



**THE IMPACT OF DIVESTITURES (SPIN-OFFS AND SELL-OFFS)
ANNOUNCEMENTS ON THE SHARE PRICE PERFORMANCE OF PARENT'S
COMPANIES: SOUTH AFRICAN LISTED COMPANIES**

By

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Thesis submitted in fulfillment of the requirements for the degree of Master of
Commerce in Finance (Investment Management)

In the

DEPARTMENT OF FINANCE AND TAX

FACULTY OF COMMERCE

UNIVERSITY OF CAPE TOWN

January 2019

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DECLARATION

I, Oyedotun Ibukun Kolawole declare that the research work reported in this dissertation is my own, except where otherwise indicated and acknowledged. It was submitted for the degree of Master of Commerce in Finance (Investment Management) at the Department of Finance and Tax, Faculty of Commerce, University of the Cape Town, Cape Town. This thesis has not been submitted for a degree or diploma at any other universities, either in whole or in part.

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Date: 31 January 2019

ACKNOWLEDGEMENTS

To Jesus Christ, for first saving my soul and giving the courage and strength to resign from Union Bank of Nigeria to take on this programme after five years of procrastination.

I want to extend my appreciation to the following people who have been instrumental in inspiring me to take a leap of faith to start this journey and complete it.

To my father who died 20 years ago whom I know more as a myth than a man. Thank you for the moments we shared together. To my biological and adopted mother, Mrs. Alice Oyedotun and Mrs. Babawale Ruth for not giving up on me and for always supporting my vision on the altar of prayers.

I say a big thank you to my brothers and sisters, especially Mr. Adelekan Oyedotun for all the sacrifices you have been making for me since you relocated to Canada. God bless you more.

To my "daughter," Yetunde Afolami Grace, I say a big thank you for your prayers and support.

I say a special thank you to my former supervisor at Ilupeju Commercial Hub of Union Bank of Nigeria Plc, Mrs. Rita Chukwumezie for encouraging and supporting my dreams and vision, especially my decision to leave Union Bank and pursue true happiness. God reward your kindness.

To my supervisor, Professor Paul Van Rensburg, thank you for your patience, insights, and inputs in this research. To Professor Glen Holman for his unique style of lecturing. To Professor Kanshukan Rajaratnam and Professor Phillip De Jager for their guidance and support during the course of this programme. Lastly, to Ms. Christine Olsen for giving special attention to my needs and enquiry from day one to the very last day. She is never tired of me, and she went out of her way to assist me on many occasions.

To Adeniyi Adenike Oluwatosin, a true friend who has stood by me in the quest to fulfill God's Vision for my Life. Although far away in the United States, her presence is ever visible and real. To Barrister Nagu Yakubu, thank you for your support and standing by me during those difficult times. Thank you to Richard Harrisberg for always sharing note

and assignment and also for our examinations discussion. Special thanks to Diina Hamutumwa and Shamiso Malekano for being a loyal friend from day one. Arnold Lumala was very helpful with the event study metrics software that was used for analysing my data.

To my Spiritual Community, Jubilee Community Church, thank you for giving me a better perception about Christian and for making Christianity so simple. Life Group was unique and always impactful. Thank you to Graham, Sally, and Kika for all the help and support.

ABSTRACT

This thesis is based on the empirical examination of the impact of divestiture announcements, with a focus on spin-off and sell-off transactions, on the share performance of parent companies listed on the Johannesburg Stock Exchange (JSE) in South Africa. The sample of the study for spin-off consisted of 36 companies while that of sell-off transactions consisted of 41 companies listed on JSE for deals that were announced and concluded from 2006 to 2016. The cumulative average abnormal returns for the parent companies were calculated using the event study methodology over the entire event window. Abnormal returns were calculated using the two-factor APT model approach. The cumulative average abnormal returns significance was tested using the t-test. Thereafter, the average abnormal returns and cumulative average abnormal returns were compared over the event window for the pre and post announcement period. A comparison was also made between spin-off and sell-off transactions over the entire event window (-30, +30). Three key results were established, the first being that, spin-off transactions generate positive abnormal returns while sell-off transaction generate negative abnormal returns. Second, it is clear that there were significant positive cumulative average abnormal returns for post-announcement returns for spin-off transactions while the post-announcement returns for sell-off transactions generated a negative cumulative average abnormal returns. Thirdly, I compared the two form of divestiture (spin-off and sell-off transactions) and discovered that there appears to be significant evidence that the CAAR for spin-off transactions are higher than the CAAR for sell-off transactions.

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Divestment or Divestiture is a corporate strategy which involves partial or full disposal of a business unit or asset. This research study examined the impact of divestitures (spin-offs and sell-offs transactions) announcements on the share performance of the parent firms listed on the Johannesburg Stock Exchange (JSE) in South Africa. There are various types of divestiture that can be undertaken by an organization as it pursues corporate strategy, but this study focused on spin-offs and sell-offs transactions. The study examined the impact of divestitures on the share performance of parent companies and not the reasons why such corporate actions are taken by top management. Any study on the reason for such corporate action would be better conducted in Business Management and not in Finance, the reason being that the impact of divestitures is likely to be more quantitative, while the reason for a corporate action like divestitures will most likely be qualitative.

The first chapter introduces the research and is organized as follows: Section 1.1 presents the background on divestitures (spin-offs and sell-offs) as a form of corporate actions taken by management to achieve a particular objective. Section 1.2 provides a background to the study by outlining key the research problems. Section 1.3 presents the research objectives. Section 1.4 explains the research questions. Section 1.5 highlights the significance of the study and in particular its contribution to the divestitures (spin-offs and sell-offs) body of knowledge. Section 1.6 concludes the chapter.

1.1 Definition of Spin-offs and sell-offs transactions

It is essential to distinguish between a spin-off and a sell-off transaction since the focus of the study was limited to these two corporate actions. A spin-off results in the creation of a new entity, i.e., a new company will be established from an existing company usually referred to as the parent company. The new entity's shares are allotted among

the shareholders of the parent company on a pro rata basis. The shares are usually allotted on the basis of their holdings in the parent company before the spin-offs transactions. Spin-offs transactions essentially lead or give birth to a new company. A good example was when Pick and Pay Holdings Limited gave birth to Pick and Pay Stores Limited.

A sell-off is when a company disposes off some of its subsidiaries or assets for cash or any other form of consideration or payment agreed upon by the parties to the transactions. A sell-off is an outright sales to a third party. The third party can be their competitor, a new company in the industry or any other interested party such as a foreign company looking for a presence in that particular industry. In a spin-off transaction, 'parent-firm shareholders receive a pro-rata distribution of stock in the newly formed company' (Terry et al., 2000, p.278). Sell-offs transactions do not result in a reduction of the parent company. Sell-offs transactions usually lead to a complete take-over of the organization (Terry et al., 2000).

1.2 Background of the Study

In considering the background of this study, it is essential to begin by making a clear distinction between spin-offs and sell-offs transaction as a form of corporate restructuring or re-organization.

Divestment or Divestiture

Divestment or Divestiture is a corporate term which describes partial or full disposal of a business unit with the intention of focusing on the more profitable ones or for other strategic reasons best known to top management. It is important to note here that profit is not the only reason for divesting, although it is generally believed to be the primary reason. Other reasons, apart from profit may be as a result of the company exiting a particular industry or country or an effect of government regulations. An excellent example of when government regulations led to divestment was in Nigeria's banking sector in 2010. Before this regulation, Nigerian banks operated a boutique of financial services, including: insurance, stockbroking, pension funds, et cetera. It was uncovered in 2011 that most banks were making losses from the core business of banking, but

these losses were either not reported or they were underreported. In order to prevent the collapse of the banks, the Central Bank of Nigeria took a pro-active decision to scrap their Universal Banking Licenses. This decision compelled the banks to divest from non-core banking activities such as: insurance and stockbroking.

Divestment is a form of corporate action undertaken by top management. Companies generally expand over time, and when this happens, the company becomes very challenging to manage in most cases. In most instances, this expanding company loses its strategic mission and hence divesting might be a good option. There are different reasons for considering corporate restructuring in any organization, but this is not the focus of this research.

When an organization decides to divest, the structure of its ownership changes depending on the form of divestiture undertaken. These changes are not limited to ownership alone. Capital structures and some other things are likely to change. An organization can divest its holdings in many ways, but the two most common types are either through a spin-off transaction or a sell-off transaction.

There are existing works of literature that provide some answers as to why companies divest, whether through spin-offs or sell-offs. However, there are still some fundamental questions regarding the driving factors and differences between these two forms of divestitures (Prezas and Karen, 2015). Some important questions to ask according to Prezas and Karen (2015) are: "Does pre-divestiture market valuation of divesting firms affect their choice between spin-offs and sell-offs? Do firms divesting through spin-offs realize more significant improvements in their post-divestiture performance compared to those divesting through sell-offs? Do market conditions at the time of divestiture affect a firm's choice of divestiture form? Why is it that the announcement effects of spin-offs are in general larger than those of sell-offs?" (Prezas and Karen, 2012, p.1) It is vital for management to look at these critical and fundamental questions before divesting or deciding to divest.

According to Nixon et al., (2000), for an organization to accomplish its corporate goals and objectives, it must take certain decisions including and not limited to the decision to divest some of its assets. As indicated earlier, spin-offs and sell-offs transactions are

two common ways of divesting assets. The impact of each on the divesting company are usually different (Nixon et al., 2000) Sell-offs and spin-offs transactions are used by companies to divest portions of their assets, and studies have found that both transactions are associated with positive share price reactions for divesting companies (Hite and Owers, 1983). A spin-off results in the creation or birth of a new company. The new company's shares are allotted among the shareholders of the parent company on a pro rata basis i.e. from their holdings with the parent company. A sell-off is when a company disposes off some of its subsidiaries or assets for cash or any other form of consideration or payment agreed upon by the parties to the transactions. A sell-off transaction is an outright sales of a division or asset to a third party who can be even its competitors or a new company in the industry. A spin-off results in the creation of a new entity, i.e., a new company will be established from the existing company usually referred to as the parent's company. (Terry at al., 2000).

Bowman et al., (1999) posit that there are three significant reasons why company executives or top management restructure their organization. According to their research, this can be done to reduce costs, to improve productivity or to add to the shareholders' value. Based on their summary of findings from various studies conducted in 1990, they classified restructuring activities under three major headings: portfolio restructuring, financial restructuring and organizational restructuring. According to Bowman at al., (1999), any changes in the capital structure of a firm would be classified as financial restructuring, i.e. the combination of debt and equity capital, "including leveraged buyouts, leveraged recapitalizations and debt for equity swaps" (Bowman at al.,1999,p.35). Organizational restructuring can consist of changes in the corporate ownership of the firm. This includes but is not limited to, "redrawing of divisional boundaries among its various divisions or units, flattening of hierarchic levels to improve efficiency, spreading of the span of control, reducing product diversification to gain more market share, revising compensation to encourage productivity, streamlining processes to reduce waste, reforming governance and downsizing employment" (Bowman at al.,1999,p.44).

According to Gaughan (2010), mergers and acquisitions are usually implemented for expansion while divestiture is usually for the purpose of contracting or downsizing operations. A company might divest if a division is no longer profitable, when it is losing its market share or if a previous merger or acquisition was unsuccessful (Gaughan, 2010). If a merger or acquisition is not producing the strategic result, the obvious thing to do is to divest either through a spin-off transaction or sell-off transactions or by whatever form of divestment the organization finds suitable.

Eckbo and Thorburn (2013) reviewed literature on corporate financial restructuring, including breakup transactions such as divestitures, spin-offs carve-outs, leveraged recapitalizations and leveraged buyouts (LBOs), aimed at seeking out the motives behind corporate reorganization and establishing if the type of selection tools for restructuring were influenced by the kind of transaction. They infer that many restructuring strategies are usually reactions to excessive conglomeration and reverse costly diversification discount. Their study revealed that corporate restructuring may be introduced by top management or outside sponsors like buyout funds. They also noted that sometimes, in order to address arising 'threat from the market for corporate control', (Eckbo and Thorburn, 2013, p.162) the defensive restructuring is undertaken to unlock value by selling underperforming assets to increase the value of a company to its shareholders.

Rappaport (1986) posited that the consideration of a corporate strategy is based on whether or not it adds value to the shareholder. According to Rappaport (1986), the shareholder value is the only real standard for business performance. Although, shareholder value is regarded as a significant standard for business performance, this does not imply that there are no other measures for business performance. The best form of any business performance measure is the one that can be easily quantifiable. Shareholder values are easily and readily quantifiable, so they present one of the best methods to use to measure the impact of divestiture that is undertaken in this research. Rappaport (1986) outlines the shortcomings of other business performance standards or measurements such as earnings per share, return of investment and return on equity.

He presents a model to measure and determine shareholder value which can easily be measured by the rise in market capitalization on the stock exchange.

More studies have been conducted on mergers and acquisitions when compared to studies on spin-offs and sell-offs transactions (Erika, 2014). The simple reason is that many market participants see mergers and acquisitions in a more positive light, while sell-offs and spin-offs transactions are often perceived negatively ; people generally think that "adding up" will always be better or will produce a better result than "subtracting from" (Erika, 2014). This assumption is logical from a mathematical point of view. The addition of two numbers generally leads to an increase while the subtraction of two numbers would likely lead to a reduction.

