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Growing through acquisitions: the long-term effects of total shareholder return of companies listed on the Johannesburg Stock Exchange

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ABSTRACT

Mergers and acquisitions (M&A) are critical components for companies searching to expand or improve organisational performance. This study examined whether companies listed on the Johannesburg Stock Exchange growing through acquisitions delivered superior total shareholder returns (TSR) compared to organic or mixed growth strategies from 2007 to 2016.

The extensive existing share-price based literature indicate that M&A events are mostly value-destroying in the long-term, while comparative growth strategy studies are mostly ambiguous. The bulk of existing M&A literature is based on developed countries, while no equivalent growth strategy studies were found in South Africa.

This research will aim to provide insight to companies looking to either expand locally or enter the South African market as to which growth strategy to employ.

This study is quantitative of nature that considered secondary data in the form of historical share price, dividend and M&A data of companies listed on the JSE derived from the Thomson Reuters Eikon and McGregor BFA databases. Judgmental sampling was employed to identify a final sample of 104 companies that met the relevant criteria and was further divided into 43 organic, 30 mixed and 31 acquisitive growth companies. Statistical techniques in the form of independent samples t-tests and simple linear regression was implemented to test for differences and prediction.

The research concluded that companies growing through acquisitions do not contribute significant different TSR compared to organic or mixed growth companies. In addition, it was highlighted that dividend yields are a significant predictor of TSR in specific instances.

KEYWORDS

Mergers and acquisitions, total shareholder returns, dividends

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DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

_____ _____2017-11-06____

Tony Snyders Date

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1. CHAPTER 1 – INTRODUCTION TO THE RESEARCH PROBLEM

1.1. Definition of Problem and Purpose

“The deals just kept on coming – as demonstrated by the end of year surge in high-profile acquisitions that lifted the annual total for M&A to $3.6tn [in 2016]. … the M&A boom will carry on, according to advisers. Many companies face poor organic growth prospects, forcing them to consider buying rivals or expanding in new territories“ (Massoudi & Fontanella-Khan, 2016).

Companies pursue two distinct modes of growth strategies, organic or inorganic growth. Organic growth is characterised by increasing output and enhancing sales internally. Inorganic growth, or rather acquisitive growth, is marked by growth from obtaining intellectual property, new products and markets (local and cross-border), rival elimination, tax reduction, or as a way of diversifying.

The increase in global merger and acquisition (M&A) activity has steadily risen since the global financial crisis in 2008 and is set to continue as companies look for new and innovative ways to expand. The most significant announced deals of the 2016 calendar year can be seen in Figure 1 below.

The largest announced deal (to be completed by the end of 2017) was that of USA telecommunications conglomerate, AT&T Inc., acquiring USA cable television company Time Warner for $107.5 billion. The second largest announced deal in 2016 was that of German pharmaceutical and life sciences multinational, Bayer, acquiring USA agrochemical and agricultural biotechnology company Monsanto Company Inc. for $63.9 billion. What is interesting to note from these mega-M&As, is that companies are not afraid to seek for growth opportunities outside of their core business and capabilities. It is apparent that numerous companies do not see potential in growing organically, but instead look for external opportunities to spur growth.

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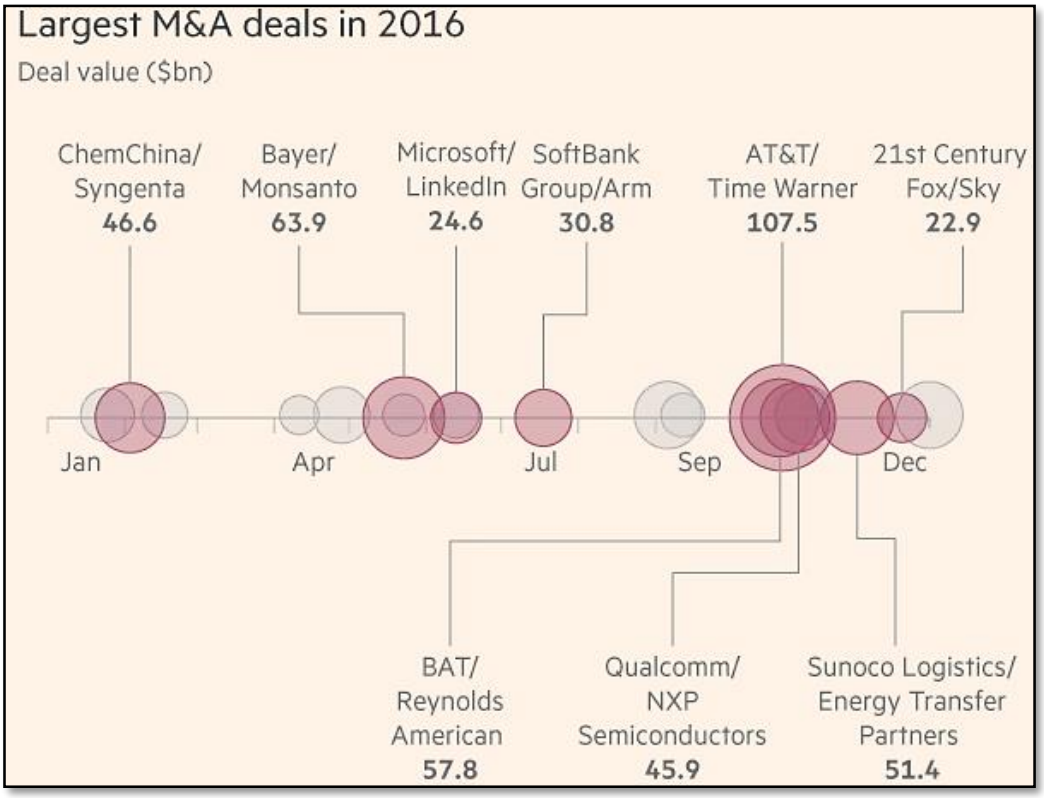

Source: Massoudi and Fontanella-Khan (2016) retrieved from Thomson Reuters Datastream

Figure 1 – Most significant global M&A deals in 2016

In the South African context, the M&A market is predicted to grow by 66% in the next two years considering the number of expected deals (BusinessTech, 2017). South Africa faces several challenges in the form of political instability, investment status downgrade, and regulatory uncertainty but remains an attractive location for inbound and outbound deal flows.

The number of South African M&A deals have been consistent since the global financial crisis with an initial decline in total value followed by a sharp increase in value since 2013 as can be seen in Figure 2. Some of the most notable M&As in recent years in South Africa include the acquisition of Pepkor Holdings by Steinhoff International Holdings in 2015 for $5.7 billion and the mega-acquisition of SAB Miller by the largest brewing company in the world, Anheuser-Busch InBev, for $103 billion in 2016.

