rate over a 53-week period (9.7% growth if

compared to a 52-week period). The Group's turnover increased by 7.26%, OK Franchise increased turnover by 7.8%, and the furniture division increased turnover by 1.9%. Investments in property, plant, equipment and intangible assets amounted to R3.005 billion. An amount of R937 million was used to acquire land and buildings, R361 million was used for refurbishments, the cost of new stores was R610 million, and R374 million was spent on information technology, while R723 million was used for normal replacements. With the repositioning of Checkers completed, 53% of their consumers were seen to come from the higher-income consumer segment. Shoprite was again selected as Grocery and Convenience Store category winner in the annual Top Brands survey conducted by Markinor and the Sunday Times. (Shoprite Holdings Limited Integrated Report 2011 2011:14-21).

As a corporate citizen, Shoprite employed over the period 2004 to 2011 between 61 500 and 69 000 people, the majority of whom were from the historically disadvantaged groups. Shoprite also provided management and staff training with specific programmes to enhance the various skills. A large number of articled clerks were employed at Shoprite over the eight-year period to complete their articles at Shoprite. Shoprite was approved by the South African Institute for Chartered Accountants (SAICA) as a training organisation for Training Outside Public Practice (TOPP) up to chartered accountant (CA) level. The learnerships programmes were launched and involved opportunities in retail management and other related occupations at various NQF-levels. Succession planning was done by identifying a pool of managers to be developed as possible successors. Educational assistance in terms of grants for school fees for lower-income staff was provided, and interest-free educational loans and bursaries for studies were made available. A support programme for HIV+/Aids employees was launched, providing access to Aids counselling specialists. Product safety programmes were implemented in both stores and distribution centres, to ensure that all products were free of forbidden residues. Shoprite also supported local producers when buying supplies. Other initiatives undertaken by Shoprite included worm-farming/vermiculture, energy management, packaging, and waste management (Shoprite Holdings Limited

Annual Report 2004 – 2009; Shoprite Holdings Ltd Annual Report 2010; Shoprite Holdings Ltd Integrated Report 2011).

Over the period 2004 to 2011, Shoprite was involved in numerous corporate projects, and some of the projects are still running during 2012. The projects included the following:

- consumer education programmes focusing on a diverse range of topics from hygiene, health issues, finances to crime;
- Shoprite Checkers/SABC2 Woman of the Year Awards recognising women of distinction;
- the Shoprite Checkers/USSASA Under-13 Netball Challenge sponsorship programme to develop talented young girls;
- the association with Aged in Action and the South African Police Services focusing on fitness, activity, celebration and vulnerability of the elderly;
- a sponsorship programme to develop talented young girls and self-defence workshops for young girls in the Western Cape, with the aim to nationalise the workshop;
- the Toy for Toy Campaign in association with the SA Red Cross Society to collect toys to be distributed at Christmas to needy children;
- the Shoprite Soup Truck Initiative, distributing soup and bread to needy children and the elderly;
- the Shoprite Community Network where listeners nominated worthy causes or development projects to be supported by the initiative;
- the RSG/KKNK Book Collection to collect books for libraries throughout South Africa to promote literacy in South Africa;
- Shoprite Checkers Strokes of Genius project to help young local artists to gain recognition for their work, and to encourage an art culture among the youth;
- Cuppa for Cansa in association with the Cancer Association of South Africa to raise cancer awareness of funds for the worthy cause;
- Age in Action’s Pretty Things for Little Things where the elderly produced clothing or toys for needy children;

- the Casual Day initiative to raise money for the physically disabled; and
- Play pumps to increase the availability of running water to rural communities. (Shoprite Holdings Limited Annual Report 2004 – 2009; Shoprite Holdings Ltd Annual Report 2010; Shoprite Holdings Ltd Integrated Report 2011).

The Group is managed by a board of directors which consists of non-executive and executive directors. Table 5.1 summarises the split between the two types of directors.

TABLE 5.1: NUMBER OF BOARD DIRECTORS OF SHOPRITE HOLDINGS LIMITED

TYPE OF DIRECTOR	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Independent non-executive	5	5	5	5	5	4	4	4
Non-executive	1	1	1	1	1	1	1	1
Executive	5	5	7	7	7	6	6	6
TOTAL	11	11	13	13	13	11	11	11

Source: Shoprite Holdings Limited Annual Report 2004 – 2009; Shoprite Holdings Ltd Annual Report 2010; Shoprite Holdings Ltd Integrated Report 2011.

The board of directors is chaired by one of the independent non-executive directors who has no executive functions. The directors retire at least once every three years but can avail themselves for re-election by the shareholders. The board meets four times a year. (Shoprite Holdings Limited Annual Report 2004 2004:30).

Barney Rogut, who founded Shoprite in 1979, was an executive director of the board in March 2004, when he retired (Shoprite Holdings Limited Annual Report 2004 2004:8). Mr El Nel and Mr AE Karp were appointed as executive directors during the 2006 financial year (Shoprite Holdings Limited Annual Report 2006

2006:46). At the end of the 2008 financial year, Mr JJ Fouché and Mr AN van Zyl retired as independent non-executive directors (Shoprite Holdings Limited Annual Report 2008 2008:44).

Mr TRP Hlongwana retired as an independent non-executive board member as from 26 October 2009, and Mr EC Kieswetter was appointed as an independent non-executive board member with effect from 28 May 2010 (Shoprite Holdings Ltd Annual Report 2010 2010:23-24).

5.2.3 Number of stores and store locations of Shoprite Holdings Limited

The Group operates from different store formats in various countries. Table 5.2 summarises the various store formats per country.

TABLE 5.2: STORES PER COUNTRY FOR SHOPRITE HOLDINGS LIMITED

GEOGRAPHIC LOCATION OF STORE	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Shoprite								
South Africa	252	260	286	297	302	310	319	331
Angola	1	2	1	3	3	3	3	4
Botswana	3	3	3	4	4	5	5	5
Egypt	7	7	-	-	-	-	-	-
Ghana	-	-	-	-	1	1	2	-
India	-	1	1	1	1	1	-	-
Lesotho	2	2	3	4	4	4	4	4
Madagascar	6	7	7	8	7	7	7	7
Malawi	2	2	2	2	2	2	2	2
Mauritius	1	1	1	1	1	1	1	1
Mozambique	3	3	4	4	5	8	5	5
Namibia	8	8	11	11	12	13	14	14
Nigeria	-	-	1	1	1	1	2	2
Swaziland	2	2	2	4	6	6	6	6
Tanzania	5	7	5	5	5	4	3	3
Uganda	2	3	2	2	2	2	2	3
Zambia	17	18	18	18	16	17	19	19
Zimbabwe	1	1	1	1	1	1	1	1
Shoprite Hyper								
South Africa	-	-	-	-	-	-	3	-
Shoprite Liquor Shop								
South Africa	-	-	-	-	-	-	50	69
Namibia	-	-	-	-	-	-	2	2
Shoprite MediRite								
South Africa	-	-	-	-	-	-	34	40
Swaziland	-	-	-	-	-	-	1	1

TABLE 5.2: STORES PER COUNTRY FOR SHOPRITE HOLDINGS LIMITED (cont)

GEOGRAPHIC LOCATION OF STORE	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Checkers								
South Africa	85	91	106	111	119	130	141	154
Botswana	1	1	1	1	1	-	-	-
Namibia	3	3	3	3	3	4	4	4
Checkers Hyper								
South Africa	22	23	24	24	24	24	22	26
Checkers MediRite								
South Africa	-	-	-	-	-	-	69	80
House & Home								
South Africa	22	23	26	29	37	44	45	48
Namibia	-	-	1	2	2	2	2	2
Hungry Lion								
South Africa	37	41	55	80	93	103	108	109
Angola	-	-	-	-	1	1	1	2
Botswana	3	4	4	7	7	7	7	7
Lesotho	2	2	2	2	2	2	2	2
Malawi	2	2	2	2	2	-	-	-
Mozambique	1	1	1	-	-	-	-	-
Namibia	2	2	2	2	3	4	4	6
Swaziland	1	1	1	1	1	1	1	1
Zambia	7	7	7	7	7	-	8	8
Megasave								
South Africa	64	47	44	44	32	27	22	17
Angola	1	1	-	-	-	-	-	-
Botswana	1	-	1	1	1	1	1	1
Namibia	8	8	8	10	10	10	10	10
Swaziland	2	-	1	1	1	1	-	-
Tanzania	1	-	-	-	-	-	-	-
Uganda	1	-	-	-	-	-	-	-
Zambia	1	-	-	-	-	-	-	-
OK Foods								
South Africa	23	19	19	18	16	14	15	13
Botswana	2	2	2	5	5	5	4	-
Namibia	3	3	3	3	3	3	2	2
OK Furniture								
South Africa	132	136	139	151	162	180	192	205
Angola	-	-	-	-	-	-	-	1
Botswana	2	5	5	5	4	6	6	6
Lesotho	2	2	3	3	4	4	4	5
Mozambique	-	1	1	1	2	2	2	2
Namibia	8	9	9	9	10	10	10	10
Swaziland	1	1	1	1	1	2	2	2
Zambia	-	-	-	-	-	-	-	1
OK Grocer								
South Africa	36	35	42	49	54	83	67	72
Botswana	-	2	-	-	-	-	-	-
Lesotho	-	-	-	1	1	1	-	-
Namibia	6	8	9	10	9	9	9	9
Swaziland	1	-	1	1	-	-	-	-
OK MiniMark								
South Africa	28	32	29	27	29	25	26	26
Namibia	3	3	2	2	2	2	2	2

TABLE 5.2: STORES PER COUNTRY FOR SHOPRITE HOLDINGS LIMITED (cont)

GEOGRAPHIC LOCATION OF STORE	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
OK Power Express / OK Express								
South Africa	-	-	12	14	13	13	16	17
Lesotho	-	-	1	1	1	1	1	1
OK Enjoy								
South Africa	-	-	-	-	-	-	11	15
Sentra and Value								
South Africa	94	73	76	71	70	84	86	83
Botswana	-	-	-	-	-	-	-	1
Lesotho	2	-	-	-	-	-	-	-
Namibia	21	14	16	17	19	20	21	18
Usave								
South Africa	43	62	68	77	91	129	169	189
Angola	2	7	7	5	5	5	5	7
Botswana	-	-	-	-	-	-	2	2
Ghana	3	3	2	1	1	1	1	1
Lesotho	-	-	1	2	3	3	3	3
Malawi	6	6	4	3	3	3	3	3
Mozambique	-	-	-	-	-	-	-	2
Namibia	4	5	8	9	11	11	12	14
Swaziland	-	1	2	2	2	2	2	2
Tanzania	1	-	-	-	-	-	-	-
8 'Till Late								
South Africa	3	1	-	-	-	-	-	-

Source: Shoprite Holdings Limited Annual Report 2004 – 2009; Shoprite Holdings Ltd Annual Report 2010; Shoprite Holdings Ltd Integrated Report 2011.

From Table 5.2 one can see that some of the store formats, such as the 8'Till Late format ceased to exist, while other store formats such as Shoprite, expanded over the years. The trend is also visible for national and international stores.

5.2.4 Financial overview of Shoprite Holdings Limited for the period 2004 to 2011

A summary of the financial data of the Group as from 2004 to 2011 is provided in Table 5.3. It should be noted that the 2004 and 2005 financial statements were prepared in accordance with the GAAP, while the 2006 to 2011 financial statements were prepared in accordance with the IFRS.

TABLE 5.3: FINANCIAL DATA OF SHOPRITE HOLDINGS LIMITED AS AT 30 JUNE ANNUALLY

FINANCIAL DATA	FINANCIAL YEAR (R million)							
	2004	2005	2006	2007	2008	2009	2010	2011
NPAT*								
GAAP	R556.811	R567.855	-	-	-	-	-	-
IFRS	-	-	R890.132	R1 076.071	R1 570.252	R1 998. 246	R2 266. 522	R2 509. 780
Growth rate	-	1.98%	56.75%	20.89%	45.92%	27.26%	13.43%	10.73%
Cash and cash equivalents	R1 128.235	R408.908	R536.704	R1 987.702	R3 135.85	R2 811.465	R1 344.587	(R80.549)
Growth rate	-	-63.76%	31.25%	270.35%	57.76%	-10.34%	-52.17%	-105.99%
Headline earnings	R410.662	R610.460	R744.365	R1 025.565	R1 572.231	R2 021.560	R2 293.215	R2 569.006
Growth rate	-	48.65%	21.94%	37.78%	53.30%	28.58%	13.44%	12.03%
Standard tax rate	30.0%	29.0%	29.0%	29.0%	28.0%	28.0%	28.0%	28.0%
Effective tax rate	30.1%	36.0%	36.1%	36.5%	35.6%	33.1%	29.7%	31.6%

* In 2004 and 2005 the financial statements were prepared accordance to GAAP, and as from 2006 the financial statements were prepared in accordance to IFRS. The comparative 2005 figures provided in the 2006 annual report were calculated using IFRS.

Source: Shoprite Holdings Limited Annual Report 2004 – 2009; Shoprite Holdings Ltd Annual Report 2010; Shoprite Holdings Ltd Integrated Report 2011.

It is evident from Table 5.3 that the headline earnings steadily increased over time. The arithmetic growth rates for the period 2004 to 2011 were 25.28% for NPAT, 18.16% for cash and cash equivalents, and 30.82% for headline earnings.

Table 5.4 provides a summary of the share-related data for Shoprite Holdings Limited as at the financial year-end.

TABLE 5.4: SHARE-RELATED DATA OF SHOPRITE HOLDINGS LIMITED AS AT 30 JUNE ANNUALLY

SHARE-RELATED DATA	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Shares authorised								
Ordinary ('000)	650 000	650 000	650 000	650 000	650 000	650 000	650 000	650 000
Preference ('000)								
Non convertible, non participating no par value	360 000	360 000	360 000	360 000	360 000	360 000	360 000	360 000
Non Convertible Cumulative								
6%	175	175	175	175	175	175	175	175
5%	325	325	325	325	325	325	325	325
2nd 5%	225	225	225	225	225	225	225	225
3rd 5%	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Shares outstanding								
Ordinary ('000)	543 479.460	543 479.460	543 479.460	543 479.460	543 479.460	543 479.460	543 479.460	543 479.460
Preference ('000)								
Non convertible, non participating no par value	276 821.666	276 821.666	276 821.666	276 821.666	276 821.666	276 821.666	276 821.666	276 821.666
Non Convertible Cumulative								
6%	175	175	175	175	175	175	175	175
5%	325	325	325	325	325	325	325	325
2nd 5%	225	225	225	225	225	225	225	225
3rd 5%	500	500	500	500	500	500	500	500
Book value per share								
Ordinary	113.4c	113.4c	113.4c	113.4c	113.4c	113.4c	113.4c	113.4c
Preference (all)	200.0c	200.0c	200.0c	200.0c	200.0c	200.0c	200.0c	200.0c
Market value	940c	1 465c	2 540c	3 265c	3 949c	5 500c	8 285c	10 180c
Basic EPS								
GAAP	111.7c	111.9c	-	-	-	-	-	-
IFRS	-	124.1c	175.4c	212.1c	309.5c	396.5C	450.1c	495.9c
Dividend								
Interim	16.5c	22.0c	27.0c	35.0c	49.0c	70.0c	80.0c	88.0c
Final	19.5c	28.0c	46.0c	66.0c	106.0c	130.0c	147.0c	165.0c
Dividend yield	2.57%	2.29%	1.99%	2.01%	2.58%	2.33%	1.79%	1.68%
Earnings yield	8.80%	8.53%	6.17%	6.22%	7.99%	7.25%	5.55%	5.20%
P/E ratio	11.36x	11.73x	16.02x	16.07x	12.52x	13.80x	18.01x	19.23x
Dividend cover	3.10x	2.48x	2.40x	2.10x	2.00x	1.98x	1.98x	1.96x
Net asset value	345.42c	438.4c	598.4c	717.3c	938.0c	984.1c	1 172.7c	1 399.8c
3-year Beta	0.15	0.16	0.32	0.70	1.17	0.46	0.34	0.15

Source: Profile's Stock Exchange Handbook October 2008 – January 2009 2008:331; Profile's Stock Exchange Handbook June 2012 – September 2012 2012:311; Shoprite Holdings Limited Annual Report 2004 – 2009; Shoprite Holdings Ltd Annual Report 2010; Shoprite Holdings Ltd Integrated Report 2011.

Table 5.5 summarises the major events that occurred in the business environment of Shoprite Holdings Limited during the period 1979 to 2011.

TABLE 5.5: HIGHLIGHTS OF SHOPRITE HOLDINGS LIMITED

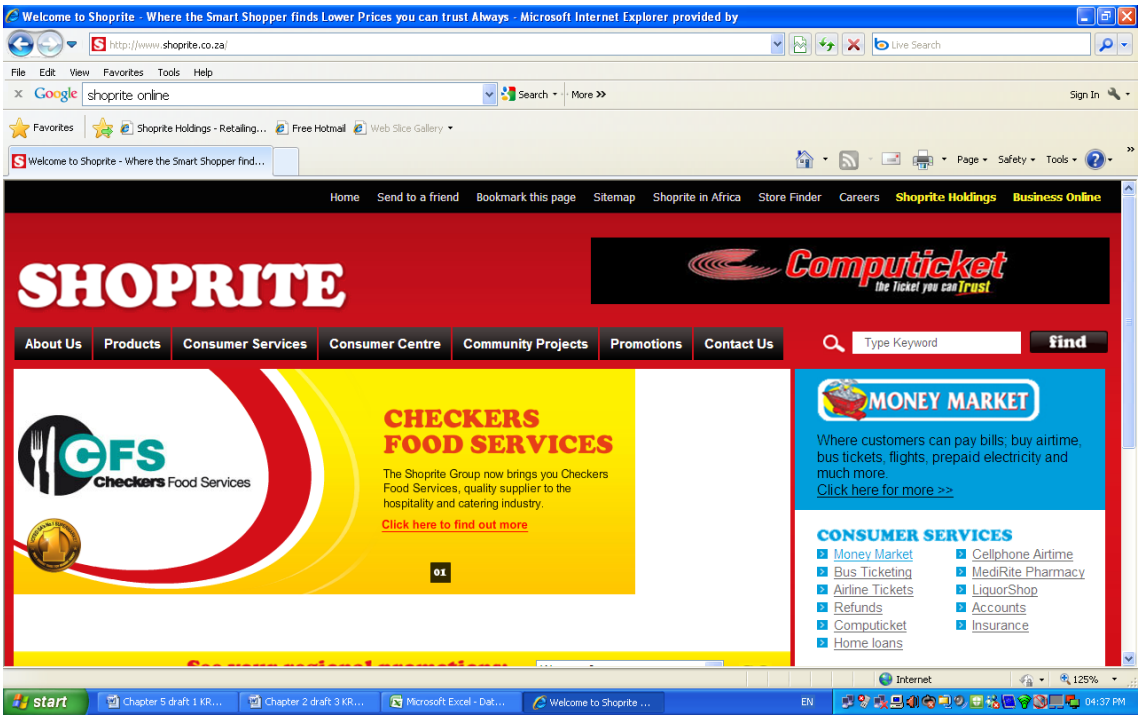
1979	• Shoprtite launched with acquisition of eight Cape-based supermarkets
1983	• Opening first store outside Western Cape in Hartswater in Northern Cape, Opening of 21st store in Worcester
1984	• Acquire six food stores from Ackermancs
1986	• Opening stores in Free State, **Shoprite listed on JSE**, Owns 33 stores
1988	• Opening two stores in former Transvaal province
1990	• Shoprite gains control of Grand Bazaars (27 stores), Expand store count to 72
1991	• Acquire 169 Checkers stores, Shoprite owns 241 stores with staff count of 22 600
1995	• **Opening store in Zambia**, Acquires Sentra
1996	• **Launching of Woman of the Year Award** to celebrate National Women's day
1997	• Acquires OK Bazaars, Opening first store in Maputo and invests in a development in Mozambique, Chief Executive won Western Cape Business Man of the Year Award
1998	• Launching of Money Markets
2000	• Opening first supermarkets in Zimbabwe and Uganda
2001	• Opening seven supermarkets in Egypt, Shoprite entering North African market, Starts operating in Malawi
2002	• Opening five stores in Madagascar, Opening three stores and one distribution centre in Tanzania, Opening first Shoprtite Hyper outside South Africa on Mauritius, **Shoprite listed on Namibiam Stock Exchange**
2003	• Shoprite and Checkers identified individuall y and combined as **South Africa's most trusted supermarket** by 2003 Markinor-Sunday Times Top Brands survey, **Shoprite listed on Lusaka Stock Exchange**, Opening of stores in Ghana and Angola, Usave format stores launched
2004	• 5.3% market share increase, Nationwide strike
2005	• Financial reporting standards changed from GAAP to IFRS
2006	• 0.13% market share increase, **Nr 1 food retailer in SA**, Opening of stores in Lagos, Lobito , Luanda, Nampula, Marienthal, Ongwediva, Windhoek, Closing of store in Egypt, Closing of two Usave stores in Malawi, Implementation of IFRS
2007	• Operated for three months under a cautionary notice, Industrial action in first quarter, Cash sales reached record heights, **Grocery and Convenience Store category winner** in the annual Top Brands survey, Introduction of NCA
2008	• Global food shortage, higher inflation and fuel prices, **Repositioning of Checkers complete, Effect of NCA visible in furniture sales**, Shoprite cheapers supermarket brand in South Africa
2009	• **Investigation by Competition Commission** into major food-retail chains, Launch of Computicket Travel, Checkers fastest supermarket chain in South Africa
2010	• OK Furniture and OK Power Express experienced major increase in cash sales, Received awards for **Most-loved brand in the country and Best Integrated Approach to Graduate Recruitment**, 130th biggest retailer globally, Largest retailer in SA
2011	• **Entry of Wal-Mart into South African market**, Opening of store in Kinshasa, **Grocery and Convenience Store category winner** in the annual Top Brands survey

Source: Researcher's own construct.

5.2.5 Classification of Shoprite Holdings Limited according to the e-business model

Figure 5.2 is a screen dump of the homepage of Shoprite where the various links can be viewed. All the links provide information for the product or service searched for.

FIGURE 5.2: HOMEPAGE OF SHOPRITE HOLDINGS LIMITED



Source: Shoprite Holdings Limited 2012.

If one considers the screen dump of Shoprite as shown in Figure 5.2 and the preceding discussion, it is clear that no online transactions where products are bought take place from the website. The homepage and the various pages linked to the homepage, provide customers with information regarding the products and services offered. For example, the link to all the consumer services provides information only and transactions need to take place at the physical premises of Shoprite. The link to products provides an array of products offered by Shoprite. Customers can e-mail the customer service centre with queries. It should be noted that it is possible to order products online from Checkers, but it is managed by another business (http://www.mad-shopping.co.za) and not by Checkers. Businesses can order online from

Checkers via the Checkers Food Services (CFS) link, but final consumers cannot use this facility. Based on the discussion in Chapter Two regarding the e-business model stages, the Group can therefore be classified as a brick-and-mortar business in the limited online presence stage from a business-to-consumer perspective.

5.3 THE SPAR GROUP LTD

The following paragraphs will provide a brief history of The SPAR Group Ltd (hereafter referred to as SPAR) and an overview of the operations over an eight-year period. A summary of the store formats and distribution centres will be given and will be followed by an overview of the financial performance for the period 2004 to 2011. To conclude the discussion of SPAR, the highlights of SPAR will be summarised.

5.3.1 History of The SPAR Group Ltd

SPAR originated in the Netherlands and was established by Adriaan van Well in 1932 as DESPAR. The establishing of DESPAR was in line with what was happening in the USA, where independent wholesalers and retailers were uniting to enter voluntary trading. The business philosophy of DESPAR was “all will benefit from united co-operation” and the business name is an acronym for the Dutch version of the business philosophy (“**D**oor **E**endrachtig **S**amenwerken **P**rofiteren **A**llen **R**egelmatig”). In 1963, eight wholesalers formed SPAR, which provided services to approximately 500 small retailers. SPAR operates under a licence agreement with SPAR International in Amsterdam. Over time, SPAR reorganised itself into two types of members, namely, SPAR retailers and SPAR distribution centres. All SPAR retailers and SPAR distribution centres are members of the SPAR Guild of Southern Africa, which is a non-profit company. All members pay subscriptions to this non-profit company, and the subscriptions collected are then used for advertising and promoting SPAR. The operations of SPAR are divided into six geographic areas, each with its own distribution centre. (The SPAR Group Limited Annual Report 2005 2005:11; The SPAR Group Limited 2011 Integrated Annual Report 2011:5).

The overall efficiency of SPAR is controlled by following the 12 Ladders, which is a comparative measure of world-class performance across 12 indices and Work Structuring processes. Succession planning is also of great importance. Possible future leaders are identified on an ongoing basis, and the progress of high-potential employees is closely monitored. SPAR is also committed to corporate social investments, by funding identified AIDS projects, Business Against Crime, and local projects and charities involved in health and hunger alleviation and the promotion of education. (The SPAR Group Limited Annual Report 2006 2006:30-33). SPAR is also exposed to various financial risks, namely credit risk, interest risk, liquidity risk and foreign exchange risk (The SPAR Group Limited Annual Report 2005 2005:57).

5.3.2 Operational overview of The SPAR Group Ltd for the period 2004 to 2011

For the retail market in general, the 2004 financial year was a remarkable year which was characterised by good growth, favourable exchange rates and lowered interest rates. The stiff competition in food market consists of a few major chains, large trade centres and a number of small convenience stores. The major competitors of SPAR extended their businesses by franchising. SPAR members were encouraged to acquire liquor stores to expand the reach of SPAR in the liquor market. The building materials market was also regarded as a booming market because interest rates were reduced, and therefore customers had more disposable income for upgrading and expanding their homes. Other expansions, extensions and upgrading that took place during 2004 were at the North Rand Distribution Centre (major extensions and re-organisation), the Nelspruit Distribution Centre (new warehouse racking and equipment, improved information and operating technology which was planned to be completed by 2006) and the Western Cape Distribution Centre (warehouse planned to be completed by 2006 at a cost of R190 million). Plans were also approved in 2004 to expand the KwaZulu Natal Distribution Centre at a cost of R20 million by 2006. (The SPAR Group Limited Annual Report 2004 2004:11-13).

The 2004 financial year for SPAR was also characterised by three major issues, namely, the remarkable drop in food inflation, the acquisition of Nelspruit

Wholesalers (Pty) Ltd and the unbundling of SPAR from Tiger Brands Ltd and the subsequent listing of SPAR on the JSE. The 2004 food inflation was averaging between 2% and 3% while the real growth for SPAR was approximately 8% for the year. The cash purchase of Nelspruit Wholesalers (Pty) Ltd on 1 November 2003 at a cost of R263 million negatively influenced the 2004 NPAT. The trading margin of 3.3% was also below the 2003 trading margin of 3.7% owing to the acquisition and the expansion of the North Rand Distribution Centre. Tiger Brands Ltd had a minority stake in SPAR from 1978, and in 1988 SPAR became a wholly-owned subsidiary of Tiger Brands Ltd. On 13 May 2004 Tiger Brands Ltd announced its unbundling from SPAR. After the unbundling of SPAR from their holding company, Tiger Brands Ltd, SPAR became a listed company on the JSE on 18 October 2004. (The SPAR Group Limited Annual Report 2004 2004:11-12, 30; Tiger Brands Annual Report 2005 2005:8). During the 2004 financial year, SPAR disposed of a retail division, and the net proceeds on the disposal amounted to R17 092 000. Four SPAR-owned retail stores which formed the retail division were Gateway, Westwille, Knowles and Richdens. Other retail stores, namely The Greymont and Dowerglen retail stores and Twoline Trading 9 (Pty) Limited were also sold during 2004. The Greymont and Dowerglen retail stores traded as Fixtrade 538 (Pty) Limited. A net cash flow equal to R993 000 resulted from the disposal of these retail stores. (The SPAR Group Limited Annual Report 2004 2004:38-39; The SPAR Group Limited Annual Report 2005 2005:49-50).

During 2005, the lower interest, tax and inflation rates had a positive influence on consumer spending. There was also a slow growth in the food retail market. The liquor market was growing at an extraordinary rate although the market is highly competitive. The building materials market was also booming because of the lower interest, tax and inflation rates (The SPAR Group Limited Annual Report 2005 2005:3).

The growth of the 2006 financial year for SPAR was 16.7% although the market only grew by 14.7%. During the year, a total of 122 existing SPAR stores were engaged in the ongoing upgrading process, as the focus remained on improving customer service and meeting customer demands. The SPAR house brand

experienced an unprecedented growth in excess of 21%. Although there was a growth in the number of liquor stores, the opening of some liquor stores was delayed as there was a legislative backlog in various provinces regarding the issuing of liquor licences. The growth of the liquor market was approximately 12%, and the turnover growth of Built-it was 61%. During the year the warehouse management systems were improved, which resulted in improved productivity while adhering to best operating practices. New techniques such as the scanning of inbound stock and voice-activated stock picking were implemented with great success at certain distribution centres. The transport fleet of SPAR was also upgraded and expanded. The fleet consisted of 190 trucks and more than 250 semi-trailers. A new distribution centre in Philippi was underway at a cost of R300 million, and SPAR expected to sell the Montague Gardens facility for R60 million. The capital expenditure for the 2006 financial year on facilities amounted to R190 million. During the 2006 financial year, the SPAR Group Limited Employee Share incentive Trust bought back 2.7 million shares at a cost of R99.8 million. (The SPAR Group Limited Annual Report 2006 2006:7-13).

Despite a highly competitive environment, the growth rate of the liquor and building materials stores was at 48.2% and 37.3% respectively for the 2007 financial year. Many expansion and replacement projects at a cost of R314.66 million were undertaken during 2007, to ensure that the growth could be sustained. Shares were repurchased at cost of R92.1 million. The 2007 financial year had a record high of more than R2.4 billion in sales. The Good Living range of products was launched in 2007. (The SPAR Group Limited 2007 Annual Report 2007:2-3, 5).

The SPAR branded products excelled by realising a 44% year-on-year sales growth from 2007 to 2008. The turnover of SPAR increased by 23.2% although there was a sharp upward trend in the inflation. The liquor market also prospered in 2008 and there was moderate growth in the building materials market. During 2008, R365.3 million was spent on expansion projects, while R60.8 million was used for replacement projects. A new distribution centre in the Western Cape was built at a cost of R270 million, and the construction of

another facility in KwaZulu Natal commenced at an estimated cost of R190 million. The SPAR Group Limited Employee Share Trust purchased 163 200 shares at a cost of R8.1 million. (The SPAR Group Limited 2008 Annual Report 2008:5-7, 34).

The 2009 financial year was a very difficult and highly competitive year in terms of sales and profitability for SPAR. Turnover for the year increased by19.5% from the 2008 results. A number of expansion projects were undertaken during 2009. The KwaZulu Natal perishable facility and the South Rand facility were completed during 2009 at a cost of R145 million and R104 million respectively. Montague Gardens was sold for R93 million. A total of 240 products (new and repackaged products) were introduced to the market. The SPAR Group Limited Employee Share Trust purchased 719 800 shares at a cost of R34.9 million. (The SPAR Group Limited 2009 Annual Report 2009:3-10, 38).

The 2010 financial year was characterised by slow economic recovery, low inflation and a highly competitive retail environment. Food inflation for 2010 was only 1% owing to the deflation of basic commodities. Despite these circumstances, SPAR increased food retail turnover by 8.6%, liquor turnover by 25.4%, and building materials by 19%. The capital expenditure for 2010 was R206 million. In 2009, TOPS at SPAR won the Best bottle store – Your choice award 2009, the Favourite liquor retailer – Readers Choice 2009, the Retail liquor category – Sunday Times Top Achievement Award 2009 and the Best liquor chain – AVUSA Retail 2009. The Competition Commission was investigating all the major South African supermarket chains for possible contraventions. SPAR implemented a number of strategies to reduce their carbon footprint. Examples of strategies implemented included oil recycling, waste recycling, fine metal recycling, electricity savings, fleet service used-oil disposal system, and collection of used cooking oil and fats for conversion into biodiesel. The SPAR Group Limited Employee Share Trust purchased 2 629 088 shares at a cost of R188.1 million. (The SPAR Group Limited 2010 Annual Report 2010:5, 9, 11, 31, 42).

During the 2011 financial year, the food retail turnover increased by 7.9%, the liquor market turnover by 19.9% and the building materials market turnover increased by 18.2%. One of the major issues that SPAR faced was the high diesel prices which resulted in a 19.9% increase in delivery costs. A total of 12 stores closed down during 2011. The two reasons for their closure were financial problems or these stores did not meet the group standards. The capital expenditure for 2011 amounted to R160 million which included a new R39 million perishable facility extension in the Eastern Cape. During 2011, 800 employees from the KwaZulu Natal Distribution Centre embarked on a five-week industrial action. The SPAR Group Limited Employee Share Trust purchased 1.05 million shares in SPAR for R97.8 million. Five retail stores were acquired during 2011 mainly to obtain key retail sites. (The SPAR Group Limited 2011 Integrated Annual Report 2011:10-12, 44).

SPAR focused on creating opportunities for historically disadvantaged people and to equip them with skills for more responsible positions. A number of skills development programmes were offered, which included various National Certificates and National Diplomas at NQF levels two, three, four and five. Various non-certificated SETA-approved programmes and learnerships at retail were also offered. Bursaries were also available for tertiary education to SPAR employees' children. As a corporate citizen, SPAR set specific budgets which were allocated to two main causes and one discretionary cause. The two main causes were Business Against Crime and projects supporting AIDS orphans. SPAR was also involved in the Miles for Smiles campaign where runners were sponsored to raise funds for children in need of surgery to correct cleft palate abnormalities. Succession planning was also addressed by identifying employees with high potential to take over the future leadership of SPAR. SPAR sponsored and hosted the TUNZA African Children's Conference held in 2009. Several environmental issues, such as improving recycling, reducing fuel and energy usage, more efficient waste management, and reducing the impact of packaging of products on the environment, were also addressed. SPAR was involved in and remained involved in the following:

- Ikamv'elihle Rehabilitation Centre, which provides home community-based care, soup kitchens, material support programmes, educational awareness programmes and group support to the community;
- the Arebaokeng Child Daycare Centre, which is daycare and a hospice facility; and
- the Junior Achievement South Africa (JASA) which is focusing on providing opportunities for entrepreneurs in disadvantages communities;
- supporting the Gozololo Daycare Centre and the JL Zwane and Ubunta House;
- the Kids Haven Orphanage aiming at rehabilitating children living and working on the streets; and
- the World Changes Academy offering life skills courses for high school students, the unemployed and juvenile delinquents. (The SPAR Group Limited Annual Report 2004 – 2006; The SPAR Group Limited 2007 – 2010 Annual Report; The SPAR Group Limited 2011 Integrated Annual Report).

The board of directors is responsible for compliance with sound corporate governance standards and ensuring that business decisions are made to the best interest of the company. The board members are classified as executive, non-executive, or independent non-executive members. Table 5.6 summarises the split between the two types of directors.

TABLE 5.6: NUMBER OF BOARD DIRECTORS OF THE SPAR GROUP LTD

TYPE OF DIRECTOR	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Independent non-executive	6	5	6	6	6	6	7	8
Non-executive	0	0	0	1	1	1	0	0
Executive	1	2	2	3	3	3	3	3
TOTAL	7	7	9	10	10	10	10	11

Source: The SPAR Group Limited Annual Report 2004 – 2006; The SPAR Group Limited 2007 – 2010 Annual Report; The SPAR Group Limited 2011 Integrated Annual Report.

As seen in Table 5.6, the number of board of directors increased from seven to eleven from 2004 to 2011. The number of independent non-executives increased from five to eight, while the number of executive members increased from one to three members. In years 2007, 2008 and 2009, there was one non-executive elected on to the board of directors. One of the independent non-executive board members is the chairperson of the board. According to the Articles of Association of the company, one third of the board of directors retire each year on a rotation basis. The board meets four times a year. (The SPAR Group Limited Annual Report 2005 2005:14).

On 1 October 2006 the chief executive and executive director of the group, Peter Hughes, retired, but he remains as non-executive director on the board. Wayne Hook replaced Peter Hughes as the chief executive, and Phumla Mnganga joined the board of directors on 1 January 2006 (The SPAR Group Limited Annual Report 2006 2006:5). The Group Financial Director, Rodney Coe, retired in September 2010 and Mark Godfrey was appointed the new Group Financial Director as from 1 October 2010. The Managing Director, Ian Gillespie, also retired during 2010 and was succeeded by Brett Botten. (The SPAR Group Limited 2010 Annual Report 2010:11).

5.3.3 Number of stores and store locations of The SPAR Group Ltd

SPAR is operating from three different store formats, namely, one format offering food (SPAR, KWIKSPAR and SUPERSPAR) and two formats specialising in offering liquor (TOPS) and building materials (Build it) respectively. In 2005, SPAR was represented by 15 000 stores in 35 countries. (The SPAR Group Limited Annual Report 2005 2005:11-12). Figure 5.7 summarises the various store formats.

TABLE 5.7: NUMBER OF STORE FORMATS OF THE SPAR GROUP LTD

STORE TYPE	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
SPAR								
SUPERSPAR	113	123	145	172	218	242	256	275
SPAR	464	475	478	477	457	462	458	446
KWIKSPAR	185	185	176	161	150	142	132	138
TOPS at SPAR	121	172	216	287	352	416	459	501
Build it	140	178	221	243	245	250	260	269
PHARMACY at SPAR	-	-	-	-	-	-	1	6
TOTAL	1 023	1 133	1 236	1 340	1 422	1 512	1 566	1 635

Source: The SPAR Group Limited Annual Report 2004 – 2006; The SPAR Group Limited 2007 – 2010 Annual Report; The SPAR Group Limited 2011 Integrated Annual Report.

It is evident from Table 5.7 that the number of stores grew over the eight-year period. A total of 14 stores in 2007 and 21 stores in 2009 changed their store format from a KWIKSPAR or SPAR to a SUPERSPAR. During 2010, 13 stores changed to a bigger format, and in 2011 a total of 12 stores closed down for financial reasons or for failing to meet the group standards. The distribution of the SPAR stores, which include SUPERSPAR, SPAR and KWIKSPAR stores, is summarised in Table 5.8.

TABLE 5.8: GEOGRAPHIC DISTRIBUTION OF SPAR, TOPS AT SPAR AND BUILT IT STORES

GEOGRAPHIC LOCATION	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Eastern Cape								
SPAR	85	88	86	89	93	96	97	98
TOPS at SPAR	-	18	21	33	52	59	96	73
Built it	-	30	30	34	36	38	38	38
PHARMACY	-	-	-	-	-	-	0	0
KwaZulu Natal								
SPAR	142	143	148	152	157	162	160	166
TOPS at SPAR	-	49	54	65	75	84	89	98
Built it	-	58	62	64	67	68	70	73
PHARMACY	-	-	-	-	-	-	1	2
Lowveld								
SPAR	31	30	33	35	35	37	41	41
TOPS at SPAR	-	3	5	11	13	16	16	21
Built it	-	16	22	24	29	28	32	33
PHARMACY	-	-	-	-	-	-	0	0
North Rand								
SPAR	164	172	180	180	182	162	138	143
TOPS at SPAR	-	39	51	64	73	81	82	93
Built it	-	34	39	41	44	38	32	32
PHARMACY	-	-	-	-	-	-	0	2
South Rand								
SPAR	228	231	230	229	229	232	255	255
TOPS at SPAR	-	36	48	69	83	100	114	119
Built it	-	24	41	44	50	49	56	60
PHARMACY	-	-	-	-	-	-	0	1
Western Cape								
SPAR	112	119	122	125	129	157	155	156
TOPS at SPAR	-	27	37	45	56	76	89	97
Built it	-	16	27	20	19	29	32	33
PHARMACY	-	-	-	-	-	-	0	1
TOTAL								
SPAR	762	783	799	810	825	846	846	859
TOPS at SPAR*	121	172	221	287	352	416	459	501
Built it*	140	178	216	227	245	250	260	269
PHARMACY**	-	-	-	-	-	-	1	6

* Individual breakdown for the various distribution centres not available.
** PHARMACY at SPAR was established in 2010.

Source: The SPAR Group Limited Annual Report 2004 – 2006; The SPAR Group Limited 2007 – 2010 Annual Report; The SPAR Group Limited 2011 Integrated Annual Report.

Since 2004 the number of stores of all formats showed a steady increase although some of the stores ceased to exist. During 2010, SPAR added another specialised line of business, the PHARMACY at SPAR.

5.3.4 Financial overview of The SPAR Group Ltd for the period 2004 to 2011

A summary of the financial data of SPAR as from 2004 to 2011 is provided in Table 5.9. The 2004 financial statements were prepared in accordance with the GAAP, while the 2005 to 2011 financial statements were prepared in accordance with the IFRS.

TABLE 5.9: FINANCIAL DATA OF THE SPAR GROUP LTD AS AT 30 SEPTEMBER ANNUALLY

FINANCIAL DATA	FINANCIAL YEAR (R million)							
	2004	2005	2006	2007	2008	2009	2010	2011
NPAT*								
GAAP	291.974	R357.628	-	-	-	-	-	-
IFRS	-	R342.600	R407.600	R523.000	R681.600	R745.200	R915.800	R952.600
Growth rate	-	17.34%	18.97%	28.31%	30.33%	9.33%	22.89%	4.02%
Cash and cash equivalents	(R306.762)	R0.206	R41.500	R435.500	(R252.100)	(R30.500)	(R163.400)	R427.400
Growth rate	-	100.07	20 045.63%	949.40%	157.89%	-87.90%	435.74%	361.57%
Headline earnings	R284.135	R359.441	R406.700	R521.900	R680.300	R685.900	R915.900	R955.100
Growth rate	-	26.50%	13.15%	28.33%	30.35%	0.82%	33.53%	4.28%
Standard tax rate	30.0%	29.0%	29.0%	29.0%	28%	28.0%	28.0%	28.0%
Effective tax rate	31.3%	30.6%	34.1%	34.2%	31.7%	35.0%	30.0%	32.2%

***** In 2004 and 2005 the financial statements were prepared accordance to GAAP and as from 2006 the financial statements were prepared in accordance to IFRS. Some of the comparative 2005 figures provided in the 2006 annual report were calculated using IFRS.

Source: The SPAR Group Limited Annual Report 2004 – 2006; The SPAR Group Limited 2007 – 2010 Annual Report; The SPAR Group Limited 2011 Integrated Annual Report.

There was a steady growth in the NPAT as from 2004 to 2011. The cash and cash equivalents were not consistent, as many of the financial years produced negative results. One of the reasons for the negative results was the many acquisitions SPAR made over the years. There was a decline in the standard tax rate for companies, as indicated in the budget speeches of each year. The effective tax rate was not constant, and varied from 30.0% (2010) to 35.0% (2009). The headline earnings reported also showed a steady increase over the years. The arithmetic growth rates for the period 2004 to 2011 were 18.74% for NPAT, 2 960.48% for cash and cash equivalents, and 19.57% for headline earnings.

Table 5.10 provides a snapshot of the share data of SPAR annually as at 30 September from 2004 to 2011.

TABLE 5.10: SHARE-RELATED DATA OF THE SPAR GROUP LTD AS AT 30 SEPTEMBER ANNUALLY

SHARE-RELATED DATA	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Shares authorised ('000)								
Ordinary	250 000	250 000	250 000	250 000	250 000	250 000	250 000	250 000
Preference	-	-	-	-	-	30 000	30 000	30 000
Shares outstanding ('000)								
Ordinary	168 783.670	169 260.035	169 935.935	169 940.035	169 940.035	170 597.792	171 170.013	171 936.604
Preference	-	-	-	-	-	18 911 349	18 911 349	18 911 349
Book value per share								
Ordinary	0.06c	0.06c	0.06c	0.06c	0.06c	0.06c	0.06c	0.06c
Preference	-	-	-	-	-	0.06c	0.06c	0.06c
Market value per share	-	3 090c	3 635cc	5 511c	5 050c	6 470c	9 290c	9 629c
Market cap ('000)	-	R5 229 000.000	R6 177 171.237	R9 170 000.000	R8 481 971.768	R11 037 677.140	R15 901 694.210	R16 555 775.600
Basic EPS								
GAAP	173.0c	211.6c	-	-	-	-	-	-
IFRS	-	202.7c	240.5c	313.0c	406.5c	439.4c	536.00c	555.6c
Dividend*								
Interim	-	30.0c	48.0c	72.5c	100.0c	122.0c	140.0c	142.0c
Final	-	64.5c	75.0c	112.5c	155.0c	200.0c	222.0c	235.0c
Dividend yield*	-	3.1%	3.4%	3.4%	5.0%	5.0%	3.9%	3.9%
Earnings yield								
GAAP	-	6.9%	-	-	-	-	-	-
IFRS	-	6.6%	6.6%	5.7%	8.0%	7.5%	5.9%	6.1%
P/E ratio*								
GAAP	-	14.6x	-	-	-	-	-	-
IFRS	-	15.2x	15.1x	17.6x	12.4x	13.3x	17.1x	17.3x
Market cap to shareholders' equity*	-	7.0 x	6.8x	8.3x	5.7x	5.7x	8.3x	6.6x
Dividend cover	0.76x	2.14x	1.96x	1.69x	1.59x	1.36x	1.48x	1.47x
Net asset value per share	259.1c	443.58c	533.5c	666.9c	883.5c	1 137.4c	1 278.8c	1 450.5c
3-year Beta**	-	-	-	-	0.56	0.27	0.27	0.18

* The SPAR Group Ltd's shares were listed on 18 October 2004 and therefore limited stock exchange statistics are available for 2004.

** Need three full year's data to calculate the three-year Beta.

Source: Profile's Stock Exchange Handbook October 2008 – January 2009 2008:337; Profile's Stock Exchange Handbook June 2012 – September 2012 2012:315; The SPAR Group Limited Annual Report 2005 – 2006; The SPAR Group Limited 2007 – 2010

Annual Report; The SPAR Group Limited 2011 Integrated Annual Report.

On 18 October 2004 SPAR was authorised to issue 250 000 000 ordinary shares of 0.06c each. In 2009 authorisation was obtained to issue 30 000 000 redeemable convertible preference shares of 0.06c each. The redeemable convertible preference shares are redeemable in 2016 and are treated as treasury shares arising from the consolidation of the broad-based black equity empowerment (BBBEE) trust at the end of the year 2009. The ordinary shares issued increased steadily from 168 783 670 (2004) to 171 936 604 (2011) and the number of redeemable convertible preference shares issued remained constant at 18 911 349 shares. The ordinary share price increased by more than 210% from 2005 to 2011. The market capitalisation of SPAR also showed a constant upward trend. The basic EPS and dividend paid improved over the years as from 2005 to 2011. The dividend yield ranged from 3.1% (2005) to 5.0% (2008 and 2009), while the earnings yield had a range from 5.7% (2007) to 8.0% (2008). The dividend yield has remained constant for the last two financial years and the earnings yield has improved slightly from 2010 to 2011. The P/E ratio varied from 12.4 (2008) to 17.6 (2007). There was a sudden decline in the P/E ratio from 17.6 (2007) to 12.4 (2008) and a sharp increase from 13.3 (2009) to 17.1 (2010). The market capitalisation to shareholders' equity also varied from 5.7 times (2008 and 2009) to 8.3 times (2007 and 2010). The dividend coverage was the highest in 2005 with 2.14 times, while the lowest coverage was in the 2009 financial year with 1.36 times if the 2004 year in which SPAR listed on the JSE is ignored.