It is important to note at this juncture, that the purpose of this research was neither to find out why companies restructure nor to establish which form of corporate restructures best suit a particular organization. Rather, the study sought to empirically determine if divestitures, as a form of corporate restructuring can add or create value to shareholders. Managers do not do things for the fun of it but rather to achieve a particular objective at the end of the day. The impact of such decisions formed the basis of the study and also served as a navigational system to reach a conclusion.

1.3 Research Problems

There is a variety of academic studies on divestiture, with focused on reasons for divestiture and what form of divestment best aligns to the corporate goals and objectives of an organization. Very few studies have examined the impact of such strategies on the performance of the organization in South Africa as most of the studies have been conducted in developed markets especially in the US and Europe. This study contributes to knowledge on the effects such corporate actions on the share performance of parent companies in South Africa.

Erika (2014) conducted a study on the circumstances that make spin-off transactions a good strategy in the Airline Industry in the United States. He concluded that spin-offs were a smart strategy if the goals and objectives of the spun-off unit are separate from the goals and objectives of the parent companies. In other words, the spin-off division

should not be allowed to do the same thing; the parent companies are doing. Spin-off transactions only add value to shareholders if they operate in a completely different environment. An example similar to this is the case of MultiChoice Nigeria, the leading pay television services in Nigeria. When it was launched it only offered DSTV services but in order to compete favourably with StarTimes (which was targeting the low-end of the market segments), MultiChoice spun-off GOtv Services. Currently both, DStv and GOtv services are operating in the same market space in Nigeria. This is a clear case of when a spun-off division does or operate in the same market.

According to Donghun and Ravi (2010), there have been numerous empirical studies to examine the relationship between corporate divestiture and subsequent firm performance in both developed and developing market. However, these studies were characterized by inconsistent findings. Donghun and Ravi conducted a meta-analysis of the divestiture-performance relationship using 650 effect sizes from 94 reviews. They found out that among these studies, corporate divestiture had a positive impact on company performance. In order to further substantiate the claim of a positive impact, there is a need for more research to be done in this regard, hence the relevance of this study.

Lea (2009) examined a sample of Danish sell-offs transactions undertaken in the period from 2002 until April 2009. Results showed an average abnormal return on the day of the announcement of 1.29%, but the effect was not statistically significant. The component of the abnormal return generated by his findings is in line with several similar event studies on the sell-off transactions carried out on samples of American sell-offs. His result, however, showed a negative cumulative average abnormal return of -1.96% after the announcement. This indicates that the positive effect on the announcement day disappeared during the 30 days after the announcement. He concluded that Danish sell-offs add marginal value to shareholders wealth on the day of the announcement, but that this value tends to vanish in the period post the announcement. His conclusion is a bit strange. There is an abnormal return on the announcement date, but the cumulative average abnormal return is negative within 30 days. The conclusion for Danish Companies is a situation whereby we have

shareholders benefitting only in the short term. The long-term value added is negative for shareholders.

Francis et al., (2005) discussed different forms of corporate divestitures and the reasons for these corporate actions. They used some samples of corporate divestitures to identify the primary motivations in the Singapore context. For Singapore companies, operational efficiency, increased profitability and liquidity are the three major reasons for embarking on divestitures. They used price data around the announcement dates, and they proved that returns on the parent company increased significantly on divestitures announcements. They concluded that corporate divestiture adds value for Singapore companies.

Sebastian (2014) examined the wealth effects of 90 completed spin-offs in the United Kingdom that were announced between January 1987 and December 2010. Other factors such as the change in corporate focus, the level of information asymmetry, the relative size, board monitoring effectiveness, and takeover interest were investigated as possible sources of the wealth effects, i.e., the spin-offs effect was not the only factor considered in this study. His result showed a significant positive wealth effect of 4.46% over the three-day window. There was no evidence for long-term wealth effects associated with a spin-off, as the results are mostly insignificant. His conclusion was similar to that of Lea (2009) who found that Danish companies showed positive abnormal average returns in the short term, but not in the long run.

Emily et al., (2014) examined the impact of divestitures (spin-offs and sell-offs) on the wealth of shareholders for the parent firms listed on the Johannesburg Stock Exchange over the period 1995-2011. The study also made a comparison of the wealth created by spin-offs versus sells offs transactions. Results showed significant negative cumulative abnormal returns over the 250 and 500 days respectively, after the announcement date. This finding pointed to the fact that divestitures in South Africa do not add value to shareholders' wealth in the long run. In addition, sell-offs transactions are a better choice of divestitures compared to spin-offs transactions. The study by Emily et al., (2014) left us with a big question: Do divestitures in South Africa add value in the short

term? This question in turn informed the focus of this research; it looks at the short-term impact rather than the long-term impact.

Matthias and Markus (2010) examined sources of divestiture gains in the insurance industry. Their study was unique for comparing performance between programme divestiture and “stand-alone” divestitures. They define “divestiture programme as groups of (unit) divestitures that adjust the corporate focus of a firm according to an explicitly announced strategic logic” (Matthias and Markus, 2010, p.85). In a programme divestiture, an organization embarks on a series of transactions in order to implement their corporate strategy. For “stand-alone” divestitures, the organization uses one transaction to achieve its corporate strategy. Using event study methodology, they analyzed abnormal returns of 160 divestiture announcements within the global insurance industry between 1998 and 2007. Their findings shows that programme divestitures generate higher positive abnormal returns than “stand-alone” divestitures. Furthermore, they looked at what might be responsible for the higher abnormal returns in programme divestitures. They considered two factors: experience transfer and timing. By experience transfer, they considered if management has been this kind of divestiture in the past and by timing, they referred to how the divestiture has been scheduled for effective execution. Looking at these two factors, it was discovered that experience transfer does not have any impact on the announcement returns. However, timing of the divestitures did have positive impact on the announcement returns.

Meijui (2012) examined the performance of divestiture announcements on listed companies in Taiwan. She considered two specific kinds of divestitures: sell-offs transactions and equity carve-outs. He analyzed 266 sell-offs transactions and equity carve-outs between 1995 and 2004. She looked at both short-term and long-term performance. For short-term performance, she measured the abnormal stock returns while she used financial ratios to measure the long-term performance. Her findings showed positive abnormal stock returns associated with divestiture announcement for listed companies in Taiwan.

Jain (1985) examined the effect of voluntary sell-offs announcements on shareholder wealth in the United States between 1976 and 1978. Past researches have limited the effect of divestitures on sellers and most importantly companies listed on a recognized stock exchanges. Jain studied the effects not just on the sellers but also on the buyers. He used a sample of over 1000 voluntary sell-offs, specifically for first time announcements. His findings showed that both sellers and buyers earn significant positive abnormal returns from these transactions. However, the abnormal returns earned by sellers are higher than the abnormal returns earned by buyers. Furthermore, sell-off announcements are preceded by significant negative returns before the sell-off activities.

Mulherin and Boone (2000) did a very interesting study by comparing acquisitions and divestitures announcements in the United States. They examined 1305 firms from 59 industries between 1990 and 1999. Their findings on the two form of restructuring i.e. acquisitions and divestitures in the 1900s increased shareholders wealth. In addition, their results also showed that 50 percent of the firm are either involved in acquisitions or one form of major divestitures. Finally, economic reasons was the major driver for restructuring during this period.

Rosenfeld (1984) investigated additional evidence on the relationship between divestiture announcements and shareholders wealth in the United States. Two types of voluntary divestitures announcements were considered: spin-off and sell-off announcements. He found out that both spin-off and sell-off transactions have positive abnormal returns on divesting firms. In addition, spin-off transactions outperformed sell-off transactions on the day of the event.

Most research on corporate divestitures and its impact on shareholders' wealth have been conducted mostly for listed companies on a recognized stock exchange. However, Feldman et al., (2016) investigated the relationship between firm's values in family companies. Since these family companies are mostly not listed on the stock exchange, they used hand collected data on a sample of over 30,000 family businesses. Their findings showed that non-family companies are likely to embark on a divestiture than a family owned companies, especially if the family owned companies are managed by a

family member. Furthermore, it was established that divestitures undertaken by family companies generated higher post-announcement returns when compared to divestitures undertaken by non-family companies. The significance of their study was to show that family businesses may pursue objectives beyond shareholders wealth maximization such as “preserving the founder’s legacy and heritage, creating employment opportunities for family members, and maintaining family harmony and social status” (Feldman et al., 2016, p.2). These multiples objectives may hinder them to exploit available economic opportunities.

Desai and Jain (1999), examined if corporate focus was responsible for stock market gains associated with spin-offs. According to them, corporate focus can take two forms: selling unrelated assets to others or by spinning off unrelated divisions. They considered 155 spinoffs between 1975 and 1999. They found out that there was higher long-run abnormal returns for focus-increasing spin-offs than for non-focus-increasing spinoffs.

Most studies on spin-offs and sell-offs have been conducted in developed countries such as, the United States of America, the United Kingdom, and in European countries (Mthabisi, 2017, p.12). The fundamental question to ask is if these results are a true reflection or representation of what is obtainable in the emerging markets. There is limited research on spin-offs and sell-offs events in South Africa hence this study’s focus on spin-off transactions and sell-off transactions therein. The study bridges the gap in knowledge by looking at the impact of spin-offs and sell-offs announcements on the stock price performance of JSE listed companies. In addition to this, the period under consideration for these studies carried out in South Africa is usually short. The study examined these impacts over a period of ten years.

1.4 Research objective

The study sought to analyse whether the announcement of spin-offs and sell-offs creates value for the shareholders of the parent companies listed on the JSE in South Africa.

1. The study will investigate the reaction of the stock prices of parent firms during spin-offs and sell-offs announcements period, to establish whether value was being created to the shareholders of the parent companies in the short term period.
2. The study also investigated if there was a difference between the abnormal returns (if any) generated pre-announcement and post-announcement.
3. The study then examined the forms of divestitures (Spin-offs or Sell-Offs) that produced more abnormal returns (if any).

1.5 Research Questions

In line with the aforementioned objectives, the research sought to answer the following specific questions:

1. Do Spin-offs and Sell-offs announcements yield abnormal returns for the share price of parent companies listed on the JSE, during and around the announcement periods?
2. What are the differences between the pre and post-announcement returns, and how significant are the differences if they exist?
3. What is the difference in returns between a spin-offs transactions and a sell-offs transactions and how significant are the differences if they exist?

1.6 Significance of the study

In most cases, many studies have used small samples and the results from these small samples are difficult to generalize on a larger population. This study covered a large sample period of over ten years (2006 – 2016).

Divestment, whether through spin-off transactions or sell-off transactions is becoming popular in South Africa. This study will help market participants decides what form of divestment to undertake.

Spin-offs and sell-offs transactions are usually seen as a means of improving financial performance of a company. This is one of the reasons they are adopted by top

management or shareholders. However, various studies on this subject have produced a set of conflicting results (Donghun and Ravi, 2010). As a result, the findings of this research will add to existing body of knowledge.

1.7 Outline of the research.

This thesis comprises five chapters, Chapter 1 being the introduction section. Chapter 2 provides a literature review of the earlier research on spin-offs and sell-offs transactions. Chapter 3 explains the research methodology that will be followed to address research questions. Chapter 4 will analyze and interpret the data collected, followed by a summary of findings and suggestions for further research in Chapter 5.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter summarizes relevant studies from a large body of literature related to divestitures and shareholder value in developed markets and emerging ones. Fundamental concepts, theories, and definitions were also reviewed to illustrate their relevance to this research. Section 2.1 defines divestitures as a form of corporate strategy. Section 2.2 looks at the historical trends in the area of divestitures especially, spin-offs and sell-offs. Section 2.3 sheds more light on different forms of divestitures, but with a focus on spin-offs and sell-offs transactions. Section 2.4 will consider the reason why an organization divests. Even though this is not the focus of this study, the insight will be helpful. Section 2.5 differentiate between spin-offs and sell-offs transactions. Section 2.6 dives into the market efficiency hypothesis. Section 2.7 reviews the summary of past findings related to this study. Section 2.8 defines and formulates the hypothesis of this research, and the chapter ends with a conclusion in Section 2.9.

2.1 Defining Divestitures

Decisions to divest are deemed voluntary if they are made by top management representatives or company executives. Involuntary divestitures usually occur when invoked by third parties or government regulations. An excellent example of when government regulations led to divestment was in Nigeria's banking industry in 2010. Prior to new regulations, Nigerian banks operated a boutique of financial services including: insurance, stockbroking, pension funds, et cetera. In 2011 it was uncovered

that most banks were making losses from the core business of banking, but these losses were either not reported or they were underreported. In a pro-active decision to prevent the collapse of these banks, the Central Bank of Nigeria scrapped the Universal Banking Licenses of the banks. This decision compelled the banks to divest from non-core banking business of insurance, stockbroking, etc. The external factors may be due to some systemic factors or happenings in the local economy. The government will usually step in to avert a major economic disaster if the effect is likely to be systemic. The divestiture is voluntary if it is a management decision without any outside force or pressure. Voluntary divestiture usually happens to achieve some strategic objectives by top management. This research will focus on voluntary divestiture.