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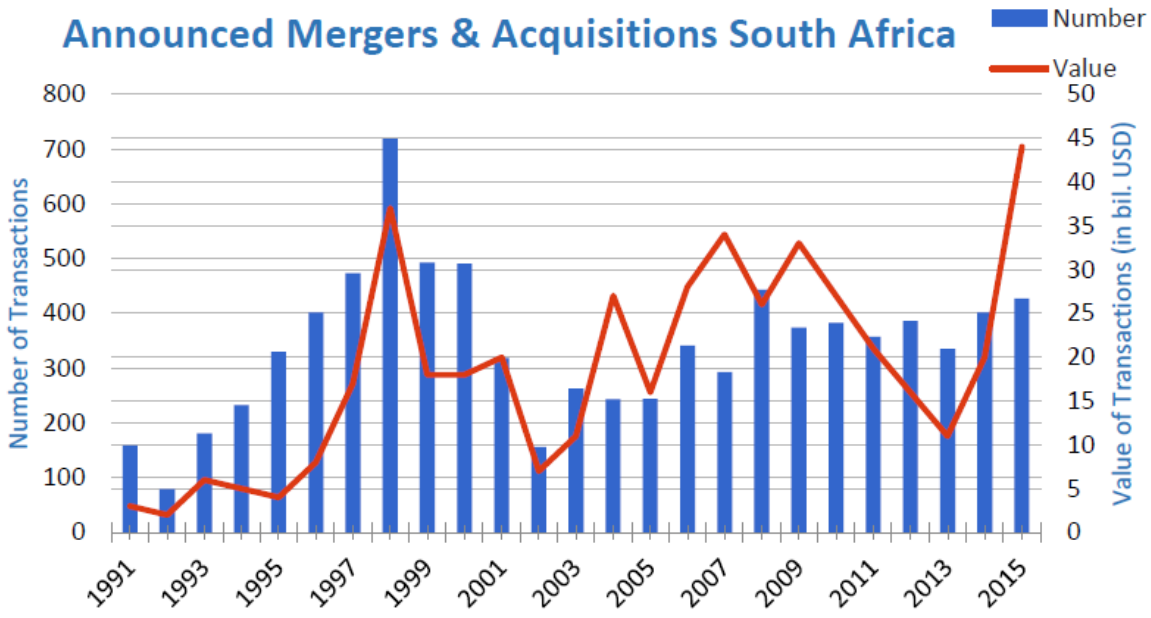

Source: Institute for Mergers, Acquisitions and Alliances (2015)

Figure 2 - Number and value of M&As in South Africa

With M&A activity expected to increase in South Africa, important theoretical and business questions need to be addressed. Does implementing and executing an acquisitive growth strategy instead of an organic growth strategy, lead to superior shareholder returns? How does the historical performance of acquisitive, organic and mixed growth companies listed on the South African Johannesburg Stock Exchange (JSE) compare?

The purpose of this research was threefold:

1. Firstly, the study aimed to determine whether companies listed on the JSE employed acquisitive, organic, or mixed growth strategies.

2. Secondly, the study aimed to determine whether companies growing through acquisitions delivered significant different historical total shareholder returns (TSR) compared to that of organic and mixed growth companies listed on the JSE.

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3. Thirdly, the study aimed to determine whether a relationship exists between accumulated dividends and TSR for each of the three growth strategy groups, and also the strength of the relationship.

The M&A topic has been extensively researched in the past, with a substantial focus on developed countries. As M&A opportunities in developed countries started to decline and as developing countries started playing a progressively more important global role, an increase in M&A research in developing countries have become apparent. The bulk of M&A studies focused primarily on whether a M&A event creates or destroys value in the short or long-term, but few studies have considered whether an acquisitive growth strategy (including few or multiple M&As) delivers superior value to shareholders in the long-term. The development of research on company growth strategies has been notably slow in recent years, and a significant reason for this may be that growth is not a single, but several different phenomena (McKelvie & Wiklund, 2010).

From the limited research on company growth strategies conducted in developed countries, the results of the most successful strategy have mostly been contradictory. Goedhart and Koller (2017) found in their study of 550 United States of American (USA) and European companies that an organic growth strategy delivered superior returns to shareholders. In contradiction; Cools, King, Neenan and Tsusaka (2004) found that an acquisitive growth strategy provided higher TSR in their study of 700 USA companies.

Bauer and Matzler (2014) developed a model of M&A success in their comprehensive study where the following four schools of thought regarding M&A research was identified: financial economic school, strategic management school, organisational behaviour school and process (perspective) school. Further to this, past literature aimed to address pre-merger, post-merger, M&A success or a combination of these research areas. This research will specifically focus on the financial economic school of thought by investigating M&A growth success, including organic and mixed growth, by assessing stock market-based measures.

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The results of this study may deliver valuable business and theoretical insights into the dynamics and outcomes of different growth strategies adopted by publicly traded companies operating in South Africa. The results may benefit existing South African companies, as well as foreign companies targeting South Africa as a market to expand. The results of historical studies have primarily been ambiguous. If this study is in line with previous studies, managers will need to assess M&As on a case to case basis, and if the results show that M&As in South Africa delivers superior TSR, the reasons behind this will be investigated.

1.2. Research Scope

The scope of the research was limited to companies listed on the FTSE/JSE All-Share Index (JALSH) as of 31 December 2016. The JALSH is intended to represent the performance of South African companies, where the performance of the major capital and industry segments of the African market is measured (FTSE Russel, 2017). The JALSH included 163 companies on 31 December 2016, with a market capitalisation ranging from R1.459 trillion for British American Tobacco PLC at the top end to R2.298 billion for Trustco Group Holdings Ltd at the lower end, according to the Thomson Reuters Eikon database. The study is longitudinal and analysed data from the 2007 to 2016 calendar years, thus a 10-year study.

The research will first focus on identifying the growth strategies employed by the JSE-listed companies and placing them into three distinct growth categories: acquisitive, organic, or mixed growth strategies. This phase will be followed by calculating the TSR of each company included in the final sample over the 10-year period. The next stage will involve testing for any significance between the three identified groups. The final two stages will aim to provide more insight and depth of understanding to the topic. This will entail first testing for significant differences between accumulated dividends, which is used in the TSR calculation, between the identified groups and finally recognising whether a relationship exists between TSR and accumulated dividends.

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1.3. Importance of the Topic

The importance of understanding the growth strategies employed in South Africa, a leading developing African country, is immense. For companies looking to expand into South Africa, or for South African companies looking for opportunities abroad, one first need to understand which strategies have been successful in the past.

The study will also aim to add value to the existing business and theoretical knowledge on this subject. Large numbers of studies have historically focussed on M&A events, limited studies on organic growth strategies, but comparative growth strategy studies remain unknown (Moatti, Ren, Anand, & Dussauge, 2015).

The document will outline the existing literature by focusing on growth through acquisitions, reviewing historical post-acquisition performance studies, analysing different company performance measures, and looking at the fundamental differences between developed and developing countries in this context. Following the literature review, the various hypotheses will be stated, and the research methodology will be discussed in depth followed by the results, discussion, and conclusion chapters.

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2. CHAPTER 2 – LITERATURE REVIEW

2.1. Introduction

Every company's primary objective is to grow profitably, but importantly this growth can either be achieved through organic growth or M&A growth (Jayesh, 2012). It is not a surprise that numerous executives only think about company growth in terms of M&As, especially in markets that are matured or in a state of contraction where the opportunities to grow organically may be limited. Business leaders may therefore be attracted to the appeal of taking on headline-making deals, which provides an immediate boost to top-line revenues and in many cases earnings per share as well (Goedhart & Koller, 2017). Goedhart and Koller (2017) further argue that company executives should not disregard the power of growing organically. It is common knowledge that organic growth may take more time and effort to result in a larger company with superior returns, but more value is typically generated through organic growth in the long-term.

The literature review will focus primarily on growth through acquisitions. The M&A value creation topic has been researched widely, but it remains mostly inconclusive whether this strategy creates or destroys shareholder value.