Table 5.11 summarises the major events that occurred in the business environment of SPAR during the period 1963 to 2011.

TABLE 5.11: HIGHLIGHTS OF THE SPAR GROUP LTD

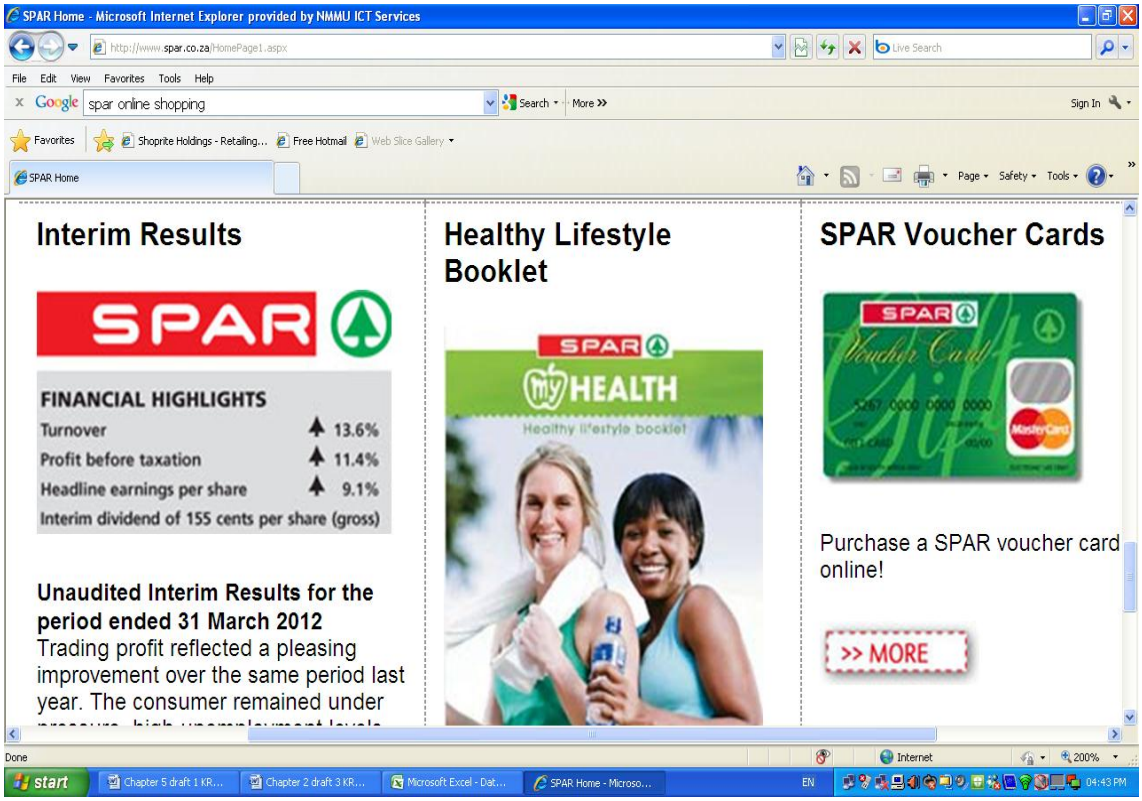
1963	• SPAR SA (Pty) Limited registered and awarde SPAR rights, **First country outside Europe** to join SPAR organisation, Initial membership 500 stores, average stire selling area 150m^2
1970	• Launch of SPAR Foodliners and SPAR Foodmarkets, Self-service and service departments in stores become the norm, Full scratch bakeries introduced to SPAR stores
1972	• First SPAR members' convention held in Swaziland
1980	• 5.5% market share, Total retail selling area 191 646m^2
1982	• SPAR stores **introduce wine departments**
1985	• "There's a friendly SPAR wherever you are" advertisements
1990	• KWIKSPAR stores launced to cement group's posisiton in convenience market
1991	• SPAR commissions new 16 500m^2 Boksburg warehouse
1993	• More than 1 300 SPAR retailers and suppliers attend SPAR's 30-year convention at Sun City
1998	• SUPERSPAR stores introduced to compete aggressively with major food chain stores
2000	• **TOPS at SPAR liquor stores launched**
2004	• **Unbundling of Tiger Brand Limited and SPAR**, **SPAR lists on the JSE**, Acquisition of Nelspruit Wholesales, Expansion of North Rand Distribution Centre, Disposal of four company owned SPAR stores and two retail stores
2005	• Retail space increased by 3.3%, Expansion of KwaZulu Natal , Eastern Cape and Western Cape Distribution Centres, Opening of 110 SPAR, TOPS at SPAR and Built it stores, Financial reporting stadards changes from GAAP to IFRS.
2006	• 26.4% market share, Retail space increased by 5.9%, Opening of 9 SUPERSPAR, 22 SPAR, 8 KWIKSPAR, 44 TOPS at SPAR and 43 Built it stores, Implementation of IFRS
2007	• 26.9% market share, Retail space increased by 7.3%, Opening of 32 SPAR, 73 TOPS at SPAR and Build it stores, New fleet vehicles purchased, Expansion of South Rand Distribution Centre underway, Aqcuired facility ste at Mount Edgecombe
2008	• 27.6% market share, Retail space increased by 6.9%, TOPS at SPAR number one retail liquor chain in terms of numbers and retail sales, Opening of Western Cape Distribution Centre, 25 SUPERSPAR, 12 SPAR, 69 TOPS at SPAR and 31 Built it stores
2009	• Increased market share, Retail space increased by 5.8%, Opening of KwaZulu Natal Distribution Centre, 47 SPAR, TOPS at SPAR and 25 Built it stores, Completion of South Rand Distribution Center,Construction for Lowveld Distribution Centre
2010	• Retail space increased by 1.75%, Opening of 31 SPAR, 52 TOPS at SPAR and SPAR Group Imports Warehouse
2011	• Retail space increased by 3.0%, Opening of 25 SPAR, 48 TOPS at SPAR and 21 Built it stores, 11 SAVEMOR stores in small rural towns and central business districts and five PHARMACY at SPAR (standalone or instore), Acquisition of five retail stores

Source: Researcher's own construct.

5.3.5 Classification of The SPAR Group Ltd according to the e-business model

A screen dump of the homepage of SPAR is provided in Figure 5.3.

FIGURE 5.3: HOMEPAGE OF THE SPAR GROUP LTD



Source: The SPAR Group Ltd 2012.

If one considers the screen dump of SPAR as presented in Figure 5.3, there is only one transaction type that will take place electronically on the website, and that is the purchase of SPAR voucher cards which is not the main products and services on offer to customers. The homepage and the various pages linked to the homepage provide customers with information regarding the products and services offered. Customers can e-mail the customer service centre with queries. Based on the discussion in Chapter Two regarding the e-business model stages, SPAR can then be classified as a brick-and-click business in the interactive online presence stage, although the transactions are limited to the purchase of SPAR voucher cards. SPAR is in the market to sell a variety of products and services and not only SPAR voucher cards. The voucher cards can be seen as a value added product offered to customers. It should be noted that it is possible to order products from SPAR, but the purchases made by

customers are managed by another business (http://www.mad-shopping.co.za) and not SPAR.

5.4 PICK N PAY STORES LTD

The following paragraphs will provide a brief history of Pick n Pay Stores Ltd (hereafter referred to as PnP) and an overview of the operations over an eight-year period. A summary of the store formats will be given, and will be followed by an overview of the financial performance for the period 2004 to 2011. To conclude this discussion, the highlights of PnP will be summarised.

5.4.1 History of Pick n Pay Stores Ltd

The PnP empire began in 1967 when Mr Ackerman acquired four small stores in Cape Town at a cost of R620 000. PnP listed on the JSE in 1968 and the share increased from R1.00 per share to R6.50 per share. The turnover of PnP for the first year of trading reached R5 million. PnP expanded its reach to Port Elizabeth in 1969 and in the same year, PnP was reported to be on the Business Times Top 100 Companies. During 1970, PnP reached the Financial Mail Top 100 Companies. The 1971 financial year was characterised by PnP's campaign to cut prices in an attempt to reduce the cost of living. In 1973, PnP reached the 18th position on the Business Times Top 100 Companies. Mr Ackerman requested the government to shut down price-fixing cartels. The first PnP hypermarket was opened in Boksburg in 1975, and at the same time Mr Ackerman took on oil companies in order to reduce fuel prices. The no name brand was established in 1976. During 1977, PnP signed a Non-Racial Manifesto, and donated R25 million to the Urban Foundation for Black Housing. The highlight of the year 1978 was PnP becoming the first South African company to secure 99-year lease rights for black employees. The first PnP superstores opened during 1979. (History (n.d.):103).

PnP shares were issued to all races at the Mitchell's Plain PnP store in 1980. Mr Raymond Ackerman received the Times Businessman of the Year Award in 1984. PnP's turnover was in excess of R2 billion in 1986, and in 1987 PnP became the official sponsor of the Comrades Marathon. PnP celebrated its 21st

birthday in 1988, while the 100th store was opened in Highgate and a turnover of R3 billion was achieved. (History (n.d.):103-104).

During 1990, both Foodhall and Green ranges were launched. PnP became the official sponsor of the Cape Argus Cycle Tour in 1991, and in 1992, on its 25th birthday, became the national sponsor of the Olympic team in Barcelona. PnP was also named the most admired company in South Africa by the Financial Mail. The Family Stores brand was born in 1993, and in 1994 the Choice brand saw the light. PnP also became the official sponsor of the ultimate bid to bring the Rugby World Cup to South Africa in 1994, and in 1995 was named the Rugby World Cup broadcast sponsor. PnP was the sponsor for the Olympic team in Atlanta and a supporter of the 2004 Olympic bid. The 1997 financial year was a good year for PnP as turnover reached the R56 million milestone. In 1998 Mr Ackerman received the Professional Management Review Award for The Most Admired Personality in Western Cape while PnP received the Golden Arrow Award for Best Corporate Citizen and Best JSE Company in the Western Cape. Another award given to Mr Ackerman in 1999 was the Vivid People's Choice Award. (History (n.d.):104-105)

In 2001 Mr Ackerman received the Business Times Lifetime Achievement Award. PnP also sponsored Calypso Beach Cricket. Online shopping was introduced by PnP. In 2003 PnP was voted as South Africa's most trusted company. The PnP Schools Club was launched in 2005. On the environmental field, PnP received the Kudu Award for environmental projects. PnP was named the sponsor of the 2011 Rugby World Cup bid. In 2007, PnP changed its logo and brandline (Inspired by you) and was voted the company with the "Best Reputation" by The Reputation Institute. Another accolade for PnP was that of being named the Coolest Grocery Store by South Africa's youth. (History (n.d.):105)

5.4.2 Operational overview of Pick n Pay Stores Ltd for the period 2004 to 2011

The CEO of PnP, Mr Sean Summers, regarded the 2004 financial year as the most demanding year in the 37 years of operation. The growth in turnover for the 2004 financial year was 11.8%. Franklins, situated in Australia, had a

turnover growth of 4% (in Australian dollars) while the Southern African operations produced 15.9%. Property and equipment to the value of R508.6 million was acquired, including a total of eight new Corporate stores and 15 Family stores. The Score stores were going through restructuring. Boardmans was sold on 1 April 2004 after obtaining the Competition Tribunal approval. (Pick n Pay Annual Report 2004 2004: 10-11; 'Reviewed Group Results' 2004).

The low-inflation business environment of 2005 resulted in an 8.9% increase in turnover, as selling prices were lower. During the financial year, Boardmans was sold for R24 million, property was disposed of for R1.4 million, and fixed assets were sold for a loss of R3.8 million. PnP invested R525.6 million in property and new stores, and 12.4 million shares were repurchased for R267.3 million. A total of 14 corporate supermarkets, 12 franchise stores, 2 stand-alone clothing stores and 13 liquor stores were opened during 2005. PnP supported South Africa's bid to host the Soccer World Cup in 2010, and became a bid sponsor for the 2011 Rugby World Cup. (Pick n Pay Annual Report 2005 2005:14-15, 18, 21).

The 2006 financial year was characterised by low inflation (approximately 3.5%) and PnP was also hindered by industrial action. PnP implemented SAP retail, Finance and HR operating systems as an enterprise-wide computer software system. Growth in PnP's turnover was 10.0%. Eight new corporate supermarkets, 12 Family Franchise stores and 11 clothing stores were opened. Boxer stores increased by three stores in 2006. PnP and Netcare 911 jointly raised funds to assist the victims of the Tsunami disaster. The long-term ratings of A+ and short-term rating of F1 for PnP, as affirmed by Fitch, provided a clear indication that the outlook for PnP remained stable, and reflects PnP's leading position in the South African retail market. (Pick n Pay Annual Report 2006 2006:8, 19-20, 23, 50).

The growth of PnP's turnover for the 2007 financial year was 12.3%. The CEO, Mr Summers, retired after 33 years' service to PnP, having been the CEO for 11 of these years. A number of stores were opened during 2007, namely, 10 corporate stores, two corporate stores converted to Family franchise format, 11

Family franchise format stores, and two Hypermarkets. PnP considered joining Fruit & Veg City, but decided against the acquisition. During 2007, PnP became the first retail company to participate in the Carbon Disclosure Project, and PnP also supported the Organic Freedom Project. A total of 10 corporate stores, 11 Family Franchise format stores and two Hypermarkets were opened during 2007. Two corporate stores converted to Family Franchise format stores. Nine new Boxer stores and three Boxer Build hardware stores opened their doors for the first time during 2007. TM's trading environment was extremely difficult. Franklin's store count had a net increase of two; three new stores were opened and five stores were closed, while two stores relocated to new locations. (Pick n Pay Annual Report 2007 2007:7-8, 16, 20).

The 2008 financial year was characterised by the conversion of the Score stores to Family Franchise format stores. Other investments included the implementation of SAP, the development of the distribution capacity, and the relaunching of the PnP brand. During 2008, there were steep hikes in the interest rates and petrol prices which led to increased food prices. PnP managed to grow turnover by 15.2% while Franklin growth was 16.4% despite the disposal of two stores. Seven new corporate stores were opened during 2008 while six corporate stores converted to Family Franchise stores. Twenty new Family Franchise stores were opened and two Score stores were converted to Family Franchise stores. Two Hypermarkets were also opened, one in Edenvale and one in Soweto. A total of 18 new liquor stores and seven clothing stores also opened their doors during 2008 for the first time. Both the Score and Boxer stores performed well during 2008, and five new Boxer stores were opened. The Managing Director of Boxer, Mr Hugh Bland, retired on 1 March 2008, and Mr Eugene Stoop took over the reigns from him. The TM stores traded in conditions of economic and social instability, and faced difficulty with the procurement of inventory. (Pick n Pay Annual Report 2008 2008:6, 14-16).

For the 2009 financial year, the turnover of PnP increased by 17.3% from 2008, and for the same period Franklin's increased by 17.3%. The year was also characterised by higher inflation and ultimately higher food prices. A total of 38

Score stores were converted to Family Franchise format stores or Boxer stores, while 18 Score stores closed down or were sold. Six new Boxer stores were opened over and the above the nine Score stores that were converted to Boxer stores. During 2009, 11 Franklin stores were fully refurbished, and the Franklin loyalty card was named the best loyalty card, based on ease of use and customer benefits. (Pick n Pay Annual Report 2009 2009:1, 10-21).

The turnover of PnP increased by 9.8% to R54 734.5 million for the 2010 financial year. Mr Gareth Ackerman was appointed as the new chairman of the board of directors after the retirement of Mr Raymond Ackerman. The business environment was slowly recovering from the recession which the global economy was experiencing. Lower interest rates and lower levels of inflation did not encourage consumer spending. During 2010, five new PnP corporate supermarkets, 20 Boxer stores and 38 Franchise stores were opened. The first store in Zambia was opened in mid-2010, franchise partnerships with Mozambique were signed, and sites for expansion into Mauritius were identified. The PnP private label and Fresh food sales increased by 15% and 17% respectively. The Competition Commission's investigation was still underway and not yet finalised. (Pick n Pay Annual Report 2010 2010:6-7, 14-17).

The turnover of the PnP group increased by 5.9% to R51.9 billion for the 2011 financial year, although the year was characterised by depressed consumer spending, rising costs and problematic industrial relations. South Africa's first major grocery chain loyalty programme, The Smart Shopper loyalty card, was launched during 2011. In July 2010, Metcash Trading Limited (Metcash) submitted a proposal to acquire Franklins for AUD215 million (Australian dollar), but the Australian Competition and Consumer Commission (ACCC) ruled against the proposal. The two parties concerned indicated that they intended to continue with the sale and the ACCC commenced with legal proceedings in the Federal Court of Australia in December 2010. On 11 August 2011, Metcash was given the approval by the court to purchase Franklins. PnP was the overall winner at the Mail & Guardian Greening the Future Awards in the category "Companies and organisations with innovative environmental strategies that

improve business performance". Mr Jonathan Ackerman was appointed as Customer Director. Mr Alex Mathole and Ms Lorato Phalatse were appointed as independent non-executive board members, Ms Connie Nkosi retired as a board member, and Mr Dennis Cope retired as a board member and Chief Financial Officer (CFO). Mr Cope was replaced by Mr Bakar Jakoet as board member and as CFO. The 2011 financial year was a busy year considering the number of new stores that opened, namely, four corporate supermarkets, 13 Franchise format stores, 33 liquor stores, 11 clothing stores and six Boxer format stores. A second store was opened in Zambia. PnP increased the shareholding in TM to 49%. New local master franchise agreements were signed with Mozambique and Mauritius (Pick n Pay Integrated Annual Report 2011 2011:9-13, 18-19).

PnP aimed at reducing energy consumption and waste consistently. PnP was involved in several social engagements as a corporate citizen, and many engagements are still continuing, such as:

- expanding the "Green" merchandise range;
- exchanging vouchers for Compact Fluorescent Lamp light bulbs as part of the power pledge campaign;
- assisting and empowering emerging entrepreneurs by working closely with the Ackerman Pick n Pay Foundation;
- being a SASSI (The South African Sustainable Seafood Initiative) Retail Participant and a founding sponsor and supporter of SASSI
- partnering with Landmark Foundation on a predator management programme;
- training and mentoring emerging farmers;
- reducing energy and water usage, waste and the business's carbon footprint;
- installing a wind turbine at the Port Elizabeth regional offices;
- providing organic products by joining forces with OrganiMark and Bio Swiss Industries;
- converting waste oil to biodiesel for use in the commercial fleet of PnP;

- introducing Smart Shopper to thank loyal customers for their support;
- the Flowervalley project supplying flowers to the PnP stores; and
- sponsoring cycling and running events (Pick n Pay Annual Report 2004 – 2010; Pick n Pay Integrated Annual Report 2011).

PnP is managed by a board of directors, who can be either non-executive or executive. The majority of the non-executives are independent, and the chairperson is usually the non-executive who is not independent. Table 5.12 summarises the split between the two types of directors.

TABLE 5.12: NUMBER OF BOARD DIRECTORS OF PICK N PAY STORES LTD

TYPE OF DIRECTOR	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Independent non-executive	*	4	6	7	7	4	5	6
Non-executive	*	2	1	1	1	2	2	2
Executive	*	4	5	5	5	4	4	4
TOTAL	*	10	12	13	13	10	11	12

* Full annual report not available

Source: Pick n Pay Annual Report 2004 – 2010; Pick n Pay Integrated Annual Report 2011.

Directors serve three-year terms, after which they are required to retire, but the retired directors may make themselves available for re-election at the annual general meeting. All independent non-executive directors are evaluated in order to ensure independence based on the King III guidelines. (Pick n Pay Annual Report 2010 2010:22-23).

The CEO, Mr Summers, retired at the end of the 2007 financial year and Mr Nick Badminton took over the prestigious position (Pick n Pay Annual Report 2007 2007:8-9). Mr Colin Hultzer retired on 14 June 2007 from the board of directors, while Mr René de Wet and Mr David Nurek retired on 30 April 2008

from the board (Pick n Pay Annual Report 2008 2008:11-12). Two board members, namely the chairperson Mr Raymond Ackerman and Ms Wendy Ackerman, retired on 1 March 2010. Mr Gareth Ackerman took over the reins as chairperson of the board and both Mr Jonathan Ackerman and Ms Suzanne Ackerman-Berman were appointed as full board members on 1 March 2010. Ms Constance Nkosi retired as a director on 31 December 2010. (Pick n Pay Annual Report 2010 2010:12-13; Pick n Pay Integrated Annual Report 2011 2011:15).

5.4.3 Store formats of Pick n Pay Stores Ltd

PnP operates from various store formats. Figure 5.13 summarises the various store formats for the financial periods 2004 to 2011.

TABLE 5.13: STORE FORMATS OF PICK N PAY STORES LTD

STORE FORMAT	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Hypermarkets	14	14	14	16	18	20	20	20
Supermarkets	121	135	152	160	162	152	157	160
Franchise*	121	170	179	190	206	250	281	285
Mini Markets	41	38	35	-	-	-	-	-
Express	-	-	-	-	-	-	7	8
Liquor	10	13	22	36	54	95	105	149
Pharmacy	-	4	6	10	14	1	17	19
Clothing	3	7	18	24	31	32	36	57
Boxer	-	54	57	66	70	83	103	109
Franklins	-	78	79	78	80	82	84	90
TM	53	54	54	56	56	56	53	51
Score Supermarkets	-	128	126	127	118	67	-	-
Garages	5	5	5	5	5	5	5	5
TOTAL	368	700	747	768	814	843	868	953

* Includes both Discount & Family Supermarkets and Family supermarkets

Source: Pick n Pay Annual Report 2004 – 2010; Pick n Pay Integrated Annual Report 2011.

Evident from Table 5.13, the numbers of store formats have increased over the eight-year period. The Franklin stores were sold during the 2011 financial year, but the financial results were reported in the annual report as “discontinued operations” and therefore reported separately from the continuing operations. The Score stores were converted into corporate supermarkets or into Family Franchise format stores.

The various store formats can be classified as either a corporate store or a franchise format store. The split between these two categories is provided in Table 5.14.

TABLE 5.14: STORE CATEGORIES OF PICK N PAY STORES LTD

STORE TYPE	2004	2005	2006	2007	2008	2009	2010	2011
Corporate	153	183	474	515	541	498	535	551
Franchise	162	170	179	192	212	284	328	379
TOTAL	315	353	653	707	753	782	863	930

Source: Pick n Pay Annual Report 2004 – 2010; Pick n Pay Integrated Annual Report 2011.

As evident from Table 5.14, the various store categories have increased during 2004 to 2011. This is an indication of the growth that was experienced by the various store formats over the eight-year period.

5.4.4 Financial overview of Pick n Pay Stores Ltd for the period 2004 to 2011

A summary of the financial data of PnP as from 2004 to 2011 is provided in Table 5.15. It should be noted that PnP adopted the IFRS in the 2006 financial year, while GAAP was adopted in the years before 2006. The financial statements where GAAP was adopted were restated according to IFRS, and are available in the annual reports of PnP.

TABLE 5.15: FINANCIAL DATA OF PICK N PAY STORES LTD AS AT 28(29) FEBRUARY ANNUALLY

FINANCIAL DATA	FINANCIAL YEAR (R millions)							
	2004	2005	2006	2007	2008	2009	2010	2011
NPAT Growth	R507.400 -	R539.900 6.41%	R630.300 16.74%	R763.00 21.05%	R983.200 28.86%	R1 120.200 13.93%	R1 265.600 12.98%	R866.500 -31.53
Cash and cash equivalents Growth	R1 502.5 -	R1 329.0 -11.55%	R944.6 -25.16%	R709.1 -28.71%	R663.2 -6.47%	R1 072.8 61.76%	R1 055.3 -1.63%	(R431.8) -140.92%
Headline earnings Growth	R522.5 -	R633.9 21.32%	R713.3 12.53%	R772.9 8.36%	R867.2 12.20%	R988.6 14.00%	R1 021.1 3.29%	R784.4 -23.18%
Standard tax	30.0%	30.0%	29.0%	29%	29.0%	28.0%	28.0%	28.0%
Effective tax rate	35.7%	35.3%	35.4%	43.9%	36.6%	32.7%	29.4%	33.0%

Source: McGregor BFA Fin24Expert 2012; Pick n Pay Annual Report 2004 – 2010; Pick n Pay Integrated Annual Report 2011.

From Table 5.15 it is evident that the NPAT and headline earnings increased over time, but from the 2010 to 2011 financial year, NPAT decreased by 31.53%, and headline earnings decreased by 23.18%. Over the eight-year period NPAT increased by 9.78%, cash and cash equivalents decreased by 21.81%, and headline earnings increased by 6.93%.

Table 5.16 provides a summary of share-related data of PnP over the eight-year period from 2004 to 2011.

TABLE 5.16: SHARE-RELATED DATA OF PICK N PAY STORES LTD AS AT 28(29) FEBRUARY ANNUALLY

SHARE-RELATED DATA	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Shares authorised Ordinary ('000)	800 000	800 000	800 000	800 000	800 000	800 000	800 000	800 000
Shares outstanding Ordinary ('000)	483 443. 882	486 133. 882	486 133. 882	486 133. 882	506 133. 882	506 133. 882	480 397. 321	480 397. 321
Book value per share Ordinary	1.25c	1.25c	1.25c	1.25c	1.25c	1.25c	1.25c	1.25c
Market value per share	1 760c	2 310c	3 030c	3 286c	3 100c	3 100c	4 040c	4 644c
Basic EPS	101.55c	138.60c	152.49c	148.13c	212.32c	223.60c	251.25c	164.99c
Dividend Interim Final	16.50c 63.50c	19.80c 76.70c	23.30c 90.50c	27.00c 107.25c	31.10c 118.00c	35.75c 134.25c	39.75c 134.75c	37.00c 105.50c
Dividend yield	4.68%	4.15%	3.73%	6.52%	4.96%	5.28%	4.33%	3.24%
Earnings yield	6.86%	6.08%	5.01%	5.00%	6.66%	6.47%	5.31%	3.75%
P/E ratio	14.57x	16.43x	19.96x	19.98x	15.01x	15.46x	18.83x	26.69x
Dividend cover	1.50x	1.40x	1.34x	1.10x	1.32x	1.38x	1.32x	1.32x
Net asset value per share	209.9c	211.5c	247.1c	283.4c	374.7c	441.7c	512.5c	503.00c
3-year Beta	0.27	0.40	0.47	0.75	0.77	0.34	0.36	0.31

Source: Pick n Pay Annual Report 2004 – 2010; Pick n Pay Integrated Annual Report 2011; Profile's Stock Exchange Handbook October 2008 – January 2009 2008:286-27; Profile's Stock Exchange Handbook June 2012 – September 2012 2012:252-253.

A total of 25 736 561 shares were repurchased from a subsidiary company which held the shares as treasury shares during the 2010 financial year, at a cost of R1 037 100 000 (Pick n Pay Annual Report 2010 2010:37, 69).

Table 5.17 summarises the major events of PnP as from 1967 to 2011.

TABLE 5.17: HIGHLIGHTS OF PICK N PAY STORES LTD

1967	• Ackerman acquired four small stores at a cost of R620 000
1969	• **PnP listed on JSE**, Share price skyrocketed from R1 per share to R6.50 per share
1969	• **PnP listed on Business Times Top 100 Companies**
1970	• **PnP on Financial Mail Top 100 Companies**
1973	• **PnP in 18th position on Business Times Top 100 Companies**
1976	• No Name brand launched
1983	• Turover exceeds R1 billion
1984	• Ackerman received Cape Times Businessman of the Year Award
1986	• Turover reached R2 billion
1988	• 100th store opened
1990	• Foodhall and Green ranges launched
1991	• Official sponsor of the Cape Argus Cycle Tour
1992	• National sponsor of the Olympic team in Barcelona, PnP named most admired company in South Africa by the Financial Mail
1993	• Family stores brand launched
1994	• Choice brand launched, PnP official sponsor of the ultimate bid to bring the Ruby World Cup to South Africa
1995	• Rugby World Cup broadcast sponsor
1996	• PnP sponsor for the Olympic team in Atlanta ; Supporter of the 2004 Olympic bid
1997	• Turnover reached R56 million, Go Banking was launched
1998	• Ackerman received the Professional Management Review Award for The Most Admired Personality in Western Cape, PnP received Golden Arrow Award for Best Corporate Citizen and Best JSE Company in the Western Cape
1999	• Ackerman received Vivid People's Choice Award
2001	• Business Times Lifetime Achievement Award, Sponsored the Calypso Beach Cricket, **Online Shopping was launched**
2003	• **PnP voted as South Africa's most trusted company**, Green Bag launched, **Top Company in the Top 300 Company Awards, Best Grocery/General Store, Third Most Admired Company in SA, One of South Africa's top 10 brands**
2005	• **Top Company in the Top 300 Company Awards, Best Grocery/General Store, Third Most Admired Company in SA, One of South Africa's top 10 brands**

TABLE 5.17: HIGHLIGHTS OF PICK N PAY STORES LTD (cont)

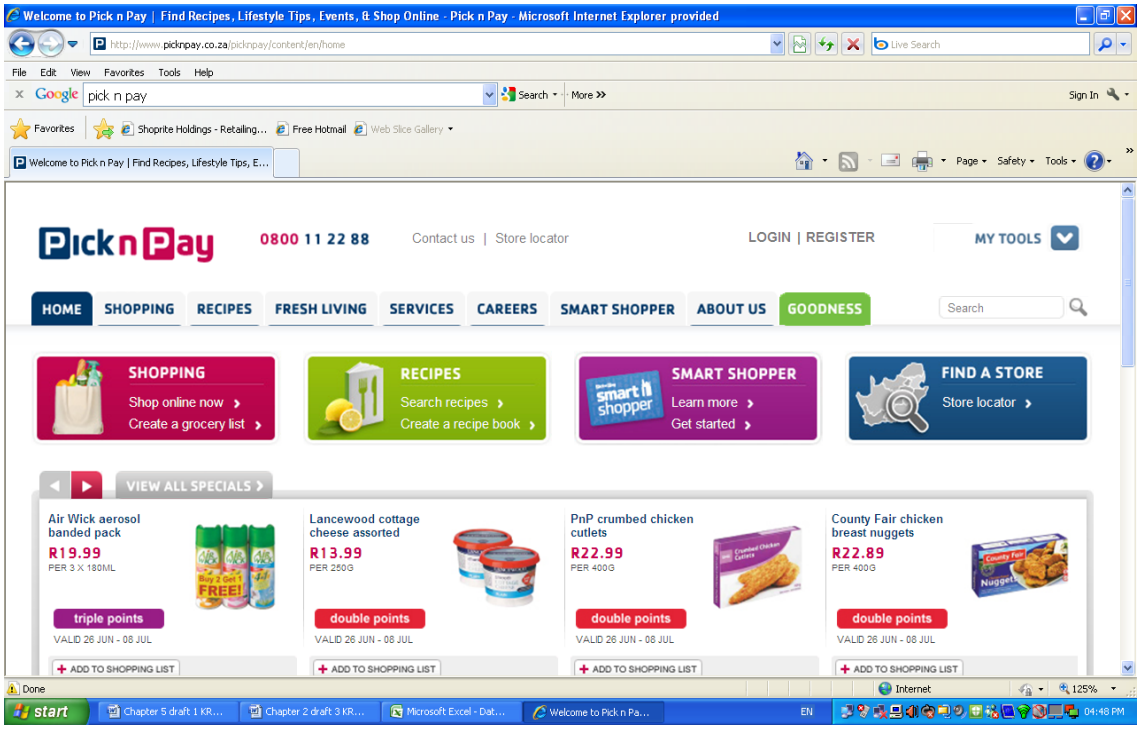
2006	• Awarded **Kudu Award for environmental projects**, **Corporate Governance Award for Ethics and Integritoy** and listed as one the world's 50 fastest growing retailers, Sponsor of Knysna Oyster Festival, 49 new stores opened, 63.5% increase in Online Shopping turnover, 36% increase in Go Banking transaction volume, Impementation of IFRS
2007	• Proud sponsor of 2011 Rugby World Cup bid, PnP changed its logo and brandline (Inspired by you) , Voted company with 'Best Reputation' by The Reputation Institute, **Named Coolest Grocery Store by South Africa's youth**, CEO Summers retired
2008	• Opening of new distribution facility at Longmeadow in Gauteng, Sold two Franklin stores
2009	• Relaunch of private lable brands, Conversion of 27 stores to PnP stores, Creation of 3 200 new work opportunities
2010	• Raymond Ackerman retired as chairperson of board of directors and Gareth Ackerman appointed as new chairperson, Many stores of various store formats opened during the year, Metcash Trading Limited acquired Franklins, **PnP's Food Safety Audit Standards accepted as retail industry benchmark** auditing standard by the Consumer Goods Council's Food Safety Initiative
2011	• Smart Shopper card introduced in SA, Sold Franklins to Metcash, Increased shareholding in TM to 49%, Opened a second store in Zambia, New local master franchise agreements signed in Mozambique and Mauritius, **Launch of Pick n Pay on Nicol, the flagship green store**

Source: Researcher's own construct.

5.4.5 Classification of Pick n Pay Stores Ltd according to the e-business model

Figure 5.4 is a screen dump of the homepage of PnP.

FIGURE 5.4: HOMEPAGE OF PICK N PAY STORES LTD



Source: Pick n Pay Store Ltd 2012.

If one considers the screen dump of PnP as shown in Figure 5.4, there is a hyperlink that will take the customer to a dedicated website that takes orders online, and processes the orders online as well. All transaction activities as from placing to paying for the order are done on the website. Based on the discussion in Chapter Two regarding the e-business model stages, PnP can then be classified as a brick-and-click business in the e-commerce stage, as all transaction activities take place online.

5.5 NASPERS LTD

The following paragraphs will provide a brief history of Naspers Ltd (hereafter referred to as Naspers that represents the group) and an overview of the operations over an eight-year period. A summary of the companies that operate under the Naspers banner will be provided, and it will be followed by an overview of Naspers financial performance for the period 2004 to 2011. To conclude the discussion of Naspers, its highlights will be summarised.

5.5.1 History of Naspers Ltd

Naspers was incorporated in 1915 as De Nationele Pers, and the first edition of Die Burger was published on 26 July 1915. In 1916, the monthly magazine, Huisgenoot was launched. In 1918, De Burger Boekhandel and De Burger Leeskring saw the light, while the first English book, Republicans and Sinners, was published in 1919. A number of newspapers were launched in the following few years, namely Die Volksblad (1925) and Oosterlig (1937). In the 1950s the Nasionale Boekhandel (1950) was founded, and Tafelberg Uitgewers was acquired (1959). During the 1960s, Nasau was founded (1963), and Fair Lady was launched as the first edition of an English women's magazine (1965). The Beeld and Dagbreek Sunday papers amalgamated to form Rapport in 1970, and Via Afrika was established. In 1974 the first edition of Beeld was published in Johannesburg, and the Nasionale Nuusdistrubeerders were founded in 1975. In 1978 Human & Rousseau became a subsidiary of Naspers. Leserskring was found in 1979, and the English counterpart, Leisure Hour (renamed Leisure Books at a later stage) was added in 1982. In 1984, Naspers acquired Drum Publications as well as a 50% interest in Jane Raphaely & Associates. M-Net was launched in 1985, and Finansies & Tegniek was published for the first time.

JL Van Schaik publisher was acquired in 1986, and in 1987 the Naspers book stores changed their name to Van Schaik Boekhandel. The You magazine was also published. In 1988 Naspers became involved in distance learning by taking over Lyceum and Success distance learning colleges. (Company History 1915 – 2011 2012).

In the 1990s M-Net listed on the JSE, and Jonathan Ball Publishers was acquired. M-Net expanded their operations into Africa, while MultiChoice extended their services to Europe. M-Net and MultiChoice separated, but traded as a linked unit on the JSE. Die Burger acquired Oosterlig newspaper. In 1994 Naspers listed on the JSE. During 1995, Naspers founded the Klein Karoo Nasionale Kunstefees (KKNK) and also became the sponsor of the event. Naspers expanded their digital satellite transmissions in Africa, Europe and Asia, and introduced the Greek TV platform, NetMed. During 1996, MultiChoice decided to be renamed MIH Holdings Limited, while the MIH subsidiary MultiChoice Africa was founded. The two publishing houses Nasou and Via Afrika amalgamated, and a 50% interest in Touchline Media was acquired. In 1997, MIH expanded their investment in Thailand by founding the pay television platform UBC, while MWEB was founded in South Africa. During 1988, the Group name changed to Naspers, and the Internet segment of Naspers started with several web pages, namely those of 24.com, Kalahari.net, BFA.net, fin24.com, and news24.com. (Company History 1915 – 2011 2012).

Naspers reorganised during 2000 to include Naspers as the holding company with five subsidiaries, namely MIH Holdings, MWEB, Media24, Nasboek and Educor. Several amalgamations were initiated during 2000. A 74% interest was obtained in the weekly newspaper Soccer-Lauma, while a 50% interest was acquired in The Natal Witness. Naspers acquired a 46.5% in Tencent in 2001. The Sunday Sun was founded, as well as the dit magazine. MWEB delisted from the JSE. In 2002, the Daily Sun published its first edition and MIHL sold its interest in OpenTV, while MIH Holdings and MIHL became wholly-owned subsidiaries of Naspers with their delisting from the JSE and Nasdaq. Naspers listed on Nasdaq (secondary listing). In 2003, the first edition of Kaapse Son,

the Hungarian version of Woman's value in Budapest and Kick Off Nigeria, were launched. (Company History 1915 – 2011 2012).

The growth of Naspers is evident in the change from a traditional print media business in a single country to a global broad-based media company. Naspers is a multinational media group with operations around the globe, namely in Africa, Asia, Australia, Europe and both Americas. Naspers is listed on the JSE (primary listing) and on the LSE with a secondary listing on the American Depository Shares (ADSs). The principal operations of Naspers are based on Internet platforms, pay television, and the provision of related technologies, as well as print media. Therefore the business strategy of Naspers is to provide operating platforms linking users to media, e-commerce, content and advertising and it also provides communication facilities. The core expertise is to package media content and to build brand names based on the media content. Naspers also aims to run platforms to distribute media products, to manage paying subscribers, and to sell advertisements. (Naspers Integrated Annual Report 2011 2011:8; Naspers Fact Sheet 2012).

Naspers Ltd comprises a number of businesses, and is illustrated in Figure 5.5.

FIGURE 5.5: COMPOSITION OF NASPERS LTD

Source: Naspers Fact Sheet 2012.

5.5.2 Operational overview of Naspers Ltd for the period 2004 to 2011

The revenue for the 2004 financial year grew by 5%. During the 2004 financial year, there were 2.1 million pay-television subscribers, with 71% of the subscribers subscribing to digital services. Pay-television revenues grew by 1%, and the two subscriber management platforms of MultiChoice and M-Web were merged. The operations in the sub-Saharan Africa and Mediterranean regions experienced exceptionally high levels of growth. Challenges experienced by Naspers in the Thailand operation are cable and copyright piracy. With regard to technology, Naspers experienced stiff competition in the encryption technology market. Naspers developed a business that provides security, billing and customer care service for broadcast and online media. The Internet business Tencent's QQ services experienced growth, and a popular QQ game portal with multiplayer online games and instant messaging services, was also introduced. In South Africa, the growth of M-Web has stalled owing to the monopoly Telkom has in the market. The print media (newspapers and magazines) operated in a mature market, and revenues increased by 14%. The various newspapers, namely, the Daily Sun, Sunday Sun and Son experienced high growth. Several niche magazines, namely Bicycling SA, Seventeen and Wegbreek, were launched. The book publishing business increased revenues by 18%. (Naspers Annual Report 2004 2004).

In the 2005 financial year the revenues of Naspers increased by 9%. The major challenge faced by Naspers during that financial year was the strengthening of the rand against most of the major currencies. The Naspers group comprised two segments, namely the electronic media and print media segments. MultiChoice provided television and subscriber management services to South Africa (1.14 million subscribers of whom 78% subscribed to digital services) and more than 50 other sub-Saharan African countries, as well as the Indian Ocean islands. The television services included 59 video channels, six data channels and 40 audio channels. During 2005 the MultiChoice and MWEB subscriber management platforms were merged. A new satellite, SESAT, was assisting in the expansion of the French and Portuguese bouquets, and nine Portuguese channels were introduced in Angola. A total of eleven new channels were introduced on the French bouquet, focusing on the Democratic Republic of

Congo. The largest subscriber base in sub-Saharan Africa is Nigeria. Competition from three service providers was faced during 2005. SuperSport introduced three short channels and six extra channels to broadcast overflow sport. (Naspers Annual Report 2005 2005).

The revenues increased by 16% for the 2006 financial year. The major drivers for this increase were the net growth in pay television subscribers, resulting in an increase of 22% in advertising revenues. The revenues generated by the pay television increased by 15% during the year, the Internet segment revenues grew by 29%, and the revenues generated by print media increased by 18%. MultiChoice launched the personal video recorder (PVR). During 2006, a 30% equity stake was obtained in leading Brazilian media company, Abril, for a cash consideration of US$422 million. (Naspers Annual Report 2006 2006).

The South African subscriber base grew to just below 1.4 million subscribers in the 2007 financial year, 88% of which receive digital signals. MultiChoice bouquet consisted of 76 video channels, eight interactive channels and 68 audio channels. M-Net produced 15 channels for the DStv platform. SuperSport broadcast the 2006 soccer world cup and the 2007 cricket world cup. A new Portuguese sports channel was introduced. Media24 expanded to publish six daily newspapers, three Sunday newspapers, two weekly newspapers and 43 community newspapers. During the 2007 financial year, the newspaper division underwent reorganisation to improve customer service. The division was subdivided into publishing and print as a division, and distribution as a separate division. The journalists received various awards, such as the Mondi Shanduka Newspaper Awards, Sanlam Community Press Awards. Media24 published more than 60 magazines and was regarded as the leading magazine publisher in Africa. The NND24 and On the Dot distributions were also consolidated during 2007. In July 2007, the 24.com portal was launched, and the portal has experienced high growth since its establishment. During 2007, the restructuring of Damelin was started, while Midrand Graduate Institute and the Graduate Institute of Management and Technology were disposed of. (Naspers Annual Report 2007 2007).

The growth in revenue for the 2008 financial year was 19%, with the Internet segment reporting a 42% growth rate, followed by the pay television growth rate of 22%. Naspers acquired 100% of Tradus plc issued share capital at a cost of R491 million for net assets, R461 million for intangible assets, and a balance for goodwill. In October 2007 Media24 accepted an offer to sell Educor, and in November 2007 Naspers acquired a 40% interest in M-Net/SuperSport. In December 2007 two further acquisitions were concluded, namely Gadu-Gadu and Cloakware. (Naspers Annual Report 2008 2008).

The 2009 financial year was a prosperous year for the Naspers group, with a revenue growth rate of 30%. The drivers that led to the high growth rate were the growth of existing operations of 19% and new acquisitions which contributed 11% to the growth rate. As a result of improved gross subscriber growth, pay television growth rate increased by 29%. The pay television businesses in Greece and Cyprus were disposed of at a profit of R2.97 billion. Naspers acquired a 100% interest in Vatera.hu at a cost of R183 million, a 37% interest in Xin'an Media at a cost of R315 million, and an additional 10.3% interest in mail.ru for R1.03 billion. Other disposals included the agreement for the sale of MWEB's sub-Saharan Africa business, excluding South Africa. Naspers announced that a public tender of R156 million was submitted to acquire up to 100% of Bankier.pl, a Warsaw-listed financial portal. (Naspers Annual Report 2009 2009).

The revenue growth for Naspers for the 2010 financial year was a low 5% because of the pressure on print media and the strengthening of the rand against the major currencies. The Internet segments reported an increase in revenues of 24% while the pay television segment increased turnover by 12%. The revenues for both the print and technology segments declined for the 2010 financial year. Acquisitions during 2010 included the purchase of a 94.8% interest in BuscaPé, a Brazilian e-commerce group, for approximately R2.7 billion. A 51% stake was obtained in Korbitec (Proprietary) Limited, which is an electronic platform for attorneys, banks and other property value chain members, for R158 million. Naspers acquired the remaining share in Bankier.pl for R178 million. (Naspers Annual Report 2010 2010).

Revenues for the 2011 financial year for Naspers increased by 18% as a result of a well-diversified portfolio. Growth was experienced in the Internet and pay television segments, while the media businesses were slowly recovering from the 2010 performance. A 28.7% interest was obtained in the Digital Sky Technologies in Russia. A R365 million cash purchase ensured that Naspers obtained a 100% interest in Level Up! International Holdings. Another acquisition was that of DineroMail, where Naspers bought a 77.7% share for R206 million. A number of awards were received by the group companies. ibibo received the Star Youth Icon Award at Global Youth Marketing Awards 2011. Media24 Newspapers received the National Press Club Editor of the year Award 2010. At Pica 2011 Awards, Sarie received Editor of the Year Award and Consumer Magazine of the Year Award, while Woolworths Taste received Client of the Year Award. Paarl Media was the first Africa member to be admitted to the international WAN/IFRA Quality Club, and was acknowledged by Mondi and Sappi for printing work. NB Publishers received the Hertzog prize for fiction, and the University of Johannesburg début prize for creative writing, the Alba Bouwer prize for children's literature and the Commonwealth Writers Prize for best book Africa region. SuperSport's Let's Play was named South Africa's best social responsibility in sport initiative at Virgin Active sport industry awards. MultiChoice also received numerous accolades. At The Orange Index Awards MultiChoice came first in the telecommunication sector, and fourth overall among companies providing customer services. Four Loerie Awards for creative media advertising, 12 Africa Promax Awards for creative on-air marketing and four international Promax Awards for international on-air creative marketing were received. MultiChoice also obtained the first position in the FinWeek radio campaign of the year, and the 21 Generation X Top Teas Award. In the top ten most-loved South African television advertisements, MultiChoice received the first and joint second positions. (Naspers Integrated Annual Report 2011 2011).

As a corporate citizen, Naspers developed comprehensive programmes for their South African operations dealing with HIV/Aids information and awareness campaigns, voluntary free testing, free counselling and comprehensive medical treatment programmes. Naspers also focused their attention on the waste

management of hazardous materials at the various printing facilities. Free eye-testing was provided for their employees. Professional and independent psychosocial support was also made available to the employees. (Naspers Annual Report 2004 – 2010; Naspers Integrated Annual Report 2011 2011).