According to Lea (2009:8), the word divestiture has two meanings that should not be confused. The first and broadest type of divestment is when a company sells off a business unit, division or assets to one or more acquirers or a third party. In the United States, the term divestiture is used in reference to when a company is forced to give up its subsidiary, specific assets or capital. When this happens, it is usually referred to as involuntary divestment. The focus and concentration of this thesis will be on voluntary divestitures. Therefore, the word divestiture in this study refers to the voluntarily type initiated by a firm's management. The legal meaning as used in the United States is out of context and will not be considered for the purpose of this research.

2.2 Historical Trends

Erika (2014) asserted that in the 1960s, there were few studies on divestitures compared to those on mergers and acquisitions. During this period, companies were mainly focusing on expansion as it was during the period of industrial revolution in Europe and America. Divestitures were used as a strategy by companies seeking to increase the stock price of the companies they were acquiring. During the 1974 recession, there was a change in strategy by these companies. There was generally a weak economic demand which subsequently affected the sales of their products, for this reason, companies had to sell off these 'divisions to raise funds and improve cash flow' (Erika, 2014, p. 140). After the crisis of weak economic demand, the number of

divestitures went down and they remained low until the 1990s. The number of divestitures rose again just after this time, “as downsizing and refocusing became prominent business strategies” (Erika, 2014, p. 140). This made them profitable and efficient. Since the early 2000s many academic studies similar to the subject under study were published.

2.3 Forms of Divestitures

This study will explain four major types of divestitures: tracking stocks, spin-offs, equity carve-outs, and sell-offs, but with a major focus on spin-offs and sell-offs transactions, which happen to be the most widely used in the corporate world.

According to Erika (2014), tracking stocks are also known as letter or targeted stocks. They are stocks that track the earnings of a division or subsidiary. They were first created in 1984 by General Motors to track the performance of its Electronic Data System Division. The next tracking stock was created in 1991 by USX Corp. (Billet and Anand, 2001). It is a situation where a company creates new shares from the non-taxable stock dividend to its present shareholders. Generally, this leads to the creation of two stocks: the old stock called the general division stock and the new stock which is now referred to as the tracking stock.

In comparison to a spin-off, which is a focus area in this research, the company is still under one legal entity. For the spin-off, the company is divided into two divisions with clear autonomy. In simple terms, under tracking stock, there is one company with two stocks, one stock is tracking the other whereas under spin-off, there are two companies with two distinct stocks. Tracking stocks are more similar to spin-off transactions than sell-off transactions.

Gaughan (2011) defined equity carve-outs as the sales of an equity interest in a division to a third party or outsiders. In comparison to a spin-off transaction, a new legal company is established. When compared to spin-offs transactions, the divested company has a different management team and is run as a different firm. They are now

autonomous and independent. According to Erika (2014), spin-offs and sell-offs transactions have two significant differences. Just like a spin-off transactions, “an equity carve-out comes with a cash inflow from the buyers, and therefore it is not a tax-free transaction” (Erika, 2014, p. 138). Secondly, the decisions of the new management team are taken by the parent company's board since it is a partial sale as the parent company still keeps the majority of the shares. Equity carve-outs present situations whereby the parent company does not want to allow an outsider or non-shareholder to take control of or manage the asset or unit. The parent company still wants to retain control of strategic decisions in the organization. (Koller, et al., 2005).

An equity carve-out happens when a full or partial interest in a subsidiary or unit or asset is sold to non-shareholders or a third party. (Weston, et al., 2004). In an equity carve-out, the majority shares in the unit are held by the parent company (Derya, 2008). An equity carve-out can be defined as an initial public offering of a company's subsidiary or split off from initial public offerings. This kind of organizational structure creates a new, and publicly listed company with partial or full independence from the parent company. (Weston, et al., 2004).

Spin-offs transactions, according to Weston, et al., (2004) can be seen as a dividend to the shareholders of the parent company. The dividend in this case is referred to as stock dividend and not the usual cash dividend. A spin-off transaction is defined as a pro-rata allotment of shares in a subsidiary or unit or asset to the existing shareholders of the parent's company. This kind of organizational structure creates a new and publicly listed company with partial or full independence from the parent company. They are fully autonomous. The parent company maintains majority interest in both equity carve-out and spin-offs transactions (Derya, 2008). The parent company will not receive any cash in this type of divestiture, unlike sell-offs where the parent company will receive some cash payment or consideration. (Weston, et al., 2004).

According to Alexandros and Karen (2015), in a spin-off transaction, certain assets, which can be in the form of a unit, division or subsidiary of a firm, are separated from the parent company into a different listed traded company. A new company will be created and shares of this new independent company are allotted to the present shareholders of the parent firm on a pro-rata basis, i.e. on the basis of their present

holdings in the parent company. In a spin-off transaction, there are no tax consequences for the parent companies because this transaction is treated as a stock dividend to the parent company shareholders. However, in a sell-off transaction, a specific asset of the parent firm is sold off for cash or security to another company. Here, the sale proceeds are taxable, as they are mostly cash payments.

Cusatis et al., (2001) defined sell-offs transactions (also known as buy-outs) as a strategy in which the division is sold entirely to another company, usually to a competitor or even to a new company seeking to gain market share of the industry or a foreign company trying to gain some market share in a local economy. A sell-offs transaction is similar to an equity carve-out because they both generate cash inflow to the parent firm. In this transaction, the parent company gets cash payment in return. They however differ in that, the new company is now fully autonomous and independent (Erika, 2014).

2.4 Reasons for Divestitures

A company's strategy is a significant driver behind the decision to divest. One primary reason for this strategy could be that the divested business asset no longer resonates with the parent company's goals and objectives. A good example of this strategic alignment is when a bank that offers a boutique of financial services such as stockbroking, pension funds and investment management, decides for a strategic reason to divest from these businesses and focus on the core business of banking. According to Lea (2009), a company may divest to combine synergies between business divisions to explore economies of scales. This type of strategy can also be done to spread the operational risk thereby creating highly diversified companies which are known as conglomerates. Conglomerates are a combination of diversified companies, usually under the same management. A company might have acquired another company to take advantage of the market situation, even though they operate in different industries. This same company after some years may decide to divest the acquired company and focus on its core business, especially if the acquired company is making a loss or draining the cash flow of the parent company.

Another reason according to Lea (2009), is when the asset or business division is more strategic to another company and this company is willing to pay a premium cost to

acquire the assets or the division which is no longer profitable. For example, a pharmaceutical store is likely to be more strategic to a hospital than it is for a retail outlet. The logic here is merely "to sell high because reluctance to sell in these situations could result in a hostile takeover" (Lea, 2009, p.29).

2.5 Spin-offs versus Sell-offs

Alexandros and Karen (2012) found that the decision to either spin-off or sell-off is likely to be determined by the intrinsic value of the firm and the market value before divestiture announcement. For a firm that is overvalued, they are more likely to sell-off and receive cash payment. For an undervalued firm, they are more likely to spin off in order to unlock its intrinsic value at a future time. Their empirical findings indicated that firms which have a higher or lower market value are more likely to spin off or sell off respectively. An overvalued firm is likely to sell off its assets while an undervalued firm is more likely to spin off its assets or units.

They also analysed the differences in the "post-divestiture operating and stock return performance" (Alexandros and Karen,2012, p.4). Their results supported the following hypotheses: results showed that sell-off transactions produce more substantial gains in the long run. "The improvements in their long-term post-divestiture operating and stock return performance are higher for sell-offs transactions when compared to the firms which divest their assets through a spin-off" (Alexandros and Karen,2012, p.4). Sell-offs transactions as a form of divestiture show a better result in the long term when compared to spin-offs transactions.

They also looked at the role which organization tax rates played in deciding whether to sell off or spin off assets. Their empirical findings indicated "that firms with higher marginal tax rates are more likely to spin off their assets and firms with lower marginal tax rates are more likely to sell off their assets" (Alexandros and Karen, 2012, p.5). The reason for this is that sell-off transactions involve cash payment which is taxable. A spin-off transaction does not involve any cash payment; it is a stock dividend and therefore not taxable. A company with a higher tax rate will lose some money in the form of tax payment. It is therefore strategic to spin-off the asset in order to avoid any tax payment.

They concluded that the choice between spin-offs and sell-offs transactions is "driven by several factors such as the characteristics of divesting firms (pre-divestiture market valuation and marginal tax rates), the characteristics of assets being divested (how well they perform), and by the prevailing market conditions at the time of divestiture" (Alexandros and Karen,2012, p.6). The company's most significant task is deciding whether to sell off its assets or units for long term growth or to spin-off its assets or units and save big in the form of tax avoidance.

2.6 Market Efficiency Hypothesis

Market efficiency is a term used to describe a situation where all available information is reflected in the share prices. Efficient Market Hypothesis (EMH) was developed by Fama. According to EMH, a market is efficient if stock prices fully reflect all available information about the stock (Fama et al., 1969). "A critical assumption of the EMH is that, the markets are sufficiently efficient to react to any new information or events that have an impact on the future profits of the affected companies" (Mthabisi, 2017, p.18). For example, the stock prices will reflect the decision of a company to design or roll-out products that will solve a well-known problem in the market place. According to Fama et al., (1969), there are three forms of market efficiency and they can be classified as: weak, semi-strong or strong. The weak form describes a situation where historical prices of the shares contain already known information about the stock. The 'semi-strong form describes a situation whereby all available public information about the stock is already incorporated in the stock prices. The information is public knowledge about the company or stock. Information such as the company entering an expanding market is already reflected in the share price. The weak and semi-strong types only incorporate public information into the stock prices. The strong form of market efficiency incorporates not only the public information but also private information not yet known to the public. The 'strong form' therefore incorporates all publicly and privately available information in the share price.

In an efficient market, the stock prices of shares already reflect both public and private information about the company. The prices of these shares are premised both on events

that have taken place in the past, as well as future events (Fama et al., 1969). In an efficient financial market, as suggested by the Efficient Market Hypothesis (EMH), divestitures announcement is immediately incorporated into the stock prices. For this study, the announcement of divestitures will be incorporated or reflected into the company stock prices. This will make it impossible for any market participants to earn abnormal returns around the announcement period.

2.7 Spin-offs and Sell-offs Announcement Studies

According to Bhana (2004), there is scant research on the subject of voluntary divestiture and their impact in South Africa. South African companies were majorly family owned before now, and as a result families are usually not willing to lose control of their businesses by way of either "selling off" or "spinning off." These family businesses are not known to voluntarily divest either through sell-offs transactions or spin-offs transactions (Bhana, 2004). The reason for this is mostly historical.

Erika (2014) established that there is a "considerable discussion on corporate expansion in the form of mergers and acquisitions (M&As) in academic finance literature" (Erika, 2014, p.136). According to Erika (2014) writings on organization "downsizing" are not as popular, maybe because splitting up is usually perceived as a failure. The simple reason is that many market participants see mergers and acquisitions from a positive perspective. Sell-off and spin-off transactions are perceived negatively as people generally think that "adding up" will always be better or that it will produce a better result than "subtracting from." However, this is not to imply that there are few studies that focus on the different forms of divesting an organization and the subsequent results incurred from such strategies. It is fascinating to note that many of these articles and papers were written in the 1990s. The 1990s was the period in which divestitures became very popular and wide-spread (Erika, 2014).

Erika (2014) did a study to find out when spinoff will be a good strategy to undertake in the Airline Industry in the United States. He conducted three case studies of spin-offs in the Airline industry. In each case, the “parent firm and subsidiary had different Standard Industry Classification (SIC) Codes” (Erika, 2014, p.149). The SIC codes is a case of Cross-Industry situation. The three cases did not provide positive results as suggested by academic literature. The findings thereof, were as a result of the robustness of agreements signed between parent companies and their subsidiaries, as per future relationships. The three cases are between Expedia and TripAdvisor, which had future relationships. They produced a positive abnormal return. In the case of Air Canada and Aero plan, there was a previous and substantial agreement as per future relationship. In the last case, America Airline and Sabre had no robust substantial agreement has per future transactions. They produced a negative abnormal return. He concluded that spin-offs transactions are a good strategy, only if the goals and objectives of the spun-off division are different from that of the parent company. The parent company and that of the new divested company must have different goals and objectives in order for the strategy to add any value. Erika (2004) also found that higher returns are achieved when the parent company and its subsidiary operate in entirely different industries. The result shows that if the parent company and the divested unit operate in the same industry spin-offs transactions will add no value to the parent company.

According to Donghun and Ravi (2010), there have been numerous empirical studies to examine the relationship between corporate divestiture and subsequent firm performance in both developed and developing markets. However, inconsistent findings persist among these studies. They conducted a meta-analysis of the divestiture-performance relationship. They used 650 effect sizes from 94 reviews and found that, among these studies, corporate divestiture had a positive impact on company performance. In order to further substantiate their claim of a positive impact, there is need for further research, hence the need for the present study.

Lea (2009) examined a sample of Danish sell-offs transactions undertaken from 2002 until April 2009. Results showed an average abnormal return on the day of the announcement of 1.29%, but the effect was not statistically significant. The component

of the abnormal return generated by his findings is in line with several similar event studies on the sell-off transactions carried out on samples of American sell-offs. The result however, showed a negative cumulative average abnormal return of -1.96% after the announcement. This indicates that the positive effect on the announcement day disappeared during the 30 days after the announcement. He concluded that Danish sell-offs add marginal value to shareholders wealth on the day of the announcement, but that this value tends to vanish in the period post the announcement. The conclusion here, for Danish Companies, is a situation where we have shareholders benefitting only in the short term. The long-term value added is negative for shareholders.