2.2. Growth Through Acquisitions

Academics have long pursued M&As to better predict and explain deal outcomes. It is no surprise that large amounts of empirical research exist today where M&As are analysed from the perspective of various archetypes with the use of multiple methodologies and metrics (Meglio & Risberg, 2010). Meglio and Risberg (2010) further state that despite a vast amount of historical research, and the manifold of methodological and theoretical approaches used, the influence and effects of M&As on companies are still mostly unclear.

The inconclusive results from prior M&A research is largely a result of the diverse range of methodologies used to measure performance, the timeframe of the study investigating either short-term or long-term value creation, and in some cases, both. More recently, M&A performance in developing countries has become an

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attractive topic as the economic relevance of developing markets are increasing dramatically and opportunities in developed markets to grow through M&As are decreasing.

What is apparent, is that the overwhelming majority of global research, investigated for this study, predominantly concentrated on the short-term effects of M&A transactions. Only a limited relative number of studies considered the long-term impact of M&As on company performance.

2.3. Post-acquisition Performance Studies

History has shown that senior executives and various stakeholders have reason to be sceptical in no small degree on the performance of large M&As (Agrawal, Ferrer, & West, 2011). Agrawal et al. (2011) stated that several high profile M&A deals have resulted in significant shareholder value destruction. In the same breath, Agrawal et al. (2011) also found in their study that large M&A deals can also create substantial shareholder returns, even if the value is created in the long-term, instead of the short-term where most M&A research has focused historically.

Krishnakumar and Sethi (2012) investigated M&A performance from the perspective of methods employed to determine post-M&A value. Literature from the past three decades was used to describe the different methodologies to assess M&A performance, identify the most popular methods used, primary limitations and benefits, and analyse whether conclusions of research differ depending on the methodologies used to determine value creation. Krishnakumar and Sethi (2012) took it a step further, and also investigated the differences in methods between emerging and developed markets

The study of Krishnakumar and Sethi (2012) showed that the vast majority of historical research on the performance evaluation of M&As used event study or accounting based methodologies. Less popular methods such as residual income, total shareholder return, economic value added, innovative performance or questionnaire models were also recorded. Considering more recent research,

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balanced scorecard and envelopment analyses models were employed. Krishnakumar and Sethi (2012) also aimed to understand the differences in methodologies used between developed and developing countries and interestingly found that in developing markets and more specifically India, accounting measures were used most frequently to measure M&A performance.

The research conducted by Krishnakumar and Sethi (2012) is in line with the extensive study undertaken by Bruner (2004). Bruner conducted a meta-analysis and established that the most prominent methodologies used in historical studies on the success of M&As were either event studies or accounting studies. Event studies focused on the period surrounding the M&A announcement date where the abnormal shareholder returns were measured. Accounting studies typically take on a longer-term view where numerous financial indicators are scrutinised both before and after the M&A event to determine how financial performance was affected post-M&A.

The question then remains: Why do some researchers employ short-term methods while others make use of long-term methodologies to determine M&A performance? Research done by Andrade, Mitchell and Stafford (2001) argued in favour of short-term M&A performance studies. They demonstrated in their extensive study of M&As in the 80s and 90s that in an efficient market, a company's share price should adjust to the shocks of a M&A announcement almost immediately and therefore the short-term effects provide sufficient information to predict long-term performance. This belief has been the conventional assumption and approach that many researchers have applied in the field of M&As performance.

In contrast to the above argument, recent event studies focusing on abnormal shareholder returns over a longer-term cast uncertainty on the interpretation of the conventional thinking pattern, and recommend that to measure the impact of M&As on company performance adequately, long-term event studies are a more appropriate approach. According to economic theory, markets operate efficiently and therefore adjust rapidly after specific events to reflect the long-term impact. However, a large number of researchers have found inconclusive results with

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regards to short-term studies, and thus the argument remains that over the short-term, the full effect of the market's reaction cannot be captured because the ripple effects are often delayed to a certain extent.

The study of Meglio and Risberg (2010) stated that if the general understanding of the M&A field is to be advanced, researchers need to rethink the way knowledge is produced concerning the data sources and research designs used. They further stated that M&As should not be seen as monolithic, simplistic, or isolated events, as these events can often span for long periods where stakeholders inside as well as outside the relevant companies are affected. Trying to identify the full effects of M&As, independent of other factors, is therefore misleading within a short-term study (Meglio & Risberg, 2010).

In the meta-study conducted by Bruner (2004), he established that three fundamental research approaches could be used to determine the profitability of M&As; these include event studies, accounting studies, and executive surveys and clinical studies that will be discussed in more details below.

2.3.1. Event Studies

The event study methodology was initially introduced to the financial and accounting audience in two breakthrough studies by Ball and Brown (1968) and Fama, Jensen, and Roll (1969). The international domination of the event study methodology can be ascribed to the following factors: event studies give a direct shareholder value measure, are difficult to manipulate, are easily measured for listed firms, and not only show the impact of the company, but also that of rivals (Lubatkin & Shrieves, 1986).

Since the introduction of event studies, it has become omnipresent in research on capital markets and is the most popular method used historically. The event study methodology has been advanced as the years passed by, but the early research mentioned above still contains the core items of a typical event study (Corrado, 2011).

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Event studies consider the abnormal shareholder returns over a period that surrounds the M&A announcement date. The calculation of the shareholder return for a single day is the change in the share price plus any dividends that were paid, divided by the previous day's closing share price. The abnormal return can then be determined by subtracting a benchmark return defined or required by the shareholders for that particular day from the actual return (Bruner, 2002).

Bruner (2002) further stated that benchmark returns are typical returns dictated by the capital asset pricing model (CAPM) or certain returns on an extensive market index, such as the JSE, which can be used as a benchmark. It must be noted that many other models have also been developed for this purpose. Bruner (2002) concluded on the topic of event studies, stating that this methodology is regarded as forward-looking with the simple assumption that share prices are the present values of the expected future cash flows to shareholders, and therefore has dominated the M&A field since the 1970s.

2.3.2. Accounting Studies

The second most popular research approach used in determining M&A profitability is accounting studies, also referred to as operating performance studies. Andrade et al. (2001) stated that accounting studies concentrate on accounting measures that may include operating margins, leverage, return on assets or equity, earnings per share, or the liquidity of the company. Accounting studies aim to determine whether benefits from M&As can be realised through operating cash flows as opposed to general share price increases.

Healy, Palepu and Ruback (1992) conducted the first major study that utilised operating financial performance and accounting returns as the primary methodology for M&A performance measurement. Healy et al. (1992) defined operating cash flow as follows:

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Operating Cash Flow = Sales
- Cost of Goods Sold
- Selling and Administrative Expenses
+ Depreciation and Goodwill Amortization Expenses

Krishnakumar and Sethi (2012) stated that the most critical aspect of this methodology is to apply the operating cash flow as a measure of operating performance, followed by adjusting against specific industry benchmarks before the return over a specified period is calculated.

2.3.3. Executive Surveys and Clinical Studies

Executive surveys involve precisely what it says, presenting executives of companies with standardised sets of questions, aggregating the results throughout followed by drawing conclusions, or rather generalisations, from the results. In close relation to this, clinical studies place in-depth focus on a small sample of executives through field interviews. As this approach is inductive, new insights are typically acquired from such studies.

Meglio and Risberg (2010) argued that the field of M&A research has become tarnished by a set of bureaucratic research methodologies that provide results without taking into account any organizationally-relevant factors. Also, they state that research designs need to be rejuvenated to add new knowledge to the M&A field. To understand questions like: what are the primary drivers of acquisition activity, how does the M&A integration process unfold, how is the M&A outcome affected, or why does M&As show high rates of failure, researchers need to turn to alternative research methods (Meglio & Risberg, 2010).