Other corporate and social engagements Naspers were involved in since 2004 to 2011 included the following:

- KTV Market Days focusing on encouraging entrepreneurship;
- SuperSport's Let's Play initiative aiming at encouraging children to take part in sport activities;
- the Carte Blanche Making a Difference campaign where funds were raised that were donated to state hospitals and identified charity organisations;
- the MultiChoice Orphaned and Vulnerable Children programmes assisting care centres by providing new and refurbished buildings and homes and training care personnel;
- SuperSport Executive Management Programme aiming at improving the skills and knowledge of sport managers and sport administrators;
- the Vuka Awards and Film Talent Incubator for aspirant filmmakers/producers making television commercials and films;
- Volunteers24 were involved in projects to revamp and upgrade shelters for the homeless youth in Cape Town, Earth Hour and Rachel's Angels mentorship programmes;
- the Media24 Lapdesk Challenge where lap desks were donated to learners in historically disadvantaged communities;
- the MultiChoice Information Communication Technology (ICT) in Schools initiative by donating equipment to develop multimedia centres;
- the Paarl Media Bursary Trust providing bursaries to needy students from previously disadvantages communities in the Paarl community;
- the DStv Education bouquet comprising eight education channels which were free of charge to MultiChoice Resource Centres in more than 800 schools in 24 countries;

- awarding bursaries to employees for part-time studies; and
- the Paarl Mountain project cleaning the area of alien vegetation;
- erecting buildings according to green architectural principles (Naspers Annual Reports 2004 – 2010; Naspers Integrated Annual Report 2011 2011).

Naspers is managed by a board of directors, who can be either non-executive or executive directors. Table 5.18 summarises the split between the two types of directors.

TABLE 5.18: NUMBER OF BOARD DIRECTORS OF NASPERS LTD

TYPE OF DIRECTOR	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Independent non-executive	10	10	10	10	10	10	11	11
Non-executive	1	1	1	1	1	1	1	1
Executive	2	2	2	2	0	1	2	2
TOTAL	13	13	13	13	11	12	14	14

Source: Naspers Annual Reports 2004 – 2010; Naspers Integrated Annual Report 2011.

One third of the non-executive directors need to retire annually as stipulated in the articles of association. In 2004 and 2005, 38% of the board members were from previously disadvantaged groups, and 23% were women. In the financial years 2006, 2007 and 2009, 42% of the directors were from previously disadvantaged groups and 17% were women. In 2008, 45% of the board members were from previously disadvantaged groups and 18% were women. In 2010 board members from previously disadvantaged group represented 43% of the board of directors, while 21% of the board were women. The composition of the board of directors in 2011 was structured in such a way that 36% of the members were from previously disadvantages groups and 21% were women. (Naspers Annual Reports 2004 – 2010; Naspers Integrated Annual Report 2011 2011).

5.5.3 Companies and brands forming part of Naspers Ltd

Figure 5.19 summarises the various companies and brands that form part of the Naspers group.

TABLE 5.19: COMPANIES AND BRANDS OPERATING UNDER THE NASPERS BANNER

YEAR	MAJOR BRANDS
2004	**MIH Group** Pay television: action X, Big Brother Africa,Channel O, DStv, go, Idols, KTV, K-World, kyNet, M-Connection, MIH, M-Net, M-Net-on-Demand, Movie Magic 1, Movie Magic 2, MultiChoice, MultiChoice Africa, MultiChoice Cyprys, MultiChoice Hellas, NetMed, Nova, Series Channel, SuperSport, SuperSport Arena, SuperSport Club Champs, SuperSport Hardware, SuperSport Series Cricket, SuperSport Show, SuperSport Travel, SuperSport Wheelchair Basketball, SuperSport United, SuperSport Zone, UBC Internet: M-Web, M-Web (Thailand), Sanook!, SportsCN, QQ, Tencent Technology: Entriq, Irdeto Access
	Media24 Newspapers: Beeld, Die Burger, City Press, Daily Sun, Rapport, Soccer Laduma, Son, Sunday Sun, The Natal Witness, Volksblad and community newspapers Magazines: Baba & Kleuter, Bicycling SA, Blunt, Eat In, Eat Out, dit, Drive Out, Drum, Fairlady, FHM, Finance Week, Finansies & Tegniek, Golf Digest, hear, Huisgenoot, Insig, Kick Off, Landbouweekblad, Men's Health, Runner's World, Salt Water Girl, Sarie, SA Sports Illustrated, Seventeen, Shape, True Love, Tvplus, Visi, Wegbreek, Woman's Value, YOU, Your Baby, Your Pregnancy, ZigZag Media24 Digital: Finance24, Food24, Health24, News24, Property24, Subscribe24, Wheels24, Women24 Printing: Paarl Gravure, Paarl Media, Paarl Print, Paarl Web Distribution: NND24
	Via Afrika Publishers and agents: Tafelberg, Human & Rousseau, Pharos, Kwela, Best Books, Lux Verbi.BM, Jonathan Ball Publishers, Ad Donker, Sunbird, Book Promotions, Nasou Via Afrika, Van Schaik, Action, Collegium, Learning Online Trade and distribution: Van Schaik Bookstore, Lux Verbi, Leserskring, Leisure books, Kalahari.net, On the Dot, Afribooks, Computicket, LeisureworxGRC Private education: Educor includes Damelin, Allenby Campus, Midrand Graduate Institute, Graduate Institute of Management and Technology, Milpark Business School, City Varsity International Colleges Group includes Intec Colleges, Damelin Correspondence College, Books from Us, Content solutions, Image Data Solutions, Academy for Mathematics, Lyceum, Success
2005	**MIH Group** Pay television: action X, Africa Magic, Big Brother, Carte Blanche, Channel O, DStv, go, Idols, KTV, K-World, kykNET, M-Connection, MIH, M-Net, M-Net Holiday, M-Net Movies 1, M-Net Movies 2, M-Net-on-Demand, M-Net Original Movies, MultiChoice, MultiChoice Africa, MultiChoice Cyprus, MultiChoice Hellas, NetMed, Nova, SuperSport, SuperSport Arena, SuperSport Club Champs, SuperSport Hardware, SuperSport Series Cricket, SuperSport Show, SuperSport Travel, SuperSport United, SuperSport Wheelchair Basketball, SuperSport Zone, The Series Channel, UBC Internet: commerceZONE, KSC, Sanook!, MWEB, MWEB Business, MWEB home, MWEB (Thailand), polka, QQ, Sportscn, Tencent Technology: Entriq, Irdeto Access

TABLE 5.19: COMPANIES AND BRANDS OPERATING UNDER THE NASPERS BANNER (cont)

YEAR	MAJOR BRANDS
2005 (cont)	**Media24** Newspapers: Beeld, City Press, Daily Sun, Die Burger, Rapport, Soccer Laduuuuuma, Son, Sunday Sun, The Witness, Volksblad and community newspapers Magazines: Ana Maria, Baba & Kleuter, Bicycling SA, blunt, Bride, Bruid, Cosmopolitan, dit, Drive Out, Drum, Eat In, Eat Out, Fairlady, FHM, Finance Week, Finansies & Tegniek, Fit Pregnancy, Golf Digest, heat, home, Huisgenoot, Insig, Kick Off, Landbouweekblad, Men's Health, Move!, National Geographic kids, Runner's World, Saltwater GIRL, Sarie, SA Sports Illustrated, seventeen, Shape, the wisden cricketer, Time Out, True Love, tuis, tvplus, Visi, Weg, Woman's Value, YOU, Your Baby, Your Pregnancy, Zigzag Media24 Digital: Finance24, Food24, Health24, Learning Online, News24, Property24, Subscribe24, Wheels24, Women24 Printing: Paarl Gravure, Paarl Media, Paarl Print, Paarl Web Distribution: NLD, NND24
	Via Afrika Publishers and agents: Book Promotions, Clever Content, Collegium, Human & Rousseau, Jonathan Ball Publishers, Kwela, Learning Solutions, Lux Verbi.BM, Nasou Via Afrika, Pharos, Sunbird, Tafelberg, Van Schaik Trade and distribution: Afribooks, Computicket, Kalahari.net, Leisure Books, LeisureworxGRC, Leserskring, Lux Verbi, On the Dot, Van Schaik Bookstore Private education: Educor: City Varsity, Damelin, Graduate Institute of Management and Technology, Midrand Graduate Institute, Milpark Business School International Colleges Group: Academy for Mathematics, Books from Us, Content Solutions, Damelin Correspondence College, Image Data Solutions, Intec Colleges, Lyceum
2006	Pay television: action X, Africa Magic, Big Brother, Carte Blanche, Channel O, DStv, go, Idols, K-World, kykNET, M-Net, M-Net Movies 1 and 2, M-Net Series, MultiChoice Africa, MultiChoice Hellas, NetMed, Nova, Oracle Airtime Sales, SuperSport, SuperSport Travel, SuperSport United Football Club Internet: commerceZONE, ibibo, mail.ru, MWEB Business, MWEB home, MWEB (Thailand) polka, QQ, Tencent, Sannok! Media24 Digital: 24.com, Fin24, Food24, Health24, Images24, Kalahari.net, News24, Property24, Wheels24, Women24 Technology: Entriq, Irdeto, MediaZone Newspapers: Allgemeine Zeitung Namibia, Beeld, Beijing Youth Daily, Cape Son, City Press, Daily Sun, Claudia, Die Burger, Die Republikein, Gauteng Business, NaweekSon, Rapport, Soccer Laduuuuuma!, Son, Sunday Sun, The Witness, Volksblad and various community newspapers Magazines: Allsports, Ana Maria, Baba & Kleuter, Best Life, Bicycling, blunt, Cosmopolitan, dit, Drive Out, Drum, Drum East Africa, EAT IN, eatout, EXAME, Fairlady, Bride, Femina, FHM, Finweek, go!, Golf Digest, Golf for Women, heat, home, Huisgenoot, ideas, idees, InStyle, Kick Off, Kick Off Nigeria, Landbouweekblad, Lééf met hart & siel, Maxpower, Men's Health, Men's Health Living, Mountain Bike, Move!, National Geographic kids, Ova, Outside, Psychologies, Reader's Digest, Real Simple, Runner's World, Saltwater Girl Surf, Sarie, Sarie Bruid, Sports Illustrated, seventeen, Shape, Shape Fit Pregnancy, Slam, Soccer Weekly, the wisden cricketer, TimeOut, TOPbike, topCar, topMotor, True Love, True Love babe, True Love Bride, True Love East Africa, True Love West Africa, tuis, tv24, tvplus, Vejá, Viagem, Viva! VISI, Weg!, Weg!Sleep, WegRy, Yoga, YOU, Your baby, Your Child, Your Pregnancy, ZigZag, Zoo Weekly/Weekliks and My Week, a community magazine Printing: Imaging Data Solutions, Paarl Gravure, Paarl Media, Paarl Print, Paarl Print Labels, Paarl Web, Paarl Web Gauteng, Print24 Distribution: MCS24, NLD24, NND24, On the Dot Books: Afribooks, Atica & Scipione (Brazil), Book Promotors/Horizon, Collegium Botswana, Jonathan Ball Publishers, Leisure Books/Leserskring, Lux Verbi.BM, NB Publishers, Nasou Via Afrika, Van Schaik Uitgewers, Van Schaik Bookstores

TABLE 5.19: COMPANIES AND BRANDS OPERATING UNDER THE NASPERS BANNER (cont)

YEAR	MAJOR BRANDS
2006 (cont)	Private education: Educor: International Colleges Group: Academy of Mathematics and Science, City Varsity, Damelin, Damelin Correspondence College, ICG Learning Solutions, INTEC College, Lyceum College
2007	Pay television: action X, Africa Magic, Big Brother, Carte Blanche, Channel O, DStv, go, Idols, K-World, kykNET, M-Net, M-Net Movies 1 and 2, M-Net Series, MultiChoice Africa, MultiChoice Hellas, NetMed, Nova, Oracle Airtime Sales, SuperSport, SuperSport Travel, SuperSport United Football Club Internet: commerceZONE, ibibo, mail.ru, MWEB Business, MWEB home, MWEB (Thailand) polka, QQ, Tencent, Sannok! Media24 Digital: 24.com, Fin24, Food24, Health24, Images24, Kalahari.net, News24, Property24, Wheels24, Women24 Technology: Entriq, Irdeto, MediaZone Newspapers: Allgemeine Zeitung Namibia, Beeld, Beijing Youth Daily, Cape Son, City Press, Daily Sun, Claudia, Die Burger, Die Republikein, Gauteng Business, NaweekSon, Rapport, Soccer Laduuuuuma!, Son, Sunday Sun, The Witness, Volksblad and various community newspapers Magazines: Allsports, Ana Maria, Baba & Kleuter, Best Life, Bicycling, blunt, Cosmopolitan, dit, Drive Out, Drum, Drum East Africa, EAT IN, eatout, EXAME, Fairlady, Bride, Femina, FHM, Finweek, go!, Golf Digest, Golf for Women, heat, home, Huisgenoot, ideas, idees, InStyle, Kick Off, Kick Off Nigeria, Landbouweekblad, Lééf met hart & siel, Maxpower, Men's Health, Men's Health Living, Mountain Bike, Move!, National Geographic kids, Ova, Outside, Psychologies, Reader's Digest, Real Simple, Runner's World, Saltwater Girl Surf, Sarie, Sarie Bruid, Sports Illustrated, seventeen, Shape, Shape Fit Pregnancy, Slam, Soccer Weekly, the wisden cricketer, TimeOut, TOPbike, topCar, topMotor, True Love, True Love babe, True Love Bride, True Love East Africa, True Love West Africa, tuis, tv24, tvplus, Vejá, Viagem, Viva! VISI, Weg!, Weg!Sleep, WegRy, Yoga, YOU, Your baby, Your Child, Your Pregnancy, ZigZag, Zoo Weekly/Weekliks and My Week, a community magazine Printing: Imaging Data Solutions, Paarl Gravure, Paarl Media, Paarl Print, Paarl Print Labels, Paarl Web, Paarl Web Gauteng, Print24 Distribution: MCS24, NLD24, NND24, On the Dot Books: Afribooks, Atica & Scipione (Brazil), Book Promotors/Horizon, Collegium Botswana, Jonathan Ball Publishers, Leisure Books/Leserskring, Lux Verbi.BM, NB Publishers, Nasou Via Afrika, Van Schaik Uitgewers, Van Schaik Bookstores Private education: Educor: International Colleges Group: Academy of Mathematics and Science, City Varsity, Damelin, Damelin Correspondence College, ICG Learning Solutions, INTEC College, Lyceum College
2008	Pay television: action X , M-Net Action, AfricaMagic, AfricaMagic Plus, Big Brother, Carte Blanche, Channel O, DStv, go, Idols, K-World, kykNET, MK, M-Net, M-Net Movies 1 and 2, M-Net Series, M-Net Stars, MediaZone, MultiChoice Africa, MultiChoice Hellas, NetMed, Nova, Oracle Airtime Sales, SuperSport, SuperSport Travel, SuperSport United Football Club Internet: 24.com, ACL, Allegro, Ancestry24, Aruodas.lt, Aukro, bixeeCrawlX, pixee.com, Careers24, ceneo.pl Channel24, Compero, Crossfire and Xunixian are licensed games, Dungeon & fighter, fin24, EDOMUS.LT, Food24, Gadu-Gadu, GoTravel24, GadunaGlos, GaduRadio, Health24, ibibo, Images24, iStore.pl, Kalahari.net, KV.EE, Litnet.co.za, mail.ru, Mobile QQ, MojaGeneracja, molotok, MWEB (Thailand), MXit, Netads24, News24, Nimbuzz, onefamily, OSTA.EE, otoDom.pl, otoMoto.pl, Qzone, Paipai.com, Platnosci, PayGSM, PayU, Pixrat, Property24, QQ, Ricardo, Sanook!, Skelbia.it, Soso.com, Sports24, Tencent, Tenpay, teszvesz, TM, RTX, TT Explorer, Wheels24, Women24, qq.com QQ Dance, QQ Doctor, QQ Download, QQ Friends, QQ eye, QQ Fantasy, QQ Game, QQ Mail, QQ Member, QQ Music, QQ Live, QQ Pinyi Input Method, 3G.QQ.com, QQ Pet, QQ San Guo, QQ Show, QQ Speed, QQ Tang, commerceZONE, MWEB Business, MWEB home, polka Media24 Digital: 24.com, Fin24, Food24, Health24, Images24, Kalahari.net, News24, Property24, Wheels24, Women24 Technology: Irdeto, Entriq, BSS

TABLE 5.19: COMPANIES AND BRANDS OPERATING UNDER THE NASPERS BANNER (cont)

YEAR	MAJOR BRANDS
2008 (cont)	Newspapers: Africa: Beeld, City Press, Daily Sun, Die Burger, Rapport, Soccer Laduuuuuma!, Son, Sondag, Sunday Sun, The Witness, Volksblad and various community newspapers. China: Beijing Youth Daily, Titan Zhou Bao Magazines: Africa: COSMOPOLITAN, Destiny, Drum, Fairlady, Femina, FHM, Finweek, heat, HUISgenoot, KICKOFF, Landbouweekblad, Men's Health, Move!, Psychologies, Real, Sarie, Sports Illustrated, Seventeen, True Love, tuis, tv24, tvplus, Twende, Weg, YOU and some 45 more. Brazil: Claudia, XAME, Nova, Ana Maria,Vejá, Viagem, Viva! and some 90 more. China: Allsports, Golf Digest China, MILK, Outside, SLAM, Soccer Weekly, Yoga Journal Printing: Paarl Gravure, Paarl Media, Paarl Print, Paarl Labels, Paarl Web, Paarl Web Gauteng, Print24 Logistics: MCS24, NLD24, NND24, On the Dot Books: Atica & Scipione (Brazil), Collegium Botswana, Jonathan Ball Publishers, Leisure Books/Leserskring, NB Publishers, Nasou Via Afrika, Van Schaik Uitgewers
2009	Pay television: M-Net Action, AfricaMagic, AfricaMagic Plus, Big Brother, Carte Blanche, Channel O, DStv, Idols, KooWee, kykNET, MK, M-Net, M-Net Movies 1 and 2, M-Net Series, M-Net Stars, MultiChoice Africa, Oracle Airtime Sales, SuperSport, SuperSport Travel, SuperSport United Football Club Internet: 24.com, ACL, Allegro, AlleWakacje.pl, allo, Ancestry24, Aruodas.It, Aukro, Beijing Youth Daily online, Careers24, ceneo.pl, Channel24, Compera nTime, Crossfire and Xunixian are licensed games, Dungeon & Fighter, Fin24, EDOMUS.LT, Food24, Gadu-Gadu, GoTravel24, GadunaGlos, Health24, Heureka!, ibibo, Images24, Kalahari.net, KV.EE, LIVECHAT software, mail.ru, Mobile QQ, Mobilne Gadu-Gadu, MojaGeneracja, Molotok, MWEB, MWEB (Thailand), MXit, nauka.pl, Netads24, News24, Nimbuzz, oferia.pl, OPENFM, OSTA.EE, otoDom.cz, otoMoto.pl, Qzone, PAYBACK, PayGSM, Pay U SA, platnosci, platforma iStore.pl, PracaAllegro, Property24, QQ, QXL, Ricardo, Sanook!, Skelbia.it, Sports24, Tencent, teszvesz, Titan24.com, Wheels24, Women24, qq.com QQ Dancer, QQ Doctor, QQ Download, QQ Friends, QQ eye, QQ Fantasy, QQ Game, QQ Mail, QQ Member, QQ Music, QQ Live, QQ Pinyin Input Method, 3G.QQ.com, QQ Pet, QQ San Guo, QQ Show, QQ Speed, QQ Tang, Vatera.hu, Xin'an Evening News online Technology: Irdeto, Cloakware, Entri Newspapers: Beeld, City Press, Daily Sun, Die Burger, Rapport, Soccer Laduuuuuma!, Son, Sondag, Sunday Sun, Supa Strikas, Volksblad and various community newspapers. China: Beijing Youth Daily, Titan Weekly Newspaper, Xin'an Evening News Magazines: Destiny, DRUM, FAIRLADY, FEMINA, FHM, FINWEEK, heat, HUISgenoot, KICKOFF, Landbouweekblad, Men's Health, Move!, SARIE, Sports Illustrated, seventeen, TRUE LOVE, tuis, tv24, tvplus, Twende, Weg, YOU,Claudia, EXAME, Nova, Ana Maria, Vejá, Viagem, Viva!, All Sports, Golf Digest China, Soccer Weekly, Women's Health Printing: Paarl Gravure, Paarl Media, Paarl Print, Paarl Labels, Paarl Web, Paarl Web Gauteng, Print24 Logistics: On the Dot Books: Atica & Scipione (Brazil), Collegium (Botswana), Future Entrepreneurs, idem smile, Jonathan Ball Publishers, Leisure Books/Leserskring, Lux Verbi.BM, Mwajionera Publishers (Zambia), NB Publishers, Nasou Via Afrika, Stimela Publishers, Van Schaik Uitgewers
2010	Pay television: M-Net Action, AfricaMagic, AfricaMagic Plus, Big Brother, Carte Blanche, Channel O, DStv, Idols, KooWee, kykNET, MK, M-Net, M-Net Movies 1 and 2, M-Net Series, M-Net Stars, MultiChoice Africa, Oracle Airtime Sales, SuperSport, SuperSport Travel, SuperSport United Football Club Internet: 24.com, ACL, Allegro, AlleWakacje.pl, allo, Ancestry24, Aruodas.It, Aukro, Beijing Youth Daily online, BuscaPé, Careers24, ceneo.pl, Channel24, Compera nTime, Crossfire and Xunixian (licensed games), Dungeon & Fighter, Fin24, EDOMUS.LT, Food24, Gadu-Gadu, GoTravel24, GadunaGlos, Health24, Heureka!, ibibo, Images24, Kalahari.net, Korbitec, KV.EE, Lelong, LIVECHAT software, Mail.ru, Mobile QQ, News24, Nimbuzz, oferia.pl, OPENFM, OSTA.EE, otoDom.cz, otoMoto.pl, Qzone, PAYBACK, PayGSM,

TABLE 5.19: COMPANIES AND BRANDS OPERATING UNDER THE NASPERS BANNER (cont)

YEAR	MAJOR BRANDS
2010 (cont)	Pay U SA, platnosci, platforma iStore.pl, PracaAllegro, Property24, QQ, QXL, Ricardo, Sanook!, Skelbia.it, Sports24, Sulit, Tencent, teszvesz, Titan24.com, Wheels24, Women24, qq.com, QQ Dancer, QQ Doctor, QQ Download, QQ Friends, QQ Eye, QQ Fantasy, QQ Game, QQ Mail, QQ Member, QQ Music, QQ Live, QQ Pinyin Input Method, 3G.QQ.com, QQ Pet, QQ San Guo, QQ Show, QQ Speed, QQ Tang, Vatera.hu, Xin'an Evening News online
	Technology: Irdeto, Cloakware, Entriq
	Newspapers: Africa: Beeld, City Press, Daily Sun, Die Burger, Rapport, Soccer Laduuuuuma!, Son, Sondag, Sunday Sun, Supa Strikas, Volksblad,Beijing Youth Daily, Titan Weekly Newspaper, Xin'an Evening News
	Magazines: Africa: Destiny, DRUM, FAIRLADY, FEMINA, FHM, FINWEEK, heat, HUISgenoot, KICKOFF, Landbouweekblad, Illustrated, seventeen, TRUE LOVE, tuis, tv24, tvplus, Twende, Weg, YOU,Claudia, EXAME, Nova, Ana Maria, Vejá, Viagem, Viva!, All Sports, Golf Digest China, Soccer Weekly, Women's Health
	Printing: Paarl Gravure, Paarl Media, Paarl Print, Paarl Labels, Paarl Web, Paarl Web Gauteng, Print24
	Logistics: On the Dot
	Books: Collegium (Botswana), Future Entrepreneurs, idem smile, Jonathan Ball Publishers, Leisure Books/Leserskring, Lux Verbi.BM, Mwajionera Publishers (Zambia), NB Publishers, Nasou Via Afrika, Stimela Publishers, Van Schaik Uitgewers
2011	Pay television: M-Net Action, AfricaMagic, AfricaMagic Plus, Big Brother, Carte Blanche, Channel O, DStv, Idols, KooWee, kykNET, MK, M-Net, M-Net Movies 1 and 2, M-Net Series, M-Net Stars, MultiChoice Africa, Oracle Airtime Sales, SuperSport, SuperSport Travel, SuperSport United Football Club
	Internet: 24.com, ACL, Allegro, AlleWakacje.pl, allo, Ancestry24, Aruodas.It, Aukro, Beijing Youth Daily online, BuscaPé, Careers24, ceneo.pl, Channel24, Compera nTime, Crossfire and Xunixian (licensed games), Dungeon & Fighter, Fin24, EDOMUS.LT, Food24, Gadu-Gadu, GoTravel24, GadunaGlos, Health24, Heureka!, ibibo, Images24, Kalahari.net, Korbitec, KV.EE, Lelong, LIVECHAT software, Mail.ru, Mobile QQ, Mobilne Gadu-Gadu, MojaGeneracja, Molotok, MWEB, MWEB (Thailand), MXit, nauka.pl, Netads24, News24, Nimbuzz, oferia.pl, OPENFM, OSTA.EE, otoDom.cz, otoMoto.pl, Qzone, PAYBACK, PayGSM, Pay U SA, platnosci, platforma iStore.pl, PracaAllegro, Property24, QQ, QXL, Ricardo, Sanook!, Skelbia.it, Sports24, Sulit, Tencent, teszvesz, Titan24.com, Wheels24, Women24, qq.com, QQ Dancer, QQ Doctor, QQ Download, QQ Friends, QQ Eye, QQ Fantasy, QQ Game, QQ Mail, QQ Member, QQ Music, QQ Live, QQ Pinyin Input Method, 3G.QQ.com, QQ Pet, QQ San Guo, QQ Show, QQ Speed, QQ Tang, Vatera.hu, Xin'an Evening News online
	Technology: Irdeto, Cloakware, Entriq
	Newspapers: Beeld, City Press, Daily Sun, Die Burger, Rapport, Soccer Laduuuuuma!, Son, Sondag, Sunday Sun, Supa Strikas, Volksblad, Beijing Youth Daily, Titan Weekly Newspaper, Xin'an Evening News
	Magazines: Africa: Destiny, DRUM, FAIRLADY, FEMINA, FHM, FINWEEK, heat, HUISgenoot, KICKOFF, Landbouweekblad, Illustrated, seventeen, TRUE LOVE, tuis, tv24, tvplus, Twende, Weg, YOU,Claudia, EXAME, Nova, Ana Maria, Vejá, Viagem, Viva!, All Sports, Golf Digest China, Soccer Weekly, Women's Health
	Printing: Paarl Gravure, Paarl Media, Paarl Print, Paarl Labels, Paarl Web, Paarl Web Gauteng, Print24
	Logistics: On the Dot
	Books: Collegium (Botswana), Future Entrepreneurs, idem smile, Jonathan Ball Publishers, Leisure Books/Leserskring, Lux Verbi.BM, Mwajionera Publishers (Zambia), NB Publishers, Nasou Via Afrika, Stimela Publishers, Van Schaik Uitgewers

Source: Naspers Annual Reports 2004 – 2010; Naspers Integrated Annual Report 2011 2011.

If one studies Table 5.19, it will be evident that Naspers has a global footprint in various countries including, Africa, Asia, Europe, Latin America and China. The main operations of Naspers and its subsidiaries are pay television, Internet, technology, newspapers, magazines, printing, books and logistics (distribution).

5.5.4 Financial overview of Naspers Ltd for the period 2004 to 2011

A summary of the financial data of Naspers as from 2004 to 2011 is provided in Table 5.20. It should be noted that the financial statements of Naspers were prepared using the guidelines of IFRS and the King Report on Corporate Governance in South Africa. All financial statements that were prepared using GAAP were restated using IFRS.

TABLE 5.20: FINANCIAL DATA OF NASPERS LTD AS AT 31 MARCH ANNUALLY

FINANCIAL DATA	FINANCIAL YEAR (R million)							
	2004	2005	2006	2007	2008	2009	2010	2011
NPAT Growth	R375 -	R2 600 593.33%	R3 265 25.58%	R1 999 -38.77%	R3 418 70.99%	R5 761 68.55%	R3 257 -43.47	R5 260 61.50%
Cash and cash equivalents Growth	R2 616 -	R3 600 37.61%	R6 411 78.08%	R11 481 79.08%	R6 690 -41.73%	R5 725 -14.42%	R5 827 1.78%	R7 401 27.01%
Headline earnings Growth	R782 -	R2 167 177.11%	R2 168 0.05%	R2 559 18.04%	R3 806 48.73%	R3 065 -19.47%	R3 297 7.57%	R4 213 27.78%
Standard tax	30.0%	30.0%	29.0%	29%	29.0%	28.0%	28.0%	28.0%
Effective tax rate	3%	3%	3%	36%	26%	30%	31%	24%

Source: McGregor BFA Fin24Expert 2012; Naspers Annual Report 2004 – 2010; Naspers Integrated Annual Report 2011; Profile's Stock Exchange Handbook October 2008 – January 2009 2008:269; Profile's Stock Exchange Handbook June 2012 – September 2012 2012:246.

From Table 5.20 it is evident that the NPAT, cash and cash equivalents, as well as headline earnings, increased over time, although there were some negative growth rates in some financial periods. Over the eight-year period, NPAT

increased by 105.39%, cash and cash equivalents decreased by 23.92%, and headline earnings increased by 37.11%.

Table 5.21 provides a summary of share-related data of Naspers for the financial periods 2004 to 2011.

TABLE 5.21: SHARE-RELATED DATA OF NASPERS LTD AS AT 31 MARCH ANNUALLY

SHARE-RELATED DATA	FINANCIAL YEAR							
	2004	2005	2006	2007	2008	2009	2010	2011
Shares authorised ('000)								
A Ordinary	1 250	1 250	1 250	1 250	1 250	1 250	1 250	1 250
N Ordinary	500 000	500 000	500 000	500 000	500 000	500 000	500 000	500 000
Shares outstanding								
A Ordinary	712 131	712 131	712 131	712 131	712 131	712 131	712 131	712 131
N Ordinary	296 816 639	314 548 700	315 113 700	366 688 936	403 309 411	404 305 411	405 885. 411	406 581. 911
Book value per share								
A Ordinary	2 000c	2 000c	2 000c	2 000c	2 000c	2 000c	2 000c	2 000c
N Ordinary	2c	2c	2c	2c	2c	2c	2c	2c
Market value per share								
Ordinary	4 400c	7 121c	12 550c	17 550c	14 100c	16 000c	31 650c	36 400c
Basic EPS	302.00c	781.00c	756.00c	866.00c	1 076.00c	827.00c	884.00c	1 125.00c
Dividend (Total)								
Interim	-	-	-	-	-	-	-	-
Final	45.00	84.00	144.00	156.00c	180.00c	207.00	235.0c	270.0c
Dividend yield	1 56%	0.92%	0.97%	0.95%	1.30%	1.46%	0.75%	0.71%
Earnings yield	6.95%	10.24%	6.15%	4.98%	7.77%	5.37%	2.84%	2.95%
P/E ratio	14.39%	9.76%	16.25%	20.08%	12.88%	18.62%	35.17%	33.85%
Net asset value per share	1 235.00c	1 721 92c	2 420.20c	6 134 95c	8 611.00c	9 019.00c	8 993.00c	10 831.00c
Dividend cover	3.83x	12.29x	9.28x	4.33x	5.37x	7.50x	3.72x	5.20x
3-year Beta	1.04	0.93	0.76	1.00	1.27	0.85	0.91	0.98

Source: McGregor BFA Fin24Expert 2012; Naspers Annual Report 2004 – 2010; Naspers Integrated Annual Report 2011; Profile's Stock Exchange Handbook October 2008 – January 2009 2008:269; Profile's Stock Exchange Handbook June 2012 – September 2012 2012:246.

Table 5.22 summarises the major events of Naspers as from 1915 to 2011.

TABLE 5.22: HIGHLIGHTS OF NASPERS LTD

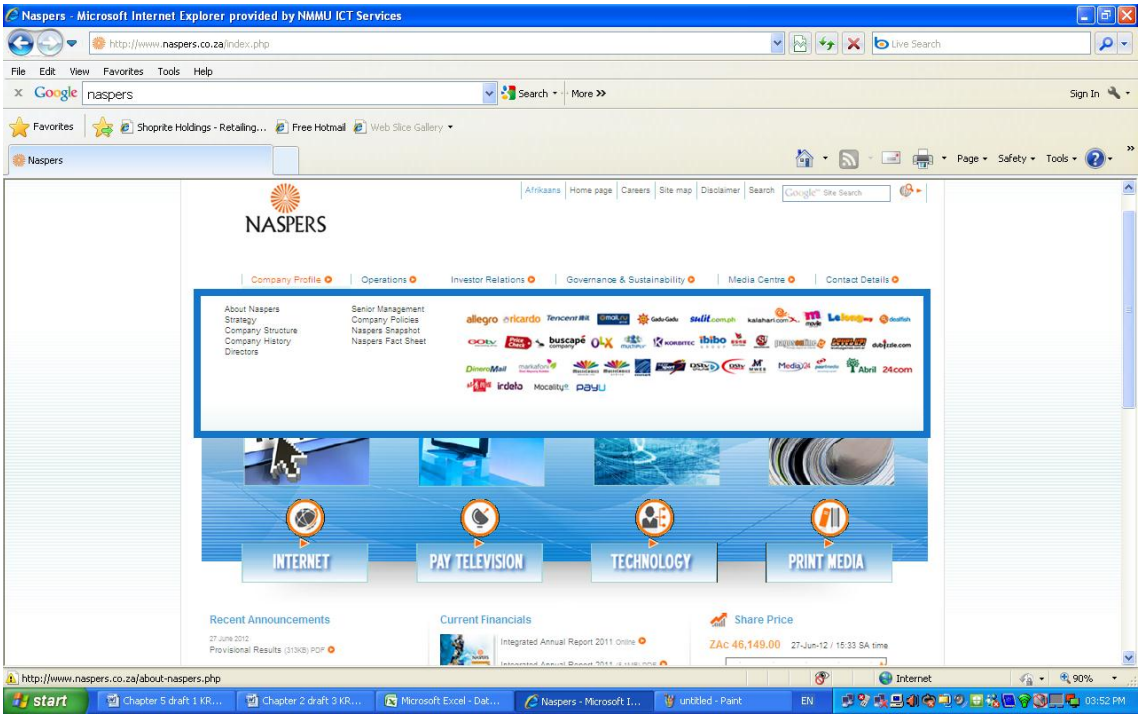
1915	• Beginning of Naspers
1994	• Listed on JSE
2004	• Tencent liisted on Hong Kong Stock Exchange, Exceptional growth of pay-television in Greece, Some newspapers show exceptional circulation growth, Via Afrika became profitable,Launch of several new channels, New magazines launched
2005	• MultiChoice and MWEB subscriber management platforms were merged, Introduction of action X and Africa Magic channels, Closure of M-Net's *Open Time* window announced, First dedicated soccer channel, SuperSport add nine channels
2006	• Electronic Communications Act came into effect, SuperSport broadcasted soccer world cup, Lauch of 24.com and PVR, Sale of dicsountinued operations, Implementation of IFRS
2007	• Listed on LSE, M-Net *Open Time* window closed on 31 March, SuperSport broadcastes cricket world cup, A number of acquisitions and disposals were initiated and concluded
2008	• A number of acquisitions and disposals were initiated and concluded, Delist American Depositary Shares (ADS) from Nasdaq and terminated registration of ADS with Securities and Exchange Commission in USA, Listed ADS as Level 1 ADS on LSE
2009	• A number of acquisitions and disposals were initiated and concluded
2010	• Low growth financial year, Many acquisitions were initiated and concluded, Naspers awarded **Most Empowered Media Company** by Financial Mail
2011	• Seven-year US$700 bond issued, A number of Awards received by the group (ibibo, Media24 Newspapers, Media24 Magazines, Paarl Media, NB Publishers, SuperSport and MultiChoice), A number of acquisitions were finalised, Naspers awarded **Most Empowered Media Company** by Financial Mai

Source: Researcher's own construct.

5.5.5 Classification of Naspers Ltd according to the e-business model

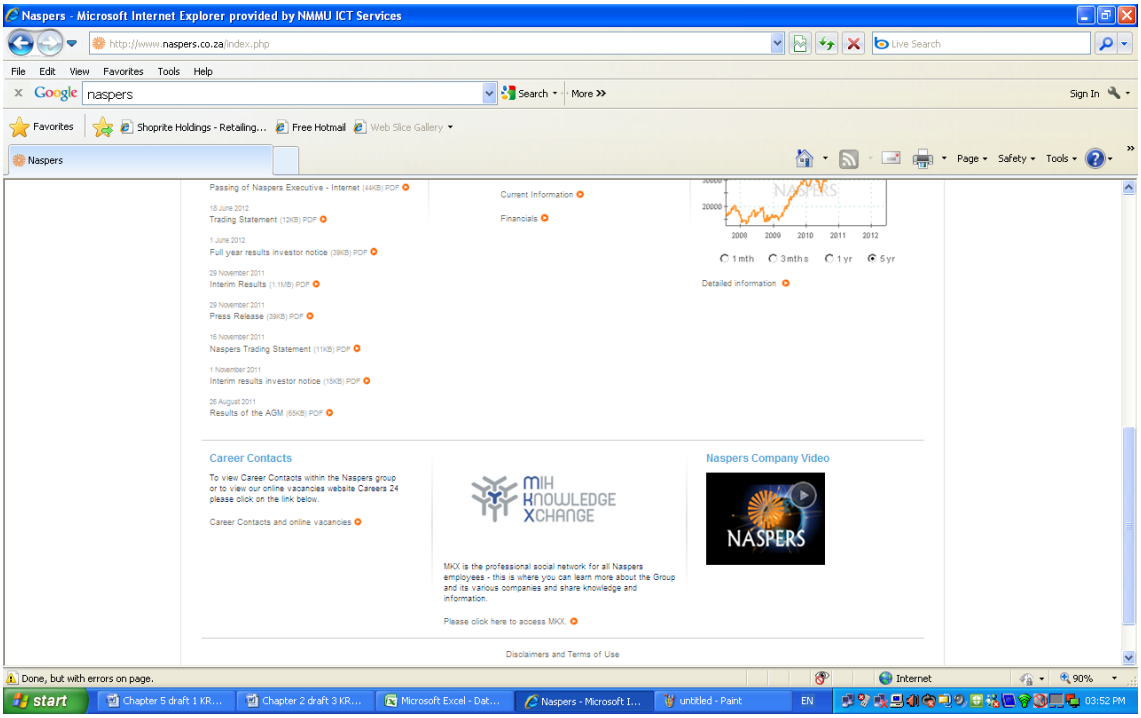
Figures 5.6 to 5.7 are screen dumps of the Naspers homepage.

FIGURE 5.6: HOMEPAGE OF NASPERS LTD – SCREEN DUMP 1



Source: Naspers Ltd 2012.

FIGURE 5.7: HOMEPAGE OF NASPERS LTD – SCREEN DUMP 2



Source: Naspers Ltd 2012.

If one considers the two Naspers screen dumps, it is obvious that no online transactions take place on the website. Even though no online transactions will occur on Nasper's website, the online transactions do occur at the subsidiaries' websites, such as Kalahari.net. It should also be noted that the individual annual reports of the different subsidiaries are not available and only the consolidated annual reports can be viewed. Based on the discussion in Chapter Two regarding the e-business model stages, Naspers can be classified as an online business in the e-commerce stage, as all the transactions take place online on the websites of the various subsidiaries.

5.6 OVERVIEW OF THE BUSINESS ENVIRONMENT

A brief overview of the global and South African business environments in which the businesses under investigation operate, will be provided in the following paragraphs. Remarks concerning the business environment as made by the various chief executive officers (CEOs) and reported in the annual reports will also be highlighted.

5.6.1 The 2004 economic year

The 2004 economic year was characterised globally by many banks increasing short-term interest rates. The international crude oil prices increased considerably during the year, and exceeded the US$50 per barrel frequently during October 2004. Another aspect of the 2004 economic year was that the output gap between actual production and potential output was fairly small in most countries worldwide. This led to a modest increase in inflation in some of the major economies. In South Africa, the real gross domestic product (GDP) also increased for five consecutive quarters to an annualised rate of 5.5%. The consumption expenditure by households increased, and it was also evident in the increase in household debt. Retailers benefited from the strong growth in consumer demand and consumption expenditure of households. Consumer prices were stable during the year, interest rates were declining, and the business and consumer confidence improved during 2004. Households' real expenditure on durable goods increased from 13.5% in the first quarter to 25% in the fourth quarter of 2004, with the highest growth rates reported by personal transport equipment, furniture, and household appliances. The annualised

growth rate was then calculated to be 16%. The growth of semi-durable goods increased at an annualised rate of 13% in the third quarter of 2004, with the highest growth rates reported for clothing, footwear, household textiles and furnishings. The non-durable goods and services remained during the year in the 4% to 4.5% range. Employment in the trade, catering and accommodation sector increased by 8.5%, while employment in the total private and total public sectors increased by 5.3% and 4.1% respectively. Owing to the steep increase in petrol and diesel prices, consumers curbed their expenditure on non-durable goods, with only services showing a strong positive growth during the fourth quarter of 2004. The international crude oil prices increased by approximately 123%, which resulted in higher domestic petrol and diesel prices; the domestic fuel prices increased by 32.5%. The repurchase rate was reduced by 50 basis points from 8.0% to 7.5% in August 2004, and it remained unchanged for the remainder of the year. The ultimate result of these higher prices was that the year-on-year Total CPIX inflation increased to 4.2% in October 2004. (Quarterly Bulletin – March, June, September, December 2004 2004 – 2005).

Shoprite reported that the business environment had had a negative effect on food retailing in the primary markets. Lower inflation, cheaper imported commodities and reduced interest rates resulted in more spending on durable and semi-durable goods, and not on food (Shoprite Holdings Limited Annual Report 2004 2004:8). Spar reported that the retail sector as a whole had experienced strong growth as a result of favourable exchange rates and lowered interest rates. It was furthermore reported that the food market had not experienced the same growth, because the food market, in general, does not move with the shifts in the economy. The extremely low levels of inflation and deflation for certain food categories also negatively influenced the food market (The SPAR Group Limited Annual Report 2005 2005:11). PnP experienced great difficulty during the 2004 financial year, but thanks to the support of their customers, suppliers and the broader South African community, PnP was able to recover. During the year inflation also decreased, and there was a deflation on basic food items sold in the Score and Boxer stores. Despite the challenges, PnP performed remarkably well. (Pick n Pay Annual Report 2004 2004:10). Naspers performed well during the 2004 financial year which presented

favourable trading conditions. The international operations of Naspers excelled in their performance. Growth was experienced in sub-Saharan Africa which resulted in a satisfactory financial performance by Naspers (Naspers Annual Report 2004 2004).

5.6.2 The 2005 economic year

The global economy experienced strong economic growth during the first three quarters of 2005, with a real growth nearing 4.5%. The international price of crude oil also declined drastically although the refining capacity along the cost of the Gulf of Mexico was disrupted because of hurricanes. The South African economy continued to expand for 24 consecutive quarters until the third quarter of 2005. The real GDP reported an annualised growth of 5.5% in the second quarter, but it declined to 4% in the third quarter. Reasons suggested for this decline were the lower gold and diamond production output, the slower growth in the manufacturing sector, and the decline in electricity production. The annualised growth rate of the trade section was 7% in the second quarter and 6.5% in the third quarter of 2005. This is evident when considering the real final consumption expenditure by households, which slowed to an annualised growth rate of 6% in the third quarter. This decline was a result of a lower demand for durable goods during this period. Consumer spending on durable goods reported a third-quarter growth rate of 8%, with furniture, household appliances, medical equipment, and recreational and entertainment goods showing the highest growth. The annualised growth rate in real final consumption expenditure by households on durable goods was 17%. The growth rate of semi-durable goods also improved rapidly from an annualised growth rate of 13.5% in the second quarter of 2005 to 19.5% in the third quarter. The major growth areas were vehicle tyres, parts and accessories, clothing, footwear, household textiles, furnishings and glassware. The growth of non-durable goods was sustained from 2004. The first three quarters of 2005 were characterised by industrial action regarding wage disputes. Employment in the trade, catering and accommodation sector increased by 7.8%, compared to the 0.7% increase for the private sector in total and a 3.0% increase for the total public sector. During 2005, the repurchase rate was reduced only once by 50 basis points in April from 7.5% to 7.0%, and remained unchanged for the remainder of the

year. The prices of international crude oil and derivative products increased during 2005, and the result of these higher prices was an increase in inflation. Inflation, as measured by the CPIX, in August 2005 was 4.8%, and it declined to 4.4% in October 2005, which is in the 3% to 6% inflation target range. (Quarterly Bulletin – March, June, September, December 2005 2005 – 2006).

Shoprite reported that there was an increase in disposable income in the lower-income group as interest rates decreased further. Another positive aspect was the creation of jobs, resulting in more consumers having disposable income to spend, and consumers moving into higher lifestyle levels. Consumers also spent more on high-margin food items and non-food products (Shoprite Holdings Limited Annual Report 2005 2005:10). SPAR retail sales exceeded those of the market, and SPAR also increased its market share during the 2005 financial year. The direct competition increased the number of stores nationally, and SPAR counteracted by engaging in more extensive advertising (The SPAR Group Limited Annual Report 2005 2005:11). PnP reported an increase in their operating margin in a low-inflation environment (Pick n Pay Annual Report 2005 2005:14). The newspapers, magazines and printing divisions of Naspers experienced exceptionally high growth levels in advertising. As an end result, Naspers maintained its profitability and reported strong cash flows. (Naspers results presentation for the financial year ended 31 March 2005 2005).

5.6.3 The 2006 economic year

The global economy indicated a slower growth in the third quarter of 2006 than in the previous quarter. Global inflation was kept under control by the decline in the international crude oil prices and the implementation of tighter monetary policies. The growth rate of the South African real GDP was around 5.0%. Factors influencing the slower growth of the real GDP included higher domestic price levels. The growth of the secondary and tertiary sectors in South Africa was also fairly slack because of the pressures experienced by the food manufactures and agricultural producers. The retail sectors' real output also slowed down during 2006. Consumer spending on new vehicle sales dropped drastically, while the catering and accommodation subsectors were improving rapidly. The real gross domestic expenditure for the first three quarters of 2006

was 7.0% higher than the corresponding 2005 quarters. Consumer spending was curbed by a decline in consumer confidence, higher interest rates and higher consumer prices. This is evident when considering the real final consumption expenditure by households for durable, semi-durable and non-durable goods, as well as for services. Expenditure by households on furniture and household appliances increased, while expenditure on vehicles and other personal transport equipment decreased. The wholesale and retail trade industry reported an 18.03% increase in employment compared with the 5.6% increase in employment for all formal sectors within the public sector. The repurchase rate increased four times during 2006. In June 2006 the repurchase rate increased from 7.0% to 7.5%, in August 2006 the rate increased to 8.0% and in October 2006 the rate further increased to 8.5%. The final increase for the year ended the repurchase rate at 9.0% after another 50 basis point increase in December 2006. The international crude oil prices decreased towards the end of 2006 from the high record prices of August 2006. The targeted twelve-month rate of CPIX remained under the 6% upper boundary of the target range for the 38th successive month, indicating that inflation would remain under control. (Quarterly Bulletin – March, June, September, December 2006 2006 – 2007).