Francis et al., (2005) discussed the different forms of corporate divestitures and the reasons for these corporate actions. They used some samples of corporate divestitures to identify the primary motivations in the Singapore context. For Singapore companies, operational efficiency, increase profitability and liquidity are the three major reasons for embarking on divestitures. They used price data around the announcement dates and they proved that returns on the parent company increased significantly following divestiture announcements. They concluded that corporate divestiture adds value for Singapore companies.

Sebastian (2014) looked at the wealth effects of 90 completed spin-offs transactions in the United Kingdom that were announced on the stock exchange from January 1987 up to December 2010. The study also investigated if the certain factors had any wealth effects by means of adding value to parent companies. These factors included: change in corporate focus, level of information asymmetry, the relative size, board monitoring effectiveness, and takeover interest. Results showed that, the announcement of spin-offs leads to a significantly positive wealth effect of 4.46% over the three-day window. The result was analyzed in different panels. Panel A was on corporate focus. The mean CAR for 50 companies with an increase in corporate focus was 5.24% while the mean CAR for 40 companies with decreased corporate focus was 3.49%. Panel B was on takeover interest. The mean CAR with takeover interest was -5.37%, but a company with no takeover interest had a mean CAR of 2.29%. Panel C was on the level of

Information Asymmetry. There was a higher mean CAR for a company with a higher level of information asymmetry when compared with a company with a lower level of information asymmetry. Panel D was on Board monitoring effectiveness as measured by board size.

Firms with higher board monitoring effectiveness had a positive mean CAR of 2.63% while companies with a lower board of director's oversight functions and monitoring effectiveness report non-significant negative mean CAR. Panel E was on the size of the Spin-offs. A relatively large size produced a higher CAR of 7.74% while a small size spin-off only produced a CAR of 1.19%. There was, however, no evidence for long-term wealth effects associated with a spin-off, as the results are mostly insignificant. According to him, companies with no takeover interests that are submitted before the spin-off announcement brought a significantly higher return in comparison to those where such interest was present (Sebastian, 2014).

Md Hamid (2010) studied the value effect of 25 corporate spin-off events that occurred in Singapore between 1975 and 2005. Results showed that parent shareholders gain about 15.73 percent value after spin-offs transactions. The 15.73% are derived as follows: the spin-off stocks gained 6.62% while the balance of 9.11% gain came from the parent stocks. Findings from the study corresponded with the suggestion that corporate spin-offs add value to shareholders' wealth. There was another shocking revelation from his result. There is a correlation between debt-asset ratio of the parent company and the value derived from its spin-off transactions. He concluded that corporate spin-offs has a positive impact in the Singapore market as was found earlier in the developed markets.

Francis et al. (2005) supported the findings of Md Hamid (2010) in Singapore. Their paper discussed the different forms of corporate divestitures, the reasons for this corporate activity and the empirical findings of their economic outcomes. The result of their findings shows that divestiture announcements have a positive impact on the share returns of the parent company. They discovered two factors that were responsible for these positive abnormal returns. First was the size of the divestitures and with second

being, accounting gains. Overall, they concluded that corporate divestiture add value for Singapore companies.

Emily et al., (2014) did a study on the impact of divestitures (spin-offs and sell-offs transactions) on shareholder wealth for the parent companies listed on the Johannesburg Stock Exchange (JSE) over the period 1995-2011. The focus of this study was on long term value creation. The event window used for this study was 250 days pre and post and 500 days pre and post for a total of 44 sample sizes. The study also made a comparison between the gains from spin-offs transactions and sells offs transactions. They found significantly negative cumulative abnormal returns over the 250 and 500 days respectively, after the announcement date. On the 44 samples of companies, they had a CAAR of -0.89% and -1.27% for pre and post 250 days respectively while the CAAR for pre and post 500 days was -0.65% and -1.0% respectively. They further looked at the value creation for spin-offs and sell-offs. For sell-offs, they had a CAAR of -0.43% and 0.37% for post 250 days and 500 days. Spin-offs showed a CAAR of -0.84% and -0.64% for post 250 days and 500 days.

The results show that divestitures in South Africa destroy shareholder value in the long run. Divestitures, whether sell-offs transactions or spin-offs transactions do have a negative impact on the share performance of the parent company. Secondly, it is better to sell off their assets than to spin off the assets. The findings in Emily et al., (2014) differed from the findings presented by a study of spin-offs transactions in South Africa by Bhana (2014). Emily et al., (2014) found a significantly negative CAAR over the longer term horizons of 250 and 500 days, whereas according to Bhana (2004), spin-offs transactions generate significant improvements in returns. The two studies had conflicting results. Perhaps the main differentiating factor was the time- periods and the selection criteria. A quick look at some of the reasons for this contradiction will be helpful.

The study by Emily et al., (2014) was conducted just after South Africa's first democratic elections in 1994, when Nelson Mandela was elected as the first black President of the Republic. Bhana (2004) conducted his research when the apartheid government was

still in place and South Africa was under economic sanctions from western countries. Emily et al., (2014) used the two-factor APT model suggested by (Van Rensburg 1999) while Bhana (2014) used the three-factor Fama and French model. Their conclusion was that divestiture in South Africa destroys shareholder values in the long run. They discovered a negative CAAR of -1.26% and -1% over the 250 and 500 respectively, after the announcement date.

Bhana's study showed that South African holding companies that have engaged in restructuring through spin-offs have benefitted by significant improvements in performance for both the parents and their spin-off companies. They studied voluntary spin-offs initiated by 19 parent companies on JSE between 1988 through 1999. They calculated both "raw" or adjusted share returns and matched-firm-adjusted share returns (MTARs) over the various intervals from 24 months before the spin-offs through 36 months after the spin-offs. The companies experienced an average return of about 31.6% in excess return for the two years before the ex-date. For the post period of 6 months, 12 months, 24 months and 36 months, the mean raw returns were: 11.8%, 21.6%, 48.2% and 59.3% respectively, while the MTARs were 6.9%, 13.8%, 27.6% and 20.5% for 6 months, 12 months, 24 months and 36 months, respectively. They concluded that it is better for the parent companies to divest and be spun-off to its shareholders. Therefore, he recommended that South African holding companies should engage more actively in divesting their subsidiaries through spin-offs (Bhana, 2004).

A fascinating study by Hite and Owers (1983) shows positive abnormal returns. For their study, they considered 116 companies involved in spin-offs transactions during the period of 1963 to 1981. They examined press announcements showing the reasons for the spin-off. "The authors classified their sample in four groups: specialization in operations, facilitation of a merger, legal/regulatory difficulties and unknown reasons" (Erika, 2014, p.142). Their result showed that share price reactions on the first press announcement around the two-day interval showed no real differences and were significantly positive for all four categories of spin-offs transactions mentioned above.

Analyzing the results of the four groups, they found out the following: a positive returns of 14.5% for companies that their operations were specialized; 11.6% for firms who facilitate mergers; a negative returns of -4.7% for companies in the third category whose spin-offs transactions are a response to regulatory or potential anti-trust intervention, finally a return of 6.6% for the group of firms with unknown spin-off transactions. The 6.6% return is approximately equal to the mean of the first three groups discussed above. (Hite and Owers, 1983).

Veld & Veld-Merkoulova (2004) conducted a similar study in 15 different European countries. They looked at 156 spin-offs transactions. Their results showed an abnormal positive cumulative average return of 2.62% over the three-day announcement window. This then increased to 2.66% for the subsequently completed spin-offs transactions.

Cusatis et al. (1993) calculated the stock returns of spin-offs transactions. Specifically, they looked at both, the parent companies and the spun-off divisions. They used the raw and matched-firm-adjusted returns to analyze both the spinoff and parent company performance. For the spinoffs, their parents, and the spinoff-parent combination, they found positive abnormal returns for the period under consideration.

Erika (2014) found out that the positive impact on the stock price does not happen only at the time of the spin-off transactions announcement or first trading day but rather there were also abnormal positive results after this time especially the years after.

Matthias and Markus (2010) examined sources of divestiture gains in the insurance industry. Their study was unique for comparing performance between programme divestiture and "stand-alone" divestitures. They define "divestiture programme as groups of (unit) divestitures that adjust the corporate focus of a firm according to an explicitly announced strategic logic" (Matthias and Markus, 2010, p.85). In a programme divestiture, an organization embarks on a series of transactions in order to implement their corporate strategy. For "stand-alone" divestitures, the organization uses one transaction to achieve its corporate strategy. Using event study methodology, they

analyzed abnormal returns of 160 divestiture announcements within the global insurance industry between 1998 and 2007. Their findings shows that programme divestitures generate higher positive abnormal returns than “stand-alone” divestitures. Furthermore, they looked at what might be responsible for the higher abnormal returns in programme divestitures. They considered two factors: experience transfer and timing. By experience transfer, they considered if management has been this kind of divestiture in the past and by timing, they referred to how the divestiture has been scheduled for effective execution. Looking at these two factors, it was discovered that experience transfer does not have any impact on the announcement returns. However, timing of the divestitures did have positive impact on the announcement returns.

Meijui (2012) examined the performance of divestiture announcements on listed companies in Taiwan. She considered two specific kinds of divestitures: sell-offs transactions and equity carve-outs. He analyzed 266 sell-offs transactions and equity carve-outs between 1995 and 2004. She looked at both short-term and long-term performance. For short-term performance, she measured the abnormal stock returns while she used financial ratios to measure the long-term performance. Her findings showed positive abnormal stock returns associated with divestiture announcement for listed companies in Taiwan.

Jain (1985) examined the effect of voluntary sell-offs announcements on shareholder wealth in the United States between 1976 and 1978. Past researches have limited the effect of divestitures on sellers and most importantly companies listed on a recognized stock exchanges. Jain studied the effects not just on the sellers but also on the buyers. He used a sample of over 1000 voluntary sell-offs, specifically for first time announcements. His findings showed that both sellers and buyers earn significant positive abnormal returns from these transactions. However, the abnormal returns earned by sellers are higher than the abnormal returns earned by buyers. Furthermore, sell-off announcements are preceded by significant negative returns before the sell-off activities.

Mulherin and Boone (2000) did a very interesting study by comparing acquisitions and divestitures announcements in the United States. They examined 1305 firms from 59

industries between 1990 and 1999. Their findings on the two form of restructuring i.e. acquisitions and divestitures in the 1900s increased shareholders wealth. In addition, their results also showed that 50 percent of the firm are either involved in acquisitions or one form of major divestitures. Finally, economic reasons was the major driver for restructuring during this period.

Rosenfeld (1984) investigated additional evidence on the relationship between divestiture announcements and shareholders wealth in the United States. Two types of voluntary divestitures announcements were considered: spin-off and sell-off announcements. He found out that both spin-off and sell-off transactions have positive abnormal returns on divesting firms. In addition, spin-off transactions outperformed sell-off transactions on the day of the event.

Most research on corporate divestitures and its impact on shareholders' wealth have been conducted mostly for listed companies on a recognized stock exchange. However, Feldman et al., (2016) investigated the relationship between firm's values in family companies. Since these family companies are mostly not listed on the stock exchange, they used hand collected data on a sample of over 30,000 family businesses. Their findings showed that non-family companies are likely to embark on a divestiture than a family owned companies, especially if the family owned companies are managed by a family member. Furthermore, it was established that divestitures undertaken by family companies generated higher post-announcement returns when compared to divestitures undertaken by non-family companies. The significance of their study was to show that family businesses may pursue objectives beyond shareholders wealth maximization such as "preserving the founder's legacy and heritage, creating employment opportunities for family members, and maintaining family harmony and social status" (Feldman et al., 2016, p.2). These multiples objectives may hinder them to exploit available economic opportunities.

Desai and Jain (1999), examined if corporate focus was responsible for stock market gains associated with spin-offs. According to them, corporate focus can take two forms: selling unrelated assets to others or by spinning off unrelated divisions. They considered

155 spinoffs between 1975 and 1999. They found out that there was higher long-run abnormal returns for focus-increasing spin-offs than for non-focus-increasing spinoffs.

Miles and Rosenfeld (1983) investigated the effect of voluntary spin-off announcements on shareholder wealth. Their findings was consistent with the results of past investigation that voluntary spin-off announcements have a positive significant effect on share prices. In addition, they discovered that the share price increases for large spin-off transactions is greater than small spin-off transactions i.e. a spin-off transactions of say \$10,000,000.00 will generate a higher share prices than a spin-off transactions of \$2,000,000.00.

Zakaria and Arnold (2012) examined value creation for spin-offs transactions in Malaysia. They investigated the short-and long-run share return performance of Malaysian spin-off firms between 1980 and 2011. Their study examined the performance of spin-off firms against the benchmarks of Malaysian All-Shares indices. Their findings showed that parent firms significantly outperformed the market during the few days surrounding the announcement date. For the long-run analysis, they considered a period of three years. Their findings showed that there was no abnormal returns for either parents or spun-off entities.