The most substantial drawback to using these qualitative methods in assessing M&A performance is that certain degrees of subjectivity are involved in drawing conclusions. Because of this limitation, this study will not consider this methodology as a measure of M&A performance.

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2.4. Company Performance Measurement

2.4.1. Share Price Performance

2.4.1.1. Short-term Share Price Performance

As this study has a core focus on the long-term effect of employing an acquisitive strategy, it is still of great importance to understand the historical short-term studies, their strengths and shortcomings. Short-term studies using share price performance as an indicator of M&A performance have been most prevalent historically. Andrade et al. (2001) reasoned that short-term studies are useful because share prices react almost immediately to M&A announcements in an efficient market where information is freely available to the public. The typical event windows used in these studies include the three days surrounding the M&A announcement, and longer event windows that typically start just before the M&A announcement and ends once the M&A transaction is completed (Andrade, Mitchell, & Stafford, 2001).

The meta-study conducted by Bruner (2002) contained a large number of event studies in the period from 1978 to 2001, where the short-term and long-term effect of M&As were tabulated. The event studies with results of negative short-term returns are shown in Table 1 and the event studies with zero or positive short-term returns can be seen in Table 2.

Table 1 - Event studies with negative short-term returns

Study	Cumulative Abnormal Returns	Sample Size	Sample Period	Event Window
Dodd (1980)	-1.09%** -1.24%	60 66	1970 -	(-1,0)
Asquith, Bruner & Mullins	-0.85%**	343	1973 -	(-1,0)
Varaiya & Ferris (1987)	-2.15%**	96	1974 -	(-1,0)
Morck, Schleifer & Vishny	-0.70%	326	1975 -	(-1,1)
Franks, Harris & Titman (1991)	-1.45%	399	1975 -	(-5,5)
Servaes (1991)	-1.07%**	384	1972 -	(-1, close)
Jennings & Mazzeo (1991)	-0.8%**	352	1979 -	(-1,0)
Bannerjee & Owers (1992)	-3.3%**	57	1978 -	(-1,0)
Byrd & Hickman (1992)	-1.2%**	128	1980 -	(-1,0)

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Healy, Palepu & Ruback	-2.2%	50	1979 -	(-5,5)
Kaplan & Weisbach (1992)	-1.49%**	271	1971 -	(-5,5)
Berkovitch & Narayanan	-$10m	330	1963 -	(-5,5)
Sirrower (1994)	-2.3%**	168	1979 -	(-1,1)
Mulherin & Boone (2000)	-0.37%	281	1990 -	(-1,1)
Mitchell & Stafford (2000)	-0.14%** -0.07%	366 366	1961 -	(-1,0)
Walker (2000)	-0.84%** -0.77%	278 278	1980 -	(-2,2)
Houston, James & Ryngaert (2001)	-4.64% **(1985-90) -2.61% (1991-96) -3.47%** (all)	27 37 64	1985 -	(-4,1)
** Considered to be statistically significant at the 95% confidence interval				

Source: (Bruner, 2002)

From the 17 studies listed in Table 1, 12 studies showed statistically-significant negative results. The research of Houston, James and Ryngaert (2001) reflected the largest statistically-significant negative returns with a cumulative abnormal return of -4.64%. It must also be noted that all of the studies above had short-term event windows with a maximum of 11 days for which was accounted.

Table 2 - Event studies with zero or positive short-term returns

Study	**Cumulative Abnormal Returns**	**Sample Size**	**Sample Period**	**Event Window (Days)**
Dodd & Ruback (1977)	+2.83% ** +0.58%	124 48	1958 - 1978	(0,0)
Kummer & Hoffmeister (1978)	+5.20%**	17	1956 - 1970	(0,0)
Bradley, Desai & Kim (1982)	+2.35%**	161	1962 - 1980	(-10,+10)
Asquith (1983)	+0.20% +0.50%	196 89	1962 - 1976	(-1,0)
Eckbo (1983)	+0.07% +1.20%**	102 57	1963 - 1978	(-1,0)
Dennis & McConnell (1986)	-0.12% (-1,0) +3.24% (-6,+6)**	90	1962 - 1980	(-1,0)
Bradley, Desai & Kim (1988)	+1%**	236	1963 - 1984	(-5,5)
Jarrell & Poulsen (1989)	+0.92%**	461	1963 - 1986	(-5,5)
Lang, Stulz & Walklling (1989)	0%	87	1968 - 1986	(-5,5)
Loderer & Martin (1990)	+1.72%** (1966-68) +0.57%** (1968-80) -0.07% (1981-84)	970 3401 801	1966 - 1984	(-5,0)
Smith & Kim (1994)	+0.50% -0.23%	177	1980 - 1986	(-5,5) (-1,0)

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Lyroudi, Lazardis & Subeniotis (1999)	0%	50	1989 - 1991	(-5,5)
Mulherin (2000)	+0.85%**	161	1962 - 1997	(-1,0)
Kohers & Kohers (2000)	1.37% **(cash 1.09%** (stock) 1.26% (whole sample)	961 673 1634	1987 - 1996	(0,1)
** Considered to be statistically significant at the 95% confidence interval				

Source: (Bruner, 2002)

From the 14 studies listed in Table 2, ten studies showed statistically-significant positive results. The research of Kummer and Hoffmeister (1978) showed the largest statistically-significant positive returns with a cumulative abnormal return of 5.20%. Again, it must be noted that all the studies above were conducted over short-term event windows with the largest event window of 21 days.

In a more recent local study conducted in South Africa, Smit and Ward (2007) stated that the majority of M&A performance research in South Africa also focused on short-term share price performance.

2.4.1.2. Long-term Share Price Performance

In contrast to M&A performance studies focussing on the short-term, long-term studies measure the share price performance over a more extended period post-acquisition. Papadakis and Thanos (2010) stated that historical long-term studies tend to generate either insignificant or negative performance results, with very few showing positive results, over the long run. From the Bruner (2002) meta-analysis, long-term event studies returns are tabulated in Table 3.

Table 3 - Event studies with long-term returns

Study (Cont.)	Cumulative Abnormal Returns	Sample Size	Sample Period	Event Window (days)
Mandelker (1974)	-1.32% Successful bids only	241	1941-63	(0,365)
Dodd & Ruback (1977)	-1.32% Successful - 1.60% Unsuccessful	124 48	1958-78	(0,365)
Langetieg (1978)	-6.59%** Successful bids only	149	1929-69	(0,365)
Asquith (1983)	-7.20%** Successful - 9.60%** Unsuccessful	196 89	1962-76	(0,240)

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Bradley, Desai & Kim (1983)	-7.85%** Unsuccessful bids only.	94	1962-80	(0,365)
Malatesta (1983)	-2.90% Whole sample -13.70% **After 1970 -7.70% Smaller bidders	121 75 59	1969-74	(0,365)
Agrawal, Jaffe & Mandekler (1992)	-10.26%**	765	1955-87	(0,1250)
Loderer & Martin (1992)	+1.5%	1298	1966-86	(0,1250)
Gregory (1997)	-12% to —18%**	452	1984-92	(0,500)
Loughran & Vijh (1997)	-14.2% merger +61.3%** tender -0.1% combined	434 100	1970-89	(1,1250)
Rau & Vermaelen (1998)	-4%** mergers +9%** tender offers	3,968 348	1980-91	(0,36 months)
Louis (undated)	-7.3%** successful - 18.4%** unsuccessful	1,297 308	1981-98	(0, 3 years)
Pettit (2000)	-25.41%**	216	1977-93	(0, 3 years)
Moeller, Schlingemann, & Stulz (2003)	-4.1%	12,023	1980- 2001	(0, 36 months)
Ferris & Park (2001)	-19.80%**	56	1990-93	(1, +60) months
Kohers & Kohers (2001)	-37.39%	304	1984-95	(1,1250)
** Considered to be statistically significant at the 95% confidence interval				