The durable and non-food sectors reported increased spending as consumer confidence remained high. Numbers of middle-class earners were growing, and disposable income also increased during 2006. This posed a challenge for Shoprite to continuously serve this group of consumers by providing improved product choices and an extended range of customer services (Shoprite Holdings Limited Annual Report 2006 2006:12). SPAR experienced strong competition during the 2006 financial year. The trading gross margin declined slightly owing to a change from agency to direct sales delivery and a change in the sales mix (The SPAR Group Limited Annual Report 2006 2006:5). In the low inflation environment in which PNP operated during 2006, business was faced with industrial action in the middle of the year. Despite the challenges of 2006, PnP maintained to be a confident market player with a strong performance. (Pick n Pay Annual Report 2006 2006:19). The macro economic conditions were seen as favourable. The number of subscribers to Pay TV grew rapidly. A

large number of acquisitions were made during the year and a few business and business units were disposed of during the year. (Naspers results presentation for the financial year ended 31 March 2006 2006).

5.6.4 The 2007 economic year

The US market experienced great difficulty because of the sub-prime mortgage crisis. The global economy was also severely affected by this crisis as there was great uncertainty in the financial markets that led to higher risk premiums. The US Federal Reserve lowered both the discount rate and the federal funds rate to curb the negative effect of the crisis on the financial markets and on the global economy. The real economic growth rate for South Africa for 2006 was 5.4%. The main contributors to the strong growth rate were the finance, real-estate and business services sectors. Trade and construction also showed healthy growth. The manufacturing sector experienced some setbacks due to industrial action in the motor industry. The mining industry recovered owing to more favourable international diamond and platinum prices, while the agriculture industry had some difficulties as field crop production declined. The agriculture industry faced severe drought conditions that hampered planting and harvesting of grain. The commerce sector reported a lower growth in 2007 than in 2006. Regarding the real final consumption expenditure by households, there was also a downward trend. One reason posed for this decline was the higher interest payments and moderate growth in property income, resulting in less disposable income. The growth in durable goods consumption was irregular with two of the four quarters reporting increases of 9.4% and 7.6% respectively and two reporting decreases of 12.6% and 0.7% respectively. The employment in the trade, catering and accommodation sectors increased by 5.7%, while the employment of the total private sector increased by 3.6% and the total public sector decreased by 1.0%. The repurchase rate increased from 9.0% to 11.0% during 2007 after four consecutive increases of 50 basis points. Fuel prices also increased owing to higher international crude oil prices. (Quarterly Bulletin – March, June, September, December 2007 2007 – 2008).

Shoprite reported for the 2007 financial year high consumer spending on durable and semi-durable goods, mainly on credit. The reason for buying on

credit was the lowered interest rates and the increase in disposable income of the black middle class. (Shoprite Holdings Limited Annual Report 2007 2007:12). SPAR was faced with stiff competition during 2005 and the actual gross margins declined by 0.2%. The decline was a result of change in the sales mix. (The SPAR Group Limited 2007 Annual Report 2007:2). During 2008, PnP performed exceptionally well although the inflation of certain staple food items increased rapidly to exceed the rate of inflation. PnP retailed bread at below cost on a regular basis, and persisted in keeping basic food items at low prices. (Pick n Pay Annual Report 2007 2007:10). The 2007 economic year was characterised by favourable macroeconomic conditions in Naspers key markets in which it operated. Major investments were made by Naspers during the year. (Naspers Annual Results 2007 2007:8).

5.6.5 The 2008 economic year

The 2008 economic year was characterised by widespread losses with many liquidity and solvency problems in the financial sectors word-wide. Some central banks lowered their policy interest rates. Another measure taken to alleviate the uncertainty in the financial markets and the economy, was the injection of liquidity into money markets. The third quarter of 2008 reported the lowest growth per quarter in ten years for South Africa. The main contributor to the lower growth was the disruptions in the mining industry. The mining industry experienced weaker international demand, declining commodity prices and interruptions for maintenance, safety procedures and industrial action. Manufacturing also declined in the third quarter of 2008, while the agriculture sector flourished and reported a high positive growth. The real disposal income of households was limited as the domestic economic environment was very tight. The demand for all durable goods declined and the demand for semi-durable goods decreased because of high food and fuel prices. Clothing and footwear increased, while expenditure on household textiles, furnishings, glassware, and vehicles and vehicle accessories were restricted. The expenditure on non-durable goods was also limited by the high prices of these goods, and expenditure declined at an annualised rate of 2.2% in the third quarter. Employment in the trade, catering and accommodation sector decreased by 0.1%, while the employment of the total private sector increased

by 1.4% and the total public sector decreased by 4.4%. The repurchase rate reached 12.0% after six consecutive increases of 50 basis points after June 2007. The repurchase rate decreased by 50 basis points to end the year on 11.5%. International crude oil declined from US$146 per barrel to approximately US$50. The year-on-year CPIX inflation reached an unprecedented high of 13.6% in August 2008 after which it declined to 12.4% in October 2008. In October 2008 the Minister of Finance announced that the CPI would be used as both the headline measure and the inflation target measures as of 25 February 2009. (Quarterly Bulletin – March, June, September, December 2008 2008 – 2009).

In 2008, Shoprite made staple foods more affordable for lower income earners as increases in basic food products and higher transport costs were negatively affecting this consumer group. Due to the particular attempt to reduce the costs of staple foods, many consumers switched to the various brands offered by Shoprite. (Shoprite Holdings Limited Annual Report 2008 2008:10-11). During the second half of 2008, inflation increased sharply which resulted in lower sales volumes. SPAR increased their national market share. Growth in the number of stores opened was also experienced. (The SPAR Group Limited 2008 Annual Report 2008:6). During 2008 PnP performed exceptionally well again. Problems identified by PnP were a growing global food crisis and the regular protests against rising prices of basic food items. Possible reasons cited for these problems included the growing China and India economies, the conversion to bio fuels, the drastic increases in commodity prices, the halting of exporting food by some countries, and the lifting of import duties on basic food items. (Pick n Pay Annual Report 2008 2008:7). Naspers experienced major growth in the Internet and pay television sectors during 2008. The print media was under pressure and not performing very well. (Naspers Annual Report 2008 2008:8-12).

5.6.6 The 2009 economic year

Signs of recovery in the global economy became visible during the fourth quarter of 2009. Higher international trade volumes were reported and the recovery of the oil-exporting and other commodity-producing countries resulted

in higher international commodity prices. Many countries started to change their policy settings back to normal by increasing interest rates, while other countries remained operating under the tighter controls. The South African economy showed positive signs after three consecutive quarters of contractions. The agricultural industry experienced some difficulty and therefore produced smaller crops. The mining industry faced lower output levels because of industrial action and the temporary shaft closures following accidents. The export volumes from South Africa showed an upward trend and the international prices of precious metal such as gold and platinum also increased. Foreign investment in South Africa increased as investor sentiment started to turn upward. The real consumptions of expenditure of households contracted during most of 2009 as the recessionary conditions and uncertainty continued. The expenditure on durable goods increased slightly by 0.5% in the third quarter, while it decreased in the first two quarters of 2009. The year-on-year rate was -14.4%, which indicated the low confidence level of consumers and the impact of the recession on the economy. Semi-durable goods declined at an annualised rate of 7.2% in the third quarter of 2009. Spending on all non-durable goods declined during the third quarter of 2009. The number of jobs lost in the first six months of 2009 in the trade, catering and accommodation sector was 42 500 compared to 219 000 in the total private sector. The total public sector created 13 400 jobs during the same period. The repurchase rate decreased by five consecutive 100 basis points to decline from 12.5% to 7.5%. The last decrease in 2009 was 50 basis points which ended the repurchase rate on 7.0%. The international prices of imported commodities, including crude oil, petroleum, coal and furniture, declined at a rate of 10.2% in October 2009. The CPI indicated a decline in inflation by reporting a 5.9% which was the first time in 30 months within the target inflation bracket. (Quarterly Bulletin – March, June, September, December 2009 2009 – 2010).

South Africa was faced with its first recession in 17 years. Shoprite managed to keep costs under control to provide basic food products at affordable prices to lower income earners. Owing to the recession, crime levels also escalated and therefore Shoprite had an increase in security costs (Shoprite Holdings Limited Annual Report 2009 2009:10). SPAR reported that the 2009 financial year was

a difficult year with very strong competition in the trading environment. Despite the difficulties faced, SPAR managed to produce strong growth in both sales and profitability. The first six months were characterised by food inflation of 16%, while the second six months reported food inflation of 9%. SPAR recorded group turnovers of 24.5% and 14.9% respectively for the two periods. (The SPAR Group Limited 2009 Annual Report 2009:3). The world market was in turmoil and the economic conditions became tighter. Although the gross margins for PnP dropped during 2009, the business continued to perform well under difficult economic conditions. Food prices kept on rising and the fuel and commodity prices declined during the year. (Pick n Pay Annual Report 2009 2009:10). Although the financial year showed a global economic downturn, Naspers as a group reported satisfactory results for the 2009 financial year. Naspers reported a growth of 30% in revenues. Customer spending came under pressure and customers spent more time at home. The result was that the pay television subscriber base and the Internet segment based grew during 2009. (Naspers Annual Report 2009 2009:8).

5.6.7 The 2010 economic year

Economies globally were still recovering from the crisis well into the 2010 economic year. The emerging-market economies showed stronger growth than the developed economies. The result of the stronger growth was that the developed economies followed very tight fiscal controls. The euro area, Japan, UK and US implemented very low interest rates. In the third quarter of 2010, the South African economy decelerated slightly. This slower growth was due to industrial action in the automotive and related industries, resulting in lower outputs. The tertiary sector also faced industrial action. The mining industry recovered in the third quarter of 2010 after dealing with a lengthy industrial action and routine maintenance work on smelters that reduced the output capacity of the industry. The agricultural sector reported improved outputs. The trade sector showed a slower growth in the third quarter (annualised rate of 3.3%) than in the second quarter (annualised rate of 6.0%) of 2010. The major contributor to the slower growth was the decline in vehicle sales owing to the lack of stock resulting from industrial action. However, the catering and accommodation industry reported strong growth as foreign visitors visited South

Africa after the FIFA World Cup™ tournament ended. The real final consumption expenditure by households increased to an annualised rate of 5.9% in the third quarter of 2010. Households spent less on durable goods as the annualised rate decreased from 50.8% to 13.7%. The spending on semi-durable goods declined at an annualised rate of 5.9% in the third quarter. The non-durable goods spending increased by 2.0% although households spent less on fuel and power as the prices of these commodities increased drastically. Employment in the trade, catering and accommodation sector decreased by 2.2%, while employment of the total private sector also decreased by 2.3% and the total public sector increased by 1.7%. The repurchase rate declined by 50 basis points from 7.0% to 6.5% in March 2010. Another two further 50 basis point reductions were announced in September 2010 and November 2010, bringing the repurchase rate down to 6.0% and 5.5% respectively. The repurchase rate of 5.5% was the lowest since October 1980. (Quarterly Bulletin – March, June, September, December 2010 2010 – 2011).

Shoprite reported that the 2010 financial year was a challenging economic year for South Africa as the effect of the global economic crisis was strongly felt by the consumers. Because of the low inflation market, retailers had to sell more products to achieve similar results to the previous years. The disposable income of consumers was also under pressure, and therefore competition became fierce to convince consumers to use specific brands. (Shoprite Holdings Ltd Annual Report 2010 2010:10). The 2010 financial year showed a slow recovery from the global recession with low inflation and a highly competitive environment. Despite the challenges, SPAR reported satisfactory financial performance. Food inflation was 1% and was influenced by deflation on basic commodities. (The SPAR Group Limited 2010 Annual Report 2010:5). The second half of the 2010 financial year was characterised by a drastic decline in consumer inflation, and the impact of the global recession was felt by PnP. The interest rate cuts that were announced assisted the local economy to limit the impact of the recession in the South African market. (Pick n Pay Annual Report 2010 2010:6-7). Naspers faced economic challenges during the 2010 financial year and the strong rand against foreign currencies also negatively impacted on reported results when converting amounts to rand values. The

emerging market in which Naspers operated survived the global economic recession fairly well compared to the survival of businesses operating in the developed economies. The 2010 results were satisfactory. During 2020, Naspers restructured and forced retrenchments were implemented. (Naspers Annual Report 2010 2010:16, 52, 79).

5.6.8 The 2011 economic year

The recovery of the economies continued into the 2011 economic year. The euro area debt crisis also negatively affected the overall growth and confidence in the global financial markets. Growth in the developing economies was remarkable. Although tensions in the Middle East and North Africa had a negative impact on the price of gold, the sub-Saharan Africa economies were not exposed extensively to the problems the tensions caused. The South African economy continued to expand well into 2010 although production in the third quarter was hampered by industrial action in the mining and manufacturing sectors. The results of the industrial action were work stoppages, logistical problems and delays in plant maintenance. The electricity tariffs also increased drastically mid-year. The trade sector experienced high growth, especially the retail and motor trade industries. The high growth in the motor trade industry was a result of the car rental industry upgrading and expanding their fleet. The real final consumption expenditure by households decreased from quarter 1 to quarter 2 from an annualised rate of 6.4% to 3.3% and then increased to an annualised rate of 3.7% for quarter 3. Spending on durable goods by households increased from an annualised rate of 14.1% to 17.8%, while spending on semi-durable and non-durable goods declined drastically. Semi-durable spending declined from an annualised rate of 12.6% in quarter 1 to 6.0% in quarter 3, while non-durable goods spending decreased from an annualised rate of 5.4% in quarter 1 to 0.7% in quarter 3. The employment in the trade, catering and accommodation sectors increased by 5 200 jobs, while the employment of the total private sector increased with 48 800 jobs and the total public sector increased with 50 300. The repurchase rate remained unchanged at 5.5% as from November 2010. During the third quarter of 2011, petroleum prices reached record high prices. (Quarterly Bulletin – March, June, September, December 2011 2011 – 2012).

The disposable income of the lower income earners came under pressure as household debt increased and essential services became more expensive. Shoprite reported that some smaller local suppliers were struggling to survive owing to higher input costs. Therefore Shoprite had to develop contingency plans to source alternative suppliers if the local suppliers ceased to exist. (Shoprite Holdings Ltd Integrated Report 2011 2011:12). Consumer spending was under pressure and low food inflation made the 2011 financial year a challenging one. The retail market was also a very competitive market and despite the obstacles SPAR faced, managed to produce satisfactory annual results. (The SPAR Group Limited 2011 Integrated Annual Report 2011:11). In the Pick n Pay Integrated Annual Report 2011 (2011) it was stated that the financial year 2011 was the toughest trading year in history. As a result of the tough financial conditions, the financial results were disappointing when compared to previous years. One of the factors hindering good performance was the slow recovery of the economy from the global recession. Another factor influencing the financial performance of PnP was that the retail environment became more competitive. (Pick n Pay Integrated Annual Report 2011 2011:4, 9). Naspers performed well during the year. The emerging markets performed better than the developed markets during the global economic downturn. (Naspers Integrated Annual Report 2012 2012).

5.7 SUMMARY

The four Internet-based businesses that will be valued in Chapter Six were analysed by considering their history, operational and financial overviews. The chapter concluded with an overview of the economic conditions in South Africa and how the four businesses were affected by the economic conditions.

Shoprite was established in 1979 to operate in the food segment, and over the years, became a dominant player in the food retail segment. Shoprite was listed on the JSE in 1936 using the code SHP. Spar originated in 1932 as DE SPAR and was later renamed SPAR. SPAR is a dominant player in the food retail segment. Spar was listed on the JSE in 2004 using the code SPP. PnP was established by Mr Raymond Ackerman in 1968 and became a dominant player in the food retail segment. PnP was listed on the JSE in 1968 using the code

PIK. Naspers came into existence in 1915 and grew over the years to be a major business in the media segment. Naspers is listed on the JSE in 1994 using the code PNP.

The main conclusion regarding the economic environment was that as from 2008, the global economy went into a recession. As from 2009 the global economy started to recover and the South African market was not desperately affected by the global crisis.

The focus of Chapter Six will be on the valuations of the one brick-and-mortar business with limited online presence, and the three Internet-based businesses (two brick-and-mortar and one online) discussed. The valuations will be done for each year as from 2004 to 2011. The aim of the valuations is to determine whether there is a trend in the valuations of businesses at different e-business model stages, and in doing so, to quantify the effect of e-business strategies on the value of a business.

CHAPTER SIX
VALUATION OF SELECTED BUSINESSES

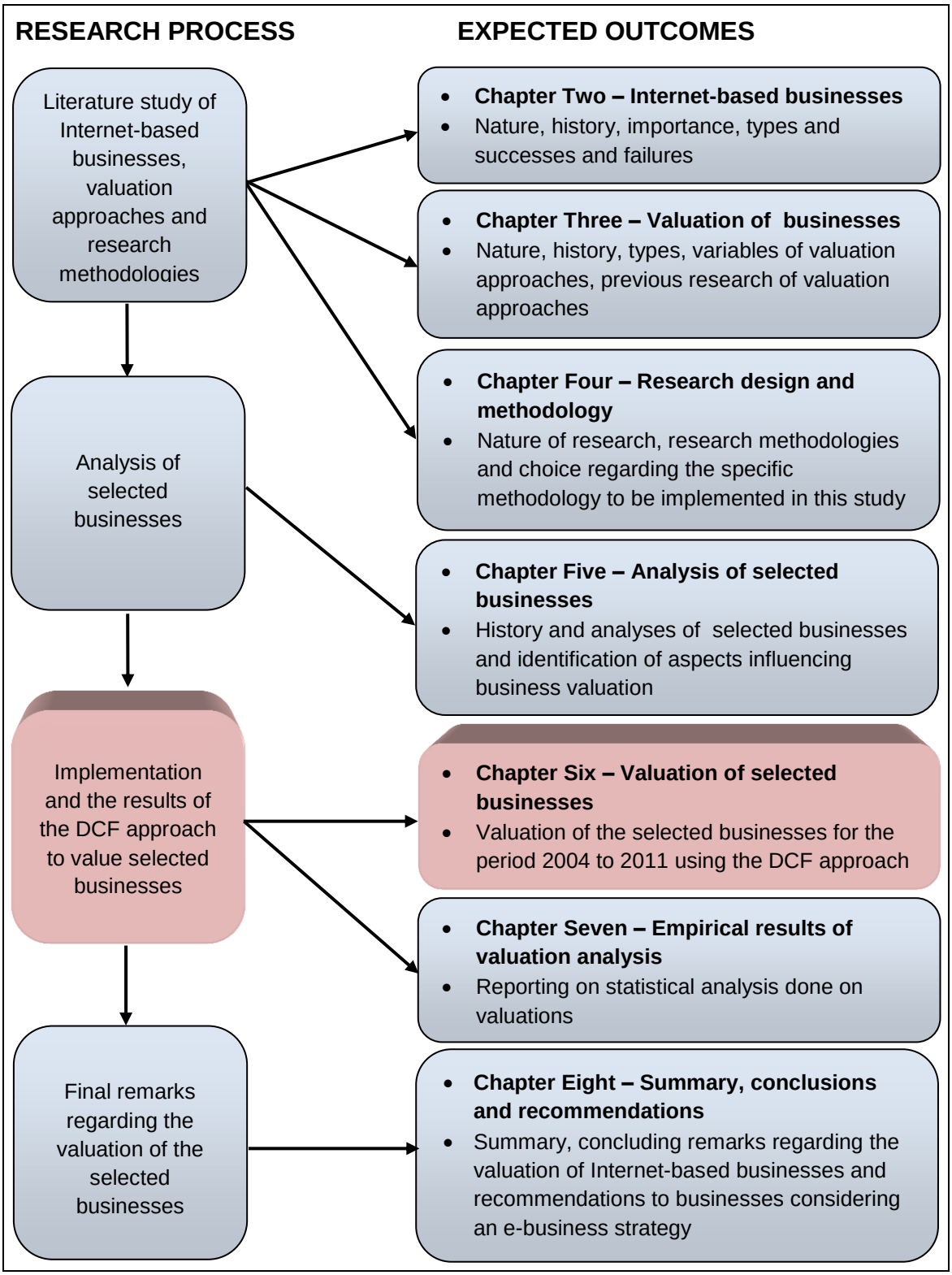
6.1 INTRODUCTION

Chapter Five presented an overview of the four businesses that were selected to be valued. The overviews included an operational and financial overview over an eight-year period, that is, from the 2004 financial year up to and including the 2011 financial year. The Internet-based business classification as used in the study and the specific e-business model stage of each business were identified and supported by appropriate evidence. The motivation for selecting these four businesses was provided in Chapter Four.

The purpose of Chapter Six is to achieve one of the secondary objectives identified in Chapter One which will assist in the attainment of the primary objective of the study. Figure 6.1 is reproduced from Chapter One, and illustrates the importance of this chapter in the research process.

This chapter will firstly highlight the chosen valuation approach to be used for the valuation purpose. This will be followed by a discussion of the valuations of Shoprite Holdings Limited, The SPAR Group Ltd, Pick n Pay Stores Ltd and Naspers Ltd. The discussion will address the variables used in the valuation and the valuations calculated using the FCF (DCF) approach with different risk-free rates for single and multiple periods. The purpose of the single period calculation is to determine what the valuation of the business will be if it existed for that specific year only. The valuations for each financial year as from 2004 to 2011 will be presented for each business, and where possible, be linked to the economic and business environment. A comparison of the valuations will be done by businesses and by year. The purpose of comparisons will be to determine whether the selected businesses managed to create tangible links between the implemented e-business strategies and value creation.

FIGURE 6.1: CHAPTER SIX AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

6.2 VALUATION APPROACH APPLIED FOR THE PURPOSE OF VALUATING THE SELECTED BUSINESSES

The various valuation approaches as found in the financial literature were discussed in Chapter Three. One of the approaches discussed was the FCF (DCF) valuation model, which values a business as the sum of the discounted expected FCF using WACC as the appropriated discount rate. It is important to note that FCF is the cash flow available to all investors, that is, both equity holders and debt holders, after all financial obligations have been met. Therefore FCF is not dependent on financing and non-operating items. (Gitman *et al*. 2010:316; Koller, Goedhart & Wessels 2005:166).

There are three main reasons why the FCF (DCF) valuation model was chosen as the valuation method to be implemented in the study. Firstly, the model can be used when there is no dividend payment history or no dividends are expected to be paid in the future. Secondly, the model is appropriate when valuing a new business. Thirdly, the model is also valuable when valuing one business unit of a large business. (Gitman *et al.* 2010:316).

The FCF (DCF) valuation model to be used is presented in Equation 17 (adapted from the equation as presented by Fernández 2007b:585; Gitman *et al.* 2010:317).

$$V_C = \sum_{i=1}^{\infty} \frac{FCF_i}{(1+WACC)^i} \qquad \text{[Equation 17]}$$

Where V_c is the market value of the business as a holistic entity

FCF_i is the expected free cash flow at the end of each period *i* until infinity

WACC is the weighted average cost of capital to be used as the applicable discount rate

The calculation of the FCF to be used in Equation 17 is one of the unknown variables which need to be clarified. FCF is the cash flow from assets that are available to be distributed to lenders and shareholders (Firer *et al*. 2012:31;

Hillier *et al.* 2010:51). Therefore FCF can then be expressed in the following way as shown in Equation 18:

FCF	=	CF from assets	[Equation 18]
	=	CF to lenders + CF to shareholders	
	=	OCF – NCS – Change in NWC	
Where		operating cash flow (OCF) = profit before interest and tax (PBIT) + depreciation – taxes	
		net capital spending (NCS) = ending net non-current assets – beginning net non-current assets + depreciation	
		net working capital (NWC) = current assets – current liabilities	
		CF to lenders = interest paid – net new borrowings	
		CF to shareholders = dividends paid – net new equity raised	

According to Ali *et al.* (2010:18-33), FCF of an Internet-based business can be determined by subtracting the cash required for investments, regardless of time-frame of investments, from the operating profits. It is thus evident that regardless of the type of business, as discussed in Chapter Two, the FCF will be calculated in the same way. For the purpose of this study, the FCF will be calculated by subtracting the NCS and change in NWC from OCF. The FCF will also be calculated by adding the CF to lenders to the CF to shareholders as a double checking mechanism. The double checking mechanism is known as triangulation (see discussion in Chapter Four) as the same set of data is used to reach the same conclusion using different methods.

The FCFs for each financial year as from 2004 to 2011 will be calculated for the four selected businesses using the standardised financial statements as provided by McGregor BFA Fin24Expert. The standardised financial statements as developed by McGregor BFA Fin24Expert following fixed standardisation rules are used to create a financial database for calculating FCF and ultimately to assist in the valuation of the businesses. The reason for using this particular source of financial data instead of the financial statements published in the annual reports of each business is that various accounting practices are used

and therefore one cannot compare the results with one another (Brummer 2010). The WACC that will be used for each calculation is calculated by McGregor BFA Fin24Expert, and all calculations are based on the standardised financial statements as developed by McGregor BFA Fin24Expert.

The cost of equity is calculated using CAPM with the R157 and R153 government bonds as the risk-free rate. A risk premium of 6% (range is 5% to 7% for South Africa) is used in the calculations, as suggested by Brummer (2010). The main findings of a study conducted by Nel (2011:5339) were that the R157 government bond was the most used bond to represent the South African risk-free rate, and the R153 was used when the R157 was not available. It was furthermore found that McGregor BFA was one of the top three financial data suppliers to be used as a source of financial data. The first step in calculating WACC is to allocate weights to equity and debt according to the optimum financing structuring. These weights are then multiplied with the market value of the equity and debt respectively and the multiplications are then summed. (Nel 2011:5336). A summary of the calculations of the FCF for each of the four selected businesses can be found in Annexures A to D.

6.3 REPORTING ON VALUATION OF SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE)

A discussion of the variables that formed part of the valuations will be presented. The discussion will be followed by the presentation of the valuations as calculated using the DCF approach. Shoprite was classified as a brick-and-mortar business with limited online presence, as discussed in section 5.2.5.

6.3.1 Variables for valuations of Shoprite Holdings Limited (brick-and-mortar business with limited online presence)

Table 6.1 summarises the variables used to calculate the value of Shoprite for each year as from 2004 to 2011. The calculation of the FCFs as presented in Table 6.1 is shown in Annexure A. All the other variables shown in Table 6.1 were obtained from the McGregor BFA Fin24Expert.

TABLE 6.1: SUMMARY OF VARIABLES USED IN THE VALUATION OF SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE)

VARIABLES[1]	2004	2005	2006	2007	2008	2009	2010	2011
FCF[2] (R'000)	R204 121	R260 680	R371 677	R 500 932	R 626 538	R 1 321 826	R1 413 785	R1 332 719
WACC[3]	13.04%	10.94%	12.32%	13.39%	15.61%	13.38%	12.17%	11.54%
WACC[4]	13.11%	11.22%	12.60%	14.05%	16.78%	12.45%	11.79%	11.67%
R157	9.48%	7.67%	7.33%	7.63%	10.72%	8.47%	8.03%	7.50%
R153	9.36%	7.40%	7.20%	7.98%	11.75%	7.19%	7.43%	7.43%
RRR[3]	7.52%	7.04%	6.71%	6.86%	7.25%	6.63%	7.18%	6.62%
RRR[4]	7.62%	6.97%	6.70%	7.08%	7.82%	6.73%	2.79%	2.79%
Market risk premium	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Beta	0.37	0.18	0.36	0.73	0.70	0.56	0.52	0.48
Cost of equity[3]	11.71%	8.76%	9.47%	12.01%	14.90%	11.81%	11.15%	10.41%
After tax cost of debt[3]	486.32%	1 376.31%	2 045.70%	1 554.49%	155.40%	225.55%	139.28%	157.56%
Cost of equity[4]	11.59%	8.49%	9.35%	12.36%	15.93%	10.53%	10.55%	10.33%
After tax cost of debt[4]	486.32%	1 376.31%	2 045.70%	1 554.49%	155.40%	225.55%	139.28%	157.56%

[1] All figures except FCF obtained from McGregor BFA Fin24Expert. Researcher calculated FCF using the cash flow statements.
[2] See Annexure A for calculation of FCF.
[3] R157 used as risk-free rate in calculations.
[4] R153 used as risk-free rate in calculations.

Source: McGregor BFA Fin24Expert 2012, Researcher's own calculations.

A discussion of the results as presented in Table 6.1 is provided in the next paragraphs. The FCF for Shoprite increased from R204 121 000 to R1 332 719 000 over the eight-year period as from 2004 to 2011, which represents a 552.91% increase in FCF. As from 2010 to 2011, the FCF decreased by 5.73%. For the remainder of the period, that is, 2004 to 2010, the FCF increased each year (27.71%, 42.58%, 34.78%, 25.07%, 110.97% and 6.96%). The arithmetic average growth rate of the FCF for the period 2004 to 2011 was 34.62%. The highest FCF was recorded for the 2010 financial year (R1 413 785 000) while the lowest was recorded for the 2004 financial year (R204 121 000). The growth of the FCF from 2008 to 2009 was the highest (110.97%) which could be a result of the recovery of the economy from the world recession. Other possible reasons could be the completion of the repositioning of Checkers in the market place as Checkers moved into a higher-income target market and Shoprite was voted as the cheapest supermarket brand in South Africa.

The WACC using the R157 government bond as the risk-free rate ranged from 13.04% in 2004 to 11.54% in 2011. The average WACC for the eight-year period was 12.80%. The lowest WACC of 10.94% was reported in 2005 while the highest WACC of 15.61% was reported in 2008. The WACC using the R153 government bond as the risk-free rate ranged from 13.11% in 2004 to 11.67% in 2011. The average WACC for the eight-year period was 12.96%. The lowest WACC of 11.22% was reported in 2005 while the highest WACC of 16.78% was reported in 2008. One possible reason for the highest WACC reported in 2008 was that the world economy was in a recession and therefore the cost of capital in general was exceptionally high (14.90% when using the R157 as the risk-free rate or 15.93% when using the R153 as the risk-free rate). The WACC reported in 2007 was the second highest over the eight-year period. A possible explanation could be the cautionary note under which Shoprite Holdings Limited operated for three months during 2007, the industrial action which characterised the first quarter of 2007 and the introduction of the NCA.

The rate of return of the R157 government bond ranged from 9.48% in 2004 to 7.77% in 2011 with the lowest return of 7.33% in 2006 and the highest return of

10.72% in 2008. The average rate of return for the period 2004 to 2011 was 8.35%. The rate of return of the R153 government bond ranged from 9.36% in 2004 to 7.43% in 2011. The average rate of return for the eight-year period was 8.22%. The lowest rate of return of 7.19% was reported in 2009 while the highest return of 11.75% was reported in 2008. Once again, the world recession can be regarded as the main contributor to the higher returns during 2008.

The required rate of return ranged from 7.52% in 2004 to 6.62% in 2011 when using the R157 government bond as the risk-free rate of return. The average required rate of return was 6.98%. The highest required rate of return was recorded in 2004 (7.52%) while the lowest was recorded in 2011 (6.62%). The required rate of return ranged from 7.62% in 2004 to 2.79% in 2011 when using the R153 government bond as the risk-free rate of return. The average required rate of return was 6.06%. The highest required rate of return was recorded in 2008 (7.82%) while the lowest required rates of return were recorded in 2010 and 2011 (both were 2.79%). The global financial environment was in extreme turmoil in 2008 and therefore the higher required rate of return during the 2008 financial year.

If one considers the volatility of Shoprite as measured by beta (β), Shoprite was not as volatile as the market as it was less than one ($\beta < 1$). Beta is the measurement to determine the sensitivity of a security to the movements in the market portfolio (Hillier *et al*. 2010:280). The lowest beta of 0.18 was recorded in 2005 while the highest beta of 0.73 was recorded in 2007. The higher beta values of 0.73, 0.70 and 0.56 were recorded during the world recession and the recovery period thereafter. During the world economic recovery it can be noted that the beta was declining to lower levels as it declined from 0.73 in 2007 to 0.70, 0.56, 0.52 and 0.48 for the years 2008, 2009, 2010 and 2011 respectively. Therefore an investment in Shoprite became less sensitive to the movements in the market as from 2007, although it has not yet reached the low betas as recorded in 2004 (0.37), 2005 (0.18) and 2006 (0.36). The early signs of the world recession could have led to the higher than normal beta recorded for 2007 of 0.73. Other factors that might have influenced the betas include the global food shortages and higher inflation and fuel prices during 2008, and the

investigation into the major food-retail chains by the Competition Commission during 2009. Factors that might have assisted in stabilising the betas as from 2008 include the completion of the repositioning of Checkers, the naming of Shoprite as the cheapest brand in South Africa, and winning several awards over the last few years.

The cost of equity ranged from 11.71% in 2004 to 10.41% in 2011 when using the R157 government bond as the risk-free rate of return. The cost of equity was therefore cheaper in 2011 than in 2004. The lowest cost of equity was recorded in 2005 (8.76%) and the highest cost of equity was recorded in 2008 (14.90%). The average cost of equity for the 2004 to 2011 period was 11.28%. The cost of equity ranged from 11.59% in 2004 to 10.33% in 2011 when using the R153 government bond as the risk-free rate of return. The cost of equity was therefore cheaper in 2011 than in 2004. The lowest cost of equity was recorded in 2005 (8.49%) and the highest cost of equity was recorded in 2008 (15.93%). The average cost of equity for the 2004 to 2011 period was 11.14%. During the 2007 and 2008 financial years equity was very expensive, with the 2008 financial year being the most expensive year to obtain equity, regardless of which one of the two risk-free rates was used. The high cost of equity could have resulted from the world recession and the turmoil in the financial environment. Other explanations could include the industrial actions during the first quarter of 2007, the introduction of the NCA, and the cautionary notice under which Shoprite Holdings Limited operated for three months during 2007.

The after-tax cost of debt ranged from 486.32% in 2004 to 157.56% in 2011. As the risk-free rate has no effect on the cost of debt, the after-tax cost of debt when using the R157 and R153 government bonds as risk-free rates does not differ. The after-tax cost of debt of Shoprite for the period 2004 to 2011 was very high, with exceptionally high after-tax cost of debt recorded in 2005 (1 376.31%), 2006 (2 045.70%) and 2007 (1 554.49%). The lowest cost of debt was recorded in 2010 (139.28%). The average after-tax cost of debt for the 2004 to 2011 period was 767.58%. The applicable South African tax rate was 30% for the 2004 and 2005 financial years, 29% for the 2006, 2007 and 2008 financial years and 28% for the 2009, 2010 and 2011 financial years.

6.3.2 Valuations of Shoprite Holdings Limited (brick-and-mortar business with limited online presence)

Table 6.2 provides a summary of the valuations done for Shoprite for the 2004 to 2011 period, while Table 6.3 illustrates the growth rates of the various valuations and the share price.

TABLE 6.2: SUMMARY OF VALUATIONS OF SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE)

Year	Discounted FCF using WACC as discount rate (R'000)				Valuation as provided by McGregor[3] (R'000)	Share price[4]
	Single period[1]		Multiple periods[2]			
	R157	R153	R157	R153		
2004	R180 574.13	R180 462.38	R180 574.13	R180 462.38	-R907 040.38	R9.08
2005	R234 973.86	R234 382.31	R400 822.29	R399 396.73	-R435 223.28	R14.11
2006	R330 909.01	R330 086.15	R681 590.12	R678 668.93	-R404 276.37	R23.77
2007	R441 777.93	R439 221.39	R1 033 140.99	R1 021 328.56	-R1 201 333.39	R32.50
2008	R541 941.01	R536 511.39	R1 402 025.43	R1 371 352.55	-R2 224 005.29	R38.80
2009	R1 165 837.01	R1 175 478.88	R2 457 051.85	R2 501 637.23	-R1 958 643.98	R55.34
2010	R1 260 394.94	R1 264 679.31	R3 502 850.79	R3 531 626.18	-R1 034 305.45	R82.04
2011	R1 194 835.04	R1 193 444.08	R4 378 263.10	R4 364 218.42	-R705 645.08	R97.60

[1]Single period includes only one FCF for that particular year, for example, 2006 financial year includes only FCF of 2006
[2]Multiple periods include all FCF up to that specific year, for example, valuation for 2006 Multiple periods include FCF for 2004, 2005 and 2006
[3](Number of shares x Share price at end of financial year) + (Long-term debt + Short-term debt) + (Preference shares – Cash)
[4]Share price at the end of the financial year as published by McGregor BFA Fin24Expert

Source: Researcher's own construct.

TABLE 6.3: GROWTH OF VALUATIONS AND SHARE PRICES OF SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE)

Year	Discounted FCF using WACC as discount rate				Valuation as provided by McGregor	Share price
	Single period		Multiple periods			
	R157	R153	R157	R153		
2004/2005	30.13%	29.88%	121.97%	121.32%	52.02%	55.40%
2005/2006	40.83%	40.83%	70.05%	69.92%	7.11%	68.46%
2006/2007	33.50%	33.06%	51.58%	50.49%	-197.16%	36.73%
2007/2008	22.67%	22.15%	35.71%	34.27%	-85.13%	19.38%
2008/2009	115.12%	119.10%	75.25%	82.42%	11.93%	42.63%
2009/2010	8.11%	7.59%	42.56%	41.17%	47.19%	48.25%
2010/2011	-5.20%	-5.63%	24.99%	23.58%	31.78%	18.97%
Arithmetic average	35.02%	35.28%	60.30%	60.45%	-18.89%	41.40%
Change in valuation	561.69%	561.33%	2 324.63%	2 318.35%	22.20%	974.89%

Source: Researcher's own construct.

The discussions to follow are based on the results as presented in Tables 6.2 and 6.3. The valuation of Shoprite for a single period using the R157 government bond as the risk-free rate ranged from R180 574 130 in 2004 to R1 194 835 040 in 2011. Therefore the percentage increase in the value of Shoprite from 2004 to 2011 was 561.69%. The arithmetic average growth rate was 35.02%. The value of Shoprite increased rapidly from 2008 to 2009 (increase of 115.12%), while there was a loss of value from 2010 to 2011 (decrease of 5.20%). The valuation of Shoprite for a single period using the R153 government bond as the risk-free rate, ranged from R180 462 380 in 2004 to R1 193 444 080 in 2011. Therefore percentage increase in the value of Shoprite over the eight-year period was 561.33%. The arithmetic average growth rate was 35.28%. The value of Shoprite increased rapidly from 2008 to 2009 (increase of 119.10%), while there was a loss of value from 2010 to 2011 (decrease of 5.63%). Possible explanations for the increase in value of Shoprite could be the expansion into Africa, the increase in the number of outlets and

additional services within South Africa, the repositioning of Checkers, the naming of Shoprite as the cheapest supermarket in South Africa, and the various major awards won by Shoprite Holdings Limited. The decrease in the value of Shoprite from 2010 to 2011 could be explained by the introduction of Wal-Mart into the South African market.

The valuation of Shoprite for multiple periods using the R157 government bond as the risk-free rate ranged from R180 574 130 in 2004 to R4 378 263 100 in 2011. This represents a 2 324.63% increase in value for Shoprite. The arithmetic average growth rate for the eight-year period was 60.30%. The value of Shoprite showed steep increases of 121.97% and 75.25% for the 2004/2005 and 2008/2009 financial years respectively. The valuation of Shoprite for multiple periods using the R153 government bond as the risk-free rate ranged from R180 462 380 in 2004 to R4 364 218 420 in 2011. This represents a 2 318.35% increase in value for Shoprite while the arithmetic average growth rate was 60.45% for the same eight-year period. The value of Shoprite showed steep increases of 121.32% and 82.42% for the 2004/2005 and 2008/2009 financial years respectively. The steep increase from 2008 to 2009 in Shoprite's value can be a result of the increase in the number of stores that opened during this period and the completion of the repositioning of Checkers within the market. Shoprite was also named the cheapest supermarket brand in South Africa during 2008. Another possible reason can be the announcement of Shoprite as the Top Brands survey's Grocery and Convenience Store category winner, although the same or similar growth did not occur during 2010/2011 when Shoprite was voted the Most-loved brand in the country. The slow growth of 2009/2010 could be a result of the investigation by the Competition Commission into the major food-retail chains.

McGregor BFA Fin24Expert completed a valuation of Shoprite and the findings resulted in negative figures. The values as obtained from the McGregor BFA Fin24Expert ranged from -R907 040 380 in 2004 to -R705 645 080 in 2011. The highest negative figure (R2 224 005 290) was reported for the financial year 2008. The value of Shoprite showed an increase of 22.20% over the eight-year period, although the arithmetic average growth rate for the period 2004 to 2011

of 18.89% was negative. The highest percentage decrease in value occurred from 2006 to 2007 (decrease of 197.16%) and from 2007 to 2008 (decrease of 85.13%). The other years, that is for the 2004/2005, 2005/2006, 2008/2009, 2009/2010 and 2010/2011 financial years, showed positive percentage increases in value ranging from 7.11% (2005/2006) to 52.02% (2004/2005). The share price of Shoprite at the end of the financial year increased from R9.08 in 2004 to R97.60 in 2011. Therefore the percentage increase in the share prices was 974.89%. If one considers the growth rate for the share price of the eight-year period, the arithmetic average growth rate was 41.40% with the steepest increase of 68.46% for the 2005/2006 financial year and the lowest increase of 18.97% for the 2010/2011 financial year. It should be noted that the DCF approach was not used to value Shoprite. The valuation approach used by McGregor BFA Fin24Expert placed emphasis on the number of shares outstanding, the share price at the end of the financial year, the short-term and long-term debt (interest bearing and non-interest bearing), preference shares outstanding and cash. Therefore the approach used by McGregor BFA Fin24Expert did not focus on the business's ability to generate cash flow, which is the focus of the DCF approach.

6.4 REPORTING ON VALUATION OF THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE)

A discussion of the variables that formed part of the valuations will be presented. The discussion will be followed by the presentation of the valuations as calculated using the DCF approach. SPAR was classified as a brick-and-click business with interactive online presence, as described in section 5.3.5.

6.4.1 Variables for valuations of The SPAR Group Ltd (brick-and-click business with interactive online presence)

Table 6.4 summarises the variables used to calculate the value of SPAR for each year as from 2004 to 2011. The calculation of the FCFs as presented in Table 6.4 is shown in Annexure B. All the other variables shown in Table 6.4 were obtained from the McGregor BFA Fin24Expert.

TABLE 6.4: SUMMARY OF VARIABLES USED IN THE VALUATION OF THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE)

VARIABLES[1]	2004	2005	2006	2007	2008	2009	2010	2011
FCF[2] (R'000)	R392 308	R58 488	R290 700	R471 900	R280 900	R402 200	R742 500	R722 800
WACC[3]	12.11%[5]	12.67%	11.54%	14.52%	13.12%	10.66%	9.73%	9.79%
WACC[4]	11.97%[5]	12.41%	11.53%	15.21%	13.69%	9.80%	9.85%	10.23%
R157	n/a	8.10%	8.63%	8.26%	8.86%	8.29%	7.30%	6.99%
R153	n/a	7.86%	8.63%	8.95%	9.43%	7.43%	7.43%	7.43%
RRR[3]	7.41%	6.96%	6.65%	6.80%	7.16%	6.58%	7.10%	6.57%
RRR[4]	7.77%	7.06%	6.76%	7.18%	7.98%	6.79%	2.52%	2.52%
Market risk premium	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Beta	n/a	0.79	0.49	0.39	0.71	0.40	0.40	0.47
Cost of equity[3]	n/a	12.84%	11.58%	13.85%	13.12%	10.66%	9.73%	9.79%
After tax cost of debt[3]	88.07%	9.45%	10.58%	1 694.35%	0.00%	0.00%	0.00%	0.00%
Cost of equity[4]	n/a	12.60%	11.58%	14.54%	13.69%	9.80%	9.85%	10.23%
After tax cost of debt[4]	88.07%	9.45%	10.58%	1 694.35%	0.00%	0.00%	0.00%	0.00%

[1] All figures except FCF obtained from McGregor BFA Fin24Expert. Researcher calculated FCF using the cash flow statements.
[2] See Annexure A for calculation of FCF.
[3] R157 used as risk-free rate in calculations.
[4] R153 used as risk-free rate in calculations.
[5] WACC the average of 2005 and 2006.

Source: McGregor BFA Fin24Expert 2012, Researcher's own calculations.

It should be noted that SPAR listed on the JSE during October 2004 after the unbundling from Tiger Brands Limited, therefore the 2004 figures and percentages are not a true reflection of SPAR's performance for that specific year. The discussion of the variables to follow will thus be either as from 2005 or 2004, depending on the applicability and availability of the information. A discussion of the results as presented in Table 6.4 is provided in the paragraphs to follow.

The FCF for SPAR increased from R392 308 000 to R722 800 000 over the eight-year period as from 2004 to 2011, which represents an 84.24% increase in FCF. For the financial years 2004/2005 and 2007/2008, the FCF decreased by 85.09% and 40.47% respectively. There was a slight decline of 2.65% in the FCF from 2010 to 2011. The FCF increased drastically from 2005 to 2006 by 397.03%, especially after the decline from 2004 to 2005. For the financial years 2006/2007, 2008/2009 and 2009/2010, the FCF increased by 62.33%, 43.18% and 84.61% respectively. The arithmetic average growth rate of the FCF for the period 2004 to 2011 was 65.56%. The highest FCF was recorded for the 2010 financial year (R742 500 000) while the lowest was recorded for the 2005 financial year (R58 488 000). It should be noted that SPAR listed on the JSE during October 2004 after the unbundling from Tiger Brands. Therefore the first full year for SPAR as a listed company on the JSE would be the 2005 financial year and thus could be the reason for the low FCF for the 2005 financial year. During the 2005 financial year, a total of 110 outlets were opened, which could have decreased the FCF of SPAR. The greatest percentage decline in FCF was for the 2008 financial year, which could be a result of the economic recession and the financial instability of the world economy.

The WACC using the R157 government bond as the risk-free rate ranged from 12.11% in 2004 to 9.79% in 2011. The average WACC for the seven-year period was 11.72%. The lowest WACC of 9.73% was reported in 2010 while the highest WACC of 14.52% was reported in 2007. The WACC using the R153 government bond as the risk-free rate ranged from 11.97% in 2004 to 10.23% in 2011. The average WACC for the seven-year period was 12.82%. The lowest WACC of 9.80% was reported in 2009 while the highest WACC of 15.21% was

reported in 2007. One possible reason for the highest WACCs reported for the 2007 and 2008 financial years was that of the turmoil in the financial world and the start of the world economic recession. Therefore the cost of capital in general was extraordinarily high, with WACC as 14.52% (13.12% in 2008) when using the R157 as the risk-free rate in 2007 and 15.21% (13.69% in 2008) when using the R153 as the risk-free rate in 2007.

The rate of return of the R157 government bond ranged from 8.10% in 2005 to 6.99% in 2011 with the lowest return of 6.99% in 2011 and the highest return of 8.86% in 2008. The average rate of return for the period 2005 to 2011 was 8.06%. The rate of return of the R153 government bond ranged from 7.86% in 2005 to 7.43% in 2011. The average rate of return for the seven-year period was 8.17%. The lowest rate of return of 7.43% was reported for three consecutive years, namely for the 2009, 2010 and 2011 financial years, while the highest return of 9.43% was reported in 2008. The main contributor to the higher returns during 2008 on the government bonds was the result of the world recession.