Ameziane et al., (1996) examined stock market reactions to divestment by financially distressed and healthy firms and also what impact the reaction has on lender monitoring. They found excess return for both financially distressed and healthy firms, but the excess returns were higher for financially distressed firms. These higher returns were derived from adjustment for reduction in financial distress cost. In addition, there was significant higher returns for firms with higher level of debt in the United Kingdom.

2.8 Conclusion of Literature Review

Overall, findings from the literature review revealed that, although there have been scores of empirical studies that have been conducted on Spin-offs and Sell-offs transactions, the results have not been consistent among these studies. There is no

certainty regarding whether divestitures announcements have an impact on the share performance of the parent companies, hence the reason for this study.

From Sebastian's 2014 study in the UK, there was no evidence of long-term value effects associated with a spin-off, as the results were mostly insignificant. Emily et al., (2014) collaborated this in their studies and they concluded that divestitures, either spin-off transactions or sell-off transactions do not have any impact of the share performance of the parent companies, and as such, destroys shareholder wealth in the long run. Bhana (2004) on the other hand, found that spin-offs transactions do have an impact on the share performance of the parent company.

Francis et al. (2005) supported the findings of Md Hamid (2010) in Singapore. There is positive abnormal returns for divestment in Singapore. The positive abnormal returns were attributed to two things: the size of the divestitures and the computed accounting gains. Overall, they concluded that corporate divestiture adds values to shareholder's wealth for Singapore companies.

The outcome of this research will add to the body of knowledge on whether divestitures add value to shareholders wealth, especially in South Africa, considering the inconsistency in the result of past findings.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on the research methodology that will be used to analyze the data and answer the research questions. Section 3.1 discusses the data, and sources. Section 3.2 outlines the steps for performing a short term event study. Section 3.3 explores the research design. Section 3.4 presents the t-tests under the null hypothesis. The t-test was computed using the event study metrics software. The chapter ends with a summary of main points in Section 3.5

3.1 Data and Data Sources

The study focuses on any spin-offs and sell-offs transactions announced by a company listed on the JSE, with the exceptions of those companies whose shares returns cannot be extracted from the Bloomberg terminal. The requirement for the transaction value is

that all spin-offs and sell-offs should have been conducted on JSE. The announcement of the deals was between and inclusive of the years 2006 to 2016. In total, there were 36 deals of spin-offs transactions completed between the period under study, and 41 deals of sell-offs transactions also completed between these periods. All share returns were extracted from the Bloomberg terminal. The period between 2006 and 2016 accounted for over 80% of spin-offs and sell-offs deals that occurred between 1996 and 2016. The data on the announcement dates, the deal value of Spin-offs and Sell-offs transactions, parent companies and the subsidiaries, market capitalization (size) were all extracted from the Bloomberg terminal. Few companies that were subtracted from the data are the companies whose share returns were not available on the terminal.

The test period will be divided into estimation and event windows. This is the period of time under which abnormal returns were computed for the parent companies, for both spin-off transactions and sell-off transactions. The test period is from 180 days prior to the divestitures announcement to 30 days after the announcement. The estimation window and the event window are the two components of the test period that were considered in calculating abnormal returns.

The estimation window refers to the period where the normal returns, the estimates of the intercept, and the slope parameters for the parent companies are calculated (Jared, 2012). The period will run from 180 days prior to the announcement, to 30 days prior to the announcement. The event window is the time frame within which the abnormal returns, around the announcement of the divestitures, will be calculated. The event window is a short period of 30 days prior to the announcement until 30 days after, in order to capture the impact of share performance. This short period of 30 days has been selected to see the real effect of the announcement. If a more extended time period was selected, it is possible for other events to have happened and therefore leading to a misleading result. However, additional steps were taken to make sure that we do not have other confounding events.

The purpose of an event study is to calculate abnormal returns associated with the said event. It is essential and necessary to first calculate the normal returns before

calculating any abnormal returns. An abnormal return is the difference between the realised returns and the estimated returns. For this research, an abnormal return is the difference between the realised return of a share and the expected return of that share. The abnormal return was calculated on a day-to-day basis over the span of the event window. For example, if the expected return on an investment is 9% and the actual return is 6%, the abnormal return is still -3%. Let us look at another scenario; if the expected return is 11% and the actual return is 15%, then there is a positive abnormal return of 4%. It is also important to note that the cumulative average abnormal return is the accumulation of abnormal return over the event window period.

3.2 Steps for performing a short-term event study

In performing a short-term event study, the following eight steps can be adopted in order to reach a reliable result accurately.

The very first step was to define the event. The market is very dynamic and ever changing in order to adapt to emerging events in the market place. For a corporate organization, one will expect multiple events to take place in a particular year. Examples of corporate events that can happen include: the announcement of dividends, mergers, and acquisitions, resignations or the death of a powerful CEO, launch of a new product line, expansion to a foreign market, the introduction of new regulations and many more. This corporate event must be occurring for the first time and instantaneous information should be available to the public. If the information is already leaked to the public, then it is likely not to see any reaction to asset prices. For the purpose of this research, the corporate event has been defined as divestiture with a focus on Spin-off and Sell-off transactions only.

The second step was the definition of the sample size and the countries with the stock exchange to be examined. In general, it is appropriate to choose a substantial sample period to be able to collect as many events as possible. This study considered divestitures that happened on the JSE in South Africa between the year 2006 and 2016.

The third process was the determination of the event date. The event date in the study refers to the date on which the event occurred. A typical corporate event will have multiple dates. There can only be one event date, therefore a specific date must be selected. The event date can be the date on which the deal was announced, when it was filed at the regulatory authorities, the date the deal was completed or even the date when payment was made. In this instance, the announcement date denotes the event date. This announcement date is also available on Bloomberg.

It is essential to drop confounding events. Confounding events are events that happened simultaneously during the course of the year. It is possible to announce a dividend cut because the organization is entering a new market. There are two events here: dividend cut and expansion to a new market. A CEO may resign as a result of a false allegation against him. The resignation of a CEO is one event while fraud allegation is another event. These confounding events must be separated, and a decision has to be made as to which event will be tested as explained in the first step.

The fourth step was to identify the estimation method for the expected or normal return calculation. In order to determine the abnormal returns, i.e. the returns that can be attributed to the event of interest, the expected return for the event date must be calculated. The expected or normal return is the return the company would have earned if the said event had not happened, in simple terms, what would have happened had the CEO not resigned, or if there was no announcement of any divestiture. Abnormal return is the difference between the actual return and the expected return. There are several methods to calculate abnormal return, but one thing they have in common is that they all use historical prices. Any of the following return models can be used: Constant Mean Return, Market Return, Arbitrage Pricing Model (APT) Capital Asset pricing model (CAPM), French and Fama three and four-factor model and the Matched Firms (Portfolio) model. The return model to be used must be the one that best explains the peculiarity of the countries and the market. Some return models are best used in a developed market while others are best for undeveloped or emerging markets. The formula below can be used to calculate the expected or normal returns:

$$R_{it} = \frac{P_{it} - P_{i(t-1)}}{P_{i(t-1)}}$$

Where: R_{it} is the return over the period t for asset i , P_{it} and $P_{i(t-1)}$ represent the prices for asset i over period t and $(t-1)$ respectively. (Mthabisi, 2017, p.24).

For the purpose of this study, the two-factor Asset Pricing (APT) model suggested by Van Rensburg (2001) was adopted. This model was adopted because of the many cross-sectional irregularities found on the JSE (Rensburg and Slaney 1997). The benchmark return portfolio is represented by:

$$R_{it} - R_{ft} = \alpha_f + \beta_{fFINDI} (R_{FINDIt} - R_{ft}) + \beta_{fRESI} (R_{RESIt} - R_{ft}) + \varepsilon_{ft}$$

Where: R_{it} is the return on company i in period t , R_{ft} is the risk-free in period t proxied by the 91-day South African Treasury Bill, R_{FINDIt} is the return on the JSE Financial-Industrial Index, R_{RESIt} is the return on the JSE Resources Index, β_{fFINDI} and β_{fRESI} are the risk parameters to be estimated and ε_{ft} is the residual error term. (Emily et al., 2014, p.573).

Once the appropriate model has been adopted, the fifth step was to determine the estimation window and event window for the said event. The estimation window is the period of days, usually before and after the event day, denoted by day 0 used to determine the expected return for an asset or shares. Abnormal returns were calculated using the event window while the expected return was calculated using the estimation window. An estimation window of 180 days and an event window of 30 days were chosen since the focus of the research was on the short term effect. The event date is usually denoted by day 0.

The sixth process involved the determination of the cumulative average abnormal return (CAAR). Before then, we have to calculate the firm's abnormal average return (AAR) for each respective event and each day in the event window. The CAAR is the sum of a

firm's abnormal returns over a specified period, prior to or after an event. The AAR, as well as the CAAR, can either be positive or negative. The result is dependent on how the market reacts to the news of the said event. The summation of the average abnormal return over the T days in the event window, over all times t will form the cumulative average abnormal return (CAAR) as in the equation below:

$$CAAR_t = CAAR_{t-1} + AAR_t \quad (\text{Mthabisi, 2017, p.26}).$$

The seventh step was to test whether the AAR and CAAR are significantly different from zero. There are many test statistics that can be applied to do this. The result will either be statistically significant or statistically insignificant thereby determining if the null hypothesis will be accepted or rejected.

Event study software purchased from the Department of Tax and Finance was used to calculate the AAR and CAAR. In order to use this software, three sets of data are required. The first is called the Event list. The event list consists of three columns. The first column contains the IDs of the companies as extracted from the Bloomberg terminal. These are usually represented by three letters word. E.g., Tiger Brand share returns was represented by TBS. The second column contains the firm names. The third or last column contain the event dates. The event dates in this research are the announcement dates. The second set of data used is called the dataset. This contains two columns. The first column contains the timeline i.e., the daily share returns as extracted from Bloomberg terminal. The second contains the share returns. The third sets of data is called the return model. The APT two-factor return model was used. These three sets of data were then imported into the software to generate results. These returns are analyzed in details in chapter four.

3.3 Research Design

The event study methodology was applied. An event study is carried out to determine what impact a particular event has on a company's share price. The said event can be the announcement of a new product, entering a new market, a breakthrough in research and development, mergers and acquisitions or the resignation of a CEO. For this study,

the said events will be spin-offs and sell-offs on the JSE between 2006 and 2016. It examined the abnormal returns to shareholders and whether or not additional value was added to shareholders' wealth. As indicated earlier, the event study has one major flaw, i.e. susceptibility to confounding events. There is a high possibility of having two or more significant events occurring at the same.

In order to determine whether or not the divestitures announcement created any abnormal returns, we have to first calculate the normal returns expected without this announcement. In this study, daily stock returns were used, and these stock prices were collected for two years before the announcement period and two years after.

The study then analyzed if stock prices show abnormal returns during the event window. Abnormal returns are returns in excess of expected returns after adjusting for risk. The event is the announcement of divestitures by South African companies listed on the JSE. The event window period for this study is 61 days (-30, 0, +30). Day 0 will be used to denote the announcement day.

The daily abnormal returns can be calculated using an equilibrium asset pricing model such as the Arbitrage Pricing Theory (APT) and the Capital Asset Pricing Model (CAPM), the market model, net-of-market return and matched firm portfolio (Fama 1969).

In order to calculate the abnormal returns after the divestiture announcement, this research will use the two-factor Asset Pricing (APT) model suggested by Van Rensburg (2001). Besides, "this model was chosen over the three factors of Fama and French model because JSE does not have the size capabilities to construct effective ten stock benchmarks for the Small minus Big size portfolio, and the high minus low book-to-market Value portfolio for each subsector" (Emily et al., 2014, p.570). In order, to get the abnormal returns, actual returns will be deducted from the expected or normal returns. Finally, the average abnormal returns over the number of days in the event window will be added together to calculate the cumulative average abnormal return (CAAR).

The cumulative average abnormal return (CAAR) and the average abnormal return (AAR) are both useful in calculating the abnormal returns in an event study. The

researcher examined the results for AAR and CAAR for each company and used the t-test to determine the significance of the data that was analysed.

3.4 Test Statistics under the Null Hypothesis

T-tests will be used to measure the statistical significance of the abnormal returns, as explained above. The mean or average of one or two normally distributed populations of a hypothesis is called the t-test. The t-test together with the CAAR and p-values was computed using the newly acquired event study metrics software by the Department of Finance and Tax, University of Cape Town.

3.5 Formulation of Hypothesis

Hypothesis 1:

The null hypothesis states that the announcement of spin-offs and sell-offs transactions do not yield abnormal returns in the share price of the parent companies.

Cumulative average abnormal returns measure the value, therefore implying that sell-offs and spin-offs announcements yield abnormal returns (CAAR = 0).

The alternative hypothesis states that the announcement of spin-offs and sell-offs yield abnormal returns in share prices of the parent companies.

Hypothesis 2:

The null hypothesis states that for the pre-sell offs and spin-offs announcement period, the cumulative average abnormal return for parent companies before announcement should not be higher than the cumulative average abnormal return for parent companies post announcement.

The alternative hypothesis states that for the pre-sell-offs and spin-offs transactions' announcement period, the cumulative average abnormal return for parent companies before announcement should be higher than the cumulative average abnormal returns for parent companies after the announcement.