Source: (Bruner, 2002)

From the 16 studies listed in Table 3, the long-term event windows ranged from 365 days to 1250 days, where 11 of the studies reported significant negative returns to shareholders. What is striking is that none of the studies delivered significant positive results, not taking tender offers into account. The study conducted by Pettit (2000) delivered the highest significant negative results, with a return of -25,41%. Bruner (2002) noted that the interpretation of long-term share price performance studies is that once the transaction is completed, a series of confounding events may influence the share-price, even though it has nothing to do with the M&A transaction. Bruner (2002) further noted that there are two plausible explanations for this occurrence:

1. Acquirer Company Shares Overvaluation – Companies tend to acquire when they believe their shares are overvalued. Therefore, the decline in the M&A performance may not be linked to the specific deal, but rather to the market's correction of the acquirers shares value.

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2. Industry Shocks – Poor performance post-M&A can also be linked to poor performance within a whole industry.

Kyei (2008) conducted a long-term share price performance study of acquiring companies in South Africa, specifically focusing on companies listed on the JSE. The study found insignificant positive or negative cumulative abnormal returns, but a considerable drawback to the study was that only 14 companies were included in the final sample.

2.4.2. Operating Financial Performance

The value of using operating financial performance metrics to determine M&A value added was first discovered by Meeks in 1977, with the study of 233 companies where Return on Assets (ROA) was used as the performance measure. Operating financial performance was defined by Andrade et al. (2001) as a way to determine whether M&As realised the anticipated benefits by assessing operating cash-flows rather than the more conventional share-price growth.

The meta-study conducted by Bruner (2002) reviewed historical operating financial performance studies, often referred to as accounting studies, to find a credible alternative methodology to measure M&A performance. The study examined 15 operating financial studies published between 1977 – 2001, where metrics such as ROA, Return on Equity (ROE), Return on Capital (ROC), Cash-flow Return, etc. were considered. The results of the historical studies can be seen in Table 4 below.

Table 4 – Operating financial studies with long-term returns

Study	Sample Size	Sample Period	Metric	Notes
Meeks (1977)	233	1964-72	ROA	ROA decline post-merger
Salter & Weinhold (1979)	16	N/A	ROE	ROE 44% below NYSE ROE
Mueller (1980)	287	1962-72	ROS	Acquirers less profitable (insignificantly)
Mueller (1985)	100	1950-92	ROS	Acquirers suffer significant losses

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Ravenscraft & Scherer (1987)	471	1950-77	ROA	Negative relation between acquirer ROA and tender activity
Scherer (1987)	471	1950-77	ROA	ROA decline avg. 0.5% per year for target companies
Herman & Lowenstein (1988)	56	1975-83	ROC	ROC for acquirers increased post-merger 1975-78. Decline in ROC for 1981-83.
Seth (1990)	102	1962-79	Equity Value	9.3% additional equity returned
Healy, Palepu & Ruback (1992)	50	1979-84	Asset Turnover, Cash-flow Return	Significant increase in asset turnover, but no significant cash-flow increases
Chatterjee & Meeks (1996)	144	1977-90	Profit Returns	Between 1985-90 significant improvement in profit post-acquisition
Dickerson, Gibson & Tsakalotos (1997)	613	1948-77	ROA	5-year post-acquisition ROA lower than non-acquirers
Healy, Palepu & Ruback (1997)	50	1974-84	Cash-flow Return	M&A zero NPV activity
Parrino & Harris (1999)	197	1984-92	Cash-flow Return	2.1% cash-flow return after merger
Parrino & Harris (2001)	197	1970-89	Cash-flow Return	Significant increases in cash-flow return when target and acquirer have common business line
Ghosh (2001)	315	1981-95	Cash-flow Return	No significant difference in pre vs post cash-flow return

From Table 4, two general observations can be highlighted:

- The majority of the studies delivered either insignificant or negative returns.
- A clear trend starting in 1992, where the cash-flow return was used as the dominant metric in determining operating financial performance.

Healy et al. (1992) was the first notable study that utilised the cash-flow return metric post-acquisition to determine operating financial performance. A number of 50 large M&As in the USA were analysed during 1979-1984, where the results indicated that asset turnover, or rather asset productivity, increased significantly, and the industry adjusted cash-flow return on tangible assets (IACRTA) delivered a statistically significant result of 2.8% compared to the benchmarks in the specific industry. Importantly, the premium paid by the acquirer was excluded from the cash-flow return on tangible assets. In addition, Healy et al. (1992) interestingly found that even though M&A companies continued a constant investment in capital, research, and development expenditure, they still managed

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to deliver abnormal operating cash-flow returns, compared to that of peers in similar industries.

Half a decade later, Healy, Palepu and Ruback (1997) conducted a reanalysis of their study of 50 large USA M&As, this time excluding the premium paid by the acquirer. The results similarly delivered significant abnormal asset turnover, but this time the IACRTA result was insignificant.

Parrino and Harris (1999) continued the trend using cash-flow returns as the dominant operating financial performance measurement tool, and found, from the analysis of 197 USA M&As from 1984-1992, that those acquirer companies delivered a 2% to 3% superior return to industry norms when the CEO of the target firm is replaced. In contrast, when the target company CEO remains, the returns were insignificant.

The final accounting study included in the meta-study of Bruner (2002), Ghosh (2001) analysed 315 M&As from 1981-1995 and found insignificant pre and post-acquisition cash-flow returns. Ghosh (2001) believed that previous operating performance studies were biased because the majority of companies pursued M&As in periods of superior performance and were often more substantial, in terms of revenues, than industry-median enterprises. The study therefore only focused on companies of similar size and financial performance.

2.4.3. Other Popular Performance Measurements

2.4.3.1. Intrinsic Value

The intrinsic value of a company refers to the value of a company determined through analyses that do not consider the market value and can be calculated by using standard residual income models. The primary benefit of utilising an intrinsic value model is that the long-term performance of companies can be determined without using historical share price data. This model therefore does not run the risk of share price miss-valuation biases. The intrinsic value of a company can be defined as the present value of the expected future dividend flows.

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Ma, Whidbee and Zhang (2011) challenged the conventional event study methodology using abnormal share price returns as a metric, stating that a particular tendency exists where over-valuations exist before M&As that influence the estimations of post-M&A share price returns. Instead of using share price data through event study methodologies, instead make use of an accounting methodology in the form of the residual income model (Ma, Whidbee, & Zhang, 2011).

The intrinsic value methodology has been used widely in the recent years, but it does not come without limitations. The most considerable drawback of this model is that it requires one to make forecasts of future dividend payments, thus subject to human error, and it assumes income only from dividends. Another obvious drawback is that it cannot be used to value shares of companies that do not pay dividends, thus relying on the assumption that the value of any share is the return on investment provided through dividend payouts.

2.4.3.2. Economic Value Added

The creation of value is an economic, not an accounting, concept. To measure it, one has to look not only within the company but also at the share market. The return to a shareholder who purchased equity in a company will be reflected by the change in share price over time. What makes Economic Value Added (EVA) so revealing is that it takes into account a cost that conventional measures exclude: the cost of equity (Ward & Price, 2017).