The required rate of return ranged from 7.41% in 2004 to 6.57% in 2011 when using the R157 government bond as the risk-free rate of return. The average required rate of return for the eight-year period was 6.90% (6.83% for the period 2005 to 2011). The highest required rate of return of 7.41% was recorded in 2004 (7.16% in 2008 if the 2004 financial year is ignored) while the lowest required rate of return of 6.57% was recorded in 2011. The required rate of return ranged from 7.77% in 2004 to 2.52% in 2011 when using the R153 government bond as the risk-free rate of return. The average required rate of return was 6.07% (5.83% if the 2004 financial year is ignored). The highest required rate of return was recorded in 2008 (7.98%) while the lowest required rates of return were recorded in 2010 and 2011 (both were 2.52%). The higher required rate of return during the 2008 financial year could be a result of the financial instability in the global financial environment.

If one considers the volatility of SPAR as measured by beta (β), SPAR was not as volatile as the market as it was less than one ($\beta < 1$). Beta is the

measurement to determine the sensitivity of a security to the movements in the market portfolio (Hillier *et al*. 2010:280). Beta ranged from 0.79 in 2005 to 0.47 in 2011. The lowest beta of 0.39 was recorded in 2006 while the highest beta of 0.79 was recorded in 2005 which was the first full year SPAR was listed on the JSE. The second highest beta, 0.71, was recorded in 2008 and could be due to the world recession.

The cost of equity ranged from 12.841% in 2005 to 9.79% in 2011 when using the R157 government bond as the risk-free rate of return. The cost of equity was therefore cheaper in 2011 than in 2005. The lowest cost of equity was recorded in 2010 (9.73%) and the highest cost of equity was recorded in 2007 (13.85%). The average cost of equity for the 2005 to 2011 period was 11.65%. The cost of equity ranged from 12.60% in 2005 to 10.23% in 2011 when using the R153 government bond as the risk-free rate of return. The cost of equity was therefore cheaper in 2011 than in 2005. The lowest cost of equity was recorded in 2010 (9.85%) and the highest cost of equity was recorded in 2007 (14.54%). The average cost of equity for the 2004 to 2011 period was 11.76%. During the 2007 and 2008 financial years equity was very expensive with the 2007 financial year being the most expensive year for SPAR to obtain equity, regardless of which one of the two risk-free rates were used. The cause of the high cost of equity could have been the world recession and the instability in the world financial environment.

The after-tax cost of debt ranged from 9.45% in 2005 to 0.00% in 2011. The weighting given to the cost of equity was 100% for the 2008 to 2011 financial years as per McGregor BFA Fin24Expert, therefore no debt formed part of the optimal capital structure for these four years. As the risk-free rate has no effect on the cost of debt, the after-tax cost of debt when using the R157 and R153 government bonds as risk-free rates do not differ. The after-tax cost of debt of SPAR for 2007 was exceptionally high (1 694.35%). A possible reason for the high cost of debt was that SPAR expanded rapidly during 2007 in terms of new outlets (SPAR, TOPS at SPAR and Built it stores), new fleet purchases, expansion of distribution centres and increased market share. The lowest cost of debt was recorded in 2005 (9.45%). The average after-tax cost of debt for the

2005 to 2011 period was 244.91%. The applicable South African tax rate was 30% for the 2004 and 2005 financial years, 29% for the 2006, 2007 and 2008 financial years and 28% for the 2009, 2010 and 2011 financial years.

6.4.2 Valuations of The SPAR Group Ltd (brick-and-click business with interactive online presence)

Table 6.5 provides a summary of the valuations done for SPAR for the 2004 to 2011 period, while Table 6.6 illustrates the growth rates of the various valuations and the share price.

TABLE 6.5: SUMMARY OF VALUATIONS OF THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE)

Year	Discounted FCF using WACC as discount rate (R'000)				Valuation as provided by McGregor[3] (R'000)	Share price[4]
	Single period[1]		Multiple periods[2]			
	R157	R153	R157	R153		
2004	R390 280.05	R390 245.86	R390 280.05	R390 245.86	R151 421.00	R0.00
2005	R51 910.89	R52 030.96	R360 947.96	R362 499.26	R85 856.56	R29.52
2006	R260 623.99	R260 647.36	R590 341.78	R590 449.63	R115 915.99	R36.58
2007	R412 067.76	R409 599.86	R900 755.29	R889 529.57	-R199 264.96	R53.10
2008	R248 320.37	R247 075.38	R1 065 454.68	R1 051 548.05	R208 080.93	R53.33
2009	R363 455.63	R366 302.37	R1 383 826.92	R1 416 313.90	R235 697.15	R63.29
2010	R676 660.89	R675 921.71	R1 969 847.61	R1 963 487.14	R254 211.98	R86.60
2011	R658 347.75	R655 719.86	R2 449 642.76	R2 418 928.87	R269 226.78	R95.13

[1]Single period includes only one FCF for that particular year, for example, 2006 financial year includes only FCF of 2006
[2]Multiple periods include all FCF up to that specific year, for example, valuation for 2006 Multiple periods include FCF for 2004, 2005 and 2006
[3](Number of shares x Share price at end of financial year) + (Long-term debt + Short-term debt) + (Preference shares – Cash)
[4]Share price at the end of the financial year as published by McGregor BFA Fin24Expert

Source: Researcher's own construct.

The 2004 share price for SPAR, as presented in Table 6.5, is indicated as zero. The reason for no share price is that SPAR unbundled from Tiger Brands Limited in 2004 and SPAR listed for the first time on the JSE during October

2004. Therefore there is no share price that can be used for the 2004 financial year.

TABLE 6.6: GROWTH OF VALUATIONS AND SHARE PRICES OF THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE)

Year	Discounted FCF using WACC as discount rate				Valuation as provided by McGregor	Share price
	Single period		Multiple periods			
	R157	R153	R157	R153		
2004/2005	-86.70%	-86.67%	-7.52%	-7.11%	-43.30%	-
2005/2006	402.06%	400.95%	63.55%	62.88%	35.01%	23.92%
2006/2007	58.11%	57.15%	52.58%	50.65%	-271.90%	45.16%
2007/2008	-39.74%	-39.68%	18.28%	18.21%	204.42%	0.43%
2008/2009	46.37%	48.26%	29.88%	34.69%	13.27%	18.68%
2009/2010	86.17%	84.53%	42.35%	38.63%	7.86%	36.83%
2010/2011	-2.71%	-2.99%	24.36%	23.20%	5.91%	9.85%
Arithmetic average	66.22%	65.93%	31.93%	31.59%	-6.96%	22.48%
Change in valuation	68.69%	68.03%	527.66%	519.85%	77.80%	222.26%

Source: Researcher's own construct.

All the discussions to follow are based on the results as presented in Tables 6.5 and 6.6. The valuation of SPAR for a single period using the R157 government bond as the risk-free rate ranged from R390 280 050 in 2004 (R51 910 890 in 2005 if ignoring 2004 financial year) to R658 347 750 in 2011. Therefore the value of SPAR increased with 68.69% from 2004 to 2011 while the arithmetic average growth rate was 66.22% for the same period. There was a steep increase of 402.06% in the value of SPAR from 2005 to 2006, while there was a loss of value from 2007 to 2008 (decrease of 39.74%) and from 2010 to 2011 (decrease of 2.71%). Although there was a decrease in value from 2004 to 2005 of 86.70%, it should be noted that during 2004 SPAR was still part of Tiger Brand Limited, a listed company on the JSE. The valuation of SPAR for a single period using the R153 government bond as the risk-free rate ranged from

R390 245 860 in 2004 (R52 030 960 in 2005 if ignoring 2004) to R655 719 860 in 2011. Therefore the value of SPAR increased with 68.03% over the eight-year period. The arithmetic average growth rate for the same period was 65.93%. The value of SPAR increased rapidly from 2005 to 2006 (increase of 400.95%), while there was a loss of value from 2007 to 2008 (decrease of 39.68%) and from 2010 to 2011 (slight decrease of 2.99%). Possible explanations for the increase in value of SPAR could be the increase in the number of outlets throughout South Africa, the improvement of the various distribution centres and the use of the new fleet vehicles. The decreases in the value of SPAR could be a result of the world recession and the global food shortages during 2008 and the decline in 2011 could be the effect of competition (Wal-Mart) entering the retail market.

The valuation of SPAR for multiple periods using the R157 government bond as the risk-free rate ranged from R390 280 050 in 2004 to R2 449 642 760 in 2011. This represents a 527.66% increase in value for SPAR. The arithmetic average growth rate for the eight-year period was 31.93%. The highest percentage increase in the value of SPAR was from 2005 to 2006 (63.55%) and the lowest percentage increase was from 2007 to 2008 (18.28%). The valuation of SPAR for multiple periods using the R153 government bond as the risk-free rate ranged from R390 245 860 in 2004 to R2 418 928 870 in 2011. This represents a 519.85% increase in value for SPAR while the arithmetic average growth rate was 31.59% for the same eight-year period. As in the case of the valuation with the R157 government bond as the risk-free rate, the highest percentage increase in value occurred from 2005 to 2006 (62.88%) and the lowest percentage increase in value occurred from 2007 to 2008 (18.21%). The decline in the value of SPAR from 2004 to 2005 was ignored as SPAR was still part of Tiger Brand Limited for the majority of the 2004 financial year. Possible reasons for the increase in value of SPAR could be the increase in the number of outlets catering for various income groups country-wide in South Africa. Some of the existing SPAR (SPAR, TOPS at SPAR and Built it) outlets also increased their retail space over the eight-year period. SPAR also increased the market share on a continuous basis. A number of distribution centres were streamlined to be more efficient.

McGregor BFA Fin24Expert completed a valuation of SPAR and one of the valuations resulted in a negative figure. The values as obtained from the McGregor BFA Fin24Expert ranged from R151 421 000 in 2004 to R269 226 780 in 2011. The value of SPAR showed an increase of 77.80% over the eight-year period, although the arithmetic average growth rate for the period 2004 to 2011 of 6.96% was negative. The highest percentage decrease in value occurred from 2006 to 2007 (decrease of 271.90%) and from 2004 to 2005 (decrease of 43.30%). The highest percentage increase in value occurred from 2007 to 2008 when the value increased by 204.42%. The value of SPAR was growing from 2008 to 2011 at a diminishing rate (204.42% in 2008, 13.27% in 2009, 7.86% in 2010 and 5.91% in 2011). The share price of SPAR at the end of the financial year increased from R29.52 in 2005 to R95.13 in 2011 which is a 222.26% increase. If one considers the growth rate for the share price of the seven-year period (2005 to 2011), the arithmetic average growth rate was 22.48% with the steepest increase of 45.16% for the 2006/2007 financial year and the lowest increase of 0.43% for the 2007/2008 financial year. It should be noted that the DCF approach was not used to value SPAR. The valuation approach used by McGregor BFA Fin24Expert placed emphasis on the number of shares outstanding, the share price at the end of the financial year, the short-term and long-term debt (interest bearing and non-interest bearing), preference shares outstanding and cash. Therefore the approach used by McGregor BFA Fin24Expert did not focus on the business's ability to generate cash flow, which is the focus of the DCF approach.

6.5 REPORTING ON VALUATION OF PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE)

A discussion of the variables that formed part of the valuations will be presented. The discussion will be followed by the presentation of the valuations as calculated using the DCF approach. According to section 5.4.5, PnP is classified as a brick-and-click business in the e-commerce stage.

6.5.1 Variables for valuations of Pick n Pay Stores Ltd (brick-and-click business in the e-commerce stage)

Table 6.7 summarises the variables used to calculate the value of PnP for each year as from 2004 to 2011. The calculation of the FCFs as presented in Table 6.7 is shown in Annexure C. All the other variables shown in Table 6.7 were obtained from the McGregor BFA Fin24Expert.

TABLE 6.7: SUMMARY OF VARIABLES USED IN THE VALUATION OF PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE)

VARIABLES[1]	2004	2005	2006	2007	2008	2009	2010	2011
FCF[2] (R'000)	R 460 200	R 765 400	R 585 900	R 801 900	R 395 700	R 824 800	R 952 900	R 972 100
WACC[3]	11.29%	9.21%	6.07%	10.03%	9.10%	10.01%	10.09%	10.93%
WACC[4]	10.98%	8.98%	4.18%	10.52%	8.88%	9.37%	9.49%	10.69%
R157	9.48%	7.67%	7.33%	7.63%	8.99%	8.07%	8.17%	7.77%
R153	9.36%	7.40%	7.20%	7.98%	9.58%	6.93%	7.43%	7.43%
RRR[3]	7.57%	7.07%	6.73%	6.89%	7.29%	6.65%	7.27%	6.63%
RRR[4]	7.78%	7.07%	6.77%	7.19%	8.00%	6.80%	2.49%	2.49%
Market risk premium	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Beta	0.47	0.26	0.27	0.36	0.20	0.32	0.37	0.52
Cost of equity[3]	12.27%	9.25%	8.94%	9.77%	10.20%	9.97%	10.40%	10.91%
After tax cost of debt[3]	8.23%	8.99%	3.03%	11.09%	6.92%	10.10%	9.15%	10.98%
Cost of equity[4]	12.16%	8.98%	8.81%	10.12%	10.79%	8.83%	9.65%	10.56%
After tax cost of debt[4]	8.23%	8.99%	3.03%	11.09%	6.92%	10.10%	9.15%	10.98%

[1] All figures except FCF obtained from McGregor BFA Fin24Expert. Researcher calculated FCF using the cash flow statements.
[2] See Annexure A for calculation of FCF.
[3] R157 used as risk-free rate in calculations.
[4] R153 used as risk-free rate in calculations.

Source: McGregor BFA Fin24Expert 2012, Researcher's own calculations.

A discussion of the results as presented in Table 6.7 is given in the following paragraphs. Table 6.7 showed that the FCF for PnP increased by 111.23%, that is as from R460 200 000 in 2004 to R972 100 000 in 2011. There was a decline in the FCF from 2005 to 2006 (decrease of 23.45%) and from 2007 to 2008 (decrease of 50.65%). For the other financial years positive FCF growth were reported ranging from 2.01% to 108.44%. The arithmetic average growth rate of the FCF for the period 2004 to 2011 is 22.15%. The highest FCF was recorded for the 2011 financial year (R972 100 000) while the lowest was recorded for the 2008 financial year (R395 700 000). The lowest FCF growth was reported for the 2007/2008 financial year (decrease of 50.65%) which could be a result of the start of the world financial crisis. The growth of the FCF from 2008 to 2009 was the highest (108.44%) which could be a result of the recovery of the economy from the world recession. The disposal of the Franklin stores did not have an impact on the FCF of PnP.

The WACC using the R157 government bond as the risk-free rate ranged from 11.29% in 2004 to 10.93% in 2011. The average WACC for the eight-year period was 9.59%. The lowest WACC of 6.07% was reported in 2006 while the highest WACC of 11.29% was reported in 2004. The WACC using the R153 government bond as the risk-free rate ranged from 10.98% in 2004 to 10.69% in 2011. The average WACC for the eight-year period was 9.14%. The lowest WACC of 4.18% was reported in 2006 while the highest WACC of 10.98% was reported in 2004.

The rate of return of the R157 government bond ranged from 9.48% in 2004 to 7.77% in 2011 with the lowest return of 7.33% in 2006 and the highest return of 9.48% in 2004. The average rate of return for the period 2004 to 2011 was 8.14%. The rate of return of the R153 government bond ranged from 9.36% in 2004 to 7.43% in 2011. The average rate of return for the eight-year period was 7.91%. The lowest rate of return of 6.93% was reported in 2009 while the highest return of 9.58% was reported in 2008. Once again, the world recession can be regarded as the main contributor to the higher returns during 2008.

The required rate of return ranged from 7.57% in 2004 to 6.63% in 2011 when using the R157 government bond as the risk-free rate of return. The average required rate of return was 7.01%. The highest required rate of return was recorded in 2004 (7.57%) while the lowest was recorded in 2011(6.63%). The required rate of return ranged from 7.78% in 2004 to 2.49% in 2011 and 2010 when using the R153 government bond as the risk-free rate of return. The average required rate of return was 6.07%. The highest required rate of return was recorded in 2008 (8.00%) while the lowest required rates of return were recorded in 2010 and 2011 (both were 2.49%). The instability of the global financial environment led to higher required rate of return during the 2008 financial year. A recovery of the economic environment is visible if one considers the lower required rate of returns after the 2008 financial year.

If one considers the volatility of PnP as measured by beta (β), PnP was not as volatile as the market, as it is less than one ($\beta < 1$). Beta is the measurement to determine the sensitivity of a security to the movements in the market portfolio (Hillier *et al*. 2010:280). The lowest beta of 0.20 was recorded in 2008 while the highest beta of 0.52 was recorded in 2011. A possible reason for the low beta in 2008 could be the need for groceries regardless of the state of the economy. The higher beta of 2011 could be a result of the retirement of Mr Raymond Ackerman as chairperson of the board of directors during 2010, implying that a trusted form of stability in the company was no more part of the company. Another possible reason could be that more emphasis was placed on PnP's Food Safety Audit Standards in the retail market, as these standards were accepted as the retail industry benchmark. Other factors that might have resulted in low betas include being named as one of South Africa's top 10 brands, awarding of Best Grocery/General Store, the awarding of the Corporate Governance Award for Ethics and Integrity, awarding of the Kudu Award for environmental projects and being named as the Coolest Grocery Store by South Africa's youth. All these awards created a sense of stability and therefore PnP was regarded as being not as volatile as the market in general.

The cost of equity ranged from 12.27% in 2004 to 10.91% in 2011 when using the R157 government bond as the risk-free rate of return. The cost of equity

was therefore cheaper in 2011 than in 2004. The lowest cost of equity was recorded in 2006 (8.94%) and the highest cost of equity was recorded in 2004 (12.27%). The average cost of equity for the 2004 to 2011 period was 10.21%. The cost of equity ranged from 12.16% in 2004 to 10.56% in 2011 when using the R153 government bond as the risk-free rate of return. The cost of equity was therefore cheaper in 2011 than in 2004. The lowest cost of equity was recorded in 2006 (8.81%) and the highest cost of equity was recorded in 2004 (12.16%). The average cost of equity for the 2004 to 2011 period was 9.99%.

The after-tax cost of debt ranged from 8.23% in 2004 to 10.98% in 2011. As the risk-free rate has no effect on the cost of debt, the after-tax cost of debt when using the R157 and R153 government bonds as risk-free rates do not differ. The after-tax cost of debt of PnP was cheaper than the cost of equity in 2004 (8.23% versus 12.27% and 12.16%), 2006 (3.03% versus 8.94% and 8.81%), 2008 (6.92% versus 10.20% and 10.79%) and 2010 (9.15% versus 10.40% and 9.65%). The years 2007 and 2009 were the only years where the after-tax cost of debt (11.09% in 2007 and 10.10% in 2009) was more expensive than the cost of equity (9.77% and 10.12% in 2007 and 9.97% and 8.83% in 2009). The lowest cost of debt was recorded in 2008 (6.92%) although there was a world financial crisis. The average after-tax cost of debt for the 2004 to 2011 period was 8.56%. The applicable South African tax rate was 30% for the 2004 and 2005 financial years, 29% for the 2006, 2007 and 2008 financial years and 28% for the 2009, 2010 and 2011 financial years.

6.5.2 Valuations of Pick n Pay Stores Ltd (brick-and-click business in the e-commerce stage)

Table 6.8 provides a summary of the valuations done for PNP for the 2004 to 2011 period, while Table 6.9 illustrates the growth rates of the various valuations and the share price.

TABLE 6.8: SUMMARY OF VALUATIONS OF PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE)

Year	Discounted FCF using WACC as discount rate (R'000)				Valuation as provided by McGregor[3] (R'000)	Share price[4]
	Single period[1]		Multiple periods[2]			
	R157	R153	R157	R153		
2004	R413 520.93	R414 669.31	R413 520.93	R414 669.31	-R985 334.29	R17.11
2005	R700 883.02	R702 330.70	R1 086 770.57	R1 089 814.02	-R893 127.43	R23.26
2006	R552 386.18	R562 392.01	R1 618 387.78	R1 674 603.31	R67 056.52	R30.54
2007	R728 795.94	R725 570.03	R2 101 284.34	R2 080 665.46	R269 426.66	R34.05
2008	R362 683.14	R363 427.63	R2 325 338.83	R2 339 152.55	R744 444.91	R29.84
2009	R749 743.89	R754 137.33	R2 813 657.46	R2 865 348.27	R89 118.88	R32.19
2010	R865 566.11	R870 307.79	R3 415 664.23	R3 478 357.85	R22 177.29	R40.28
2011	R876 342.10	R878 218.45	R3 879 431.40	R3 909 009.14	R681 092.15	R44.01

[1]Single period includes only one FCF for that particular year, for example, 2006 financial year includes only FCF of 2006
[2]Multiple periods include all FCF up to that specific year, for example, valuation for 2006 Multiple periods include FCF for 2004, 2005 and 2006
[3](Number of shares x Share price at end of financial year) + (Long-term debt + Short-term debt) + (Preference shares – Cash)
[4]Share price at the end of the financial year as published by McGregor BFA Fin24Expert

Source: Researcher's own construct.

TABLE 6.9: GROWTH OF VALUATIONS AND SHARE PRICES OF PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE)

YEAR	Discounted FCF using WACC as discount rate				Valuation as provided by McGregor	Share price
	Single period		Multiple periods			
	R157	R153	R157	R153		
2004/2005	69.49%	69.37%	162.81%	162.82%	9.36%	35.94%
2005/2006	-21.19%	-19.92%	48.92%	53.66%	109.98%	31.30%
2006/2007	31.94%	29.01%	29.84%	24.25%	301.79%	11.49%
2007/2008	-50.24%	-49.91%	10.66%	12.42%	176.31%	-12.36%
2008/2009	106.72%	107.51%	21.00%	22.50%	-88.03%	7.88%
2009/2010	15.45%	15.40%	21.40%	21.39%	-75.11%	25.13%
2010/2011	1.24%	0.91%	13.58%	12.38%	2971.12%	9.26%
Arithmetic Average	21.92%	21.77%	44.03%	44.20%	486.13%	15.52%
Change in valuation	111.92%	111.79%	838.15%	842.68%	-169.12%	157.22%

Source: Researcher's own construct.

A discussion of Tables 6.8 and 6.9 follows. The valuation of PnP for a single period using the R157 government bond as the risk-free rate ranged from R413 520 930 in 2004 to R876 342 100 in 2011. Therefore the value of PnP increased by 111.92% from 2004 to 2011. The arithmetic average growth rate was 21.92%. The value of PnP increased rapidly from 2008 to 2009 (increase of 106.72%), while there was a loss of value from 2005 to 2006 (decrease of 21.19%) and from 2007 to 2008 (decrease of 50.24%). The valuation of PnP for a single period using the R153 government bond as the risk-free rate ranged from R414 699 310 in 2004 to R878 218 450 in 2011. Therefore the value of PnP increased by 111.79% over the eight-year period. The arithmetic average growth rate was 21.77%. The value of PnP increased from 2008 to 2009 (increase of 107.51%), while there was a loss of value from 2005 to 2006 (decrease of 19.92%) and from 2007 to 2008 (decrease of 49.91%). Possible explanations for the increase in value of PnP could be the numerous awards PnP received over the eight-year period, the increase in the number of outlets in

South Africa and in Africa, the launching of private label brands and the creation of new employment opportunities. The announcement of PnP as one of the proud sponsors of the 2011 Rugby World Cup and the new logo and brandline could have resulted in exceptionally high valuations for 2007. The low growth rate of 2011 could be ascribed to the entry of Wal-Mart into the South African market. The retiring of the CEO during 2007 could have had an impact on the 2008 growth rate.

The valuation of PnP for multiple periods using the R157 government bond as the risk-free rate ranged from R413 520 930 in 2004 to R3 879 431 400 in 2011. This represents an 838.15% increase in value for PnP. The arithmetic average growth rate for the eight-year period was 44.03%. The value of PnP showed steep increases from 2004 to 2005 of 162.81% and from 2005 to 2006 of 48.92%. For the other periods, the growth rate slowed down to below 30.00% per annum. The valuation of PnP for multiple periods using the R153 government bond as the risk-free rate ranged from R414 669 310 in 2004 to R3 909 009 140 in 2011. This represents an 842.68% increase in value for PnP while the arithmetic average growth rate was 44.20% for the same eight-year period. The value of PnP showed steep increases of 162.82% and 53.66% for the 2004/2005 and 2005/2006 financial years respectively. The steep increases could be a result of green initiatives (such as the launching of the Green Bag) undertaken by PnP and the various award received by PnP. The awards included the Top Company in the Top 300, Best Grocery/General Store and Third Most Admired Company in South Africa. PnP was also named as one of South Africa's top 10 brands.

Two of the valuations of PnP as calculated by McGregor BFA Fin24Expert resulted in negative figures (2004 with negative R985 334 290 and 2005 with negative R893 127 430). The values as calculated by McGregor BFA Fin24Expert ranged from negative R985 334 290 in 2004 to R681 092 150 in 2011. The value of PnP increased by 169.12% over the eight-year period, from a negative value to a positive value. The arithmetic average growth rate for the period 2004 to 2011 was 486.13%. The highest percentage increase in value of 2 971.12% occurred from 2010 to 2011. Extraordinarily high growth rates were

also reported for 2006 to 2007 (increase of 301.79%), 2007 to 2008 (increase of 176.31%) and 2005 to 2006 (107.51%). Two consecutive years reported a decrease in value, namely from 2008 to 2009 (decrease of 88.03%) and from 2009 to 2010 (decrease of 75.11%). The share price of PnP at the end of the financial year increased from R17.11 in 2004 to R44.01 in 2011 which represents an increase of 157.22%. If one considers the growth rate for the share price of the eight-year period, the arithmetic average growth rate was 15.52%, with the steepest increase of 35.94% for the 2004/2005 financial year and the lowest increase (which is actually a decrease) of -12.36% for the 2007/2008 financial year. During 2007 it was announced that PnP was one of the proud sponsors of the 2011 Rugby World Cup. Therefore the increase in the share price during 2007 could have resulted from this announcement. The new logo and brandline of PnP that was introduced during 2007 could also have resulted in an increase in the share price. The retiring of the CEO could have been a possible reason for the decrease in the share price in 2008. It should be noted that the DCF approach was not used to value PnP. The valuation approach used by McGregor BFA Fin24Expert placed emphasis on the number of shares outstanding, the share price at the end of the financial year, the short-term and long-term debt (interest bearing and non-interest bearing), preference shares outstanding and cash. Therefore the approach used by McGregor BFA Fin24Expert did not focus on the business's ability to generate cash flow which is the focus of the DCF approach.

6.6 REPORTING ON VALUATION OF NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE)

A discussion of the variables that formed part of the valuations will be presented. The discussion will be followed by the presentation of the valuations as calculated using the DCF approach. According to the discussion in section 5.5.5, Naspers is an online business in the e-commerce stage.

6.6.1 Variables for valuations of Naspers Ltd (online business in the e-commerce stage)

Table 6.10 summarises the variables used to calculate the value of Naspers for each year as from 2004 to 2011. The calculation of the FCFs as presented in Table 6.10 is shown in Annexure D. All the other variables shown in Table 6.10 were obtained from the McGregor BFA Fin24Expert.

TABLE 6.10: SUMMARY OF VARIABLES USED IN THE VALUATION OF NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE)

VARIABLES[1]	2004	2005	2006	2007	2008	2009	2010	2011
FCF[2] (R'000)	R951 713	R913 092	R369 255	-R6 059 945	-R8 496 832	R7 430 679	R24 000	-R1 253 000
WACC[3]	18.09%	13.64%	13.63%	13.56%	10.88%	11.52%	11.04%	11.33%
WACC[4]	18.04%	13.34%	13.43%	13.82%	11.20%	10.53%	10.64%	11.02%
R157	9.72%	8.58%	7.51%	7.84%	9.23%	8.17%	7.95%	7.82%
R153	9.52%	8.20%	7.30%	8.19%	9.72%	6.89%	7.43%	7.43%
RRR[3]	6.33%	6.23%	6.16%	6.19%	6.28%	6.14%	6.26%	6.14%
RRR[4]	6.67%	6.40%	6.29%	6.45%	6.75%	6.30%	4.68%	4.68%
Market risk premium	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Beta	1.29	1.00	1.17	1.11	0.90	0.75	0.82	0.84
Cost of equity[3]	17.49%	14.55%	14.50%	14.48%	14.65%	12.64%	12.87%	12.86%
After tax cost of debt[3]	18.69%	11.81%	11.73%	7.21%	1.81%	7.13%	5.48%	7.14%
Cost of equity[4]	17.29%	14.17%	14.30%	14.83%	15.14%	11.36%	12.35%	12.46%
After tax cost of debt[4]	18.69%	11.81%	11.73%	7.21%	1.81%	7.13%	5.48%	7.14%

[1] All figures except FCF obtained from McGregor BFA Fin24Expert. Researcher calculated FCF using the cash flow statements.
[2] See Annexure A for calculation of FCF.
[3] R157 used as risk-free rate in calculations.
[4] R153 used as risk-free rate in calculations.

Source: McGregor BFA Fin24Expert 2012, Researcher's own calculations.

A discussion of the results as presented in Table 6.10 follows. The FCF for Naspers decreased from R951 713 000 to -R1 253 000 000 from 2004 to 2011. Therefore the FCF decreased by 231.66% and the arithmetic average growth rate of the FCF was -1 011.16%. As from 2004 to 2010, the only positive growth took place from 2008 to 2009 when the FCF grew by 187.45%. For all the other years, the growth rate of the FCF decreased ranging from negative 4.06% (2004) to negative 5 320.83% (2011). The highest positive FCF was recorded for the 2009 financial year (R7 430 679 000) while the lowest positive FCF was recorded for the 2010 financial year (R24 000 000). The highest negative FCF of R8 496 832 000 was reported for the 2008 financial year and the lowest negative FCF of R1 253 000 000 was reported in 2011.

The WACC using the R157 government bond as the risk-free rate ranged from 18.09% in 2004 to 11.33% in 2011. The average WACC for the eight-year period was 12.96%. The lowest WACC of 10.88% was reported in 2008 while the highest WACC of 18.09% was reported in 2004. The WACC using the R153 government bond as the risk-free rate ranged from 18.04% in 2004 to 11.02% in 2011. The average WACC for the eight-year period was 12.75%. The lowest WACC of 10.53% was reported in 2009 while the highest WACC of 18.04% was reported in 2004.

The rate of return of the R157 government bond ranged from 9.72% in 2004 to 7.82% in 2011 with the lowest return of 7.51% in 2006 and the highest return of 9.72% in 2004. The average rate of return for the period 2004 to 2011 was 8.35%. The rate of return of the R153 government bond ranged from 9.52% in 2004 to 7.43% in 2011. The average rate of return for the eight-year period was 8.08%. The lowest rate of return of 6.89% was reported in 2009 while the highest return of 9.72% was reported in 2008. The world's financial instability can be regarded as the main contributor to the higher returns during 2008.

The required rate of return ranged from 6.33% in 2004 to 6.14% in 2011 when using the R157 government bond as the risk-free rate of return. The average required rate of return was 6.22%. The highest required rate of return of 6.33% was recorded in 2004 while the lowest of 6.14% was recorded in both 2009 and

2011. The required rate of return ranged from 6.67% in 2004 to 4.68% in 2011 when using the R153 government bond as the risk-free rate of return with the average required rate of return of 6.03%. The highest required rate of return was recorded in 2008 (6.75%) while the lowest required rates of return were recorded in 2010 and 2011 (both were 4.68%). The global financial environment was in extreme turmoil in 2008 and therefore a higher required rate of return during the 2008 financial year was recorded.

If one considers the volatility of Naspers as measured by beta (β), Naspers' volatility for the eight-year period ranged from not as volatile as the market ($\beta < 1$), to as volatile as the market ($\beta = 1$) to as more volatile than the market ($\beta > 1$). Beta is the measurement to determine the sensitivity of a security to the movements in the market portfolio (Hillier *et al*. 2010:280). The lowest beta of 0.75 was recorded in 2009 while the highest beta of 1.29 was recorded in 2004. The beta value of Naspers was greater than or equal to one from 2004 to 2007 and since 2008 it has been below 0.9. The financial instability that occurred during and after 2008 did not have an impact on the volatility of Naspers. One of the reasons that could be offered as an explanation is that the majority of the products and services offered by Naspers are for the more wealthy consumers and the wealthy consumers might not have been affected by the world recession as much as less wealthy consumers. Another possibility is the listing of Naspers on the London Stock Exchange (LSE) during 2007 which could have been seen as a sign of stability and future growth opportunities. The higher beta of 2006 could have been a result of the implementation of the Electronic Communications Act.

The cost of equity ranged from 17.49% in 2004 to 12.86% in 2011 when using the R157 government bond as the risk-free rate of return. The cost of equity decreased drastically from 2004 to 2011. The lowest cost of equity was recorded in 2009 (12.64%) and the highest cost of equity was recorded in 2004 (17.49%). The average cost of equity for the 2004 to 2011 period was 14.25%. The cost of equity ranged from 17.29% in 2004 to 12.46% in 2011 when using the R153 government bond as the risk-free rate of return. The cost of equity was therefore cheaper in 2011 than in 2004. The lowest cost of equity was

recorded in 2009 (11.36%) and the highest cost of equity was recorded in 2004 (17.29%). The average cost of equity for the 2004 to 2011 period was 13.99%. During the 2007 and 2008 financial years equity was very expensive with the 2008 financial year being the most expensive year to obtain equity (ignoring the 2004 year), regardless of which one of the two risk-free rates were used. The high cost of equity could have resulted from the world recession and the turmoil in the financial environment. It should also be noted that Naspers delisted the American Depositary Shares (ADS) from Nasdaq in 2008 and terminated their registration of ADS with the Securities and Exchange Commission in the USE. Furthermore, Naspers listed on the LSE during 2007.

The after-tax cost of debt ranged from 18.69% in 2004 to 7.14% in 2011. Therefore debt was cheaper in 2011 than what it was in 2004. As the risk-free rate has no effect on the cost of debt, the after-tax cost of debt when using the R157 and R153 government bonds as risk-free rates does not differ. The after-tax cost of debt of Naspers for the period 2004 to 2011 was with the exception of the year 2004, cheaper than the cost of equity. Therefore it was cheaper for Naspers to finance investments with debt than with equity. The lowest cost of debt was recorded in 2008 (1.81%). The average after-tax cost of debt for the 2004 to 2011 period was 8.87%. The applicable South African tax rate was 30% for the 2004 and 2005 financial years, 29% for the 2006, 2007 and 2008 financial years and 28% for the 2009, 2010 and 2011 financial years.

6.6.2 Valuations of Naspers Ltd (online business in the e-commerce stage)

Table 6.11 provides a summary of the valuations done for Naspers for the 2004 to 2011 period, while Table 6.12 illustrates the growth rates of the various valuations and the share price.

TABLE 6.11: SUMMARY OF VALUATIONS OF NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE)

Year	Discounted FCF using WACC as discount rate (R'000)				Valuation as provided by McGregor[3] (R'000)	Share price[4]
	Single period[1]		Multiple periods[2]			
	R157	R153	R157	R153		
2004	R805 939.50	R806 234.44	R805 939.50	R806 234.44	R893 562.57	R43.47
2005	R803 510.80	R805 593.59	R1 486 004.87	R1 488 587.29	R164 675.78	R76.25
2006	R324 929.62	R325 495.64	R1 609 966.91	R1 614 838.11	-R1 808 458.94	R122.86
2007	-R5 336 525.59	-R5 324 049.55	-R3 938 922.94	-R3 919 881.79	-R7 514 864.04	R173.87
2008	-R7 662 859.96	-R7 641 077.20	-R1 1148 667.78	-R11 097 161.67	R6 127 729.88	R138.57
2009	R6 663 294.07	R6 723 075.32	-R3 331 632.40	-R3 195 064.07	R3 265 988.22	R153.99
2010	R21 613.11	R21 692.93	-R2 963 974.16	-R2 760 135.31	R5 526 600.91	R310.92
2011	-R1 125 512.12	-R1 128 623.44	-R3 781 716.04	-R3 528 831.35	R11 700 257.49	R380.85

[1]Single period includes only one FCF for that particular year, for example, 2006 financial year includes only FCF of 2006
[2]Multiple periods include all FCF up to that specific year, for example, valuation for 2006 Multiple periods include FCF for 2004, 2005 and 2006
[3](Number of shares x Share price at end of financial year) + (Long-term debt + Short-term debt) + (Preference shares – Cash)
[4]Share price at the end of the financial year as published by McGregor BFA Fin24Expert

Source: Researcher's own construct.

TABLE 6.12: GROWTH OF VALUATIONS AND SHARE PRICES OF NAPSERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE)

YEAR	Discounted FCF using WACC as discount rate				Valuation as provided by McGregor	Share price
	Single period		Multiple periods			
	R157	R153	R157	R153		
2004/2005	-0.30%	-0.08%	84.38%	84.63%	-81.57%	75.41%
2005/2006	-59.56%	-59.60%	8.34%	8.48%	-1 198.19%	61.13%
2006/2007	-1 742.36%	-1 735.67%	-344.66%	-342.74%	-315.54%	41.52%
2007/2008	43.59%	43.52%	183.04%	183.10%	181.54%	-20.30%
2008/2009	-186.96%	-187.99%	-70.12%	-71.21%	-46.70%	11.13%
2009/2010	-99.68%	-99.68%	-11.04%	-13.61%	69.22%	101.91%
2010/2011	-5 307.54%	-5 302.72%	27.59%	27.85%	111.71%	22.49%
Arithmetic average	-1 009.44%	-1 007.61%	-54.49%	-53.68%	-182.79%	41.90%
Change in valuation	-239.65%	239.99%	-569.23%	-537.69%	1 209.39%	399.48%

Source: Researcher's own construct.

The discussion to follow is based on the results presented in Tables 6.11 and 6.12. The valuation of Naspers for a single period using the R157 government bond as the risk-free rate ranged from positive value of R805 939 500 in 2004 to a negative value of R1 125 512 120 in 2011, implying a decrease in value of 239.65%. The arithmetic average growth rate was -1 009.44%. Only the 2008/2009 financial year reported a positive growth in the value of Naspers. The valuation of Naspers for a single period using the R153 government bond as the risk-free rate ranged from R806 234 440 in 2004 to -R1 128 623 440 in 2011. Therefore the percentage decrease in the value of Naspers over the eight-year period was 239.99%. The arithmetic average growth rate was negative 1 007.61%. The only positive growth rate was reported for the 2008/2009 financial year as all the other financial years reported negative growth rates.

The valuation of Naspers for multiple periods using the R157 government bond as the risk-free rate ranged from R805 939 500 in 2004 to negative R3 781 716 040 in 2011. This represents a decline in value of 569.23% for Naspers. The arithmetic average growth rate for the eight-year period was negative 54.49%. The value of Naspers showed steep decreases of 344.66% and 183.04% for the 2006/2007 and 2007/2008 financial years respectively. These decreases could have been the early signs of the world recession. The valuation of Naspers for multiple periods using the R153 government bond as the risk-free rate ranged from R806 234 440 in 2004 to negative R3 528 831 350 420 in 2011. This represents a 537.69% decrease in value for Naspers while the arithmetic average growth rate was -53.68% for the same eight-year period. The value of Naspers showed steep decreases of 342.74% and 183.10% for the 2006/2007 and 2007/2008 financial years respectively. The steep decreases from 2006 to 2007 and from 2007 to 2008 in Naspers' value could be a result of the implementation of the Electronic Communication Act and the delisting from Nasdaq.

McGregor BFA Fin24Expert completed a valuation of Naspers and two of the valuations resulted in negative valuations. The values as obtained from the McGregor BFA Fin24Expert ranged from R893 562 570 in 2004 to R11 700 257 490 in 2011. The highest positive value of R11 700 257 490 was reported for the 2011 financial year, while the smallest positive value of R893 562 570 was reported for the 2004 financial year. The value of Naspers increased by 1 209.39% from 2004 to 2011 although the arithmetic average growth rate for the same period of 182.79% was negative. The highest percentage decrease in value occurred from 2005 to 2006 (decrease of 1 198.19%) and from 2006/2007 (decrease of 315.54%). The highest percentage increase in value for Naspers was reported in 2008 (181.54%) and in 2011 (111.71%). The share price of Naspers at the end of the financial year increased from R43.47 in 2004 to R380.85 in 2011, which is a 776.12% increase. If one considers the growth rate for the share price of the eight-year period, the arithmetic average growth rate was 41.90% with the steepest increase of 101.91% for the 2009/2010 financial year and the lowest increase of 11.13% for the 2009/2010 financial year. The percentage decrease in the share

price from 2007 to 2008 was 20.30%. It should be noted that the DCF approach was not used to value Naspers. The valuation approach used by McGregor BFA Fin24Expert placed emphasis on the number of shares outstanding, the share price at the end of the financial year, the short-term and long-term debt (interest bearing and non-interest bearing), preference shares outstanding and cash. Therefore the approach used by McGregor BFA Fin24Expert did not focus on the business's ability to generate cash flow which is the focus of the DCF approach.

6.7 ALTERNATIVE APPROACH TO VALUATION

It should be noted that the principles of the Gordon model as discussed in Chapter Three could also be applied in the study. The FCF as calculated and presented in Annexures A to D are used. The WACCs as presented in Tables 6.1, 6.4, 6.7 and 6.10 for the respective businesses are used in the calculations. This valuation approach aims to grow the FCF with WACC for each period as from the basis year. The basis year for this study is 2004. Therefore the 2004 FCF will grow for one period, 2005 FCF will grow for two periods, the 2006 FCF will grow for three periods, and so forth. The average of the "future" FCF will then be discounted to the basis year (2004). The discount rate used is the difference between the WACC and the risk-free rate of return. Annexure E provides a summary of the valuations using this alternative model.

6.8 SUMMARY

The main aim of this chapter was to use the DCF approach to value each of the four selected businesses. The variables required by the DCF approach were identified and explained. In order to facilitate the testing of the research hypotheses still to be done, the various valuations of the four selected businesses, namely Shoprite, SPAR, PnP and Naspers, had to be calculated using the DCF approach. Therefore the first section of the chapter motivated why the DCF approach was used. The calculation of the FCF was also explained and the different ways to calculation were also described. Both the methods explained were used to calculate the FCF as a double checking mechanism for reliability of FCF as an input into the DCF approach. WACC was also identified as the discount rate to be used in the DCF approach. The

valuations were calculated with the R157 and R153 government bonds as risk-free rates.

The valuations of each of the four selected businesses, that is for Shoprite, SPAR, PnP and Naspers, were discussed. For each of the businesses, the variables used in the valuation process were identified and explained. Once the variables were identified, the valuations for each business for each year as from 2004 to 2011 were calculated. For Shoprite, the highest FCF was R1 413 785 000 (2010) while the lowest FCF was R204 121 000 (2004). The percentage change in the valuation of Shoprite from 2004 to 2011 using the R157 government bond as risk-free rate was 561.69% (single period valuations) and 2 324.63% (multiple period valuations). For SPAR, the highest FCF was R742 500 000 (2010) while the lowest FCF was R58 488 000 (2005). The percentage change in the valuation of SPAR from 2004 to 2011 using the R157 government bond as risk-free rate, was 68.69% (single period valuations) and 527.66% (multiple period valuations). For PnP, the highest FCF was R972 100 000 (2011) while the lowest FCF was R395 700 000 (2008). The percentage change in the valuation of PnP from 2004 to 2011 using the R157 government bond as risk-free rate, was 111.92% (single period valuations) and 838.15% (multiple period valuations). For Naspers, the highest FCF was R7 430 679 000 (2009) while the lowest FCF was negative R8 496 831 000 (2008). The percentage change in the valuation of Naspers from 2004 to 2011 using the R157 government bond as risk-free rate, was negative 239.65% (single period valuations) and negative 569.23% (multiple period valuations), implying that the valuations decreased. It should be noted that if the valuation yielded a negative value, then the net asset value (NAV) of the business should be used as an appropriate value for decision-making. An alternative model for valuation was also provided.

Chapter Seven will present the results from the research hypotheses testing using the valuations as discussed in Chapter Six. The basic descriptive statistics, Pearson product moment correlation coefficients and t-test results will be discussed.

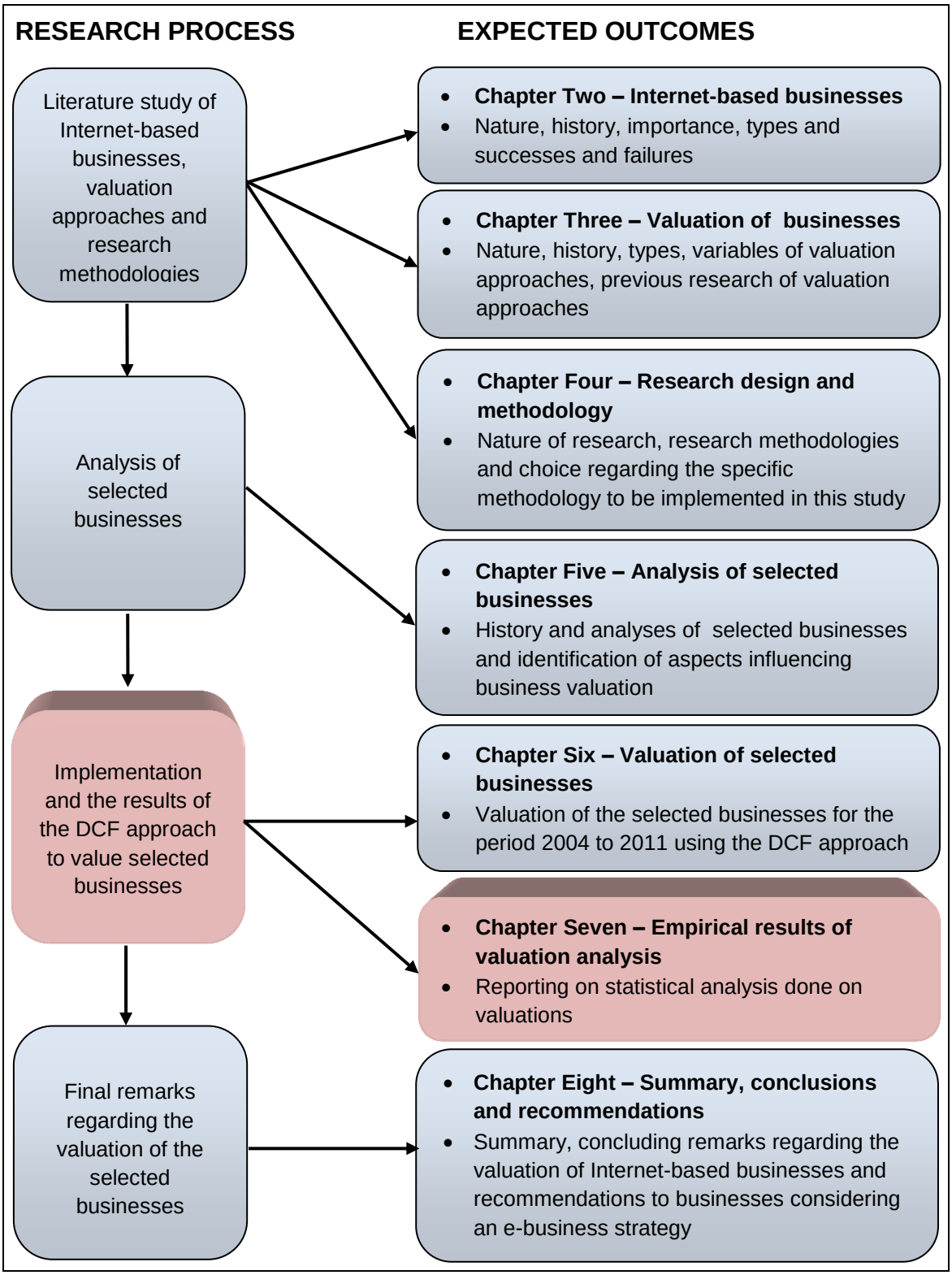
CHAPTER SEVEN
EMPIRICAL RESULTS OF VALUATION ANALYSIS

7.1 INTRODUCTION

Chapter Six identified and discussed the variables required by the DCF approach. The valuations for the four businesses for the period 2004 to 2011 were calculated. The valuations presented in Chapter Six will be used in Chapter Seven in the statistical analysis necessary to test the research hypotheses formulated in Chapter One. Therefore Chapter Seven will assist in the achievement of one of the secondary objectives identified in Chapter One, which will assist in the attainment of the primary objective of the study. The purpose and importance of Chapter Seven in the research process can be seen in Figure 7.1, which is reproduced from Chapter One.