Hypothesis 3:

The null hypothesis states that the cumulative average abnormal return of parent companies is not higher for spin-offs than sell-offs transactions.

The alternative hypothesis states that the cumulative average abnormal return of parent companies is higher for spin-offs than sell-offs.

3.6 Summary

This chapter described the methodological approach that was applied in analyzing the effects of Spin-offs and Sell-offs transactions announcements to the shareholders of the parent companies. The first section of the chapter outlined the data and data sources, followed by an indication of the processes or steps followed when performing a short-term event study. Thereafter a thorough explanation of the research design was given. To determine the effect of the announcements, abnormal returns were calculated and analysed.

CHAPTER 4: PRESENTATION OF RESULTS

4.0 Introduction

This chapter presents the results of the findings of this study. These were obtained using the methodology explained in Chapter 3. A detailed explanation will be discussed in this chapter. An event study approach was used. The abnormal returns (AR), average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) results are presented. In Chapter 2, it was indicated that the study only considered spin-off and sell-off types of divestiture and their impact on the share performance of the parent company. As such, the findings of this study will be divided into two, in line with the research objective. The results from spin-offs will be discussed first, before the sell-off results.

This section addresses the first null hypothesis which states that the announcements of divestitures do not affect the share prices of the parent companies, therefore $CAAR = 0$ around announcement dates. Section 4.2 summarizes data for the spin-off results while section 4.3 indicates the result for AAR for spin-off transactions. Section 4.4 addresses the CAAR for spin-off transactions. Section 4.5 introduces the result of sell-off transactions. Section 4.6 presents the result for AAR for sell-off transactions. Section

4.7 addresses the CAAR for sell-off transactions. It also addresses the second hypothesis which states that the difference between pre-announcement CAAR is greater than post-announcement CAAR. It is worth noting that different event windows of; + 3 days, + 5 days, +10 days, + 15 days, +20 days, +25 days and +30 days were tested. Section 4.8 presents test results for the null hypothesis stating that the cumulative average abnormal returns for spin-off transactions effects are higher than in sell-off transactions.

4.1 Analysis of Spin-Off Results

A total of 36 companies were analyzed for the spin-off transactions effect. The daily share returns were extracted from Bloomberg terminal for the ten year period between 2006 and 2016. In order to have better representation, all companies within this period were considered, with the exception of companies whose share returns were not available. The event study metrics software was used to generate the results as explained in chapter 3. The event list, dataset and return model were imported into the software to generate the results analysed below.

4.2 Average Abnormal Returns for spin-off announcement

The sample of the study for spin-off consisted of 36 JSE listed companies for deals announced and concluded from 2006 to 2016. Detailed results of the AAR for all the event windows can be found in table 1.

Table. 1, shows the AAR over the event window for the period over 61 days (-30, 0, +30). Day 0 will be the announcement date.

Day 0, which is the day of announcement showed the highest AAR of 1.19%. The AAR for subsequent days, up to the 6th days all showed a negative AAR. From the table, we can see that the pre-event windows for the following days are all negative: day 1, 3, 4, 6, 8, 10, 12, 13, 18, 20, 21, 22, 23, 27, 28 and 29 while day 2, 5, 7, 9, 11, 14, 15, 16, 17, 19, 24, 25, 26, and 30 showed a positive AAR. For the post-event period, day 1, 2, 3, 4, 5, 6, 8, 9, 15, 16, 22, 25, 26, 27, 28 and 30 produced a negative AAR while the following post-event days produced a positive AAR: day 7, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 23, 24 and 29.

The pre-event window of 30 days produced a negative AAR of -0.28% with an average of - 0.0093% while the post-event window of 30 days produced a marginal positive of 0.09% with an average of 0.003%.

Table 1: Sample Daily Statistics of AAR for Spin-off announcements.

Full Sample AAR	
Mean	0.2654%
Medium	0.0309%
Standard Deviation	0.09613%
Minimum	-0.7938%
Maximum	1.1985%
T-test	2.7605
p-value	0.0038

The mean, medium and standard deviation were calculated over the event window. The mean AAR is 0.2654%, maximum AAR 1.1985% and the minimum AAR -0.7938%. The sample mean is close to zero. This implies that most companies have average abnormal returns marginally above zero. The standard deviation is 0.09613%.

With a test statistic of 2.7605 and p-value of 0.0038, the null hypothesis will be rejected at a 5% level of significance since the p-value of 0.0038 is less than 0.05. It therefore means that spin-off transactions generate abnormal returns.

4.3 Cumulative Average Abnormal Returns for spin-off announcement

Cumulative average abnormal returns were analysed and computed using the AARs and the results are presented in table 3 and shown graphically in figure 1 below.

The post-announcement CAAR showed a positive impact for most of the days except for day 9,10,11,16 and 17 which are all negative. Specifically, day 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30 all produced a positive post-announcement CAAR. Over the 30 days window period, the CAAR was 22.24% with an average of 0.74%. This result clearly shows that spin-off transactions have a positive impact on the share price of the parent company.

The pre-announcement CAAR showed a negative impact for most of the days except for day 13, 14, 15 and 30 which all produced positive pre-announcement CAAR. Specifically, day 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28 and 29 produced negative pre-announcement CAAR. Over the 30 days window period, the CAAR was -7.11% with an average of -0.24%.

The difference between pre and post-announcement cumulative average abnormal returns is shown below:

Pre-CAAR = -7.11%

Post-CAAR = 22.24%

Difference = 15.13%

The results show that there is a difference of 15.13%, which is greater than zero. With a difference of 15.13%, the result is significant enough to draw a conclusion from the hypothesis. The null hypothesis is rejected as the difference between the pre-announcement CAAR, and post-announcement CAAR is greater than 0. T-tests were also computed to test the significance of the difference in the means of pre and post-announcement CAARs.

This result contradicts Emily et al., (2014) findings that spin-off transactions destroy shareholders' wealth. In conclusion, spin-off transactions destroyed shareholders' wealth both in the long term but adding value in the short term.

Table 2: Daily T-test results for the parent firms for Sell-off transactions.

Date	CAAR	t-stat	P - values	Is the CAAR statistically Significant?
-30+30	0.0125	0.4908	0.6236	No
-25+25	0.0248	1.0674	0.2858	No
-20+20	0.0199	0.9534	0.3404	No
-15+15	0.0052	0.2867	0.7744	No
-10+10	- 0.0020	-0.1306	0.8961	No
-5+5	0.0039	0.3603	0.7186	No
-3+3	0.0077	0.8883	0.3744	No

*at 5% significance level

Note: Table 2 shows the results for the CAAR, t-tests and the p-values over different event windows. The p-values shows the significance of the t-test. Significance tests were done at 95% confidence level.

The table shows the p-values calculated for different event windows. The p-values indicates the level of significance at which the null hypothesis will be rejected. Higher the p-values increase the probability of accepting the null hypothesis. The t-test were run at 5% significance level. The CAAR is not significant at any of the event windows.

Therefore, the null hypothesis which states that spin-off transactions do not produce positive CAAR was rejected.

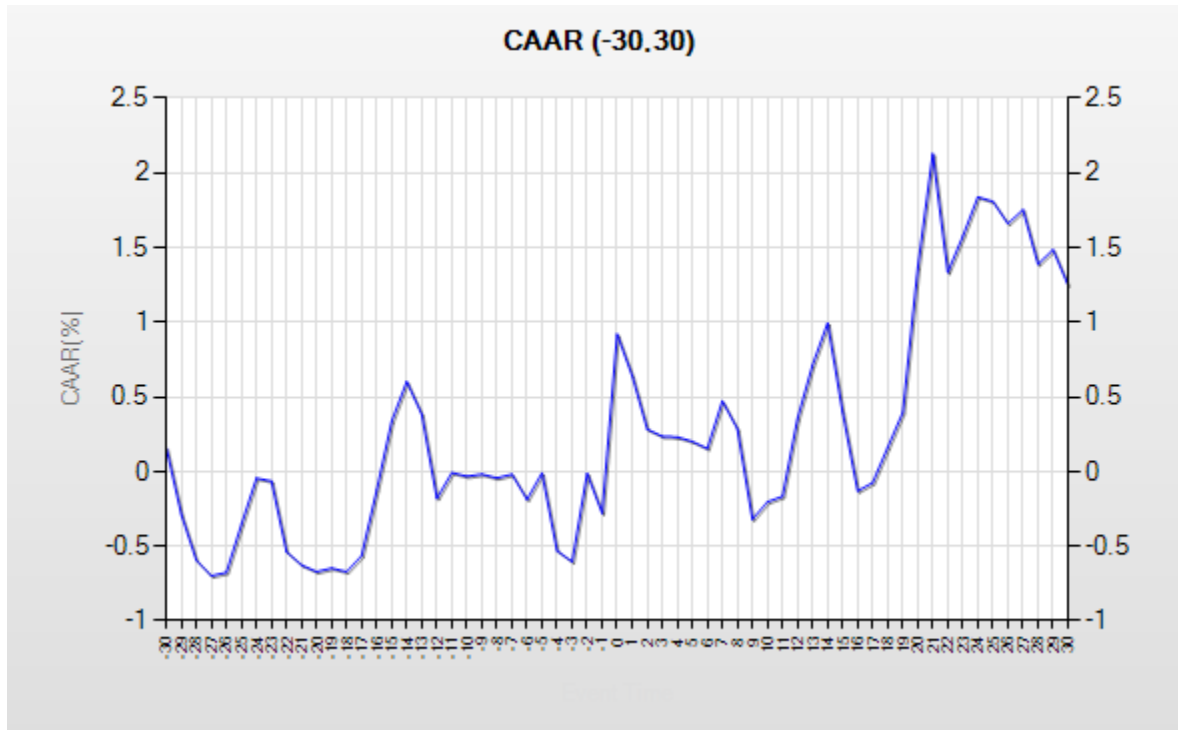


Figure 1: Cumulative Average Abnormal Returns for parent companies listed on the Johannesburg Stock Exchange (JSE), for Spin-off transactions for a period of 2006 - 2016 for an event window period (-30, 30) days.

4.4 Analysis of Sell-Off Results

A total of 41 companies were analyzed for the spin-off effect. The daily share returns were extracted from Bloomberg terminal between 2006 and 2016. In order to have better representation, all companies within this period were considered except the companies whose share returns are not available. The event study metrics software was used to generate the results. The event list, dataset and return model were imported into the software to generate the results analysed below.

The AAR result was presented in Section 4.6. Section 4.7 addresses the second null hypothesis which states that the difference between pre-announcement CAAR is greater than post-announcement for sell-off announcement; therefore $CAAR = 0$ around

announcement dates. Section 4.8 then addresses the last hypothesis which states that the difference between pre-announcement CAAR is greater than post-announcement CAAR for sell-off announcement. Different event windows of; + 3 days, + 5 days, +10 days, + 15 days, +20 days, +25 days and +30 days were tested.

4.5 Average Abnormal Returns for sell-off announcements

The sample of the study for sell-off consisted of 41 JSE listed companies and it focused on deals announced and concluded from 2006 to 2016. Detailed results of the AAR for all the event windows can be found in table 3.

Table. 3, shows the AAR over the event window for the period over 61 days (-30, 0, +30). Day 0 will be the announcement date.

Day 0, which is the day of announcement showed the highest AAR of 0.83%. The AAR for subsequent days, up to the 7th days all showed a negative AAR, except for day 1. Specifically for the post-event window, day 1, 8, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 26 and 29 produced a positive AAR while day 2, 3, 4, 5, 6, 7, 9, 10, 11, 15, 23, 24, 25, 27, 28 and 30 all produced a negative AAR. For the pre-event window AAR, day 1, 2, 4, 5, 6, 7, 9, 11, 13, 14, 16, 20, 21, 22 and 26 produced a positive AAR while day 3, 8, 10, 12, 15, 17, 18, 19, 23, 24, 25, 27, 28, 29 and 30 all produced a negative AAR. The total AAR for the pre-event window of 30 days was a marginal positive of 0.12% with an average of 0.004%. While the pre-event window produced a positive AAR, the post-event window produced a negative of -0.02%

Table 3: Sample Daily Statistics of AAR for Sell-off announcements.

Full Sample AAR	
Mean	-0.1612%
Medium	0.0581%
Standard Deviation	0.0812%
Minimum	-0.9557%
Maximum	1.0662%
T-test	-1.9847
p-value	0.0259

The mean, medium and standard deviation were calculated over the event window. The mean AAR is -0.1612%, maximum AAR 1.0662%, and the minimum AAR -0.9557%. The mean is negative and close to zero. This implies that most companies have average abnormal returns close to zero. The standard deviation is 0.0812%.

With a test statistic of -1.9847 and p-value of 0.0259, we accept the null hypothesis at a 5% level of significance since the p-value of 0.0259 is greater than 0.05. It therefore means that sell-off transactions do not generate abnormal returns.

4.6 Cumulative Average Abnormal Returns for sell-off announcements.

In this section, the CAARs results will be analyzed together with the AARs over the event window period. Cumulative average abnormal returns were computed using the AARs and these results are presented in table 4 and graphically as shown in figure 2 below.