EVA is the economic value added or destroyed by a business in any single year. The Market Value Added (MVA) measured at any given time, is the sum of each future year's expected EVA discounted at the weighted average cost of capital back to that point in time. The intrinsic value is the book value at the point in time plus (or minus) the calculated MVA.

The aim of Sirower and O'Byrne (1998), one of the first prominent EVA research projects, was to develop and illustrate a leading method for the forecasting and evaluation of M&A operating performance post-deal that will serve in the interest of researchers as well as corporate practitioners. They realised that the majority

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of M&A studies only compared the pre – and post-acquisition operating performance measures, and therefore explored a methodology to determine whether a M&A event can be accurately justified before the deal conclusion. The method they used assessed the pre-M&A market values of both the target and acquirer, as well as the acquisition premium to calculate the expected future annual operating performance in EVA.

Sirower and O'Byrne (1998) first calculated the expected annual increase in EVA for both the target and acquirer companies to arrive at a particular performance benchmark. Next, the actual EVA improvements were derived, the difference between the expected and actual EVA values determined before comparing it to the abnormal market returns. A high correlation was found between the performance benchmark EVA and the abnormal market returns. Krishnakumar and Sethi (2012) stated that by using this methodology, the calculations show what the combined entity post-M&A must achieve if it acts in the shareholder's interest.

One of the few, if not only, local research projects made use of the EVA methodology to re-examine post-M&A performance of acquiring companies in South Africa. Makhele (2013) investigated 336 South African acquisitions between 2000 to 2011 to reveal that acquiring firms experience significant EVA depletion post-M&A. In the concluding remarks, Makhele (2013) proposed a future scope where the long-term performance of acquiring and non-acquiring companies are compared using the EVA methodology.

Grigorieva and Petrunina (2015) focussed on emerging countries to investigate M&A performance of 80 M&As during 2000-2009. The impact of M&As on a company's value was measured by using economic profit as the key indicator, as well as using the traditional event and accounting methodologies to compare results. They noted that only a few historical studies made use of the economic profit concept and measures such as EVA to examine company performance post-M&A. Grigorieva and Petrunina (2015) found that the economic profit results showed similar trends compared to the traditional methods. The median-adjusted economic profit declined by an average of $4 million post-M&A, which was in line

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with the results Yook (2004) found in his study where EVA also declined post-M&A.

2.4.4. Total Shareholder Returns (TSR)

TSR can be defined as the percentage shareholder return appreciation or depreciation, measured as the growth or decline in share price plus the dividend reinvestment, over a certain designated period (Burgman & Van Clieaf, 2012). TSR takes on the assumption that all dividends (if paid out) are reinvested in the company, at the share price on the payment date, to create the accumulation effect of shares over a certain, in this case, 10-year period. Independent of the way TSR is calculated, it refers to the total amount returned to the shareholders.

TSR does not mean much when measured in any given year, but it remains the single best indicator of success when measured over a longer-term period (Favaro & Rotz, 2011). Favaro and Rotz (2011) explained that the reason for this is that the long-term value created by companies in highly competitive product, capital, and labour markets is reflected by TSR, where these markets are often focused on the short-term.

Hosken and Makridis (2015) also emphasised that when using TSR as a performance measure, a longer-term outlook must be taken. They studied 449 USA firms included in the S&P 500 between 2004 and 2014 and raised the concern that multiple companies reward executives, using TSR as a measure, on a short-term horizon as low as three years. The short-term incentive plans delivered highly variable pay-outs to executives and were seen as lottery tickets by many of the recipients. Even though it is not always possible to use a longer-term timeline, in an ideal world a period of minimum 10-years must be analysed, as it typically corresponds to the lifecycle of business strategies from inception to execution to return on investment (Hosken & Makridis, 2015).

Unfortunately, the mainstream understanding of TSR is inconsistent. Deelder, Goedhart and Agrawal (2008) stated that traditional approaches often stumble when TSR is related to dividend payments, just because dividends do not create

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value. A simple example is that if more debt is taken on by a company to pay more dividends, then dividends in the future must be lower. Another case where future dividends will be reduced is when a company decides to forego an attractive investment to pay out a higher dividend. Besides, the impact of financial leverage is often neglected. If two companies created equal amounts of value, the TSR could still be different, because of the debt-equity ratio and risk level differences (Deelder, Goedhart, & Agrawal, 2008). It is essential for researchers to understand these shortcomings to deliver noteworthy results.

Limited comparative company growth strategy studies, with TSR used as the measure, have been conducted historically. The studies were conducted in developed countries with results on the most successful strategy mostly ambiguous. Favaro, Meer and Sharma (2012) found that only 36% of companies realise sufficient cost savings to cover the M&A premium paid while the other 64% of M&As have on average an annual TSR of negative 2%.

Goedhart and Koller (2017) found in their study of 550 USA and European companies from 1999 to 2013 that an organic growth strategy delivered superior returns to shareholders. The top third (best performing) of the 550 companies delivered TSR of 11.5% for organic growth companies, compared to 8.4% for acquisitive growth companies (relative to the S&P 500). The primary reason was that with an organic growth strategy, upfront investment was much less compared to that of an acquisitive strategy. Generally, when companies grow through M&As, payments are made for the stand-alone business plus a M&A premium resulting in a lower return on invested capital compared to that of growing organically (Goedhart & Koller, 2017).

In contradiction; Cools et al. (2004) found that an acquisitive growth strategy delivered higher TSR in their study of 700 USA companies from 1993 to 2002. They found that companies with an acquisitive growth strategy delivered annualised TSR of 10.8%, mixed growth companies 9.9%, and organic growth companies 9.6% (excluding the top and bottom quantiles because of outliers). They noted that companies should not undertake a M&A growth strategy under any and all circumstances. Cools et al. (2004) stated that successful acquirers

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have M&A growth at the core of their strategy, they plan far in advance before bidding on a particular deal, and they pay as much attention to post-merger integration as they do to the deal itself.

Deelder et al. (2008) stated that to better utilise and understand TSR, one needs to break the metric up into four fundamental parts:

1. Operating performance of the company
2. Valuation of the stock market at the start of the measurement period
3. Changes in stock market expectations regarding the company performance
4. Financial leverage

The analysis can be further expanded to divide the operating performance into the value from revenue growth net of the capital needed to grow, from margin improvements, and from improved capital productivity. Even though these are essential points to understand and take into account when calculating TSR, the basic TSR calculation used in this study is defined by the formula below:

$$TSR = \frac{Price_{end} * Acc.Dividends}{Price_{start}} - 1$$

Where:

TSR = total shareholder returns over the 10-year period

$Price_{start}$ = mean share price at the start of the study period

$Price_{end}$ = mean share price at the end of study period

$Dividends$ = accumulated reinvested dividends over the study period

Making use of simplified performance metrics will always be attractive, but just because it is simple does not mean it can deliver useful results. When a parameter is used to measure factors it is not intended for and justified by the

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researcher to achieve favourable outcomes; it can have disastrous implications (Burgman & Van Clieaf, 2012). Burgman and Van Clieaf (2012) stated that even though TSR is a useful performance measure, it is preferably used in conjunction with multiple other measures that will provide a basis for alignment with sustainable shareholder gains, and will reflect in the growth of future economic profit.