In Chapter Six, the various valuations from 2004 to 2011 were compared for each individual business (trend analysis) and the valuations of the businesses were also compared with each other. The comparisons done in Chapter Six will further be supported by the descriptive statistics (mean, median, minimum, maximum, range and standard deviation) to be presented in Chapter Seven. The Pearson's Product Moment Correlation Coefficient (hereafter referred to as correlation) will be calculated to assess the strength of the relationships between any two business valuations. The results of the t-test for the individual businesses and results of the t-test when comparing the businesses with each other will also be provided and discussed.

FIGURE 7.1: CHAPTER SEVEN AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

7.2 DESCRIPTIVE STATISTICS OF SELECTED BUSINESSES

The descriptive statistics that will be provided are the mean, median, minimum, maximum, range and standard deviation. Before discussing the descriptive statistics for the data set, the various statistics will be defined.

The mean of a data set is a measure of central tendency for interval or ratio data. The mean (also known as average) can be calculated by adding all the observations under study and dividing the sum total by the total number of observations. (Gray 2009:578; Saunders *et al.* 2009:444; Zikmund 2003:404). The median is a measure of central tendency, but it differs from the mean in that 50% of the observations are above the median and 50% of the observations are below the median. In other words, the median is the middle value when all the observations are placed in ranked order (Gray 2009:578; Saunders *et al.* 2009:444). The range of the data set is the difference between the largest (highest or maximum) and the smallest (lowest or minimum) observation or value within the data set. The standard deviation is a measure of the spread of the data about the mean (average) of the data set. (Gray 2009:580-581; Saunders *et al.* 2009:447).

Table 7.1 provides a summary of the descriptive statistics of the valuations for the four selected businesses over an eight-year period as from 2004 to 2011. The mean, median, minimum, maximum, range and standard deviation of each valuation method for the four selected businesses are presented in Table 7.1. All valuations are given to the nearest Rand. The same descriptive statistics will also be provided for the share prices of the four selected businesses and will also be discussed in the following sections.

TABLE 7.1: DESCRIPTIVE STATISTICS OF THE VARIOUS BUSINESS VALUATIONS

Variable		Descriptive Statistics						
		Valid N	Mean	Median	Minimum	Maximum	Range	Std. Dev.
Shoprite	Valuation R157 (s)	8	R668 905 366	R491 859 472	R180 574 133	R1 260 394 936	R1 079 820 803	R460 142 103
	Valuation R157 (m)	8	R1 754 539 839	R1 217 583 209	R180 574 133	R4 378 263 105	R4 197 688 972	R1 537 152 336
	Valuation R153 (s)	8	R669 283 235	R487 866 392	R180 462 382	R1 264 679 309	R1 084 216 928	R462 782 150
	Valuation R153 (m)	8	R1 756 086 372	R1 196 340 552	R180 462 382	R4 364 218 421	R4 183 756 039	R1 543 773 472
	Valuation McGregor BFA	8	-R1 108 809 152	-R970 672 918	-R2 224 005 290	-R404 276 374	R1 819 728 916	R669 042 969
SPAR	Valuation R157 (s)	8	R382 708 418	R376 867 842	R51 910 890	R676 660 895	R624 750 005	R209 102 447
	Valuation R157 (m)	8	R1 138 887 133	R983 104 989	R360 947 959	R2 449 642 765	R2 088 694 806	R755 661 882
	Valuation R153 (s)	8	R382192 920	R378 274 115	R52 030 958	R675 921 711	R623 890 753	R208 463 454
	Valuation R153 (m)	8	R1 135 375 287	R970 538 810	R362 499 262	R2 418 928 874	R2 056 429 612	R749 206 424
	Valuation McGregor BFA	8	R140 143 179	R179 750 966	-R199 264 957	R269 226 781	R468 491 738	R152 258 911

TABLE 7.1: DESCRIPTIVE STATISTICS OF THE VARIOUS BUSINESS VALUATIONS (cont)

Variable		Descriptive Statistics						
		Valid N	Mean	Median	Minimum	Maximum	Range	Std. Dev.
Pick n Pay	Valuation R157 (s)	8	R656 240 163	R714 839 477	R362 683 140	R876 342 099	R513 658 959	R194 251 857
	Valuation R157 (m)	8	R2 206 756 942	R2 213 311 584	R413 520 930	R3 879 431 403	R3 465 910 472	R1 163 065 787
	Valuation R153 (s)	8	R658 881 657	R713 950 368	R363 427 627	R878 218 448	R514 790 821	R194 371 311
	Valuation R153 (m)	8	R2 231 452 489	R2 209 909 004	R414 669 310	R3 909 009 137	R3 494 339 827	R1 178 331 128
	Valuation McGregor BFA	8	-R643 162	R78 087 704	-R985 334 295	R744 444 912	R1 729 779 207	R640 553 671
Naspers	Valuation R157 (s)	8	-R688 201 320	R173 271 366	-R7 662 859 962	R6 663 294 075	R14 326 154 036	R4 317 347 725
	Valuation R157 (m)	8	-R2 657 875 256	-R3 147 803 283	-R11 148 667 777	R1 609 966 912	R12 758 634 689	R4 190 627 912
	Valuation R153 (s)	8	-R676 457 282	R173 594 286	-R7 641 077 200	R6 723 075 322	R14 364 152 522	R4 325 171 415
	Valuation R153 (m)	8	-R2 573 926 793	-R2 977 599 688	-R11 097 161 669	R1 614 838 108	R12 711 999 778	R4 162 154 619
	Valuation McGregor BFA	8	R2 294 436 484	R2 079 775 394	-R7 514 864 039	R11 700 257 489	R19 215 121 528	R5 783 089 420

Source: Researcher's own construct.

A discussion of the basic descriptive statistics as presented in Table 7.1 will be presented in the sections to follow.

7.2.1 Single period valuations using the R157 government bond as the risk-free rate

The results highlighted in light orange as presented Table 7.1 will be reported on for each of the four businesses. The year-on-year valuations used to calculate the basic descriptive statistics are for the period 2004 to 2011 and the R157 government bond was used as the risk-free rate.

The average (mean) value for Shoprite was R668 905 366 and the median value of Shoprite was R491 859 472. The lowest (minimum) value was R180 574 133 and the highest (maximum) value was R1 260 394 936. Therefore the range of the values for Shoprite was R1 079 820 803. The standard deviation was R460 142 103.

The average (mean) value for SPAR was R382 708 418 and the median value of SPAR was R376 867 842. The lowest (minimum) value was R51 910 890 and the highest (maximum) value was R67 6660 895. Therefore the range of the values for Shoprite was R624 750 005. The standard deviation was R209 102 447.

The average (mean) value for PnP was R656 240 163 and the median value of PnP was R714 839 477. The lowest (minimum) value was R362 683 140 and the highest (maximum) value was R876 342 099. Therefore the range of the values for Shoprite was R513 658 959. The standard deviation was R194 251 857.

The average (mean) value for Naspers was a negative value of R688 201 320 and the median value of Naspers was R173 271 366. The lowest (minimum) value was a negative value of R7 662 859 962 and the highest (maximum) value was R6 663 294 075. Therefore the range of the values for Shoprite was R14 326 154 036. The standard deviation was R4 317 347 725.

7.2.2 Multiple period valuations using the R157 government bond as the risk-free rate

The results highlighted in light blue as presented Table 7.1 will be reported on for each of the four businesses. The compounding year valuations used to calculate the basic descriptive statistics are for the period 2004 to 2011 and the R157 government bond was used as the risk-free rate.

The average (mean) value for Shoprite was R1 754 539 839 and the median value was R1 217 583 209. The lowest (minimum) value was R180 574 133 and the highest (maximum) value was R4 378 263 105. Therefore the value range for Shoprite was R4 197 688 972. The standard deviation was R1 537 152 336.

The average (mean) value for SPAR was R1 138 887 133 and the median value was R983 104 989. The lowest (minimum) value was R360 947 959 and the highest (maximum) value was R2 449 642 765. Therefore the value range for Shoprite was R2 088 694 806. The standard deviation was R755 661 882.

The average (mean) value for PnP was R2 206 756 942 and the median value was R2 213 311 584. The lowest (minimum) value was R413 520 930 and the highest (maximum) value was R3 879 431 403. Therefore the value range for Shoprite was R3 465 910 472. The standard deviation was R1 163 065 787.

The average (mean) value for Naspers was a negative value of R2 657 875 256 and the median value was a negative value of R3 147 803 283. The lowest (minimum) value was a negative value of R11 148 667 777 and the highest (maximum) value was R1 609 966 912. Therefore the value range for Shoprite was R12 758 634 689. The standard deviation was R4 190 627 912.

7.2.3 Single period valuations using the R153 government bond as the risk-free rate

The results highlighted in light pink as presented Table 7.1 will be reported on for each of the four businesses. The year-on-year valuations used to calculate

the basic descriptive statistics are for the period 2004 to 2011 and the R153 government bond was used as the risk-free rate.

The average (mean) value for Shoprite was R669 283 235 and the median value was R487 866 392. The lowest (minimum) value was R180 462 382 and the highest (maximum) value was R1 264 679 309. Therefore the value range for Shoprite was R1 084 216 928. The standard deviation was R462 782 150.

The average (mean) value for SPAR was R382 192 920 and the median value was R378 274 115. The lowest (minimum) value was R52 030 958 and the highest (maximum) value was R9 675 921 711. Therefore the value range for SPAR was R623 890 753. The standard deviation was R208 463 454.

The average (mean) value for PnP was R658 881 657 and the median value was R3713 950 368. The lowest (minimum) value was R363 427 627 and the highest (maximum) value was R878 218 448. Therefore the value range for Shoprite was R514 790 821. The standard deviation was R194 371 311.

The average (mean) value for Naspers was a negative value of R676 457 282 and the median value was a positive value of R173 594 286. The lowest (minimum) value was a negative value of R7 641 077 200 and the highest (maximum) value was a positive value of R6 723 075 322. Therefore the value range for Shoprite was R14 364 152 522. The standard deviation was R4 325 171 415.

7.2.4 Multiple period valuations using the R153 government bond as the risk-free rate

The results highlighted in light green as presented Table 7.1 will be reported on for each of the four businesses. The compounding year valuations used to calculate the basic descriptive statistics are for the period 2004 to 2011 and the R153 government bond was used as the risk-free rate.

The average (mean) value for Shoprite was R1 756 086 372 and the median value was R1 196 340 552. The lowest (minimum) value was R180 462 382

and the highest (maximum) value was R4 364 218 421. Therefore the value range for Shoprite was R4 183 756 039. The standard deviation was R1 543 773 472.

The average (mean) value for SPAR was R1 135 375 287 and the median value was R970 538 810. The lowest (minimum) value was R362 499 262 and the highest (maximum) value was R2 418 928 874. Therefore the value range for Shoprite was R2 056 429 612. The standard deviation was R749 206 424.

The average (mean) value for PnP was R2 231 452 489 and the median value was R2 209 909 004. The lowest (minimum) value was R414 669 310 and the highest (maximum) value was R3 909 009 137. Therefore the value range for Shoprite was R3 494 339 827. The standard deviation was R1 178 331 128.

The average (mean) value for Naspers was a negative figure of R2 573 926 793 and the median value was a negative figure of R2 977 599 688. The lowest (minimum) value was a negative figure of R11 097 161 669 and the highest (maximum) value was a positive figure of R1 614 838 108. Therefore the value range for Shoprite was R12 711 999 778. The standard deviation was R4 162 154 619.

7.2.5 Valuations as calculated by McGregor BFA Fin24Expert

The results highlighted in light purple as presented Table 7.1 will be reported on for each of the four businesses. The valuations used to calculate the basic descriptive statistics are for the period 2004 to 2011 and were calculated by McGregor BFA Fin24Expert.

The average (mean) value for Shoprite for the eight-year period was a negative value of R1 108 809 152 and the median value was also a negative value of R970 672 918. The lowest (minimum) value was a negative value of R2 224 005 290 and the highest (maximum) value was also a negative value of R404 276 374. Therefore the value range for Shoprite was R1 819 728 916. The standard deviation was R669 042 969.

The average (mean) value for SPAR for the eight-year period was R140 143 179 and the median value was R179 750 966. The lowest (minimum) value was a negative value of R199 264 957 and the highest (maximum) value was a positive value of R269 226 781. Therefore the value range for Shoprite was R468 491 738. The standard deviation was R152 258 911.

The average (mean) value for PnP for the eight-year period was a negative figure of R643 612 and the median value was a positive figure of R78 087 704. The lowest (minimum) value was a negative figure of R985 334 295 and the highest (maximum) value was a positive figure of R744 444 912. Therefore the value range for Shoprite was R1 729 779 207. The standard deviation was R640 553 671.

The average (mean) value for Naspers for the eight-year period was R2 294 436 484 and the median value was R2 070 775 394. The lowest (minimum) value was a negative figure of R7 514 864 039 and the highest (maximum) value was a positive figure of R11 700 257 489. Therefore the value range for Shoprite was R12 215 121 528. The standard deviation was R5 782 089 420.

7.2.6 Descriptive statistics of the share prices over the eight-year period

Table 7.2 summarises the descriptive statistics of the share prices over the eight-year period of the four selected businesses.

TABLE 7.2: DESCRIPTIVE STATISTICS OF THE SHARE PRICES

Share price	Descriptive Statistics						
	Valid N	Mean	Median	Minimum	Maximum	Range	Std. Dev.
Shoprite	8	44.16	35.65	9.08	97.60	88.52	31.91
SPAR	8	52.19	53.22	0.00	95.13	95.13	30.79
PnP	8	31.41	31.37	17.11	44.01	26.90	8.61
Naspers	8	175.10	146.28	43.47	380.85	337.38	114.88

Source: Researcher's own construct from statistical analysis results.

The share price used in the calculation of the mean, median, minimum, maximum, range and standard deviation was the share price at the end of the financial year for each business. Evident from Table 7.2, the share prices of four businesses were obtained from the McGregor BFA Fin24Expert financial statements for the period 2004 to 2011 (n=8 for each business). Therefore there were eight share prices per business, except for SPAR as SPAR only listed in October 2004 on the JSE. A value of zero was used for 2004.

The average (mean) share price for Shoprite for the eight-year period was R44.16 and the median share price was R35.65. The lowest (minimum) share price was R9.08 and the highest (maximum) share price was R97.60. Therefore the share price range for SPAR was R88.52. The standard deviation was R31.91.

The average (mean) share price for SPAR for the eight-year period was R52.19 and the median share price was R53.22. The lowest (minimum) share price was R0.00 and the highest (maximum) share price was R95.12. Therefore the share price range for SPAR was R95.13. The standard deviation was R30.79.

The average (mean) share price for PnP for the eight-year period was R31.41 and the median share price was R31.37. The lowest (minimum) share price was R17.11 and the highest (maximum) share price was R44.01. Therefore the share price range for SPAR was R26.90. The standard deviation was R8.61.

The average (mean) share price for Naspers for the eight-year period was R175.10 and the median share price was R146.28. The lowest (minimum) share price was R43.47 and the highest (maximum) share price was R380.85. Therefore the share price range for Naspers was R337.38. The standard deviation was R114.88.

In conclusion it is evident that all the businesses experienced extraordinary growth in the share prices with the exception of PnP (increased with only R26.90 over the eight-year period). The share price of Naspers showed the highest change in share price of R337.88 over the eight-year period. The dispersion of the values of all the businesses is relatively small, with all the standard deviations being smaller than the mean values, with PnP having the smallest dispersion.

7.2.7 Remarks regarding the results of the descriptive statistics

Although the values of the standard deviations are large, the standard deviations are relatively small in comparison to the mean values. There are a few exceptions, with all the standard deviations of Naspers being greater than 50% as the standard deviations are larger than the mean values. The standard deviations of Naspers, regardless of the valuation approach used, are also greater than the mean values, that is, the standard deviations are greater than 50%.

It is clear from the valuations as presented in Table 7.1 that the values calculated by McGregor BFA Fin24Expert differ vastly from the values calculated using the DCF approach. An explanation for the differences is that the valuations done by McGregor BFA Fin24Expert are based on share price and not on the free cash flow of the business as is the case with the DCF approach.

7.3 CORRELATION OF VALUATIONS OF SELECTED BUSINESSES

The section to follow will deal with the correlation between the valuations of the selected businesses. The correlation between the share price and the valuation of each business will also be addressed. Correlation indicates the direction (positive or negative) and the strength (weak or strong) of associations between variables. Correlations between 0.10 and 0.29 are regarded as small; correlations between 0.30 and 0.49 are regarded as medium and correlations between 0.50 and 1.00 are regarded as large (Gray 2009:485-486, Saunders *et al.* 2009:460).

7.3.1 Correlation of valuations using the R157 government bond as the risk-free rate for a single period

The correlation between the valuations calculated using the R157 government bond as the risk-free rate for a single period are presented in Table 7.3. The correlations between the share prices and the respective valuations are also provided in Table 7.3.

TABLE 7.3: CORRELATION OF VALUATIONS WITH R157 GOVERNMENT BOND AS RISK-FREE RATE FOR A SINGLE PERIOD

	Means	Std. Dev.	Valuation of Shoprite	Valuation of SPAR	Valuation of PnP	Valuation of Naspers
Valuation of Shoprite	R668 905 336	R460 142 103	1.000000	**0.743520***	**0.704967****	0.292314
Valuation of SPAR	R382 708 418	R209 102 447	**0.743520***	1.000000	0.555885	0.022405
Valuation of PnP	R656 240 163	R194 251 857	**0.704967****	0.555885	1.000000	0.348968
Valuation of Naspers	-R688 210 320	R4 317 347 725	0.292314	0.022405	0.348968	1.000000
Share price	n/a	n/a	**0.938338***	**0.679508****	**0.730376***	-0.082176

*Statistically significant at a 95% confidence level ($p < 0.05$)
** Statistically significant at a 90% confidence level ($p<0.10$)

Source: Researcher's own construct from statistical analysis results.

It is evident from Table 7.3 that only one statistical significant correlation exists between the various valuations, and that is between the valuations of Shoprite and SPAR at a 95% confidence level ($p < 0.05$). All the correlations are positive, ranging from relatively weak to relatively strong correlations, implying that the

movement in the valuations are both either upward or downward. There is a relatively strong correlation between the valuations of Shoprite and PnP (0.704967) that are statistically significant at a 90% confidence level ($p < 0.10$). The relatively strong correlation between the valuations of SPAR and PnP (0.555885) is not statistically significant ($p > 0.10$). Relatively weak correlations exist between the valuations of Shoprite and Naspers (0.292314), the valuations of SPAR and Naspers (0.022405) and the valuations of PnP and Naspers (0.348968), but none of the three are statistically significant ($p < 0.10$).

Based on the results in Table 7.3, the following conclusions can be made. If one considers the correlations between the share prices of each business and the specific valuation under discussion, it is evident that three of the correlations showed a positive correlation while one indicated a negative correlation. A strong correlation exists between the share price of Shoprite and the valuation of Shoprite (0.938338). Relatively strong correlations exist between the share price of SPAR and the valuation of SPAR (0.679508) and between the share price of PnP and the valuation of PnP (0.730376). The strong correlation between the share price of Shoprite and the valuation of Shoprite and the relatively strong correlation between the share price of PnP and the valuation of PnP are both statistically significant ($p < 0.05$), while the relatively strong correlation between the share price of SPAR and the valuation of SPAR is statistically significant at a 90% confidence level ($p < 0.10$). A weak negative correlation (-0.082176) exists between the share price of Naspers and the valuation of Naspers, but it is not statistically significant. Based on these relatively strong positive correlations, the movement in the share price of Shoprite, SPAR and PnP can be used as a guideline to assess the movement in the value of the business, implying that if the share price increases, the value of the business should increase. As the correlation between the share price and the valuation of Naspers is not statistically significant, it is not possible to draw the same conclusion as for the statistically significant correlations.

7.3.2 Correlation of valuations using the R157 government bond as the risk-free rate for multiple periods

The correlations between the valuations calculated using the R157 government bond as the risk-free rate for multiple periods are presented in Table 7.4. The correlations between the share prices and the respective valuations are also provided in Table 7.4.

TABLE 7.4: CORRELATION OF VALUATIONS WITH R157 GOVERNMENT BOND AS RISK-FREE RATE FOR MULTIPLE PERIODS

	Means	Std. Dev.	Valuation of Shoprite	Valuation of SPAR	Valuation of PnP	Valuation of Naspers
Valuation of Shoprite	R1 754 539 839	R1 537 152 336	1.000000	**0.993920***	**0.953501***	-0.347751
Valuation of SPAR	R1 138 887 133	R755 661 882	**0.993920***	1.000000	**0.958771***	-0.411503
Valuation of PnP	R2 206 756 942	R1 163 065 787	**0.953501***	**0.958771***	1.000000	-0.495169
Valuation of Naspers	-R2 657 875 256	R4 190 627 912	-0.347751	-0.411503	-0.495169	1.000000
Share price	n/a	n/a	**0.996976***	**0.936845***	**0.956889***	-0.307222

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

From Table 7.4 it is evident that of the six correlations, three are positive and three are negative. It is furthermore clear that only three correlations exist between the various valuations at a 95% confidence level ($p < 0.05$). Strong positive correlations exist between the valuations of Shoprite and SPAR (0.993920), Shoprite and PnP (0.953501) and SPAR and PnP (0.958771). The three positive correlations are statistically significant, as all the correlations are above 0.95 at the 95% confidence level ($p < 0.05$). The three strong positive correlations imply that the movements in the valuations are both either upward or downward. The three negative correlations are weak (correlations below negative 0.5) and all three are not statistically significant ($p > 0.05$). All three correlations with Naspers are relatively weak negative correlations that are not statistically significant. A negative correlation implies that the valuations will move in opposite directions, therefore if the one valuation shows an upward trend the other valuation will show a downward trend. A possible reason for the

negative correlations could be that Naspers is in a different sector from Shoprite, SPAR and PnP. Another possibility could be because Naspers is an online business while Shoprite, SPAR and PnP are brick-and-mortar and brick-and-click businesses. It should also be noted that Naspers is a multinational company in various industries and therefore there are many external factors within and outside South Africa that may have an influence on the value of the business. The three retailers in the food and drug industry (Shoprite, SPAR and PnP) are operating in the same business environment which is different from the business environment of Naspers, although some similarities may exist.

Three (Shoprite, SPAR and PnP) of the four businesses show a positive correlation between the share price and the valuation of that specific business, while one (Naspers) shows a weak negative correlation. The three positive correlations are statistically significant ($p < 0.05$) while the weak negative correlation is not statistically significant ($p > 0.05$). Strong positive correlations exist between the share price and the valuation of Shoprite (0.996976), SPAR (0.936845) and PnP (0.956889). A weak negative correlation exists between the share price and the valuation of Naspers (-0.307222). Based on these strong positive correlations (all above 0.90), the change in the share price of Shoprite, SPAR and PnP can be used as a guideline to indicate the direction of the movement in the value of the business, implying that if the share price increases, the value of the business should increase. No conclusion can be drawn with regard to Naspers as the correlation is not statistically significant.

7.3.3 Correlation of valuations using the R153 government bond as the risk-free rate for a single period

The correlations between the valuations calculated using the R153 government bond as the risk-free rate for a single period are presented in Table 7.5. The correlations between the share prices and the respective valuations are also provided in Table 7.5.

TABLE 7.5: CORRELATION OF VALUATIONS WITH R153 GOVERNMENT BOND AS RISK-FREE RATE FOR A SINGLE PERIOD

	Means	Std. Dev.	Valuation of Shoprite	Valuation of SPAR	Valuation of PnP	Valuation of Naspers
Valuation of Shoprite	R669 283 235	R462 72 150	1.000000	**0.744437***	**0.708576***	0.300404
Valuation of SPAR	R382192 920	R208 463 454	**0.744437***	1.000000	0.556164	0.028252
Valuation of PnP	R658 881 657	R194 371 311	**0.708576***	0.556164	1.000000	0.357986
Valuation of Naspers	-R676 457 282	R4 325 171 415	0.300404	0.028252	0.357986	1.000000
Share price	n/a	n/a	**0.935820***	**0.679106****	**0.731849***	-0.082884

*Statistically significant at a 95% confidence level ($p < 0.05$)
**Statistically significant at a 90% confidence level ($p < 0.10$)

Source: Researcher's own construct from statistical analysis results.

It is evident from Table 7.5 that all the correlations are positive, ranging from 0.028252 to 0.744437. Although all six correlations are positive, only two of the correlations are statistically significant at 95% confidence level ($p < 0.5$). The statistically significant positive correlations between the valuations of Shoprite and SPAR (0.744437) and Shoprite and PnP (0.708576) are relatively strong as the correlations are above 0.70. The positive correlations between the valuations of Shoprite and Naspers (0.300404), SPAR and PnP (0.556164), SPAR and Naspers (0.028252) and PnP and Naspers (0.357986) are all weak, and none of the four correlations are statistically significant ($p > 0.05$). Therefore all the correlations with the valuation of Naspers yielded positive correlations that are not statistically significant. Only one of the correlations with the valuations of Shoprite, SPAR and PnP yielded relatively strong positive correlations, that is, statistically significant. Therefore if there is an upward (downward) movement of the valuation of the Shoprite, then there is an upward (downward) movement in the valuations of both SPAR and PnP. The same cannot be said of the other four correlations (Shoprite and Naspers, SPAR and PnP, SPAR and Naspers, PnP and Naspers) as none of the other correlations are statistically significant.

The correlation between the share prices of each business and the valuation of each business yielded three positive correlations and one negative correlation.

Only two of the three positive correlations are statistically significant ($p < 0.05$). The positive correlation between the share price and the valuation of Shoprite (0.935820) is strong while the positive correlation between the share price and the valuation of PnP (0.731849) is relatively strong. The positive correlation between the share price and the valuation of SPAR is relatively strong (0.679106), and is statistically significant at a 90% confidence level ($p > 0.10$). The correlation between the share price and the valuation of Naspers is a very weak negative correlation (-0.082884) and it is not statistically significant ($p > 0.10$). Therefore, if the share prices of Shoprite, SPAR and PnP are indicating upward (downward) trends then the valuations of Shoprite and PnP will also show upward (downward) trends. The same comment cannot be made regarding the share prices and valuations of Naspers as the correlation is not statistically significant.

7.3.4 Correlation of valuations using the R153 government bond as the risk-free rate for multiple periods

The correlations between the valuations calculated using the R153 government bond as the risk-free rate for multiple periods are presented in Table 7.6. The correlations between the share prices and the respective valuations are also provided in Table 7.6.

TABLE 7.6: CORRELATION OF VALUATIONS WITH R153 GOVERNMENT BOND AS RISK-FREE RATE FOR MULTIPLE PERIODS

	Means	Std. Dev.	Valuation of Shoprite	Valuation of SPAR	Valuation of PnP	Valuation of Naspers
Valuation of Shoprite	R1 756 086 372	R1 543 773 472	1.000000	**0.994298***	**0.953589***	-0.319414
Valuation of SPAR	R1 135 375 287	R739 206 424	**0.994298***	1.000000	**0.959832***	-0.387116
Valuation of PnP	R2 231 452 489	R1 178 331 128	**0.953589***	**0.959832***	1.000000	-0.467635
Valuation of Naspers	-R2 573 926 793	R4 162 154 619	-0.319414	-0.467635	-0.467635	1.000000
Share price	n/a	n/a	**0.996314***	**0.937248***	**0.955795***	-0.287101

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

Table 7.6 shows that three of the six correlations are positive and three are negative. The three correlations that are positive are also statistically significant at a 95% confidence level ($p < 0.05$). Positive correlations between the valuations of Shoprite and SPAR (0.994298), Shoprite and PnP (0.953589) and SPAR and PnP (0.959832) are all strong positive correlations (correlations above 0.95). Negative correlations between the valuations of Naspers and the valuations of Shoprite (-0.319414), SPAR (-0.387116) and PnP (-0.467635) are all weak and not statistically significant ($p > 0.05$). The three strong positive correlations (Shoprite and SPAR, Shoprite and PnP, SPAR and PnP) imply that the movement in the valuations are both either upward or downward. It should be noted that all three correlations with Naspers are relatively weak negative correlations that are not statistically significant. A negative correlation implies that the valuations will move in opposite directions, therefore if the one valuation shows an upward trend the other valuation will show a downward trend. One reason for the negative correlations could be that Naspers is the media and broadcasting industry while Shoprite, SPAR and PnP are part of the food and drug industry. Another reason could be that Naspers is an online business while Shoprite, SPAR and PnP are brick-and-mortar and brick-and-click businesses.

Evident from Table 7.6, three (Shoprite, SPAR and PnP) of the four businesses show a strong positive correlation between the share price and the valuation of that specific business, while one (Naspers) shows a weak negative correlation. The three positive correlations are statistically significant ($p < 0.05$) while the weak negative correlation is not statistically significant ($p > 0.05$). Strong positive correlations (above 0.90) exist between the share price and the valuation of Shoprite (0.996314), SPAR (0.937248) and PnP (0.955795). The only negative correlation that exists is weak, and is between the share price and the valuation of Naspers (-0.287101). Based on these strong positive correlations (all above 0.90), the movement of the share price of Shoprite, SPAR and PnP can be used as a guideline to indicate the movement of the value of the business, implying that if the share price increases, the value of the business should increase. No conclusion can be drawn with regard to Naspers as the correlation is not statistically significant.

7.3.5 Correlation of valuations calculated by McGregor BFA Fin24Expert

The correlations between the valuations as calculated McGregor BFA Fin24Expert, are presented in Table 7.7. The correlations between the share prices and the respective valuations are also provided in Table 7.7.

TABLE 7.7: CORRELATION OF VALUATIONS AS CALCULATED BY MCGREGOR BFA FIN24EXPERT

	Means	Std. Dev.	Valuation of Shoprite	Valuation of SPAR	Valuation of PnP	Valuation of Naspers
Valuation of Shoprite	-R1 108 809 152	R669 042 969	1.000000	-0.163216	-0.469277	-0.176041
Valuation of SPAR	R140 143 179	R152 258 911	-0.163216	1.000000	0.137454	**0.886590***
Valuation of PnP	-R643 162	R640 553 671	-0.469277	0.137454	1.000000	0.377261
Valuation of Naspers	R2 294 436 484	R5 783 089 420	-0.176041	**0.886590***	0.377261	1.000000
Share price	n/a	n/a	-0.132220	0.344913	**0.769178***	0.609592

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

As evident from Table 7.7, only one correlation exists between the valuations that are statistically significant at a 95% confidence level ($p < 0.05$). The statistically significant correlation exists between the valuations of SPAR and Naspers is a relatively strong positive correlation (0.886590). Three of the five correlations that are not statistically significant ($p > 0.05$) are negative while the remaining two are positive. Therefore, when using the valuations of McGregor BFA Fin24Expert, if there is an upward (downward) change in the valuation of SPAR there will be a similar directional change in the valuation of Naspers.

If one considers the correlations between the share prices and the valuations of the businesses, only one correlation that is statistically significant at a 95% confidence level ($p < 0.05$) exists. A relatively strong positive correlation between the share price and the valuation of PnP (0.769178) is the only statistically significant correlations. The correlations between the share price and valuation of both SPAR (0.344913) and Naspers (0.609592) are both weak positive correlations while the correlation between the share price and valuation

of Shoprite (-0.132220) is a weak negative correlation. The three correlations are not statistically significant ($p > 0.05$). Therefore an upward (downward) change in the share price of PnP will indicate an upward (downward) change in the value of PnP. As the correlations between the share prices and the valuations of Shoprite, SPAR and Naspers are not statistically significant, the same cannot be said for these correlations.

7.3.6 Correlation of share prices of the selected businesses

The correlations between the share prices of the selected businesses are presented in Table 7.8.

TABLE 7.8: CORRELATION OF SHARE PRICES AS AT THE END OF THE FINANCIAL YEAR

	Means	Std. Dev.	Share price of Shoprite	Share price of SPAR	Share price of PnP	Share price of Naspers
Share price of Shoprite	44.1550	31.9145	1.000000	**0.950296***	**0.914797***	**0.965017***
Share price of SPAR	52.1938	30.7864	**0.950296***	1.000000	**0.969982***	**0.935353***
Share price of PnP	31.4100	8.6119	**0.914797***	**0.969982***	1.000000	**0.948399***
Share price of Naspers	175.0975	114.8841	**0.965017***	**0.935353***	**0.948399***	1.000000

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

As evident from Table 7.8, all the correlations between the share prices of the selected businesses are statistically significant at a 95% confidence level ($p < 0.05$). All the correlations are furthermore positive and strong (range between 0.914797 and 0.965017). The strongest positive correlation is between the share prices of Shoprite and Naspers (0.965017). Therefore share price changes for any one of the selected businesses will be reflected in share price changes for all of the other selected businesses. The change in the share prices will be in the same direction, therefore, either upward or downward movements.

7.3.7 Summary of statistically significant correlations

Table 7.9 provides a summary of the statistically significant correlations between the valuations of the four selected businesses as discussed in the previous sections.

TABLE: 7.9: STATISTICALLY SIGNIFICANT CORRELATIONS BETWEEN VALUATIONS

	Risk-free rate	Valuation of Shoprite	Valuation of SPAR	Valuation of PnP	Valuation of Naspers
Valuation of Shoprite	R157 (s)	1.000000	0.743520*	0.704967**	n/a
	R157 (m)	1.000000	0.993920*	0.953501*	n/a
	R153 (s)	1.000000	0.744437*	0.708576*	n/a
	R153 (m)	1.000000	0.994298*	0.953589*	n/a
	McG	1.000000	n/a	n/a	n/a
Valuation of SPAR	R157 (s)	0.743520*	1.000000	n/a	n/a
	R157 (m)	0.993920*	1.000000	0.958771*	n/a
	R153 (s)	0.744437*	1.000000	n/a	n/a
	R153 (m)	0.994298*	1.000000	0.959832*	n/a
	McG	n/a	1.000000	n/a	0.886590*
Valuation of PnP	R157 (s)	0.704967**	n/a	1.000000	n/a
	R157 (m)	0.953501*	0.958771*	1.000000	n/a
	R153 (s)	0.708576*	n/a	1.000000	n/a
	R153 (m)	0.953589*	0.959832*	1.000000	n/a
	McG	n/a	n/a	1.000000	n/a
Valuation of Naspers	R157 (s)	n/a	n/a	n/a	1.000000
	R157 (m)	n/a	n/a	n/a	1.000000
	R153 (s)	n/a	n/a	n/a	1.000000
	R153 (m)	n/a	n/a	n/a	1.000000
	McG	n/a	0.886590*	n/a	1.000000

*Statistically significant at a 95% confidence level ($p < 0.05$)
**Statistically significant at a 90% confidence level ($p < 0.10$)
n/a Correlation not applicable as correlation is not statistically significant ($p > 0.05$)

Source: Researcher's own construct from statistical analysis results.

From Table 7.9 it is evident that there are only 11 statistically significant correlations. All the correlations are positive but with varying strengths. When using the DCF approach with the R157 government bond as the risk-free rate for a single period valuation, there are two correlations. A relatively strong positive correlation is between the valuations of Shoprite and SPAR (0.743520) at a 95% confidence level. The second relatively strong positive correlation at a 90% confidence level exists between the valuations of Shoprite and PnP (0.704967). When using the DCF approach with the R157 government bond as the risk-free rate for a multiple period valuation, three correlations exist, namely between the valuations of Shoprite and SPAR (0.993920), Shoprite and PnP (0.953501) and SPAR and PnP (0.958771). All three correlations are strong positive correlations with the correlation between the valuations of Shoprite and SPAR being the stronger of the two correlations.

When the R153 government bond is used as the risk-free rate in the DCF approach for a single period valuation, two relatively strong correlations are found. The relatively strong correlations exist between the valuations of Shoprite and SPAR (0.744437) and Shoprite and PnP (0.708576) with the correlation between the valuations of Shoprite and SPAR being the stronger correlation. When using the DCF approach with the R153 government bond as the risk-free rate for a multiple period valuation, three correlations exist, namely between the valuations of Shoprite and SPAR (0.994298), Shoprite and PnP (0.953589) and SPAR and PnP (0.959832). All three the correlations between the valuations are found to be strong positive correlations with the correlation between the valuations of Shoprite and SPAR the strongest.

The correlations between the valuations as calculated by McGregor BFA Fin24Expert yielded only one correlation between the valuations of SPAR and Naspers (0.886590). The correlation is positive and strong. None of the statistically significant correlations are negative. Therefore the correlations that are statistically significant imply that when the valuation of one business changes, the valuation of the other business will also change in the same direction (both valuations will increase or decrease). The majority of the

correlations exist between the valuations of the businesses in the food and drug retail industry (Shoprite, SPAR and PnP).

7.4 T-TEST RESULTS FOR INDIVIDUAL BUSINESSES

The section to follow will present the t-test results for the four selected businesses in order to determine whether the research hypotheses H_1 to H_4 stated in Chapter One should be accepted or rejected.

7.4.1 T-test results for Shoprite Holdings Limited (brick-and-mortar business with limited online presence)

Table 7.10 summarises the t-test results for Shoprite using the various valuation approaches over the eight-year period from 2004 to 2011. Research hypothesis H_1 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence over a period of time, will be tested.

TABLE 7.10: T-TEST RESULTS FOR SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE) – RESEARCH HYPOTHESIS H_1

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	df	p
Valuation Shoprite R157 (s)	R668 905 366	R460 142 103	4.11166	7	**0.004506***
Valuation Shoprite R157 (m)	R1 754 539 839	R1 537 152 336	3.22843	7	**0.014483***
Valuation Shoprite R153 (s)	R669 283 235	R462 782 150	4.09052	7	**0.004628***
Valuation Shoprite R153 (m)	R1 756 086 372	R1 543 773 472	3.21742	7	**0.014706***
Valuation Shoprite (McG)	-R1 108 809 152	R669 042 969	-4.68757	7	**0.002241***

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

It is evident from Table 7.10 that all the relationships among the valuations over the eight-year period are statistically significant at the 95% confidence level

($p < 0.05$). Four of the valuations for the 2004 to 2011 period yielded a positive relationship while one valuation for the same period yielded a negative relationship. The four positive relationships are the valuations calculated using the DCF approach. The negative relationship is the valuation calculated by McGregor BFA Fin24Expert, which focuses on number of shares, share prices, all debt and cash as explained in a previous section. Based on the results of the t-tests as presented in Table 7.10, research hypothesis H_1 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence over a period of time can be accepted.

7.4.2 T-test results for The SPAR Group Ltd (brick-and-click business with interactive online presence)

The t-test results for Shoprite using the various valuation approaches over the eight-year period from 2004 to 2011 are presented in Table 7.11. Research hypothesis H_2 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence over a period of time, will be tested.

TABLE 7.11: T-TEST RESULTS FOR THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE) – RESEARCH HYPOTHESIS H_2

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	df	p
Valuation SPAR R157 (s)	R382 708 418	R209 102 447	5.176711	7	**0.001286***
Valuation SPAR R157 (m)	R1 138 887 133	R755 661 882	4.262831	7	**0.003734***
Valuation SPAR R153 (s)	R382192 920	R208 463 454	5.185584	7	**0.001273***
Valuation SPAR R153 (m)	R1 135 375 287	R749 206 424	4.286304	7	**0.003627***
Valuation SPAR (McG)	R140 143 179	R152 258 911	2.603360	7	**0.035252***

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

From Table 7.11 it is clear that all the relationships among the valuations for the 2004 to 2011 period are statistically significant at a 95% confidence level ($p < 0.05$). All the tested relationships are positive. Therefore the research hypothesis H_2 stating that there is a statistical significant relationship between the changes in the business valuation of brick-and-click businesses with interactive online presence over a period of time, can be accepted.

7.4.3 T-test results for Pick n Pay Stores Ltd (brick-and-click business in the e-commerce stage)

Table 7.12 provides an overview of the t-test results for PnP using the various valuation approaches over the eight-year period from 2004 to 2011. Research hypothesis H_3 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses in the e-commerce stage over a period of time, will be tested.

TABLE 7.12: T-TEST RESULTS FOR PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_3

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	df	p
Valuation PnP R157 (s)	R656 240 163	R194 251 857	9.55526	7	**0.000029***
Valuation PnP R157 (m)	R2 206 756 942	R1163 065 787	5.36655	7	**0.001045***
Valuation PnP R153 (s)	R658 881 657	R194 371 311	9.58783	7	**0.000028***
Valuation PnP R153 (m)	R2 231 452 489	R1 178 331 128	5.35630	7	**0.001057***
Valuation PnP (McG)	-R643 162	R640 553 671	-0.00284	7	0.997813

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

As can be seen from Table 7.12, all the relationships among the valuations over the eight-year period using the DCF approach yielded statistically significant relationships at a 95% confidence level ($p < 0.05$). The only valuation that is not

statistically significant is the relationship among the valuations as calculated by McGregor BFA Fin24Expert. As noted before, the method used by McGregor BFA Fin24Expert does not focus on the generation of FCF, but it focuses on the number of shares, share prices, debt (interest bearing and non-interest bearing), preference shares and cash. Therefore the decision to accept the research hypothesis H_3 stating that there is a statistical significant relationship between the changes of the business valuations of brick-and-click businesses in the e-commerce stage over a period of time, is thus based on the t-tests results where the DCF approach was used to calculate the value of the business.

7.4.4 T-test results for Naspers Ltd (online business in the e-commerce stage)

The t-test results for Naspers using the various valuation approaches over the eight-year period from 2004 to 2011 are presented in Table 7.13. Research hypothesis H_4 stating that there is a statistical significant relationship between the changes in the business valuations of online businesses with limited online presence over a period of time, will be tested.

TABLE 7.13: T-TEST RESULTS FOR NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_4

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	df	p
Valuation Naspers R157 (s)	-R688 201 320	R4 317 347 725	-0.45086	7	0.665724
Valuation Naspers R157 (m)	-R2 657 875 256	R4 190 627 912	-1.79391	7	0.115913
Valuation Naspers R153 (s)	-R676 457 282	R4 325 171 415	-0.44237	7	0.671570
Valuation Naspers R153 (m)	-R2 573 926 793	R4 162 154 619	-1.74913	7	0.123749
Valuation Naspers (McG)	R2 294 436 484	5 783 089 420	1.12218	7	0.298799

*Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

From Table 7.13 it is evident that none of the relationships among the valuations are statistically significant at a 95% confidence level ($p > 0.05$). Three of the four relationships indicate a negative relationship (the DCF approached were used to calculate the values) while the valuation calculated by McGregor is the BFA Fin24Expert only positive relationship, although none of the four are statistically significant. Based on the results as presented in Table 7.13, the research hypothesis H_4 stating that there is a statistical significant relationship between the changes of the business valuations of online businesses in the e-commerce stage over a period of time, is rejected.

7.5 DEPENDENT T-TEST RESULTS

The section will present the t-test results for comparing the valuations over the eight-year period from 2004 to 2011 of the selected businesses with one another. The results presented will assist in the accepting of rejecting of the research hypotheses H_5 to H_{10} as formulated in Chapter One.

7.5.1 T-test results when comparing Shoprite Holdings Limited (brick-and-mortar business with limited online presence) and The SPAR Group Ltd (brick-and-click business with interactive online presence)

Table 7.14 summarises the t-test results when comparing the various valuations of Shoprite and SPAR over the eight-year period from 2004 to 2011. Research hypothesis H_5 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with limited online presence and brick-and-click businesses with interactive online presence over a period of time, will be tested.

TABLE 7.14: T-TEST RESULTS WHEN COMPARING SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE) AND THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE) – RESEARCH HYPOTHESIS H_5

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	df	p
Valuation Shoprite R157 (s)	R668 905 366	R460 142 103			
Valuation SPAR R157 (s)	R382 708 418	R209 102 447	-2.41475	7	**0.046449***
Valuation Shoprite R157 (m)	R1 754 539 839	R1 537 152 336			
Valuation SPAR R157 (m)	R1 138 887 133	R755 661 882	-2.20289	7	**0.063460****
Valuation Shoprite R153 (s)	R669 283 235	R462 782 150			
Valuation SPAR R153 (s)	R382192 920	R208 463 454	-2.40510	7	**0.047112***
Valuation Shoprite R153 (m)	R1 756 086 372	R1 543 773 472			
Valuation SPAR R153 (m)	R1 135 375 287	R749 206 424	-2.18683	7	**0.064982****
Valuation Shoprite (McG)	-R1 108 809 152	R669 042 969			
Valuation SPAR (McG)	R140 143 179	R152 258 911	4.97568	7	**0.001609***

***Statistically significant at a 95% confidence level ($p < 0.05$)
**Statistically significant at a 90% confidence level ($p < 0.10$)

Source: Researcher's own construct from statistical analysis results.

As evident from Table 7.14, only three of the relationships are statistically significant at a 95% confidence level ($p < 0.05$). Two relationships that are statistically significant both used the discounted FCF to calculate the valuations. Both the relationships are negative, therefore if the valuation of Shoprite increases then the valuation of SPAR decreases. The third statistically significant relationship is where the valuation is calculated by McGregor BFA Fin24Expert and it shows a positive relationship. The two relationships that are not statistically significant at a 95% confidence level ($p < 0.05$) are statistically significant at a 90% confidence level ($p < 0.10$). Therefore research hypothesis

H_5 stating that there is a statistical significant relationship between the changes of the business valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses with interactive online presence over a period of time, can be accepted at a 90% confidence level ($p < 0.10$).

7.5.2 T-test results when comparing Shoprite Holdings Limited (brick-and-mortar business with limited online presence) and Pick n Pay Stores Ltd (brick-and-click business in the e-commerce stage)

A summary of the t-test results when comparing the various valuations of Shoprite and PnP over the eight-year period from 2004 to 2011 is presented in Table 7.15. Research hypothesis H_6 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses in the e-commerce stage over a period of time, will be tested.