The post-announcement CAAR showed a negative impact on most of the days except for day 1 – 5 and from day 21 – 24. Over the 30 days window period, the CAAR showed a negative of -10.11%, with an average of -0.33%. The result clearly shows that sell-offs have a negative impact on the share price of the parent company. This result supports Emily et al., (2014) findings that sell-off transactions destroy shareholders' wealth. In conclusion, sell-off transactions destroyed shareholders' wealth both in the short term and long term.

The pre-announcement CAAR showed a positive impact on most of the days. Over the 30 days window period, the CAAR was -0.67% with an average of -0.02%.

Below is a calculation of the difference between pre and post announcement cumulative average abnormal returns:

Pre-CAAR = -0.67

Post-CAAR = -10.11

Difference = -10.78%

The results show that there is a difference of -10.78%, which is less than zero. The null hypothesis is therefore accepted.

Table 4: Daily T-test results for the parent firms for Sell-off transactions.

Date	CAAR	t-stat	P - value	Is the CAAR statistically significant?
-30+30	-0.0124	-0.4356	0.6631	No
-25+25	-0.0151	-0.5819	0.5607	No
-20+20	-0.0041	-0.1751	0.8610	No
-15+15	-0.0180	-0.8924	0.3722	No
-10+10	-0.0061	-0.3695	0.7118	No
-5+5	0.0046	0.3827	0.7019	No
-3+3	0.0083	0.8616	0.3889	No

*at 5% significance level

Note: Table 4 shows the results for the CAAR, t-tests and the p-values over different event windows. The p-values show the significance of the t-test. Significance tests were done at 95% confidence level.

The table shows the p-values calculated for different event windows. The p-values indicate the level of significance at which the null hypothesis will be rejected. Higher p-values increase the probability of accepting the null hypothesis. The t-tests were run at 5% significance level. The CAAR is not significant at any of the event windows.

Therefore, the null hypothesis was accepted since the difference between pre and post-announcement returns is less than zero

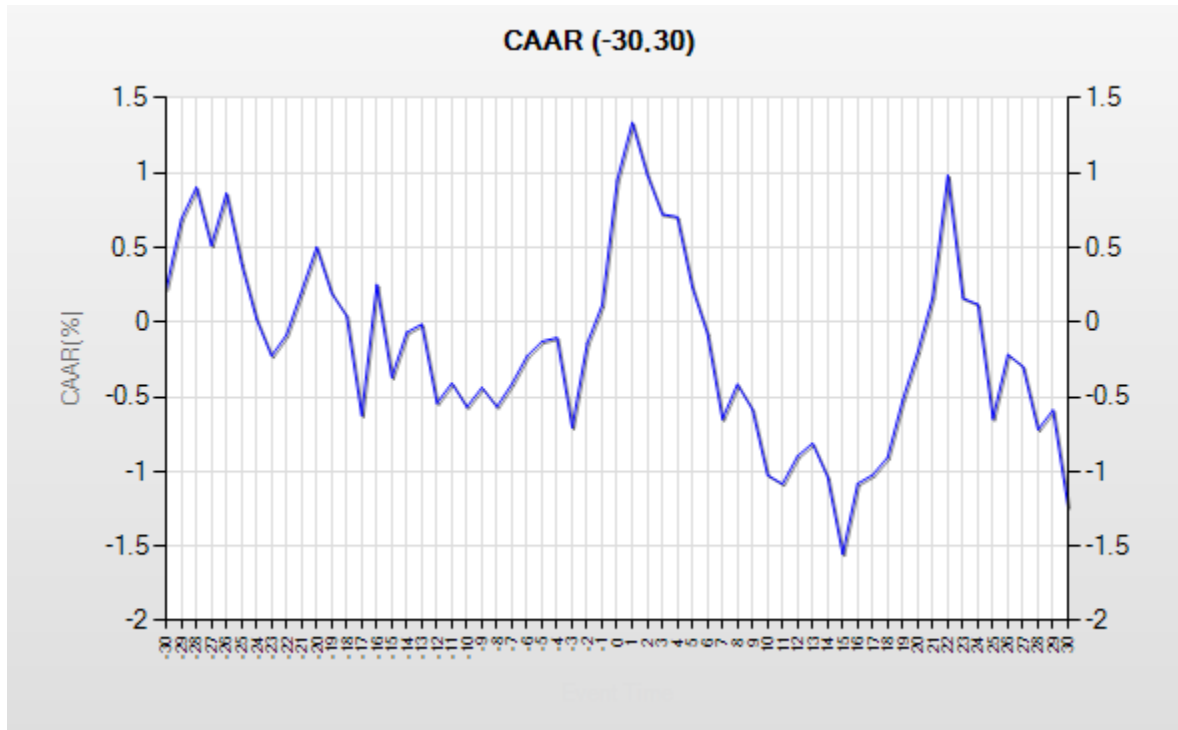


Figure 2: Cumulative Average Abnormal Returns for parent companies listed on the Johannesburg Stock Exchange (JSE), for Sell-off transactions for the period 2006 - 2016 for an event window period (-30, 30) days.

4.7 Post-announcement spin-off CAARs vs post-announcement sell-off CAARs

The last hypothesis will compare the post-announcement CAARs for both spin-off and sell-off transactions. The null hypothesis states that the post-announcement CAARs for the spin-off transactions is higher than the post-announcement CAARs for sell-off.

In section 4.4, the average post-announcement CAARs for spin-off between 2006 and 2016 for the 30 days event window was 0.74%, with a total CAAR of 22.24%. In section 4.7, the average post-announcement CAARs for sell-off between 2006 and 2016 for the 30 days event window was 0.033%, with a total CAAR of -10.11%.

Divestiture Type	Number of Obs.	Mean	Standard Deviation	Minimum	Median	Maximum
Sell- Offs	61	-0.1612%	0.6343%	-1.5514%	-0.1983%	1.3387%

Spin-Offs	61	0.2654%	0.7508%	-0.6974%	-0.006995%	2.1287%
Critical Value 2.359						
T – Stat 3.3895						

The null hypothesis is rejected at the 5% level of significance. The null hypothesis was rejected as the T-stat of 3.3895 was higher than the critical value of 2.358. The P–value was found to be significant. In conclusion, there appears to be significant evidence that the CAAR for spin-offs transactions seems to be higher than the CAAR of sell-offs transactions.

This result contradicts the result of Emily, et al., (2014) findings. Their findings concluded that sell-off transactions produced a higher CAAR than spin-off transactions for long term impact. The same cannot be said for the short term impact considered in this research. For short term impact, spin-off transactions produced a higher CAAR than sell-off transactions.

4.8 Other Return Models

This research has used the 2-factor APT return model that is generally accepted and suited to explain the peculiarity of the South Africa market returns. In addition to this model, other models such the Constant-Mean Return Model and Matched Firms are available on the event study metrics software at the Department of Finance and Tax, University of Cape Town. These other models will give room for some comparison to see how they perform.

4.9 Constant Mean Return Model

The Constant Mean Return Model can also be used to perform event study return model. The basic assumption here is that, expected asset returns can differ between companies, but they are the same or constant over time. This method is generally believed to be simple to use in comparison to other models. According to Brown and Warner (1980, 1985), this returns model can produce results that are close to those of a more complex model.

According to Campbell and MacKinley (1998), the basic assumption of this model is that, an asset's return is independent and normally distributed over time. "The model allows for the returns on different assets to be contemporaneously correlated but the correlations are constant over time" (Campbell et al., 1998, p.1).

The result of the Constant Mean Return model for Spin-off transactions is analysed below. The sample of the study for spin-off consisted of 36 companies listed on JSE, for deals announced and concluded from 2006 to 2016.

Table 6: Daily T-test results for the parent firms for Sell-off transactions.

Date	CAAR	T-Stat	P-Values	Is the CAAR Statistically Significant?
-30+30	-0.0254	-1.0132	0.3110	No
-25+25	-0.0068	-0.2977	0.7659	No
-20+20	-0.0056	-0.2707	0.7867	No
-15+15	-0.0140	-0.7865	0.4316	No
-10+10	-0.0150	-1.0198	0.3078	No
-5+5	-0.0029	-0.2759	0.7827	No
-3+3	0.0033	0.3906	0.6389	No
-0+0	0.0144	3.5432	0.0004	Yes

*at 5% significance level

Note: Table 6 presents the results for the paired t-tests for CAARS for 30 days, 25 days, 20 days, 15 days, 10 days, 5 days, 3 days and day 0 which present the announcement date. The CAAR, The t-stats and p-values are presented. Significance tests were done at 95% confidence level.

The CAAR for an event window of 30 days was -0.0254; 25 days was -0.0068; 20 days was -0.0056; 15 days was -0.014; 10 days was -0.015; 5 days was -0.0029. All showed a negative CAAR except for the event window of 3 days and the event day which showed a positive of 0.0033 and 0.0114 respectively. The result is also not statistically significant with high p-values for the different event windows analysed, except for the announcement date which showed a p-value of 0.0004 which is statistically significant.

This research was conducted for both Spin-off transactions and Sell-off transactions. The result of the Constant Mean Return model for Sell-off transactions is analysed

below. The sample of the study for spin-off consisted of 41 companies listed on JSE and was of deals announced and concluded from 2006 to 2016.

Table 7: Daily T-test results for the parent firms for Sell-off transactions.

Date	CAAR	T-Stat	P-Values	Is the CAAR Statistically Significant?
-30+30	-0.0433	-1.565	0.1176	No
-25+25	-0.0411	-1.6243	0.1043	No
-20+20	-0.0254	-1.117	0.264	No
-15+15	-0.0341	-1.7286	0.0839	No
-10+10	-0.0172	-1.0608	0.2888	No
-5+5	-0.0014	-0.1154	0.9081	No
-3+3	0.0044	0.4693	0.6389	No
-0+0	0.0076	2.1469	0.0318	No

*at 5% significance level

Note: Table 7 presents the results for the paired t-tests for CAARS for 30 days, 25 days, 20 days, 15 days, 10 days, 5 days, 3 days and day 0 which present the announcement date. The CAAR, The t-stats and p-values are presented. Significance tests were done at 95% confidence level.

The CAAR for an event window of 30 days was -0.0433; 25 days was -0.0411; 20 days was -0.0254; 15 days was -0.0341; 10 days was -0.0172; 5 days was -0.0014. All showed a negative CAAR except for the event window of 3 days and the event day which showed a positive of 0.0044 and 0.0076 respectively. The result is also not statistically significant with high p-values for the different event window analysed.

4.10 Matched Firms (Portfolios) Model

Lyon, Barber, and Tsai (1999) proposed the use of matched firms (Portfolio) model. They proposed the use of a portfolio matched by size and market-to-book ratio as a measure of normal returns for each event. In order to use the matched firms (portfolio) approach, a reference firm (portfolio) to each event must be specified. In place of the size and market-to-book ratio which they used in their study, the JSE Resources 20 index ("Resi") and the JSE financial and industrial 30 index ("Findi") were used. The shares of the parent companies have been categorized as either FINDI or RESI as

extracted from Bloomberg. Two additional columns were created in both the dataset and event list. The daily FINDI and RESI daily returns were extracted from Bloomberg for the study period. The returns were then imported into the software to generate the result below. These results will be analysed in two parts: the Spin-off transactions and the Sell-off transactions.

Table 8: Daily T-test results for the parent firms for Spin-off transactions.

Date	CAAR	T-Stat	P-Values	Is the CAAR Statistically Significant?
-30+30	-0.0098	-0.7470	0.4551	No
-25+25	-0.0020	0.0720	0.9426	No
-20+20	0.0057	0.3336	0.7387	No
-15+15	-0.0004	-0.0637	0.9492	No
-10+10	-0.0119	-0.9876	0.3233	No
-5+5	-0.0019	-0.1415	0.8875	No
-3+3	0.0057	0.7259	0.4679	No
-0+0	0.0089	1.5073	0.1317	No

*at 5% significance level

Note: Table 8 presents the results for the paired t-tests for CAARS for 30 days, 25 days, 20 days, 15 days, 10 days, 5 days, 3 days and day 0 which present the announcement date. The CAAR, The t-stats and p-values are presented. Significance tests were done at 95% confidence level.

The table shows the p-values calculated for different event windows. The p-values indicate the level of significance at which the null hypothesis will be rejected. Higher p-values increase the probability of accepting the null hypothesis. The t-tests were run at 5% significance level. The CAAR is not significant at any of the event windows.

The CAAR for an event window of 30 days was -0.0098; 25 days was 0.0020; 20 days was 0.0057; 15 days was -0.0004; 10 days was -0.0119; 5 days was -0.0019; 3 days was 0.0057. The announcement date produced a positive CAAR of 0.0089. All showed a negative CAAR except for the event window of 25 days, 20 days, 3 days and the event day which showed a positive of 0.0020, 0.0057, 0.0057 and 0.0089 respectively. The result is also not statistically significant with high p-values for the different event windows analysed.

Table 9: Daily T-test results for the parent firms for Sell-off transactions.