2.5. Dividend Yields Linked to Company Growth Rates

Companies generally utilise profits when distributing dividends to shareholders. Dividends can either be classified as regular or special, where special dividends are paid over-and-above the regular dividends. In numerous countries dividends are most typically distributed quarterly, whereas South African companies typically make an interim and final dividend payment, thus two payments a year (Wesson, Bruwer, & Hamman, 2015).

Conventional wisdom historically suggested that high dividend yielding companies will negatively affect future earnings as available cash is distributed to shareholders instead of investing in current or future business opportunities. Arnott and Asness (2003) were the first to challenge this argument through their controversial study of USA-listed companies from 1871 to 2002 which utilised aggregate market data to find that a strong positive relationship exists between the dividend payout ratios and the future growth of earnings.

The comprehensive study of Zhou and Ruland (2006) of USA listed companies further affirmed the Arnott and Asness (2003) research by using individual company data instead of aggregate market data to draw the same conclusions; high dividend yielding companies are inclined to experience strong, not feeble, growth of future earnings. Stanley (2009) noted that this topic had been extensively researched, with mixed research results going back more than five decades. There seems to be a divide, as half the studies support the dividend value destroying argument while the other half opposes it (Stanley, 2009).

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The bulk of the studies have been conducted in developed countries. Vermeulen and Smit (2011) embarked on undertaking the first study in South Africa of this kind to test whether a relationship exists between dividend yields and future earnings growth to see how the results compare to the likes of USA and Australia. Companies listed on the JSE at the time of the study, as well as delisted companies from 1973 to 2009, were included in the research.

Vermeulen and Smit (2011) found that South Africa shared strong similarities to the USA, as a significant positive correlation was found between dividend payouts and growth of future earnings for both countries for the three growth periods considered (one-year, three-years and five-years). Interestingly, the relationship in South Africa was stronger than in the USA.

Further to this, the research of Al-Twaijry (2007) of companies in Malaysia listed on the Kuala Lumpur Stock Exchange showed that dividend yields do not significantly influence future earnings growth. The study of Murekefu and Ouma (2012) of companies in Kenya listed on the Nairobi Securities Exchange and the study of Osamwonyi and Lola-Ebueku (2016) of companies listed on the Nigerian Stock Exchange found contradicting results. They discovered that dividend yields were a significant factor contributing to company performance, supporting the study of Vermeulen and Smit (2011). From the few studies conducted in emerging markets, it is clear that the results found in some emerging countries cannot be extrapolated to others with regards to dividend policy decisions and should preferably be treated as unique cases.

2.6. M&As in Developing Countries

It is essential to make a distinction between M&As performed by companies based in developed countries and those found in developing countries. The primary reason for this is that the abundance of M&A research conducted in developed countries came to conclusions that are different to a certain extent from studies conducted in developing countries. Many researchers have also argued that results found in developed countries can be translated to developing

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countries, and companies following this advice, have failed dismally in the vastly different environment.

Wong and Cheung (2009) stated in their research of M&As in developing countries between 2000 and 2007 that research on M&As in developed countries is only valid for developed countries, and not for developing countries. They stated that the weak institutional environment of developing countries is the primary factor why developing countries are far different from developed countries.

Lebedev, Peng, Xie and Stevens (2014) conducted a comprehensive study on M&As in emerging countries, which can be seen in Table 5. Their study highlights a large number of differences in companies using an acquisitive strategy between developed and developing countries. They identified additional antecedents in developing nations that resulted in M&A activity, which includes cross-border acquisitions as a means to gain access to improved technologies and institutions.

They also established that there is no clear trend in whether acquisitions create or destroy wealth in developing countries. Finally, they identified additional factors affecting the performance such as institutional development, corporate governance quality, and the level of government involvement.

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Table 5 – Lebedev et al. (2014) merger and acquisition findings from developed and developing markets

Research question	Main findings from developed economies (DE)	Additional new findings from emerging economies (EE)
Antecedents	• Market (monopoly) power • Synergy gains (e.g., economies of scale) • Diversification • Reduce transaction costs • Reduce environmental uncertainty and resource dependency • Firm characteristics (e.g., M&A experience, network ties) • CEO compensation ("empire building") • Managerial hubris	• Cross-border acquisitions as a preferred mode of entry – Access to brands, technologies, and resources which help to overcome the "latecomer disadvantage" – Access to more developed institutions and corporate governance practices (from EE to DE) – Brownfield acquisitions (from DE to EE) – EE MNEs will try to leverage their home countries' comparative advantages in resources, as well as their firm-specific capabilities, by cross-border acquisitions – National pride (from EE to DE) • The quality of institutions is an especially important determinant of acquisitions in and out of EE – Institutional development in a host country facilitates acquisitions – Institutions often determine the choice of entry mode – Institutions providing higher level of protection of minority shareholders' rights are likely to facilitate M&As (by lowering the resistance of controlling shareholders) • Firm characteristics – For EE MNEs, prior M&A experience in DE tends to have stronger influence than prior M&A experience in EE – Network ties have different influence on acquisition behaviour in EE compared to DE
Performance	• Acquisitions typically destroy shareholder value for the acquirer • Target firms typically gain value from M&As	• There is no established trend for the acquirer's gain – acquisitions in and out of EE may create or destroy shareholder value for the acquirer
Factors affecting performance	• Deal type • Payment type • Ownership structure (e.g., managerial ownership) • Management characteristics (e.g., experience) • Previous performance • Firm size • Prior acquisition experience • Environmental factors (e.g., merger waves)	• Institutional development (in both host and home countries) was found to improve cross-border M&A performance • Quality of corporate governance in a host country facilitates acquisition performance ("bootstrapping") • Privatization context – Strong government involvement – Target firms' managerial capabilities and overall efficiency are often quite low – Lower premiums – The amount of post-privatization investment was found to facilitate post-acquisition performance of the privatized target • Higher ownership concentration of the acquirer may positively affect post-acquisition performance (however, larger state ownership tends to provoke negative reaction of the market) • For cross-border M&As, the acquirer's country of origin (DE versus EE) has been shown to affect the different measures of the target's performance (possible differences in post-acquisition restructuring strategies)

Young, Tsai, Wang, Liu and Ahlstrom (2014) findings correspond to that of Lebedev et al. (2014) where developing countries suffer from a particular institutional weakness which places them at a competitive disadvantage in the global context. This limitation leads to companies in developing countries struggling to compete in global markets, as well as against multinational corporations entering their native market.

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Wong and Cheung (2009), Lebedev et al. (2014) and Young et al. (2014) considered the differences in the competitive environment between developed and developing countries. On the other hand, Al Rahahleh and Wei (2012) and Grigorieva and Petrunina (2015) analysed the performance of companies that opted for an acquisitive strategy in developing countries.

Al Rahahleh and Wei (2012) conducted an extensive study of 2340 mergers, performed by 1122 frequent acquiring companies in 17 emerging markets from 1985 to 2008. They established that the serial acquirers experience a declining revenue trend with each subsequent deal, even though the pattern was not strong. In addition, they found a more severe declining pattern for the more developed markets within the developing country context.

Further to the above, Grigorieva and Petrunina (2015) examined 80 M&A deals initiated by companies from developing countries between 2003 and 2009, and similarly found that M&As destroy value for the combined companies. They saw a considerable decline of 3.3% in EBITDA/Sales ratio post-acquisition.