TABLE 7.15: T-TEST RESULTS WHEN COMPARING SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE) AND PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_6

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	Df	p
Valuation Shoprite R157 (s)	R668 905 366	R460 142 103			
Valuation PnP R157 (s)	R656 240 163	R194 251 857	0.101096	7	0.921648
Valuation Shoprite R157 (m)	R1 754 539 839	R1 537 152 336			
Valuation PnP R157 (m)	R2 206 756 942	R1 163 065 787	-2.31147	7	**0.054070****
Valuation Shoprite R153 (s)	R669 283 235	R462 782 150			
Valuation PnP R153 (s)	R658 881 657	R194 371 311	0.08339	7	0.935877
Valuation Shoprite R153 (m)	R1 756 086 372	R1 543 773 472			
Valuation PnP R153 (m)	R2 231 452 489	R1 178 331 128	-2.44502	7	**0.044431***
Valuation Shoprite (McG)	-R1 108 809 152	R669 042 969			
Valuation PnP (McG)	-R643 162	R640 553 671	-2.79215	7	**0.026825***

* Statistically significant at a 95% confidence level ($p < 0.05$)
** Statistically significant at a 90% confidence level ($p < 0.10$)

Source: Researcher's own construct from statistical analysis results.

From Table 7.15 it is evident that the only two relationships are statistically significant ($p < 0.05$) while three are not statistically significant ($p > 0.05$) at a 95% confidence level. If a 90% confidence level is accepted, then only three (two with a 95% confidence level) of the five relationships are statistically significant ($p < 0.10$). The two relationships between the valuations of Shoprite and PnP when using the R153 and the R157 government bonds as the risk-free rate for single periods are both not statistically significant (both $p < 0.05$ and $p < 0.10$). If the relationships between the valuations using the R153 government bond as the risk-free rate are ignored for both the single and

multiple period valuations, both the relationships between the valuations using the R157 government bond as the risk-free rate for both the single and multiple period valuations are not statistically significant at a 95% confidence level. However, if a 90% confidence level is accepted, then the relationship between the valuations of Shoprite and PnP using the R157 government bond as the risk-free rate for multiple periods is statistically significant ($p < 0.10$). The relationship is a negative relationship, implying that if the valuation of Shoprite is changing, the valuation of PnP is changing in the opposite direction.

The reason for placing more importance on the relationships with the valuations using the R157 government bond is that the R153 government bond has a final (last one of three maturity dates) maturity date of 31 August 2011 while the R157 government bond has three maturity dates, namely on 15 September 2014, 15 September 2015 and 15 September 2016 (Schedule of domestic government bonds as at 28 February 2009). Previous research, as discussed in section 6.2, found that the R157 government bond was used as the preferred risk-free rate and that the R153 government was used when then R157 government bond was not available.

Both the statistically significant relationships have negative relationships. This implies that if the valuation using the R153 government bond as the risk-free rate for multiple periods of Shoprite is changing, then the valuation of PnP will move in the opposite direction. The same applies for the valuations of Shoprite and PnP when considering the valuations as calculated by McGregor BFA Fin24Expert. The two relationships for single period valuations of Shoprite and PnP (R153 and R157 government bonds as risk-free rates) both have positive relationships, although not statistically significant. The relationship between the valuations of Shoprite and PnP using the R157 government bond as the risk-free rate for multiple periods has a negative relationship and is not statistically significant at a 95% confidence level ($p < 0.05$) but at a 90% confidence level ($p < 0.10$).

Based on the varying results as discussed, research hypothesis H_6 stating that there is a statistical significant relationship between the changes of business

valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses in the e-commerce stage over a period of time, is accepted at a 90% confidence level ($p < 0.10$). The reason for accepting H_6 is because only three of the five valuations using the DCF approach yielded statistically significant relationships at a 95% ($p < 0.05$) and 90% ($p < 0.10$) confidence level respectively ($p = 0.026825$, $p = 0.044431$ and $p = 0.054070$).

7.5.3 T-test results when comparing Shoprite Holdings Limited (brick-and-mortar business with limited online presence) and Naspers Ltd (online business in the e-commerce stage)

Table 7.16 summarises the t-test results when comparing the various valuations of Shoprite and Naspers over the eight-year period from 2004 to 2011. Research hypothesis H_7 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence and online businesses in the e-commerce stage over a period of time, will be tested.

TABLE 7.16: T-TEST RESULTS WHEN COMPARING SHOPRITE HOLDINGS LIMITED (BRICK-AND-MORTAR BUSINESS WITH LIMITED ONLINE PRESENCE) AND NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_7

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	Df	p
Valuation Shoprite R157 (s)	R668 905 366	R460 142 103			
Valuation Naspers R157 (s)	-R688 201 320	R4 317 347 725	0.91264	7	0.391781
Valuation Shoprite R157 (m)	R1 754 539 839	R1 537 152 336			
Valuation Naspers R157 (m)	-R2 573 926 793	R4 190 627 912	2.52632	7	**0.039445***
Valuation Shoprite R153 (s)	R669 283 235	R462 782 150			
Valuation Naspers R153 (s)	-R688 201 320	R4 325 171 415	0.90425	7	0.395914
Valuation Shoprite R153 (m)	R1 756 086 372	R1 543 773 472			
Valuation Naspers R153 (m)	-R2 573 926 793	R4 162 154 619	2.50981	7	**0.040408***
Valuation Shoprite (McG)	-R1 108 809 152	R669 042 969			
Valuation Naspers (McG)	R2 294 436 484	R5 783 089 420	-1.62119	7	0.149008

***** Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

Table 7.16 shows that only two of the five relationships are statistically significant at a 95% confidence level ($p < 0.05$). The two statistically significant relationships between the valuations of Shoprite and Naspers using the R157 government bond and the R153 government bond as the risk-free rates for multiple periods, both have positive relationships. This implies that if the valuations of Shoprite are changing, the valuations of Naspers are changing in the same direction. The two relationships between the valuations of Shoprite and Naspers using the R157 government bond and the R153 government bond as risk-free rates for single period valuations are both not statistically significant at 95% ($p < 0.05$) and 90% ($p < 0.10$) confidence levels. Both these

relationships are positive while the relationship between the valuations of Shoprite and Naspers as calculated by McGregor BFA Fin24Expert has a negative relationship and is not statistically significant.

Based on the results as discussed, research hypothesis H_7 stating that there is a statistical significant relationship between the changes of the business valuations of brick-and-mortar businesses with limited online presence and online businesses in the e-commerce stage over a period of time, is rejected as only two out of four relationships are statistically significant. The hypothesis is thus rejected at a 95% confidence level ($p < 0.05$).

7.5.4 T-test results when comparing The SPAR Group Ltd (brick-and-click business with interactive online presence) and Pick n Pay Stores Ltd (brick-and-click business in the e-commerce stage)

The t-test results when comparing the various valuations of SPAR and PnP over the eight-year period from 2004 to 2011 are summarised in Table 7.17. Research hypothesis H_8 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence and brick-and-click businesses in the e-commerce stage over a period of time, will be tested.

TABLE 7.17: T-TEST RESULTS WHEN COMPARING THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE) AND PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_8

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	Df	P
Valuation SPAR R157 (s)	R382 708 418	R209 102 447			
Valuation PnP R157 (s)	R656 240 163	R194 251 857	-4.06073	7	**0.004805***
Valuation SPAR R157 (m)	R1 138 887 133	R755 661 882			
Valuation PnP R157 (m)	R2 206 756 942	R1 163 065 787	-6.18537	7	**0.000452***
Valuation SPAR R153 (s)	R382192 920	R208 463 454			
Valuation PnP R153 (s)	R658 881 657	R194 371 311	-4.11513	7	**0.004487***
Valuation SPAR R153 (m)	R1 135 375 287	R749 206 424			
Valuation PnP R153 (m)	R2 231 452 489	R1 178 331 128	-6.13841	7	**0.000473***
Valuation SPAR (McG)	R140 143 179	R152 258 911			
Valuation PnP (McG)	-R643 162	R640 553 671	0.62442	7	0.552149

***** Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

It is evident from Table 7.17 that four of the five relationships are statistically significant at a 95% confidence level ($p < 0.05$). The relationship between the valuations of SPAR and PnP as calculated by McGregor BFA Fin24Expert is the only relationship that is not statistically significant ($p > 0.05$) and it is a positive relationship. The statistically significant relationships between SPAR and PnP using the R157 and R153 government bonds as risk-free rates for single and multiple periods show negative relationships. This implies that if the valuation of SPAR is increasing, the valuation of PnP is decreasing. Therefore the valuations will move in opposite directions.

The results discussed showed that the four relationships using the R157 and R153 government bonds as risk-free rates for single and multiple period valuations are statistically significant. Therefore research hypothesis H_8 stating that there is a statistical significant relationship between the changes of the business valuations of brick-and-click businesses with interactive online presence and brick-and-click businesses in the e-commerce stage over a period of time, is accepted at a 95% confidence level ($p < 0.05$).

7.5.5 T-test results when comparing The SPAR Group Ltd (brick-and-click business with interactive online presence) and Naspers Ltd (online business in the e-commerce stage)

Table 7.18 summarises the t-test results when comparing the various valuations of Shoprite and Naspers over the eight-year period from 2004 to 2011. Research hypothesis H_9 stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence and online businesses in the e-commerce stage over a period of time, will be tested.

TABLE 7.18: T-TEST RESULTS WHEN COMPARING THE SPAR GROUP LTD (BRICK-AND-CLICK BUSINESS WITH INTERACTIVE ONLINE PRESENCE) AND NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_9

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	Df	p
Valuation SPAR R157 (s)	R382 708 418	R209 102 447			
Valuation Naspers R157 (s)	-R688 201 320	R4 317 347 725	0.702152	7	0.505623
Valuation SPAR R157 (m)	R1 138 887 133	R755 661 882			
Valuation Naspers R157 (m)	-R2 657 875 256	R4 190 627 912	2.35814	7	**0.050480****
Valuation SPAR R153 (s)	R382192 920	R208 463 454			
Valuation Naspers R153 (s)	-R676 457 282	R4 325 171 415	0.69244	7	0.510972
Valuation SPAR R153 (m)	R1 135 375 287	R749 206 424			
Valuation Naspers R153 (m)	-R2 573 926 793	R4 162 154 619	2.32862	7	**0.052721****
Valuation SPAR (McG)	R140 143 179	R152 258 911			
Valuation Naspers (McG)	R2 294 436 484	R5 783 089 420	-1.07873	7	0.316469

****** Statistically significant at a 90% confidence level ($p < 0.10$)

Source: Researcher's own construct from statistical analysis results.

The results of the t-test comparing the valuations of SPAR and Naspers as presented in Table 7.18 indicate that all the relationships are not statistically significant at a 95% confidence level ($p < 0.05$). If a 90% confidence level is accepted, then the relationships between the valuations of SPAR and Naspers using the R157 and R153 government bonds as risk-free rates for multiple periods are statistically significant ($p < 0.10$). All the relationships between valuations using the R157 and R153 government bonds as risk-free rates for single and multiple periods are positive. The only negative relationship which is not statistically significant, is the relationship between the valuations of SPAR and Naspers as calculated by McGregor BFA Fin24Expert.

Therefore research hypothesis H_9 stating that there is a statistical significant relationship between the changes of the business valuations of brick-and-click businesses with interactive online presence and online businesses in the e-commerce stage over a period of time, is rejected at a 90% confidence level ($p < 0.10$). Only two of the five relationships were found to be statistically significant at a 90% confidence level ($p < 0.10$).

7.5.6 T-test results when comparing Pick n Pay Stores Ltd (brick-and-click business in the e-commerce stage) and Naspers Ltd (online business in the e-commerce stage)

Table 7.19 summarises the t-test results when comparing the various valuations of PnP and Naspers over the eight-year period from 2004 to 2011. Research hypothesis H_{10} stating that there is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses in the e-commerce stage and online businesses in the e-commerce stage over a period of time, will be tested.

TABLE 7.19: T-TEST RESULTS WHEN COMPARING PICK N PAY STORES LTD (BRICK-AND-CLICK BUSINESS IN THE E-COMMERCE STAGE) AND NASPERS LTD (ONLINE BUSINESS IN THE E-COMMERCE STAGE) – RESEARCH HYPOTHESIS H_{10}

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	Df	p
Valuation PnP R157 (s)	R656 240 163	R194 251 857			
Valuation Naspers R157 (s)	-R688 201 320	R4 317 347 725	-0.89402	7	0.401006
Valuation PnP R157 (m)	R2 206 756 942	R1 163 065 787			
Valuation Naspers R157 (m)	-R2 657 875 256	R4 190 627 912	-2.82388	7	**0.025630***
Valuation PnP R153 (s)	R658 881 657	R194 371 311			
Valuation Naspers R153 (s)	-R676 457 282	R4 325 171 415	-0.88671	7	0.404667
Valuation PnP R153 (m)	R2 231 452 489	R1 178 331 128			
Valuation Naspers R153 (m)	-R2 573 926 793	R4 162 154 619	-2.81582	7	**0.025928***
Valuation PnP (McG)	-R643 162	R640 553 671			
Valuation Naspers (McG)	R2 294 436 484	R5 783 089 420	1.16479	7	0.282260

***** Statistically significant at a 95% confidence level ($p < 0.05$)

Source: Researcher's own construct from statistical analysis results.

Table 7.19 shows that only two of the five relationships are statistically significant at a 95% confidence level ($p < 0.05$). Two statistically significant relationships exist between the valuations of PnP and Naspers using the R157 and the R153 government bonds as risk-free rates for multiple periods both have negative relationships. This implies that if the valuation of PnP is changing, the valuation of Naspers is changing in the opposite direction. The two relationships between the valuations of PnP and Naspers using the R157 and the R153 government bonds as risk-free rates for single period valuations are not statistically significant at both the 95% and 90% confidence levels. Both these relationships have negative relationships implying that the movement in the valuations will occur in opposite directions (one increases while the other

decreases). A positive relationship exists between the valuations of PnP and Naspers as calculated by McGregor BFA Fin24Expert, although the relationship is not statistically significant at a 90% ($p < 0.10$) confidence level.

Based on the results as discussed, research hypothesis H_{10} stating that there is a statistical significant relationship between the changes of the business valuations of brick-and-click businesses in the e-commerce stage and online businesses in the e-commerce stage over a period of time, is thus rejected at a 95% confidence level ($p < 0.05$). Only two of the five relationships are statistically significant at a 95% confidence level ($p < 0.05$).

7.5.7 T-test results when comparing the share prices of the selected businesses

Table 7.20 summarises the t-test for groups results when comparing the share prices of Shoprite, SPAR, PnP and Naspers for the period 2004 to 2011.

TABLE 7.20: T-TEST RESULTS OF SHARE PRICE COMPARISONS OF SELECTED BUSINESSES

Variable	Test of means against reference constant (value)				
	Mean	Std. Dev.	t-value	df	p
Share price Shoprite	44.15500	31.91454			
Share price SPAR	52.19375	30.78642	2.28579	7	**0.056155****
Share price Shoprite	44.15500	31.91454			
Share price PnP	31.41000	8.61186	1.48427	7	0.181310
Share price Shoprite	44.15500	31.91454			
Share price Naspers	175.09750	114.88411	-4.38290	7	**0.003223***
Share price SPAR	52.19375	30.78642			
Share price PnP	31.41000	8.61186	2.60913	7	**0.034957***
Share price SPAR	52.19375	30.78642			
Share price Naspers	175.09750	114.88411	-4.00609	7	**0.005150***
Share price PnP	31.41000	8.61186			
Share price Naspers	175.09750	114.88411	3.80706	7	**0.006653***

***** Statistically significant at a 95% confidence level ($p < 0.05$)
****** Statistically significant at a 90% confidence level ($p < 0.10$)

Source: Researcher's own construct from statistical analysis results.

When comparing the share prices of Shoprite, SPAR, PnP and Naspers, only four of the six relationships are statistically significant ($p < 0.05$) as shown in Table 7.20. There are positive statistically significant relationships between the share prices of SPAR and PnP, and between the share prices of PnP and Naspers. Negative statistically significant relationships exist between the share prices of Shoprite and Naspers and between the share prices of SPAR and Naspers.

If a 90% confidence level ($p < 0.10$) is accepted, then a positive relationship exists between the share prices of Shoprite and SPAR. A positive relationship exist between the share price of Shoprite and PnP, but the relationship is not statistically significant at 95% ($p < 0.05$) or 90% ($p < 0.10$) confidence levels.

7.6 RESEARCH HYPOTHESES RESULTS SUMMARY

Table 7.21 summarises the results of the research hypotheses based on the relationships between:

- the single period valuations using the R157 government bond as the risk-free rate (first p-value for each hypothesis in Table 7.21);
- the multiple period valuations using the R157 government bond as the risk-free rate (second p-value for each hypothesis in Table 7.21);
- the single period valuations using the R153 government bond as the risk-free rate (third p-value for each hypothesis in Table 7.21);
- the multiple period valuations using the R153 government bond as the risk-free rate (fourth p-value for each hypothesis in Table 7.21); and
- the valuations as calculated by McGregor BFA Fin24Expert (fifth p-value for each hypothesis in Table 7.21).

TABLE 7.21: SUMMARY OF RESEARCH HYPOTHESES RESULTS

RESEARCH HYPOTHESIS	P-VALUE	DECISION
H_1: There is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence over a period of time	p = 0.004506* p = 0.014483* p = 0.004628* p = 0.014706* p = 0.002241*	Accept
H_2: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence over a period of time	p = 0.001286* p = 0.003734* p = 0.001273* p = 0.003627* p = 0.035252*	Accept
H_3: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses in the e-commerce stage over a period of time	p = 0.000029* p = 0.001045* p = 0.000028* p = 0.001057* p = 0.997813	Accept
H_4: There is a statistical significant relationship between the changes in the business valuations of online businesses in the e-commerce stage over a period of time	p = 0.665724 p = 0.115913 p = 0.671570 p = 0.123749 p = 0.298799	Reject
H_5: There is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses with interactive online presence over a period of time	p = 0.046449* p = 0.063460** p = 0.047112* p = 0.064982** p = 0.001609*	Accept
H_6: There is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence and brick-and-click businesses in the e-commerce stage over a period of time	p = 0.921648 p = 0.054070** p = 0.935877 p = 0.044431* p = 0.026825*	Accept

TABLE 7.21: SUMMARY OF RESEARCH HYPOTHESES RESULTS (cont)

RESEARCH HYPOTHESIS	P-VALUE	DECISION
H_7: There is a statistical significant relationship between the changes in the business valuations of brick-and-mortar businesses with limited online presence and online business in the e-commerce stage over a period of time	p = 0.391781 p = 0.039445* p = 0.395914 p = 0.040408* p = 0.149008	Rejected
H_8: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence and brick-and-click businesses in the e-commerce stage over a period of time	p = 0.004805* p = 0.000452* p = 0.004487* p = 0.000473* p = 0.552149	Accept
H_9: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses with interactive online presence and online businesses in the e-commerce stage over a period of time	p = 0.505623 p = 0.050480** p = 0.510972 p = 0.052721** p = 0.316469	Rejected
H_{10}: There is a statistical significant relationship between the changes in the business valuations of brick-and-click businesses in the e-commerce stage and online businesses in the e-commerce stage over a period of time	p = 0.401006 p = 0.025630* p = 0.404667 p = 0.025928* p = 0.282260	Rejected

*Statistically significant at a 95% confidence level
**Statistically significant at a 90% confidence level

Source: Researcher's own construct.

The decision to accept or reject a research hypothesis is based on the p-value of the relationships between the single and multiple period valuations using the R157 and R153 government bond as the risk-free rates, and on the relationships between the valuations as calculated by McGregor BFA Fin24Expert. Research hypotheses with a p-value smaller than 0.10 (90% confidence level) are accepted. At least three of the five relationships should exist for the research hypothesis to be accepted. Based on the relevant p-values, six of the tested relationships exist between the various valuations as

summarised in Table 7.21. For H_1, H_2 and H_5 all the tested relationships are statistically significant. No statistically significant relationships exist between the valuations as calculated by McGregor BFA Fin24Expert for H_3 and H_8, although statistically significant relationships exist between the valuations based on the DCF approach. For H_6, only three statistically significant relationships exist between the valuations using the R153 government bond as the risk-free rate for single and multiple period valuations and the valuations as calculated by McGregor BFA Fin24Expert. There are only two statistically significant relationships between the valuations using the R153 government bond as the risk-free rate for single and multiple period valuations for H_7, H_9 and H_{10}. The valuations using the R157 government bond as the risk-free rate for single and multiple period valuations and the valuations as calculated by McGregor BFA Fin24Expert yields no statistically significant relationships for H_7, H_9 and H_{10}. None of the relationships tested for H_4 yields statistically significant relationships at a 95% ($p < 0.05$) or 90% ($p < 0.10$) confidence levels. To summarise, six of the research hypotheses are accepted while four research hypotheses are rejected.

It is clear from Table 7.21 that the four research hypotheses that are rejected are concerned with online businesses in the e-commerce stage. Based on the one-sample t-test results, it is evident that online businesses in the e-commerce stage do not create value over time. When analysing the dependent t-test results, one can see that there is no relationships between online businesses in the e-commerce stage and any other business, regardless of the type of business and the e-business model stage the business is in. Therefore one can conclude that it may not be beneficial for brick-and-mortar and brick-and-click businesses to convert to online businesses because the valuation of the business will not increase and therefore shareholders' wealth will not be created. The decision to convert should be based on a comprehensive viability analysis.

7.7 SUMMARY

The main aim of the chapter was to test whether the research hypotheses stated in Chapter One should be accepted or rejected. In order to test the

hypotheses, the various valuations of the four selected businesses, namely Shoprite, SPAR, PnP and Naspers, had to be calculated using the DCF approach. The calculated valuations were presented and discussed in Chapter Six.

The descriptive statistics of the valuations for the four selected businesses were discussed. When using the DCF approach, the lowest single period valuation for Shoprite was R180 462 382 and the highest was R1 264 679 309, both using the R153 government bond as the risk-free rate. The lowest multiple period valuation for Shoprite was R180 462 382 (R153 government bond as the risk-free rate) and the highest was R4 378 263 105 (R157 government bond as the risk-free rate) when using the DCF approach. When using the DCF approach, the lowest single period valuation for SPAR was R51 910 890 and the highest was R676 660 895, both using the R157 government bond as the risk-free rate. The lowest multiple period valuation for SPAR was R360 947 959 and the highest was R2 449 642 765 when using the DCF approach with the R157 government bond as the risk-free rate. When using the DCF approach, the lowest single period valuation for PnP was R362 683 140 (R157 government bond as the risk-free rate) and the highest was R878 218 448 (R153 government bond as the risk-free rate). The lowest multiple period valuation for PnP was R413 520 930 (R157 government bond as the risk-free rate) and the highest was R3 909 009 137 (R153 government bond as the risk-free rate) when using the DCF approach. When using the DCF approach, the lowest single period valuation for Naspers was a negative value of R7 662 859 962 (R157 government as the risk-free rate) and the highest was R6 723 075 322 (R153 government bond as the risk-free rate). The lowest multiple period valuation for Naspers was -R11 148 667 777 (R157 government bond as the risk-free rate) and the highest was R1 614 838 108 (R153 government bond as the risk-free rate) when using the DCF approach. It was found that the standard deviations were relatively small when compared to the mean values of the valuations. Naspers was the only exception as the standard deviations exceeded the mean values of the valuations.

The results indicated that there were only 10 statistically significant correlations. All the correlations were positive but the strength of the correlations varied. When using the DCF approach with the R157 government bond as the risk-free rate for a single period valuation, a relatively strong positive correlation was found between Shoprite and SPAR. When using the DCF approach with the R157 government bond as the risk-free rate for a multiple period valuation, strong positive correlations existed between the valuations of Shoprite and SPAR, the valuations of Shoprite and PnP, and the valuations of SPAR and PnP. When the R153 government bond was used as the risk-free rate in the DCF approach for a single period valuation, relatively strong correlations were found between the valuations of Shoprite and SPAR and the valuations of Shoprite and PnP. When using the DCF approach with the R153 government bond as the risk-free rate for a multiple period valuation, strong positive correlations existed between the valuations of Shoprite and SPAR, the valuations of Shoprite and PnP and the valuations of SPAR and PnP. The correlations between the valuations as calculated by McGregor BFA Fin24Expert yielded only one strong positive correlation between the valuations of SPAR and Naspers.

Ten research hypotheses were formulated and presented in Chapter One. Six of the ten research hypotheses were accepted based on the t-test results where the relationships were statistically significant. Four of the 10 research hypotheses were rejected and all four of the research hypotheses involved the online business in the e-commerce stage.

The chapter to follow will provide an overview of the study, and conclusions based on the results. Recommendations will be made to valuators and investors concerning businesses operating in the various stages of the e-business model. The contribution of the study will be highlighted. The limitations and future research areas will be identified.

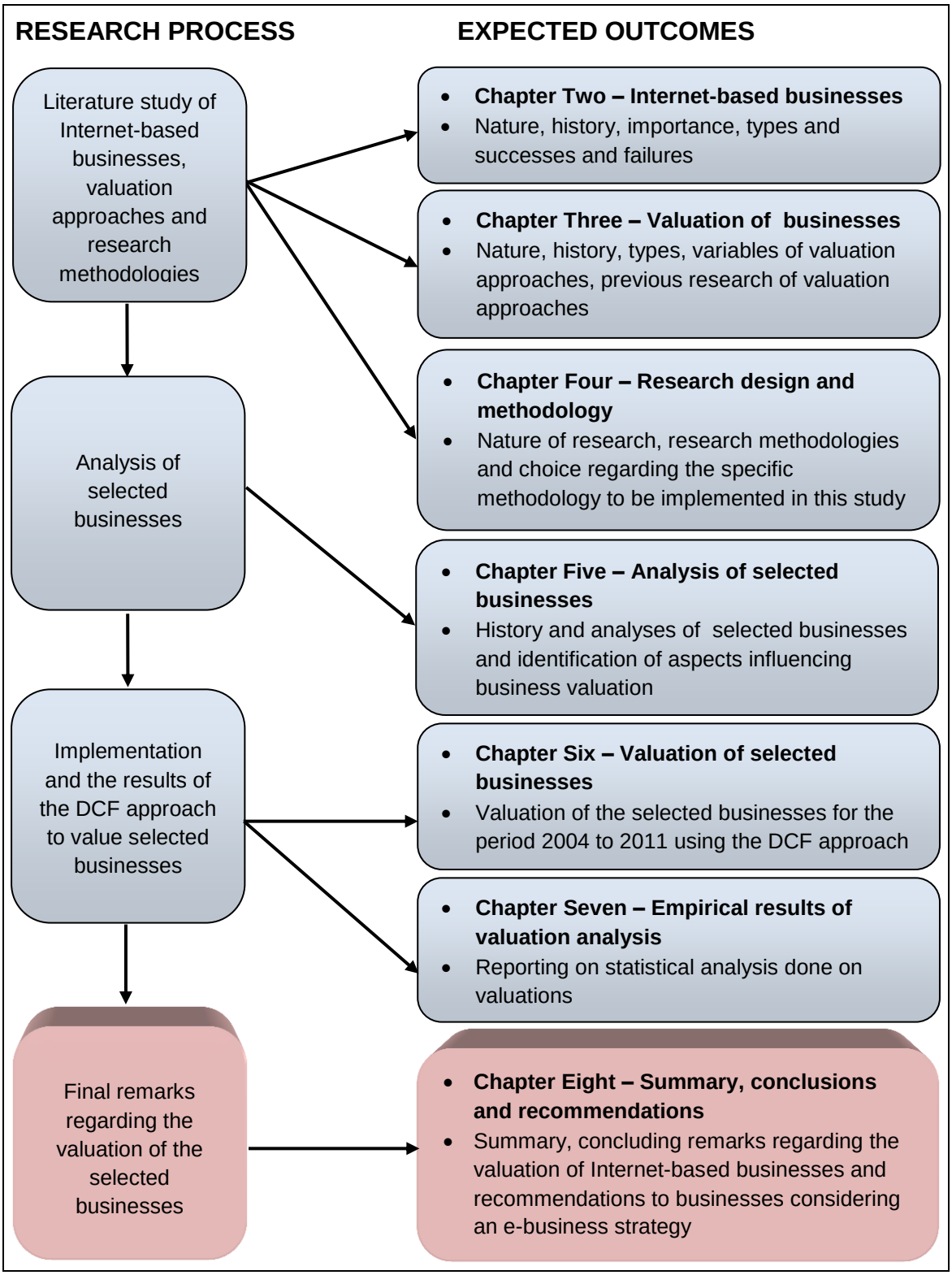
CHAPTER EIGHT
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

Chapters Two and Three provided the theoretical background to the study while Chapter Four described the research methodology that was followed in the study. The fifth chapter provided a detailed overview of the businesses that had been selected to be valued using the DCF approach. Chapter Six presented the five different valuations, while Chapter Seven provided the basic descriptive statistics and research hypotheses testing results.

The final secondary objective, as stated in Chapter One, that was needed to attain the primary objective of the study, was to provide a holistic overview of the study. Chapter Eight will therefore summarise the study by addressing the problem statement, research objectives, research design and methodology employed in the study. A synopsis of the literature overview and the four selected businesses will be provided. The main purpose of Chapter Eight is to make recommendations to businesses considering implementing e-business strategies. The recommendations can also be used by valuators and investors of businesses in various stages of the e-business model. The results as presented in Chapters Six and Seven will be used as supportive evidence to the conclusions and recommendations made. The unique contribution of this study will also be highlighted and discussed. The limitations of the study and possible future research areas will be given. To conclude the chapter and the study, some final remarks will be made regarding the study. Figure 8.1 is reproduced to illustrate the place of Chapter Eight within the research process.

FIGURE 8.1: CHAPTER EIGHT AS PART OF THE CONCEPTUAL FRAMEWORK OF THE RESEARCH PROCESS



Source: Researcher's own construct.

8.2 SUMMARY OF THE RESEARCH

The main question that was asked during the study was whether the value of Internet-based businesses differed during the various stage of Internet presence. If it was true that the value of a business increases, then it would be beneficial for businesses to engage in an e-business strategy. Various levels of Internet presence exist, and the most beneficial e-business strategy should then be sought by businesses. Therefore the primary objective of the research was to determine and to analyse the value of Internet-based businesses at various stages of Internet presence, to establish whether e-business strategies add value to businesses. The attainment of the primary objective was supported by several secondary objectives addressing the different types of Internet-based businesses and the various valuation methods found in literature. Table 8.1 summarises the attainment of the various secondary objectives to achieve the primary objective as presented in Chapter One.

TABLE 8.1: ATTAINMENT OF RESEARCH OBJECTIVES

	OBJECTIVE	CHAPTER ADDRESSING OBJECTIVE
SECONDARY	• ONE: Conduct a literature review on the various types of Internet-based businesses.	Chapter Two
	• TWO: Provide an overview of the different valuation methods by considering the literature and previous research regarding the valuation of brick-and-mortar and Internet-based businesses.	Chapter Three
	• THREE: Identify and implement the appropriate research methodology for this study in order to achieve the overall primary objective.	Chapter Four

TABLE 8.1: ATTAINMENT OF RESEARCH OBJECTIVES (cont)

	OBJECTVE	CHAPTER ADDRESSING OBJECTIVE
SECONDARY (cont)	• FOUR: Analyse the selected businesses by providing an operational and financial overview, an analysis of events, and a determination of what factors may have influenced the value of the businesses over an eight-year period from 2004 to 2011.	Chapter Five
	• FIVE: Apply the DCF approach to the selected businesses to determine the values for the businesses for each of the eight years.	Chapter Six Annexures A to D
	• SIX: Analyse the results of the business valuation to determine the extent of value creation of an e-business strategy.	Chapter Seven
	• SEVEN: Make recommendations based on the valuation of the Internet-based businesses over the eight-year period, at the different Internet presence stages, to prospective businesses considering an e-business strategy, by indicating prospective benefits.	Chapter Eight
PRIMARY	• Determine and analyse the value of Internet-based businesses at the various stages of Internet presence, to determine the value creation of an e-business strategy	Chapters Six to Eight

Source: Researcher's own construct.

A brief summary of Chapters Two to Seven addressing secondary objectives one to six will be presented in the following sections.

8.2.1 Summary of Internet-based businesses – Chapter Two

The first secondary objective was to provide a literature overview of the different types of Internet-based businesses. In the discussion of the nature of Internet-based businesses, it was important to distinguish between e-commerce, e-business, m-commerce and e-marketing. E-commerce referred to the trading of products and services to generate income using the Internet and other computer-mediated activities, while e-business used all the e-commerce activities as well as the serving of customers and collaboration with business partners. M-commerce was described as the use of mobile technology, such as PDA and cell phones, to conduct business, while e-marketing was referred to as the use of information technology to create communication with customers, with the aim of improving customer relations that would provide the business and its stakeholders with monetary and non-monetary benefits.

As the Internet is the corner-stone of Internet-based businesses, the four functions of the Internet were highlighted, namely communication, entertainment, information and e-commerce. Based on the functions, Internet-based businesses were divided into two main groups: brick-and-click businesses and online businesses. The online businesses were furthermore subdivided into click-only, Internet search engines, Internet social networks and other types of online businesses not listed. Each of the Internet-based businesses was discussed and the timelines of each were provided. Examples were identified to support the discussions. The history of the Internet from the 1960s to the 2000s was outlined.

As the emphasis of the study was on the valuation of businesses at various stages of the e-business model, a discussion on the different e-business models was provided. Based on the discussion, the researcher proposed an e-business model to be used for the study. The stages were: no online presence, limited online presence, interactive online presence, e-commerce and e-business. Clarifications of the different stages were given.

The importance of the study was emphasised by a discussion of the importance of Internet-based businesses. The value of these businesses in the market

environment was provided. Chapter Two, which addressed the first secondary objective, concluded with examples of Internet-based business successes and failures.

8.2.2 Summary of valuation approaches – Chapter Three

Various valuation approaches can be found in literature, and a discussion of these approaches for brick-and-mortar and Internet-based businesses was formulated as the second secondary objective. The purpose of valuation was describe as the determining of a fair market value for a business, where a fair market value is the acceptable price to be paid by an informed buyer and to be received by an informed seller. To understand the development of the traditional valuation approaches, a brief history of valuation was given. A number of valuation approaches were discussed, namely the DDM, the zero growth model, the constant growth model, the non-constant growth model, the FCF valuation model, the price ratios (P/E ratio, P/B ratio, book value per share and liquidation value per share ratios), EVA, MVA and real options. It was also found that some businesses opt not to pay dividends, thus not all the valuation approaches could be used.

The variables used in each of the valuation approaches were identified and categorised either as a known or an unknown variable. The different valuation approaches were also linked to the different types of businesses, namely, brick-and-mortar, brick-and-click and online businesses. The shortcomings of each of the valuation approaches were identified. It was found that the majority of the valuation approaches had many unknown variables. Another major limitation of the majority of the valuation approaches was the use of future dividends as one of the unknown variables. This was especially true for businesses not paying dividends, and therefore using valuation approaches with dividends as a variable will yield incorrect valuations.

Previous research on the applicability of the valuation approaches indicated that the DCF (also referred to as the discounted FCF approach) was the most used approach to be used when valuing businesses. If one considered the four future value scenarios, as depicted in Figure 3.3, the use of the DCF tended to focus

on the long-term perspective, providing a true economic value of the business. The scenario was known as cohesive capitalism, and gave a broad and long-term view of business value creation. An increase in the value of the business as calculated using the DCF would then indicate value creation, which would assist in the primary objective of financial managers of shareholders' wealth creation.

It was then found that businesses implementing some form of e-business strategy should consider the critical e-value indicators. The e-value indicators included were innovativeness, marketing intensity, human resources training, operational efficiency and risk disposition. These indicators should be used effectively, especially in businesses not paying dividends, to encourage investments in these businesses.

When valuing Internet-based businesses, it was found that the valuation of the intangible assets of these businesses was critical to the valuation process. This was also more important when valuing online businesses because online businesses were described as being rich in intellectual assets, and were the corner stone of the businesses' operations.

The chapter concluded with a summary of the intrinsic values over time for Amazon.com, DoubleClick, Facebook, Google, LinkedIn, Skype Technologies and Yahoo!. The income generation of Internet-based businesses included selling products and services online, buying space on websites for advertising, subscriber fees, brokerage fees, fees for using technology, job searches, commerce, paid inclusions, pay per click, pay per sale and online gaming.

8.2.3 Summary of research methodology – Chapter Four

The aim of the third secondary objective was to identify the most appropriate research methodology for the study. The nature of the research was solving a problem by following several steps in sequence. The purpose of the study was to solve a problem which was to determine and analyse the value of Internet-based businesses at the various stages of Internet presence, in order to establish whether the e-business strategy implemented created value for the

Internet-based business. The product of research was the ultimate outcome of the research, which was the primary objective of the study. As stated in Chapter One, the intended product of the study was to determine whether an e-business strategy added value to an Internet-based business in terms of its valuation. Based on the intended product, appropriate recommendations would be made, which was the purpose of Chapter Eight. The research process that was followed was depicted for the first time in Figure 1.1. The research process included literature overviews of relevant topics (Internet-based businesses and valuation approaches) and the use of the research methodology identified to collect and analyse data to make appropriate recommendations. A positivistic paradigm was followed and the presentation of the research would be in the format of a thesis, journal articles and conference presentations.

To summarise the research classification, the type of research for the study was predictive research because the primary objective was to determine whether an e-business strategy would create value for a business. The research process followed was quantitative because secondary data for four selected businesses was analysed and transformed into usable numerical data. The logic of research was deductive as 10 research hypotheses were formulated in Chapter One and tested in Chapter Seven. The study was applied research because the findings would only be usable for businesses considering e-business strategies (regardless of the stage in the e-business model as described in Chapter Two). The research was also usable by valuators and possible investors because the findings would give an indication whether e-business strategies added value to the business and therefore it would suggest future growth opportunities.

The population for the study was public companies listed on the JSE. The sampling frame was the South African public companies, and the sample used was all the businesses listed on the JSE in the food and drug industry (retailers and wholesalers subsector). Four businesses were listed in the food and drug sector and three of the four were used. The fourth business, which was not included, was Pick n Pay Holdings Limited, an investment holding company with a controlling interest in Pick n Pay Stores Ltd. Judgement sampling was was used to select Shoprite Holdings Limited, The SPAR Group Ltd and Pick n Pay

Stores Ltd. Naspers Ltd, a business in the Media sector (broadcasting and entertainment subsector) was also included. The main purpose of including Naspers Ltd in the study was because it is includes the well-known click-only business, Kalahari.net. Judgement sampling was used to select Naspers Ltd.

Secondary data from the annual financial statements of the four businesses was obtained from the individual official websites of the four businesses. This data was used to provide an operational and financial overview of the businesses. The financial statements as obtained from McGregor BFA Fin24Expert were used to compile a database for the calculations of the FCF and ultimately for the valuation processes of the four businesses. The reason for using the McGregor BFA financial statements was that all the financial statements were standardised using the same parameters.

The valuations for each business were calculated for the period 2004 to 2011. The reliability and validity of the data and the calculations were confirmed by two independent experts in the field of accounting. The reliability and validity of the e-business model and the classification of the four selected businesses according to the proposed e-business model were confirmed by two independent experts in the field of e-commerce. The data was analysed using basic descriptive statistics, correlations and t-tests. The t-tests (both one-sample and dependent) were used to test the research hypotheses as formulated in Chapter One.

8.2.4 Summary of the four selected businesses – Chapter Five

The purpose of the fourth secondary objective was to conduct an analysis of the four businesses by providing an operational and financial overview of each business to identify events and factors that could have influenced the values of the businesses. Therefore a brief historic overview of Shoprite, SPAR, PnP and Naspers was provided. The operational overview for each business per year from 2004 to 2011 was outlined. Operational highlights included awards received, growth of stores, stores opened in new geographical locations, acquiring of new stores, disposal of existing stores and capital spending. Other issues addressed were the number and composition of the board of directors,

number of stores owned, store formats and store locations. The financial overview included the NPAT, cash and cash equivalents, headline earnings, standard and effective tax rates, number of shares authorised and outstanding, book value per share, basic EPS, dividends paid, dividend and earnings yields, P/E ratio, dividend cover, net asset value per share and 3-year betas.

The standard tax rates in South Africa for the four businesses from 2004 to 2011 decreased from 30% to 28%. It was also important to note that during the 2004 to 2005 period, the businesses changed from using GAAP to IFRS. The highlights of each business were summarised by year. The discussion of each business was concluded by classifying each business according to the e-business model as proposed in Chapter Two. Shoprite was classified as a brick-and-mortar business with limited online presence, SPAR as a brick-and-click with interactive online presence, PnP as a brick-and-click in the e-commerce stage and Naspers as an online business in the e-commerce stage.

The chapter concluded with a discussion on the business environment in which the businesses operated. The performance of each business per year was linked to the underlying economic climate. Possible causes for the operational and/or financial performances of each business were highlighted per economic year as from 2004 to 2011 to give effect to the specific secondary objective.

8.2.5 Summary of valuations of four selected businesses – Chapter Six

The fifth secondary objective was to value the four selected businesses for each year from 2004 to 2011. The valuation approach used in the valuation process was the DCF valuation model, also referred to as the discounted FCF valuation model. According to previous research, as discussed in Chapters Three and Six, the DCF valuation model was the preferred valuation approach to be used. The variables necessary for the DCF valuation model were identified, and were recorded in the financial database created by the researcher. FCFs were calculated from 2004 to 2011 for each business based on the cash flow statements obtained from McGregor BFA Fin24Expert. The R153 and R157 government bonds were used as risk-free rates in the valuations. Previous research showing that the R157 government bond was the preferred risk-free

rate was presented. The market risk premium used by McGregor BFA ranged between 5% and 7%. Previous research was presented showing that a 6% market risk premium was acceptable for the South African market. The recorded betas and WACC were also obtained from McGregor BFA Fin24Expert. WACC was used as the discount rate in the valuations. The cost of equity, after tax cost of debt, and the weight of equity and debt were provided by McGregor BFA Fin24Expert. The weightings used in the calculation of WACC by McGregor BFA Fin24Expert were assumed by the researcher to be the target capital structure.

The valuations for Shoprite as a brick-and-mortar business with limited online presence ranged from R180 574 million to R1 194 835 million when using the R157 government bond as the risk-free rate for a single period valuation, while it ranged from R180 462 million to R1 193 444 million when using the R153 government bond as the risk-free rate for a single period valuation. The multiple period valuation using the R157 government bond as the risk-free rate ranged from R180 574 million to R4 478 263 million and from R180 462 million to R4 364 218 when using the R153 government bond as the risk-free rate.

The valuations for SPAR as a brick-and-click business with interactive online presence ranged from R390 280 million to R658 348 million when using the R157 government bond as the risk-free rate for a single period valuation while it ranged from R390 246 million to R655 720 million when using the R153 government bond as the risk-free rate for a single period valuation. The multiple period valuation using the R157 government bond as the risk-free rate ranged from R390 280 million to R2 449 643 million and from R390 246 million to R2 418 929 when using the R153 government bond as the risk-free rate.

The valuations for PnP as a brick-and-click business in the e-commerce stage ranged from R413 521 million to R876 342 million when using the R157 government bond as the risk-free rate for a single period valuation while it ranged from R414 669 million to R878 218 million when using the R153 government bond as the risk-free rate for a single period valuation. The multiple period valuation using the R157 government bond as the risk-free rate ranged

from R413 521 million to R3 879 431 million and from R414 669 million to R3 909 009 when using the R153 government bond as the risk-free rate.

The valuations for Naspers as an online business in the e-commerce stage ranged from a positive value of R805 940 million to a negative value of R1 125 512 million when using the R157 government bond as the risk-free rate for a single period valuation while it ranged from a positive value of R806 234 million to a negative value of R1 128 623 million when using the R153 government bond as the risk-free rate for a single period valuation. The multiple period valuation using the R157 government bond as the risk-free rate ranged from a positive value of R805 940 million to a negative value of R3 781 716 million and from positive value of R806 234 million to a negative value of R3 518 831 when using the R153 government bond as the risk-free rate.

8.2.6 Summary of statistically analysed valuation results – Chapter Seven

The aim of the sixth secondary objective was to report on the basic descriptive statistics, the correlation and the research hypotheses testing. The descriptive statistics (mean, median, minimum, maximum, range and standard deviation) were reported and interpreted for each of the four businesses over the eight-year period for each of the five valuations. If was found that the standard deviations were relative small when compared with the mean values (standard deviations less than 50%). The only exception was the standard deviation of Naspers where the standard deviations were greater than 50%, regardless of the valuation approach used. As mentioned previously, the valuations calculated by McGregor BFA Fin24Expert were vastly different from the valuations calculated by the researcher. The explanation for the differences was that the researcher used the DCF valuation model where dividends and shares outstanding were ignored, while the method used by McGregor BFA Fin24Expert focused mainly on shares outstanding, share price, dividends paid and received and cash. Therefore the valuation approach preferred by the researcher focused on cash generation rather than on market value (number of shares outstanding multiplied by share price).

The correlation results revealed that there were relatively strong positive correlations between the valuations of Shoprite and SPAR for four of the valuations calculated. The exception was that no correlation was found between the valuations of Shoprite and SPAR as calculated by McGregor BFA Fin24Expert. Three relatively strong positive correlations were found between the valuations of Shoprite and PnP. The two exceptions where no correlations were found were the correlation between the valuations of Shoprite and PnP using the R157 government bond as the risk-free rate for single periods and the correlation between the valuations of Shoprite and PnP as calculated by McGregor BFA Fin24Expert. None of the five correlations between Shoprite and Naspers were found to be statistically significant. Two strong positive correlations between the valuations of SPAR and PnP were found between the valuations calculated using the R157 government bond as the risk-free rate for multiple periods and the R153 government bond as the risk-free rate for single periods. No correlations were found between the valuations using the R157 and the R153 government bonds as the risk-free rates for single periods and the valuations as calculated by McGregor BFA Fin24Expert. The only relative strong positive correlation between the valuations of SPAR and Naspers were found for the valuations calculated by McGregor BFA Fin24Expert. None of the correlations between the valuations using the R157 and R153 government bonds as risk-free rates for single and multiple periods were statistically significant. None of the five correlations between PnP and Naspers were found to be statistically significant.

The results of the t-tests were used to accept or reject the research hypotheses formulated in Chapter One. It was found that there were relationships between the valuations of Shoprite, SPAR and PnP over the 2004 to 2011 period. Therefore research hypotheses H_1 to H_3 were accepted. No relationships were found between the five valuations of Naspers from 2004 to 2011 and therefore research hypothesis H_4 was rejected. Based on this finding, it can be stated that online businesses in the e-commerce stage may not not add value to the business over time. The brick-and-mortar and brick-and-click businesses were found to increase the value of the business over time.

The dependent t-tests revealed that there were relationships between the valuations of Shoprite and SPAR (H_5), Shoprite and PnP (H_6) and SPAR and PnP (H_8). Therefore the research hypotheses H_5, H_6 and H_8 were accepted. The dependent t-tests revealed that there were no relationships between the valuations of Shoprite and Naspers (H_7), SPAR and Naspers (H_9) and PnP and Naspers (H_{10}). The three research hypotheses were rejected as no relationships were found to exist between the valuations of the various businesses. It is thus clear that there is no evidence that online businesses in the e-commerce stage will add value to the business over time. Evidence, however to exist that brick-and-click businesses in the interactive online presence stage and the e-commerce stage will increase the valuation of the business over time.