Date	CAAR	T-Stat	P-Values	Is the CAAR Statistically Significant?
-30+30	-0.0258	-1.0073	0.3138	No
-25+25	-0.0268	-1.1510	0.2497	No
-20+20	0.0189	-0.9554	0.3394	No
-15+15	-0.0294	-1.7252	0.0845	No
-10+10	-0.0136	-0.8765	0.3807	No
-5+5	0.0047	0.4267	0.6696	No
-3+3	0.0069	0.8850	0.3762	No
-0+0	0.0059	1.4058	0.1598	No

*at 5% significance level

Note: Table 9 presents the results for the paired t-tests for CAARS for 30 days, 25 days, 20 days, 15 days, 10 days, 5 days, 3 days and day 0 which present the announcement date. The CAAR, The t-stats and p-values are presented. Significance tests were done at 95% confidence level.

The table below shows the p-values calculated for different event windows. The p-values indicate the level of significance at which the null hypothesis will be rejected. Higher p-values increase the probability of accepting the null hypothesis. The t-tests were run at 5% significance level. The CAAR is not significant at any of the event windows.

The CAAR for event window of 30 days was -0.0258; 25 days was -0.0268; 20 days was -0.0189; 15 days was -0.0294; 10 days was -0.0136; 5 days was 0.0047; 3 days was 0.0069. The announcement date produced a positive CAAR of 0.0059. All showed a negative CAAR except for the event window of 5 days, 3 days and the event day which showed a positive of 0.0047, 0.0069, and 0.0059 respectively. The result is also not statistically significant with high p-values for the different event windows which were analysed.

4.11 Chapter Summary

The chapter examined the impact of spin-off and sell-off transactions on share performance of JSE listed parent companies between 2006 and 2016. For spin-offs, it was found that parent companies yield positive abnormal returns while for sell-offs, parent companies yield negative abnormal returns.

The second hypothesis for spin-off parent's company was rejected which implies that the pre-announcement CAAR is not higher than the post-announcement CAAR. However, for sell-off parent's company, this hypothesis was accepted. It therefore means that the pre-announcement CAAR is higher than the post-announcement CAAR.

The last hypothesis confirms that the spin-off produces a better result for parent companies when compared to sell-offs i.e., spin-off transactions are a better form of divestiture in South Africa and should therefore be embraced.

The result of this research when compared to Emily et al., (2014) can be summarized as follows: Sell-off transactions and Spin-off transactions destroy shareholders' wealth in the long term. Spin-off transactions add values in the short term. The findings of this study also show that spin-off transactions are a better way to divest in South Africa, especially in the short term. Findings by Emily et al., (2014) contradict this result; their results indicated that sell-off transactions are a better way to divest in South Africa because they produced a higher CAAR when compared to spin-off transactions.

Lastly, the Constant Mean Adjusted Return and Matched Firm (Portfolios) model was adopted to analyse the data, but the intention here was not for any comparison. The APT two-factor model has been widely accepted as the best return model that explains the peculiarity of the South African market.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a summary of the findings in Chapter 4 and suggested recommendations for further study.

5.1 Conclusion

The study sought to establish if divestiture has any impact on the share performance of parent companies, with a focus on spin-off transactions and sell-off transactions. The study looked at 36 JSE companies listed for spin-off companies and 41 companies for sell-off. The divestitures announcements were made between 2006 and 2016. A 61-day event window was used to conduct the event study and determine if there was any real

or positive impact on the share performance of the parent company. The findings show that the announcements of divestitures produced different results for spin-off and sell-off. Spin-off transactions have an impact on the share performance of the parent companies. The cumulative average abnormal returns for the parent companies were significantly different from zero over the event window used. This implies that spin-off transactions do create positive abnormal returns. The opposite is true for sell-off parent companies i.e., sell-off transactions do not create positive abnormal returns.

The pre-announcement and post-announcement cumulative average abnormal returns were also compared for both spin-off and sell-off parent companies. The results show that there is a positive difference, which is greater than 0 for the spin-off transactions, and as such the null hypothesis was rejected. However, for sell-off parent companies, the difference is less than 0 and as such the null hypothesis was accepted.

Lastly, a comparison was also made between the spin-off and sell-off transactions, i.e., which one produces a higher return for the parent companies. This was done to investigate if there are any significant positive differences between the two. The results show that spin-off transactions produce better returns than sell-off transactions in South Africa.

5.2 Recommendations

Event study research is generally conducted using different returns model. The APT two-factor model has been proven to be the most suitable for South Africa according to Van Rensburg (2001). Other markets, whether emerging or developed, use whatever return model that has been proven to be appropriate for the market. Future studies can be conducted to use different return models on the same set of data to see if the result generated will be significantly different. The researcher recommends that studies should be carried out to examine long-term effects. The results from such studies can then be compared with the ones on short-term effects to establish if there are any significant differences. In addition, the appropriate return model that fits a particular market or stock exchange can also be investigated.

Another topic for further research will be the impact of divestiture announcements on the buyers in South Africa. Bhana (2004), Emily et al. (2014) and this research has succeeded in only investigating the effect on divestiture on the sellers while ignoring the impact on the buyers.

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Appendix

Table 1: AARs of total sample over the event window period for Spin-off announcements

Pre Event Windows	AAR	%	Post Event Windows	AAR	%
-30	0.0016	0.16	30	-0.0024	-0.24
-29	-0.0045	-0.45	29	0.0010	0.10
-28	-0.0031	-0.31	28	-0.0037	-0.37
-27	-0.0010	-0.10	27	-0.0009	-0.09
-26	0.0002	0.02	26	-0.0015	-0.15

-25	0.0032	0.32	25	-0.0003	-0.03
-24	0.0031	0.31	24	0.0026	0.26
-23	-0.0002	-0.02	23	0.0024	0.24
-22	-0.0047	-0.47	22	-0.0079	-0.79
-21	-0.0009	-0.09	21	0.0076	0.76
-20	-0.0004	-0.04	20	0.0097	0.97
-19	0.0002	0.02	19	0.0023	0.23
-18	-0.0002	-0.02	18	0.0024	0.24
-17	0.0011	0.11	17	0.0006	0.06
-16	0.0044	0.44	16	-0.0053	-0.53
-15	0.0046	0.46	15	-0.0060	-0.60
-14	0.0026	0.26	14	0.0028	0.28
-13	-0.0022	-0.22	13	0.0036	0.36
-12	-0.0056	-0.56	12	0.0052	0.52
-11	0.0017	0.17	11	0.0004	0.04
-10	-0.0002	-0.02	10	0.0012	0.12
-9	0.0001	0.01	9	-0.0061	-0.61
-8	-0.0002	-0.02	8	-0.0019	-0.19
-7	0.0002	0.02	7	0.0032	0.32
-6	-0.0017	-0.17	6	-0.0005	-0.05
-5	0.0018	0.18	5	-0.0003	-0.03
-4	-0.0052	-0.52	4	-0.0005	-0.05
-3	-0.0007	-0.07	3	-0.0005	-0.05
-2	0.0059	0.59	2	-0.0036	-0.36
-1	-0.0027	-0.27	1	-0.0028	-0.28
0	0.011985	1.19	0	0.011985	1.19
	Total	-0.28		Total	0.09
	Average	-0.0093%		Average	0.003%

Table 2: CAARs of total sample over the event window period for Spin-off announcements

Pre-event Windows	CAAR	%	Post-event Windows	CAAR	%
-30	0.0016	0.16	30	0.0125	1.25
-29	-0.0029	-0.29	29	0.0149	1.49
-28	-0.0059	-0.59	28	0.0139	1.39
-27	-0.0070	-0.70	27	0.0175	1.75
-26	-0.0068	-0.68	26	0.0166	1.66
-25	-0.0035	-0.35	25	0.0181	1.81
-24	-0.0004	-0.04	24	0.0184	1.84
-23	-0.0006	-0.06	23	0.0158	1.58
-22	-0.0054	-0.54	22	0.0133	1.33
-21	-0.0063	-0.63	21	0.0213	2.13
-20	-0.0067	-0.67	20	0.0136	1.36
-19	-0.0065	-0.65	19	0.0040	0.40
-18	-0.0067	-0.67	18	0.0016	0.16
-17	-0.0056	-0.56	17	-0.0007	-0.07
-16	-0.0012	-0.12	16	-0.0013	-0.13
-15	0.0034	0.34	15	0.0040	0.40
-14	0.0060	0.60	14	0.0100	1.00
-13	0.0038	0.38	13	0.0071	0.71
-12	-0.0018	-0.18	12	0.0036	0.36
-11	-0.0007	-0.07	11	-0.0017	-0.17
-10	-0.0003	-0.03	10	-0.0020	-0.20
-9	-0.0002	-0.02	9	-0.0032	-0.32
-8	-0.0004	-0.04	8	0.0029	0.29
-7	-0.0002	-0.02	7	0.0047	0.47
-6	-0.0019	-0.19	6	0.0016	0.16
-5	-0.0008	-0.08	5	0.0020	0.20
-4	-0.0053	-0.53	4	0.0023	0.23
-3	-0.0060	-0.60	3	0.0024	0.24
-2	-0.0001	-0.01	2	0.0028	0.28
-1	-0.0028	-0.28	1	0.0064	0.64
0	0.009206	0.92	0	0.009206	0.92
	Total	-7.11		Total	22.24
	Average	-0.24%		Average	0.74%

Table 3: AARs of total sample over the event window period for Sell-off announcements.

Pre Event Windows	AAR	%	Post Event Windows	AAR	%
-30	0.0022	0.22	30	-0.0064	-0.64
-29	0.0046	0.46	29	0.0031	0.31
-28	0.0021	0.21	28	-0.0042	-0.42
-27	-0.0039	-0.39	27	-0.0008	-0.08
-26	0.0034	0.34	26	0.0043	0.43
-25	-0.0047	0.47	25	-0.0077	-0.77
-24	-0.0037	0.37	24	-0.0004	-0.04
-23	-0.0024	-0.24	23	-0.0082	-0.82
-22	0.0014	0.14	22	0.0081	0.81
-21	0.0029	0.29	21	0.0036	0.36
-20	0.0029	0.29	20	0.0032	0.32
-19	-0.0030	-0.30	19	0.0038	0.38
-18	-0.0015	-0.15	18	0.0011	0.11
-17	-0.0066	-0.66	17	0.0005	0.05
-16	0.0087	0.87	16	0.0047	0.47
-15	-0.0062	-0.62	15	-0.0051	-0.51
-14	0.0029	0.29	14	-0.0022	-0.22
-13	0.0005	0.05	13	0.0008	0.08
-12	-0.005	-0.05	12	0.0018	0.18
-11	0.0013	0.13	11	-0.0005	-0.05
-10	-0.0015	-0.15	10	-0.0044	-0.44
-9	0.0013	0.13	9	-0.0016	-0.16
-8	-0.0013	-0.13	8	0.0023	0.23
-7	0.0015	0.15	7	-0.0057	-0.57
-6	0.0018	0.18	6	-0.0031	-0.31
-5	0.0009	0.09	5	-0.0047	-0.47
-4	0.0002	0.02	4	-0.0001	-0.01
-3	-0.0060	-0.60	3	-0.0026	-0.26

-2	0.0056	0.56	2	-0.0035	-0.35
-1	0.0026	0.26	1	0.0039	0.39
0	0.0083	0.83	0	0.0083	0.83
	Total	0.12		Total	-0.02
	Average	0.004		Average	-0.0006

Table 4: CAARs of total sample over the event window period for Sell-off announcements.

Pre-event Windows	CAAR	%	Post-event Windows	CAAR	%
-30	0.0022	0.22	30	-0.0124	-1.24
-29	0.0069	0.69	29	-0.0059	-0.59
-28	0.0090	0.90	28	-0.0072	-0.72
-27	0.0051	0.51	27	-0.0030	-0.30
-26	0.0086	0.86	26	-0.0022	-0.22
-25	0.0039	0.39	25	-0.0065	-0.65
-24	0.0002	0.02	24	0.0012	0.12
-23	-0.0023	-0.23	23	0.0016	0.16
-22	-0.0008	-0.08	22	0.0098	0.98
-21	0.0021	0.21	21	0.0017	0.17
-20	0.0050	0.50	20	-0.0020	-0.20
-19	0.0019	0.19	19	-0.0052	-0.52
-18	0.0004	0.04	18	-0.0090	-0.90
-17	-0.0062	-0.62	17	-0.0102	-1.02
-16	0.0025	0.25	16	-0.0108	-1.08
-15	-0.0037	-0.37	15	-0.0155	-1.55
-14	-0.0007	-0.07	14	-0.0104	-1.04

-13	-0.0001	-0.01	13	-0.0081	-0.81
-12	-0.0054	-0.54	12	-0.0090	-0.90
-11	-0.0041	-0.41	11	-0.0108	-1.08
-10	-0.0057	-0.57	10	-0.0102	-1.02
-9	-0.0044	-0.44	9	-0.0058	-0.58
-8	-0.0057	-0.57	8	-0.0041	-0.41
-7	-0.0041	-0.41	7	-0.0065	-0.65
-6	-0.0023	-0.23	6	-0.0007	-0.07
-5	-0.0013	-0.13	5	0.0023	0.23
-4	-0.0010	-0.10	4	0.0071	0.71
-3	-0.0070	-0.70	3	0.0072	0.72
-2	-0.0014	-0.14	2	0.0099	0.99
-1	0.0012	0.12	1	0.0134	1.34
0	0.0083	0.83	0	0.083	0.83
	Total	-0.67		Total	-10.11
	Average	-0.02		Average	-0.33