8.3 FINDINGS AND RECOMMENDATIONS BASED ON EMPIRICAL RESULTS

The findings and recommendations based on the empirical results discussed in Chapter Seven will be divided into a number of sections based on the type of business in a specific e-business model stages.

8.3.1 Findings and recommendations based on the empirical results of brick-and-mortar businesses with limited online presence (Shoprite Holdings Limited)

The analysis where the five valuations of Shoprite as a brick-and-mortar business with limited online presence were compared, indicated that four of the relationships were statistically significant and positive. The only negative relationship that was statistically significant was the relationship among the valuations as calculated by McGregor BFA Fin24Expert. The positive relationships implied that if the value of Shoprite using the R157 government bond as the risk-free rate increases (decreases), then all the other valuations (except the valuation as calculated by McGregor BFA Fin24Expert) will also increase (decrease). The valuation as calculated by McGregor BFA Fin24Expert will decrease (increase) when the valuation using either of the both government bonds as risk-free rates for single or multiple periods increases (decrease). A possible explanation is that the valuation approached used by McGregor BFA Fin24Expert is based on share prices, number of shares outstanding, dividends paid and received and cash while the DCF approach

focuses on cash generation. The valuation means of the valuations using the R157 and R153 government bonds as risk-free rates for single period valuations were three times higher than the valuation as calculated by McGregor BFA Fin24Expert.

The standard deviations of the valuations of brick-and-mortar businesses with limited online presence showed that the spread of the valuations was relatively small when analysing the valuations using the DCF approach. The standard deviation of the valuations calculated by McGregor BFA Fin24Expert, however, showed that the spread of the valuations was large as the standard deviation was greater than the mean valuation. Based on the five standard deviations, as presented in Table 7.10, it was evident that the valuations as calculated by McGregor BFA Fin24Expert were wider spread than the valuations calculated using the DCF approach. Based on these findings, it is thus recommended that brick-and-mortar businesses with limited online presence should rather use the DCF approach to calculate valuations instead of focusing on valuation approaches using share prices and number of shares outstanding, as the spread of the valuations is not that widely dispersed.

The recommendation to businesses is that when valuing the brick-and-mortar business with limited online presence, whether it is for obtaining capital, possible acquisitions or disposals of properties, it is imperative to use the most appropriate valuation approach. If the purpose of the valuation is to obtain external capital, then one should consider valuation approaches that focus on cash generation as cash generation will provide an indication of the payment of dividends, repayment of capital and the payment of interest charged. One should keep in mind that FCF refers to cash that is not required for operational purposes and can be distributed to shareholders and lenders at the discretion of management. Therefore the use of the DCF approach is advised.

If the purpose of the valuation is to make a decision regarding buying, selling or holding the business's shares, then a valuation based on market value (emphasis on share prices, number of shares and total debt) will be more appropriate. If the business is deeply in debt, it is possible for the valuation to

be negative. Investors should investigate the reason for the business using debt as the debt may be nearly paid off or the debt was obtained to invest in future growth opportunities. Therefore the McGregor BFA Fin24Expert valuation will be of greater value to the brick-and-mortar businesses with limited online presence.

The shareholders of a business may be concerned with both types of valuations, that is, the valuations based on cash generation and the valuations based on market values. The reason is that cash generation will give the shareholders an indication of possible future cash disbursements, either in the form of dividends or reinvestments into the business for the future growth opportunities while the valuations based on market values (emphasis on share prices and number of shares) will provide an indication of what the investors are willing to pay for a brick-and-mortar business with limited online presence.

Based on the empirical results presented in Chapters Six and Seven, Shoprite as a brick-and-click business with limited online presence created value for the business over the eight-year period. The valuations of Shoprite increased by approximately 35% for single period valuations and 60% for multiple period valuations while the share prices increased by 974.89% over the same period. In the future, Shoprite may consider having interactive online presence (therefore converting to a brick-and-click business) in order for their customers to perform limited transactions using the Internet. Such an e-business strategy may assist Shoprite to expand their target market reach and thus enlarge their customer-base.

8.3.2 Findings and recommendations based on the empirical results of brick-and-click businesses with interactive online presence (The SPAR Group Ltd)

When comparing the five valuations of SPAR as a brick-and-click business with interactive online presence, the findings revealed that all the relationships were statistically significant and positive. This implies that if any one of the valuations increases (decreases), all the other valuations will also increase (decrease).

The findings, as discussed in Chapter Seven, indicate that the valuations of brick-and-click business with interactive online presence will increase over time.

The standard deviations of the valuations of brick-and-click businesses with interactive online presence show that the spread of the valuations are relatively small when analysing the valuations using the DCF approach. The standard deviation of the valuations calculated by McGregor BFA Fin24Expert, however, shows that the spread of the valuations are large as the standard deviation is greater than the mean valuation. Based on the five standard deviations, as presented in Table 7.11, it is evident that the valuations as calculated by McGregor BFA Fin24Expert are more widely dispersed than the valuations calculated using the DCF approach. It is thus recommended that brick-and-click businesses with interactive online presence should rather use the DCF approach to calculate valuations instead of focusing on valuation approaches using share prices and number of shares outstanding.

The recommendation for valuing brick-and-click businesses with interactive online presence, regardless of the purpose of the valuation, is that it is essential to use the most appropriate valuation approach. Valuations of businesses serve several purposes. If the purpose is to acquire capital from external sources, then the valuation approach used should focus on cash generation. The cash generation will serve as a motivation to the future investors regarding the ability of the brick-and-click business to generate additional cash over and above what is needed for the operational needs. The cash generated can be distributed to shareholders in the form of dividends, debt capital can be repaid and the payment of interest charges on debt capital will not be problematic. The DCF approach is therefore advised to be used.

If the purpose of the valuation is to make a decision regarding buying, selling or holding the business's shares, then a valuation based on market value (emphasis on share prices and number of shares) will be recommended. The reason for this recommendation is that the share price is an indication of the attitudes of investors towards the business. The greater the demand for the shares, the higher the share price, the higher the valuation of the business.

Therefore the McGregor BFA Fin24Expert valuation will be of greater value to the brick-and-click business with interactive online presence.

The cash generation ability of a business and the market value of the business's share are important to shareholders. Cash generation over and above what is needed for operational needs is an important indicator for shareholders of the business's ability to generate cash for possible distribution to shareholders in the form of dividends. The additional cash generated could also be used for feasible and sustainable future growth opportunities which could lead to greater cash generation. The market value of the shares will give the shareholders, and future investors, an indication of the current investors' sentiment regarding the business. The higher the share price the greater the sentiment and the better the outlook of the brick-and-click business with interactive online presence as perceived by the investors. Therefore both valuation approaches might be preferred by future investors.

Based on the findings presented in Chapter Seven, if SPAR as a brick-and-click business with interactive online presence remains in the e-business model stage, it should be possible for SPAR to create value for the business over time. It is recommended that SPAR should consider expanding their online presence in the future depending on the actions taken by SPAR's direct and indirect competition to remain a dominant player in the food and drug retail industry.

8.3.3 Findings and recommendations based on the empirical results of brick-and-click businesses in the e-commerce stage (Pick n Pay Stores Ltd)

The findings of the comparison of the five valuations of PnP as a brick-and-click business in the e-commerce stage revealed that four of the five relationships were statistically significant and positive. The four statistically significant relationships are among the valuations calculated using the DCF valuation approach. This implies that if any one of the DCF valuations increases (decreases), all the other DCF valuations will also increase (decrease). The negative relationships among the valuations calculated by McGregor BFA Fin24Expert were not statistically significant. Therefore brick-and-click

businesses in the e-commerce stage will create value for the business over time.

The standard deviations of the valuations of brick-and-click businesses in the e-commerce stage show that the spread of the valuations is relatively large when analysing the valuations using the DCF approach because the standard deviations are slightly higher than the mean valuations. The standard deviation of the valuations calculated by McGregor BFA Fin24Expert shows that the spread of the valuations are large as the standard deviation is greater than the mean valuation because the standard deviation is approximately 122 times larger than the mean valuations. Based on the five standard deviations, as presented in Table 7.12, it is evident that the valuations as calculated by McGregor BFA Fin24Expert are much more widely dispersed than the valuations calculated using the DCF approach. It is thus recommended that brick-and-click businesses in the e-commerce stage should rather use the DCF approach to calculate valuations instead of focusing on valuation approaches using share prices and number of shares outstanding. Another reason for using the DCF approach instead of the valuations approach used by McGregor BFA Fin24Expert is that the findings indicate that there is no relationship between the valuations using McGregor BFA Fin24Expert valuation approach.

The recommendation for valuing brick-and-click businesses in the e-commerce stage, regardless of the purpose of the valuation, is that the DCF approach should be used. The findings indicated that there is no relationship between the valuations focusing on share prices, number of shares and total debt, but there are relationships among the valuations when using the DCF approach.

The findings presented in Chapter Seven indicated that if PnP as a brick-and-click business in the e-commerce stage remains in the e-business model stage and not move to the e-business stage, it is possible for PnP to create value for the business over time. It is recommended that PnP should consider moving from the e-commerce stage to the e-business stage of the e-business model as it will assist in reducing operational costs, increasing efficiency and effectiveness of operations.

8.3.4 Findings and recommendations based on the empirical results of online businesses in the e-commerce stage (Naspers Ltd)

In the analysis of the five valuations of Naspers as an online business in the e-commerce stage, the findings revealed that all the relationships were not statistically significant (see Figure 7.13). The four valuations calculated using DCF approach yielded negative relationships while the valuations as per McGregor BFA Fin24Expert yielded a positive relationship. Therefore no relationships exist between the changes in the valuations and thus it is not possible to state that an online business in the e-commerce stage will create value for the business over time.

As all the relationships were not statistically significant, the question should be asked whether using the DCF method of valuation was the most appropriate method to use. The recommendation is rather that a new valuation approach should be developed that can be used exclusively for online businesses.

It is furthermore recommended that brick-and-click businesses should remain as brick-and-click businesses, regardless of the e-business model stage the businesses are in because the findings indicated that brick-and-click businesses do create value over time. The findings for online businesses in the e-commerce stage, however, indicated that it is not possible to state whether value is created or not.

8.3.5 Findings and recommendations based on the empirical results of comparing brick-and-mortar businesses with limited online presence (Shoprite Holdings Limited) with brick-and-click businesses with interactive online presence (The SPAR Group Ltd)

When comparing the five valuations of Shoprite as a brick-and-mortar business with limited online presence with the five valuations of SPAR as a brick-and-click business with interactive online presence, the findings revealed that four of the five relationships were statistically significant and negative while one was statistically significant and positive. The results were presented in Table 7.14. This implies that if the valuation of Shoprite increases (decreases), the valuation of SPAR decreases (increases). Therefore there is a negative relationship

between the valuations of brick-and-mortar businesses with limited online presence and the valuations of brick-and-click businesses with interactive online presence.

The recommendation is that if the valuation of the brick-and-mortar business is consistently low or decreasing, it is worthwhile to consider expanding the business's reach online. The brick-and-mortar business should firstly analyse why the value of the business is consistently low or decreasing. One of the reasons could be that the financial performance of the business is lacking. If the financial performance is lacking owing to a restricted market (relatively low market share compared to competitors within the industry), then online expansion might be a good investment. If poor financial performance is a result of inefficiencies with external stakeholders, then the brick-and-mortar business should consider implementing a B2B commerce strategy after discussing such strategies with the relevant internal and external parties. The use of an e-business strategy by implementing one of the e-business model stages is a great means of entering into markets, but careful planning should precede such implementation.

The valuation of the business may also yield a low value as a result of inconsistent accounting practices, which should be rectified as soon as possible according to the IFRS and noted in the annual reports. The financial performance of the business plays an important role in the valuation process because the FCFs are calculated from the cash flow statements and indirectly it influences the share price of the business.

8.3.6 Findings and recommendations based on empirical results of comparing brick-and-mortar business with limited online presence (Shoprite Holdings Limited) with brick-and-click businesses in the e-commerce stage (Pick n Pay Stores Ltd)

The comparison of the five valuations of Shoprite as a brick-and-mortar business with limited online presence with the five valuations of PnP as a brick-and-click business in the e-commerce stage, the findings revealed that three of the five relationships were statistically significant and negative. The two

relationships that were not statistically significant were positive. See Table 7.15 for results. This implies that if the valuation of Shoprite increases (decreases), the valuation of PnP decreases (increases). Therefore there is a negative relationship between the valuations of brick-and-mortar businesses with limited online presence and the valuations of brick-and-click businesses in the e-commerce stage.

It is recommended that if the valuations of brick-and-mortar businesses with limited online presence are consistently low or consistently decreasing, then a detailed analysis of the financial performance of the business should be undertaken. If it is found that the low valuations are a result of low market share, then an attempt should be made to increase the market share. One option for the brick-and-mortar business with limited online presence is to move to the next e-business model state, namely to convert to a brick-and-click business with interactive online business (or even in the e-commerce stage). If the low or decreasing business value is as a result of poor financial performance, an in-depth study should be done of the financial performance. The financial performance of any type of business will influence the FCFs of the business which is a crucial variable of the DCF approach. Again, a word of caution is extended that the implementation of an e-business strategy using one of the e-business model stages should be preceded by careful planning and analysis.

8.3.7 Findings and recommendations based on empirical results of comparing brick-and-mortar businesses with limited online presence (Shoprite Holdings Limited) with online businesses in the e-commerce stage (Naspers Ltd)

The five valuations of Shoprite as a brick-and-mortar business with limited online presence were compared with the five valuations of Naspers as an online business in the e-commerce stage. The findings, as presented in Table 7.16, indicated that only two of the five relationships were statistically significant and positive. Three relationships were not statistically significant, two positive and one negative. This implies that there is no relationship between valuations of brick-and-mortar businesses with limited online presence and the valuations of online businesses in the e-commerce stage.

The recommendation to brick-and-mortar businesses with limited online presence is not to convert to online businesses in the e-commerce stage as no evidence can be found that value would be created for the existing brick-and-mortar business as an online business.

8.3.8 Findings and recommendations based on empirical results of comparing brick-and-click businesses with interactive online presence (The SPAR Group Ltd) with brick-and-click businesses in the e-commerce stage (Pick n Pay Stores Ltd)

The comparative analysis of the five valuations of SPAR as a brick-and-click business with interactive online presence and the five valuations of PnP as a brick-and-click business in the e-commerce stage revealed that four of the five relationships were statistically significant. All four relationships were negative. Only one relationship was positive but not statistically significant. See Table 7.17. This implies that if the valuation of SPAR increases (decreases), the valuation of PnP decrease (increase). Therefore there is a negative relationship between the valuations of brick-and-click businesses with interactive online presence and the valuations of brick-and-click businesses in the e-commerce stage.

It is recommended that when the valuations of brick-and-click businesses with interactive online presence are consistently low or consistently decreasing, then a detailed analysis of the financial performance of the business should be undertaken. If it is found that the low valuations are a result of low market share, then an attempt should be made to increase the market share. One option for the brick-and-click business with interactive online presence is to move to the next e-business model state, namely to convert to a brick-and-click business in the e-commerce stage (or even into the e-business stage). If the low or decreasing business value is as a result of poor financial performance, an in-depth study should be done of the financial performance. The financial performance of any type of business will influence the FCFs of the business which is a crucial variable of the DCF approach. The implementation of an e-business strategy using one of the e-business model stages should be preceded by careful planning and analysis.

Another recommendation is that the brick-and-click business with interactive online presence should make sure that their website with all the hyperlinks and additional webpages are reliable. A decline in the value of the business could be a result of a poorly designed website. If it is found that the website of the brick-and-click business with interactive online presence is the main problem, the website should be redesigned with a more effective navigation system. If the valuation of the business is still below what is expected, alternative actions should be considered. One action could be to expand the customer base by converting to a brick-and-click business in the e-commerce stage. This should however only be considered once all problems with the website has been corrected and proper planning and development was done for the e-commerce stage.

8.3.9 Findings and recommendations based on empirical results of comparing brick-and-click businesses with interactive online presence (The SPAR Group Ltd) with online businesses in the e-commerce stage (Naspers Ltd)

The five valuations of SPAR as a brick-and-click business with interactive online presence were compared with the five valuations of Naspers as an online business in the e-commerce stage. The findings presented in Table 7.18 revealed that only two of the five relationships were statistically significant and positive. Three relationships were not statistically significant, two positive and one negative. Therefore no relationships exist between the valuations of brick-and-click businesses with interactive online presence and the valuations of online businesses in the e-commerce stage.

The recommendation to brick-and-click businesses with interactive online presence should not to convert to online businesses in the e-commerce stage. No evidence was found in the results that value would be added to the original brick-and-click business with interactive online presence if the business changed to online business in the e-commerce stage.

8.3.10 Findings and recommendations based on empirical results of comparing brick-and-click businesses in the e-commerce stage (Pick n Pay Stores Ltd) with online businesses in the e-commerce stage (Naspers Ltd)

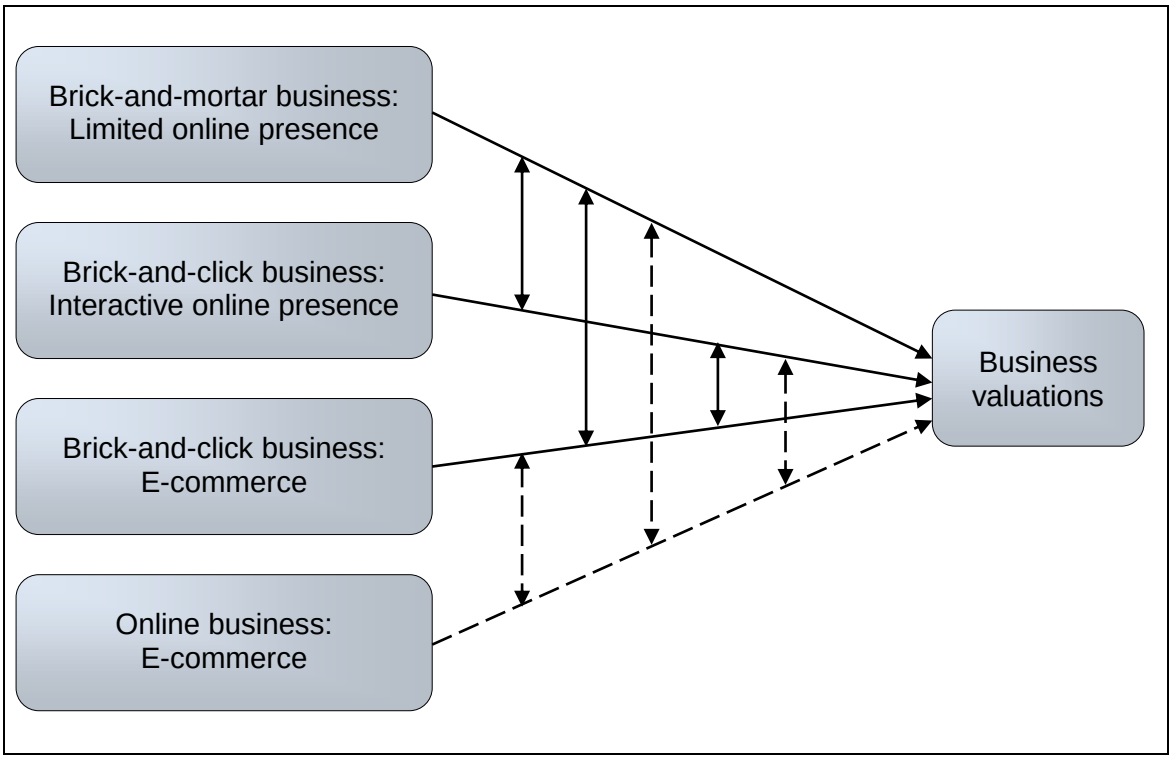
The comparing of the five valuations of PnP as a brick-and-click business in the e-commerce stage with the five valuations of Naspers as an online business in the e-commerce stage revealed that only two of the five relationships were statistically significant and negative. Two of the three relationships that were found not to be statistically significant were positive and one negative. This implies that there is no relationship between the valuations of brick-and-click businesses in the e-commerce stage and the valuations of online businesses in the e-commerce stage. The findings were presented in Table 7.19.

Therefore the recommendation to brick-and-click businesses in the e-commerce stage is not to change to online businesses in the e-commerce stage. The findings provided no evidence that value would be added to the valuation of business-and-click businesses if such a move was made.

8.3.11 Summary of relationships found

In Chapter One a revised model of business valuations at various e-business model stages were presented. Figure 8.2 graphically illustrates the relationships that were tested in the study. The relationships that were found to be statistically significant are illustrated by means of solid lines. The relationships found not to be statistically significant are illustrated by means of dashed lines.

FIGURE 8.2: RELATIONSHIPS BETWEEN BUSINESS VALUATIONS AT VARIOUS E-BUSINESS MODEL STAGES



Source: Researcher's own construct.

Form Figure 8.2 it is clear that it may not be viable, based on valuations, for brick-and-mortar or brick-and-click businesses to convert to online businesses in the e-commerce stage. Such conversions will not increase the value of the business when using the DCF approach in the valuation process. It might be viable for brick-and-mortar businesses and brick-and-click businesses to move up one stage in the e-business model as discussed in Chapter Two. Businesses should be cautioned to make such conversion decisions with great care after careful analysis.

Table 8.2 summarises the implications for the different types of businesses regarding the implementation of various e-business strategies as identified in Chapter Two.

TABLE 8.2: IMPLICATIONS OF SELECTING E-BUSINESS STRATEGIES FOR VARIOUS TYPES OF BUSINESSES

BUSINESS CATEGORY WITH AN E-BUSINESS STRATEGY	IMPLICATIONS OF IMPLEMENTING E-BUSINESS STRATEGIES
Brick-and-mortar businesses with no online presence	• Changing to a brick-and-mortar business with limited online presence will help the business to be more visible in the global market place • Implementation of an e-business strategy may increase the value of the business
Brick-and-mortar businesses with limited online presence	• Converting to a brick-and-click business with interactive online presence will help the business to be more visible in the global market place • Entry into new markets, globally and internationally, may be easier • Development of customer relations because a trust relationship can be created • Implementation of an e-business strategy may increase the value of the business
Brick-and-click businesses with interactive online presence	• Converting to a brick-and-click business in the e-commerce stage will help the business to be more visible in the global market place • Entry into new markets, globally and internationally, may be easier • Development of customer relations because a trust relationship can be created • Business operations can be done more effectively and efficiently and therefore reduces costs • Increase in turnover leading to greater return for all stakeholders • Implementation of an e-business strategy may increase the value of the business

TABLE 8.2: IMPLICATIONS OF SELECTING E-BUSINESS STRATEGIES FOR VARIOUS TYPES OF BUSINESSES (cont)

BUSINESS CATEGORY WITH AN E-BUSINESS STRATEGY	IMPLICATIONS OF IMPLEMENTING E-BUSINESS STRATEGIES
Brick-and-click businesses in the e-commerce stage	• Converting to an online business in the e-commerce stage is not recommended • The use of the traditional "brick" store should be encouraged and expansions of "brick" stores should also be considered • The empirical results showed that no relationship exist between the valuations of brick-and-click and online businesses • No empirical evidence was found that moving from a brick-and-click business to an online business will increase the value of the business
Online businesses in the e-commerce stage	• Online businesses may consider opening traditional "brick" stores and therefore convert to brick-and-click businesses • Many customers prefer to buy products and services from a physical "brick" store, although research by customer may be done using the Internet

Source: Researcher's own construct.

For businesses to remain competitive in the dynamic business environment, various business strategies, including e-business strategies should be considered. Owners and business managers should carefully assess the benefits that the various e-business stages hold for their business. Investors could also consider the possible e-business strategies to identify growth opportunities. SMEs could also benefit from implementing an e-business strategy. If an e-business strategy is too costly for SMEs, an alignment agreement with Internet-based businesses should be considered.

8.4 CONTRIBUTIONS OF THE STUDY TO THE FIELD OF VALUATIONS

A number of contributions are evident when considering the purpose of the research. The contributions range from the literature overview, to the research methodology to the research findings.

Firstly, a unique research design was adopted in the study. Although a positivistic research methodology was adopted, the traditional reliability and validity measurements normally associated with a positivistic research methodology could not be used. The researcher had to develop other methods to ensure reliability and validity of the data used. Method triangulation was used as a double checking mechanism to ensure the calculated FCFs were calculated correctly. The FCFs were calculated using both methods as provided by the literature. The collected data, equations used and workings were captured on a database. Therefore the database could be used for other similar studies to yield similar results. A further measure undertaken by the researcher to ensure reliability and validity was the consultation of experts. Two experts in the field of accounting and two experts in the field of e-commerce were consulted to ensure reliability and validity of data, workings and classifications.

The second contribution made by the research was the classification of the various types of businesses as brick-and-mortar and Internet-based (brick-and-click and online) businesses. Online businesses were categorised as click-only businesses, Internet search engines, Internet social networks and other businesses which include blogs and auctions.

The third contribution was the proposing of an e-business model based on a number of existing e-business models. Each of the e-business model stages where furthermore linked to one or more types of businesses. The proposed e-business model stages were:

- no online presence (brick-and-mortar businesses);
- limited online presence (brick-and-mortar businesses);
- interactive online presence (brick-and-click businesses);
- e-commerce (brick-and-click businesses and online businesses); and

- e-business (brick-and-click businesses and online businesses).

The fourth contribution of the research is in terms of the literature overview. A detailed summary of the different valuation approaches was provided. For each of the valuation approaches, the type of business where the valuation approach can be used was identified. The unknown variables and the shortcomings of each valuation approach were also tabulated.

The research made a fifth contribution when it provided an overview of the previous research in the field of valuations. Based on this section of the research, the researcher concluded that the DCF approach would be the most appropriate valuation approach to be used in the study.

The sixth contribution of the research is based on the results. It was found that the movement from being a brick-and-mortar business with limited online presence to being a brick-and-click business in the e-commerce stage does increase the value of the business. It also makes no sense for a brick-and-click business to dispose of the “brick” part of the business for a conversion into an online business (for example click-only). No evidence was found to support the feasibility of such a decision in terms of value creation.

Based on the various purposes of valuations and the research findings, specific valuation approaches should be used. Tables 8.3 and 8.4 summarise the applicability of the various valuation approaches from the business and investor perspective as the seventh contribution of the study.

TABLE 8.3: SUMMARY OF THE VALUATION APPROACHES FROM THE BUSINESS PERSPECTIVE

TYPE OF BUSINESS	PURPOSE OF VALUATION	VALUATION APPROACH
Brick-and-mortar businesses with limited online presence	• Obtaining of external capital • Focus on cash generation valuation approaches	• DCF approach
	• Share trading (buying, selling or holding shares) • Focus on market value of business	• McGregor BFA Fin24Expert valuation approach
Brick-and-click businesses with interactive online presence	• Obtaining of external capital • Focus on cash generation valuation approaches	• DCF approach
	• Share trading (buying, selling or holding shares) • Focus on market value of business	• McGregor BFA Fin24Expert valuation approach
Brick-and-click in the e-commerce stage	• Obtaining of external capital • Focus on cash generation valuation approaches	• DCF approach
	• Share trading (buying, selling or holding shares) • Focus on availability of cash not required for operational activities	• DCF approach
Online businesses in the e-commerce stage	• Obtaining of external capital	• New valuation approach required
	• Share trading (buying, selling or holding shares)	• New valuation approach required

Source: Researcher's own construct.

TABLE 8.4: SUMMARY OF THE VALUATION APPROACHES FROM THE INVESTOR PERSPECTIVE

TYPE OF BUSINESS	PURPOSE OF VALUATION	VALUATION APPROACH
Brick-and-mortar businesses with limited online presence	• Investing equity capital • Focus on cash generation valuation approaches	• DCF approach • McGregor BFA Fin24Expert valuation approach
	• Investing by providing debt capital • Focus on cash generation valuation approaches	• DCF approach
Brick-and-click businesses with interactive online presence	• Investing equity capital • Focus on cash generation valuation approaches	• DCF approach • McGregor BFA Fin24Expert valuation approach
	• Investing by providing debt capital • Focus on cash generation valuation approaches	• DCF approach
Brick-and-click in the e-commerce stage	• Investing equity capital • Focus on cash generation valuation approaches	• DCF approach
	• Investing by providing debt capital • Focus on availability of cash not required for operational activities	• DCF approach
Online businesses in the e-commerce stage	• Investing equity capital	• New valuation approach required
	• Investing by providing debt capital	• New valuation approach required

Source: Researcher's own construct.

8.5 LIMITATIONS OF THE STUDY AND FUTURE RESEARCH AREAS

There were a number of limitations to the study which can also indicate future research areas. Firstly a comparative valuation analysis could only be done if standardised financial statements were available. It is for this reason that the McGregor BFA Fin24Expert package was used to source the relevant financial data because all the financial statements were standardised in the same manner. The limitation with regard the use of McGregor BFA Fin24Expert was that only South African businesses were available for analysis.

Secondly, the number of online businesses within South Africa that are listed on the JSE is limited. Therefore the researcher used Naspers in this study as many of the subsidiaries of Naspers are brick-and-click or online businesses. Kalahari.net, a subsidiary of Naspers, is a well-known online business in South Africa. Another limitation that may have influenced the valuations is that Naspers is operating in more global business environments than Shoprite, SPAR and PnP. Therefore Shoprite, SPAR and PnP were exposed to the economic climate of Africa (major areas covered by the three businesses), whereas Naspers was exposed to economic climates such as Africa, Europe, Asia and the Americas.

Thirdly, the number of brick-and-click in the e-commerce stage and online businesses in South Africa is very limited and the annual reports of international online businesses are not available as these businesses are not public companies at the time the study was conducted. If it is in the future possible to obtain the annual reports with standardised financial statements of the various types of online businesses as discussed in Chapter Two, a comparative study of the valuations using various valuation approaches should be feasible.

Fourthly, the sample was relatively small. The study could be repeated with a larger sample size. Similar research could be conducted with businesses from other sectors as classified by the JSE, provided that the businesses included in the study are representative of the types of businesses (brick-and-mortar, brick-and-click and online) and in the various e-business model stages.

Fifthly, another limitation of the study is that three of the four businesses analysed were from the food and drug sector while one is in the broadcasting and entertainment sector. Ideally the businesses should have been from the same sector, but owing to the limited choice of online businesses, it was not possible to create a sample from the same sector that would be falling into the various e-business model stages.

Sixthly, the valuations were based on historical FCF although valuations are usually forward looking. The aim of the study was to establish whether there are any relationships among the various valuations of the selected businesses. Therefore the valuation based on historical FCF will suffice as the valuations were linked to a specific e-business model stage. It is also recommended that single period valuations should not be used as it does not present a true valuation of the business over time. It is however possible to repeat the study with forecasted future FCF. A future research area is to quantify the benefit of using an e-business strategy.

Lastly, the classification of the various businesses investigated according to the e-business model is based on what was found on the official website available to the general public. Therefore the researcher could not establish to what extent the four businesses use business-to-business commerce (B2B commerce). However, the researcher's main focus was to determine what level of online interaction takes place between the four businesses and their customers and potential customers. The focus was thus more on business-to-customer commerce (B2C commerce) and customer-to-business commerce (C2B commerce).

8.6 CONCLUDING REMARKS

All businesses, regardless of whether they are brick-and-mortar or Internet-based businesses, are cautioned to carefully analyse the operational aspects of the business before deciding to move to the next e-business model stage. A further cautionary note should be made in terms of analysing competition. Although direct and/or indirect competition may appear not to be engaged at some stage of e-business model, B2B commerce strategies may be

implemented to increase efficiency of the businesses. Therefore the implementation of an e-business strategy using one of the e-business model stages, should not be adopted blindly but should be made with great consideration. If it is too costly for SMEs in particular to implement the e-business model, one option is to enter into an agreement with brick-and-click or online businesses providing online services to the SMEs.

In Chapter One, the problem statement for the study was formulated as:

> *Does the value of Internet-based businesses differ during the various stages of Internet presence?*

To answer the problem statement, the primary objective of this study was to determine and analyse the value of Internet-based businesses at the various stages of Internet presence, to determine the value creation of an e-business strategy.

Therefore the answer to the question asked in the problem statement is yes, but only to a limited extent. Value is created when moving from a brick-and-mortar with limited online presence to brick-and-click businesses with interactive online presence, and from brick-and-click businesses with interactive online presence to brick-and-click businesses in the e-commerce stage. It is not feasible to convert from a brick-and-mortar business or brick-and-click business to an online business, as no evidence could be found that value would be created for the new business. It was also found that the existing valuation approaches as described in the literature, are not as applicable to online businesses as one would expect. Therefore a new valuation approach for online businesses should be developed. The alternative approach to valuation, as discussed in Section 6.7 may be one such approach to be used.

To conclude, an e-business strategy is not the answer to all problems. The reasons for considering an e-business strategy should be valid and feasible. Great care should be taken when deciding on implementing an e-business strategy using one of the e-business model stages. If the implementation is not properly planned and executed, it may be a costly exercise.

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ANNEXURE A

OPERATING CASH FLOWS FOR SHOPRITE HOLDINGS LIMITED

SHOPRITE HOLDINGS LIMITED

FREE CASH FLOW CALCULATIONS R'000	2011	2010	2009	2008	2007	2006	2005	2004
OCF = PBIT - Taxes + Depreciation	R 4 210 053	R 3 280 353	R 2 842 613	R 2 485 270	R 1 815 482	R 1 351 048	R 990 053	R 1 110 765
PBIT	R 3 768 797	R 3 275 289	R 2 588 101	R 2 311 081	R 1 710 624	R 1 273 936	R 1 368 891	R 681 382
Taxes	R 1 031 092	R 1 383 049	R 842 045	R 616 141	R 524 352	R 438 890	R 509 097	R 75 012
Depreciation and Amortisation	R 1 472 348	R 1 388 113	R 1 096 557	R 790 330	R 629 210	R 516 002	R 130 259	R 504 395
Change in NCS	R 2 937 011	R 2 680 113	R 1 737 303	R 1 167 366	R 1 171 319	R 1 088 786	R 810 961	R 736 243
Change in NWC	-R 59 677	-R 813 545	-R 216 516	R 691 366	R 143 231	-R 109 415	-R 81 588	R 170 401
CF from assets	**R 1 332 719**	**R 1 413 785**	**R 1 321 826**	**R 626 538**	**R 500 932**	**R 371 677**	**R 260 680**	**R 204 121**
CF to lenders and shareholders	**R 1 332 719**	**R 1 413 785**	**R 1 321 826**	**R 626 538**	**R 500 932**	**R 371 677**	**R 260 680**	**R 204 121**
CF to lenders	**R 116 635**	**R 87 053**	**R 77 067**	**R 38 749**	**R 83 125**	**R 89 105**	**R 46 953**	**R 29 936**
Interest paid	125 964	93 564	84 894	59 023	83 444	89 610	47 646	29 936
Net new borrowings	9 329	6 511	7 827	20 274	319	505	693	0
CF to shareholders	**R 1 216 084**	**R 1 326 732**	**R 1 244 759**	**R 587 789**	**R 417 807**	**R 282 572**	**R 213 727**	**R 174 185**
Dividends paid	R 1 216 084	R 1 082 293	R 903 824	R 587 789	R 417 587	R 282 473	R 213 462	R 171 105
Net new equity raised	R 0	-R 244 439	-R 340 935	R 0	-R 220	-R 99	-R 265	-R 3 080

Equations:

CF from assets = OCF – Change in NCS – Change in NWC

= PBIT – Taxes + Depreciation – Change in NCS – Change in NWC

PBIT = Operating profit/loss + Investment income + Other income + (Total interest paid – Net interest paid/received)

CF to lenders and shareholders = CF to lenders + Cash flow to shareholders

ANNEXURE B

OPERATING CASH FLOWS FOR THE SPAR GROUP LTD

THE SPAR GROUP LTD

FREE CASH FLOW CALCULATIONS R'000	2011	2010	2009	2008	2007	2006	2005	2004
OCF = PBIT - Taxes + Depreciation	R 1 182 700	R 1 095 800	R 876 200	R 865 100	R 659 400	R 500 100	R 410 662	R 283 724
PBIT	R 1 417 600	R 1 326 900	R 1 110 700	R 1 014 900	R 804 900	R 623 000	R 522 553	R 404 475
Taxes	R 411 300	R 384 800	R 526 800	R 268 100	R 237 900	R 186 400	R 155 850	R 181 718
Depreciation and Amortisation	R 176 400	R 153 700	R 292 300	R 118 300	R 92 400	R 63 500	R 43 959	R 60 967
Change in NCS	R 236 800	R 259 200	R 340 900	R 420 900	R 296 600	R 237 500	R 61 203	R 307 746
Change in NWC	R 223 100	R 94 100	R 133 100	R 163 300	-R 109 100	-R 28 100	R 290 971	-R 416 330
CF from assets	**R 722 800**	**R 742 500**	**R 402 200**	**R 280 900**	**R 471 900**	**R 290 700**	**R 58 488**	**R 392 308**
CF to lenders and shareholders	**R 722 800**	**R 742 500**	**R 402 200**	**R 280 900**	**R 471 900**	**R 290 700**	**R 58 488**	**R 392 308**
CF to lenders	**R 42 100**	**R 42 700**	**-R 42 900**	**-R 44 900**	**R 145 100**	**R 8 200**	**R 13 040**	**R 9 113**
Interest paid	24 700	20 900	29 500	19 300	10 300	6 100	5 457	3 315
Net new borrowings	-17 400	-21 800	72 400	64 200	-134 800	-2 100	-7 583	-5 798
CF to shareholders	**R 680 700**	**R 699 800**	**R 445 100**	**R 325 800**	**R 326 800**	**R 282 500**	**R 45 448**	**R 383 195**
Dividends paid	R 624 600	R 578 500	R 467 700	R 355 400	R 246 300	R 190 700	R 50 727	R 383 200
Net new equity raised	-R 56 100	-R 121 300	R 22 600	R 29 600	-R 80 500	-R 91 800	R 5 279	R 5

Equations:

CF from assets = OCF – Change in NCS – Change in NWC

= PBIT – Taxes + Depreciation – Change in NCS – Change in NWC

PBIT = Operating profit/loss + Investment income + Other income + (Total interest paid – Net interest paid/received)

CF to lenders and shareholders = CF to lenders + Cash flow to shareholders

ANNEXURE C

OPERATING CASH FLOWS FOR PICK N PICK STORES LTD

PICK N PAY STORES LTD

FREE CASH FLOW CALCULATIONS R'000	2011	2010	2009	2008	2007	2006	2005	2004
OCF = PBIT - Taxes + Depreciation	R 1 781 200	R 1 901 400	R 1 856 700	R 1 666 400	R 1 364 500	R 934 400	R 1 019 900	R 864 900
PBIT	R 1 471 100	R 1 516 300	R 1 702 400	R 1 535 700	R 1 349 400	R 1 174 500	R 1 021 100	R 865 300
Taxes	R 526 300	R 457 500	R 567 700	R 504 700	R 449 900	R 565 500	R 341 200	R 283 500
Depreciation and Amortisation	R 836 400	R 842 600	R 722 000	R 635 400	R 465 000	R 325 400	R 340 000	R 283 100
Change in NCS	R 1 375 200	R 927 300	R 833 800	R 810 600	R 1 090 700	R 882 000	R 464 100	R 333 300
Change in NWC	-R 566 100	R 21 200	R 198 100	R 460 100	-R 528 100	-R 533 500	-R 209 600	R 71 400
CF from assets	**R 972 100**	**R 952 900**	**R 824 800**	**R 395 700**	**R 801 900**	**R 585 900**	**R 765 400**	**R 460 200**
CF to lenders and shareholders	**R 972 100**	**R 952 900**	**R 824 800**	**R 395 700**	**R 801 900**	**R 585 900**	**R 765 400**	**R 460 200**
CF to lenders	**R 99 000**	**R 94 600**	**R 116 700**	**-R 393 100**	**R 100 300**	**R 27 100**	**R 152 500**	**R 126 600**
Interest paid	111 000	91 600	107 500	79 200	49 300	37 600	32 900	46 600
Net new borrowings	12 000	-3 000	-9 200	472 300	-51 000	10 500	-119 600	-80 000
CF to shareholders	**R 873 100**	**R 858 300**	**R 708 100**	**R 788 800**	**R 701 600**	**R 558 800**	**R 612 900**	**R 333 600**
Dividends paid	R 808 000	R 814 600	R 717 800	R 614 900	R 523 800	R 452 000	R 381 600	R 316 700
Net new equity raised	-R 65 100	-R 43 700	R 9 700	-R 173 900	-R 177 800	-R 106 800	-R 231 300	-R 16 900

Equations:

CF from assets = OCF – Change in NCS – Change in NWC

= PBIT – Taxes + Depreciation – Change in NCS – Change in NWC

PBIT = Operating profit/loss + Investment income + Other income + (Total interest paid – Net interest paid/received)

CF to lenders and shareholders = CF to lenders + Cash flow to shareholders

ANNEXURE D

OPERATING CASH FLOWS FOR NASPERS LTD

NASPERS LTD

FREE CASH FLOW CALCULATIONS R'000	2011	2010	2009	2008	2007	2006	2005	2004
OCF = PBIT - Taxes + Depreciation	R 7 389 000	R 6 225 000	R 5 864 602	R 4 880 582	R 3 943 046	R 3 608 285	R 3 061 064	R 2 728 852
PBIT	R 5 376 000	R 4 307 000	R 4 617 456	R 4 806 106	R 3 868 560	R 3 576 089	R 2 975 943	R 3 009 998
Taxes	R 1 983 000	R 1 786 000	R 1 803 314	R 1 554 165	R 1 232 093	R 821 737	R 474 462	R 306 423
Depreciation and Amortisation	R 3 996 000	R 3 704 000	R 3 050 460	R 1 628 641	R 1 306 579	R 853 933	R 559 583	R 25 277
Change in NCS	R 6 410 000	R 5 944 000	-R 766 112	R 18 431 100	R 5 394 149	R 335 439	R 881 944	R 560 856
Change in NWC	R 2 232 000	R 257 000	-R 799 965	-R 5 053 686	R 4 608 842	R 2 903 621	R 1 266 028	R 1 216 283
CF from assets	**-R 1 253 000**	**R 24 000**	**R 7 430 679**	**-R 8 496 832**	**-R 6 059 945**	**R 369 225**	**R 913 092**	**R 951 713**
CF to lenders and shareholders	**-R 1 253 000**	**R 24 000**	**R 7 430 679**	**-R 8 496 832**	**-R 6 059 945**	**R 369 225**	**R 913 092**	**R 951 713**
CF to lenders	**-R 2 802 000**	**-R 1 069 000**	**R 6 471 056**	**-R 9 226 947**	**R 893 253**	**R 200 300**	**R 735 463**	**R 898 322**
Interest paid	1 389 000	883 000	898 155	323 626	347 151	393 747	404 528	611 398
Net new borrowings	4 191 000	1 952 000	-5 572 901	9 550 573	-546 102	193 447	-330 935	-286 924
CF to shareholders	**R 1 549 000**	**R 1 093 000**	**R 959 623**	**R 730 115**	**-R 6 953 198**	**R 168 925**	**R 177 629**	**R 53 391**
Dividends paid	R 1 549 000	R 1 093 000	R 976 347	R 826 436	R 443 370	R 335 876	R 204 001	R 108 624
Net new equity raised	R 0	R 0	R 16 724	R 96 321	R 7 396 568	R 166 951	R 26 372	R 55 233

Equations:

CF from assets = OCF – Change in NCS – Change in NWC

= PBIT – Taxes + Depreciation – Change in NCS – Change in NWC

PBIT = Operating profit/loss + Investment income + Other income + (Total interest paid – Net interest paid/received)

CF to lenders and shareholders = CF to lenders + Cash flow to shareholders

ANNEXURE E

VALUATION USING THE GORDON MODEL

SHOPRITE ('000)	2011	2010	2009	2008	2007	2006	2005	2004
FCF	R 1 332 719	R 1 413 785	R 1 321 826	R 626 538	R 500 932	R 371 677	R 260 680	R 204 121
WACC with Rf = R153	11.67	11.79	12.45	16.78	14.05	12.60	11.22	13.11
WACC % with Rf = R157	11.54	12.17	13.38	15.61	13.39	12.32	10.94	13.04
Risk-free rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Compounded period[1]	R 40 800 598.78	R 33 246 402.02	R 21 578 060.96	R 7 544 744.76	R 8 845 757.06	R 9 633 584.72	R 12 216 749.89	R 5 617 548.98
Compounded period[2]	R 42 711 560.98	R 29 569 929.05	R 17 391 353.74	R 8 639 740.26	R 10 041 898.92	R 10 397 351.75	R 13 928 455.17	R 5 711 346.00
SPAR ('000)	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**
FCF	R 722 800	R 742 500	R 402 200	R 280 900	R 471 900	R 290 700	R 58 488	R 392 308
WACC with Rf = R153	10.23	9.85	9.80	13.69	15.21	11.53	12.41	11.97
WACC with Rf = R157	9.79	9.73	10.66	13.12	14.52	11.54	12.67	12.11
Risk-free rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Compounded period[1]	R 14 517 068.85	R 13 675 183.41	R 11 439 773.06	R 5 720 003.51	R 4 642 095.54	R 5 673 450.22	R 3 884 356.69	R 7 357 910.68
Compounded period[2]	R 15 935 052.60	R 14 057 131.90	R 9 591 914.33	R 6 080 922.80	R 4 942 126.45	R 5 664 343.67	R 4 227 248.53	R 7 198 306.04
PNP ('000)	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**
FCF	R 972 100	R 952 900	R 824 800	R 395 700	R 801 900	R 585 900	R 765 400	R 460 200
WACC with Rf = R153	10.69	9.49	9.37	8.88	10.52	4.18	8.98	10.98
WACC with Rf = R157	10.93	10.09	10.01	9.10	10.03	6.07	9.21	11.29
Risk-free rate	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Compounded period[1]	R 16 744 481.55	R 17 727 344.05	R 16 288 892.76	R 16 055 710.80	R 12 736 928.32	R 363 235 245.85	R 13 862 408.75	R 7 317 048.14
Compounded period[2]	R 16 327 640.25	R 16 342 023.11	R 14 866 768.31	R 15 461 829.05	R 13 622 519.14	R 32 718 131.22	R 13 289 498.90	R 7 025 467.49
NASPERS ('000)	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**
FCF	-R 1 253 000	R 24 000	R 7 430 679	-R 8 496 832	-R 6 059 945	R 369 225	R 913 092	R 951 713
WACC with Rf = R153	11.02	10.64	10.53	11.20	13.82	13.43	13.34	18.04
WACC with Rf = R157	11.33	11.04	11.52	10.88	13.56	13.63	13.64	18.09
Risk-free rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Compounded period[1]	-R 59 011 997.40	-R 63 130 374.02	-R 71 432 962.79	-R 121 998 373.26	-R 18 026 105.88	R 22 442 359.61	R 26 007 658.61	R 12 427 013.55
Compounded period[2]	-R 51 739 760.51	-R 51 410 768.97	-R 44 368 790.22	-R 142 479 654.92	-R 19 109 707.09	R 21 561 084.16	R 24 425 481.01	R 12 363 893.09

[1] WACC with Rf=R153 used in calculation

[2] WACC with Rf=R157 used in calculation