One of the first systematic research papers that focused on acquiring company value creation, by looking at Indian companies making cross-border acquisitions, was conducted by Gubbi, Aulakh, Ray, Sarkar and Chittoor (2010). A total of 425 cross-border M&As by Indian companies between 2000 and 2007 were analysed, and evidence was found that a positive correlation exists between the host country level of institutional and economic advancement and the expectation of the M&A performance by the market. What this means, is that companies in developing countries use internationalisation as a springboard to overcome the shortcomings in their native country by acquiring strategic assets through cross-border deals from advanced, diverse markets. The findings of Gubbi et al. (2010) show that this form of internationalisation is vital for companies in developing countries to transform organisational and strategic functions to compete on a global level.

As mentioned before, South Africa is considered a developing country with the irregularity of financial institutions rated as some of the best in the world, which

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instead relates to that of developed countries (World Economic Forum, 2016). It will therefore be interesting to see whether the findings of this research link to the results of developing countries, developed countries, or both.

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3. CHAPTER 3 – RESEARCH HYPOTHESES

From the literature review in chapter 2, a large number of methodologies and metrics in determining company growth and shareholder value added were highlighted. It was evident that a consensus does not exist on what the most useful tools are.

Chapter 2 also highlighted that the vast majority of research in this field was completed in developed countries. South Africa is regarded as a developing country, but globally its financial institutions are highly rated. South Africa therefore makes a compelling case, as several developed world factors are applicable in the South African market.

Making use of the TSR metric, the following set of hypotheses are proposed:

3.1. Hypothesis 1

The null hypothesis states that the total shareholder return of organic growth companies (TSR_{OG}) equals the total shareholder return of mixed growth companies (TSR_{MG}).

The alternate hypothesis states that the total shareholder return of organic growth companies (TSR_{OG}) does not equal the total shareholder return of mixed growth companies (TSR_{MG}).

$H1_0$: $TSR_{OG} - TSR_{MG} = 0$

$H1_A$: $TSR_{OG} - TSR_{MG} \neq 0$

3.2. Hypothesis 2

The null hypothesis states that the total shareholder return of organic growth companies (TSR_{OG}) equals the total shareholder return of acquisitive growth companies (TSR_{AG}).

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The alternate hypothesis states that the total shareholder return of organic growth companies (TSR_{OG}) does not equal the total shareholder return of acquisitive growth companies (TSR_{AG}).

$H2_0$: $TSR_{OG} - TSR_{AG} = 0$

$H2_A$: $TSR_{OG} - TSR_{AG} \neq 0$

3.3. Hypothesis 3

The null hypothesis states that the total shareholder return of mixed growth companies (TSR_{MG}) equals the total shareholder return of acquisitive growth companies (TSR_{OG}).

The alternate hypothesis states that the total shareholder return of mixed growth companies (TSR_{MG}) does not equal the total shareholder return of acquisitive growth companies (TSR_{AG}).

$H3_0$: $TSR_{MG} - TSR_{AG} = 0$

$H3_A$: $TSR_{MG} - TSR_{AG} \neq 0$

3.4. Hypothesis 4

The null hypothesis states that the accumulated number of shares, assuming dividends are re-invested on the record date, of organic growth companies (AS_{OG}) equals that of mixed growth companies (AS_{MG}).

The alternate hypothesis states that the accumulated number of shares, assuming dividends are re-invested on the record date, of organic growth companies (AS_{OG}) does not equal that of mixed growth companies (AS_{MG}).

$H4_0$: $AS_{OG} - AS_{MG} = 0$

$H4_A$: $AS_{OG} - AS_{MG} \neq 0$

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3.5. Hypothesis 5

The null hypothesis states that the accumulated number of shares, assuming dividends are re-invested on the record date, of organic growth companies (AS_{OG}) equals that of acquisitive growth companies (AS_{AG}).

The alternate hypothesis states that the accumulated number of shares, assuming dividends are re-invested on the record date, of organic growth companies (AS_{OG}) does not equal that of acquisitive growth companies (AS_{AG}).

$H5_0$: $AS_{OG} - AS_{AG} = 0$

$H5_A$: $AS_{OG} - AS_{AG} \neq 0$

3.6. Hypothesis 6

The null hypothesis states that the accumulated number of shares, assuming dividends are re-invested on the record date, of mixed growth companies (AS_{MG}) equals that of acquisitive growth companies (AS_{AG}).

The alternate hypothesis states that the accumulated number of shares, assuming dividends are re-invested on the record date, of mixed growth companies (AS_{MG}) does not equal that of acquisitive growth companies (AS_{AG}).

$H6_0$: $AS_{MG} - AS_{AG} = 0$

$H6_A$: $AS_{MG} - AS_{AG} \neq 0$

3.7. Hypothesis 7

The null hypothesis states that there is no relationship between total shareholder return (TSR_{OG}) and the accumulated number of shares (AS_{OG}) of organic growth companies.

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The alternate hypothesis states that there is a relationship between total shareholder return (TSR_{OG}) and the accumulated number of shares (AS_{OG}) of organic growth companies.

3.8. Hypothesis 8

The null hypothesis states that there is no relationship between total shareholder return (TSR_{MG}) and the accumulated number of shares (AS_{MG}) of mixed growth companies.

The alternate hypothesis states that there is a relationship between total shareholder return (TSR_{MG}) and the accumulated number of shares (AS_{MG}) of mixed growth companies.

3.9. Hypothesis 9

The null hypothesis states that there is no relationship between total shareholder return (TSR_{AG}) and the accumulated number of shares (AS_{AG}) of acquisitive growth companies.

The alternate hypothesis states that there is a relationship between total shareholder return (TSR_{AG}) and the accumulated number of shares (AS_{AG}) of acquisitive growth companies.

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4. CHAPTER 4 – RESEARCH METHODOLOGY

4.1. Proposed General Research Methodology and Design

The primary purpose of this research was to determine whether acquisitive growth companies listed on the JSE provided superior TSR compared to organic or mixed growth companies. Existing knowledge from the literature review was used to select the appropriate measure to analyse the data collected to come to a credible conclusion.

A quantitative research design was chosen, and data collection was realised from secondary data. Saunders and Lewis (2012) stated that data from secondary sources is the best way to do time-series studies, as the data has been collected consistently over a specified period. Secondary data is also appropriate, as the data is already in the public domain and available in software-compatible forms (Saunders & Lewis, 2012).

The type of research conducted was descriptive. The study was a 10-year longitudinal study, from the 2007 to 2016 financial years of the companies included in the study.

Descriptive research strives to describe certain people, events, or situations accurately (Saunders & Lewis, 2012). It further aims to answer the who, what, where, and how questions, and it is based on a certain level of prior understanding of a research problem (Zikmund, Babin, Carr, & Griffin, 2013). Zikmund et al. (2013) further described that descriptive research is frequently used in an attempt to determine the extent of differences in the needs, the perceptions, and individual characteristics of sub-groups, as would be the case in the research that would be conducted.

The following steps were taken in the research design:

- The identification of companies listed on the JALSH as of 31 December 2016. The listed companies were required to have been in existence in 2007 for any

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reliable results to be achieved from this study. This requirement eliminated many companies that have delisted in the period of the study.

- The companies were placed in an acquisitive, organic, or mixed growth strategy group according to the number of acquisitions concluded in the ten years of the study.

- The data was cleaned before a final sample of companies for the analysis was identified.

- Once the sample was finalised and companies placed in their respective growth strategy groups, the measurements of "success", or rather superior shareholder returns, was calculated. The measure used was the TSR from 2007 to 2016.

4.2. Population

The population included all companies listed on the JSE on 31 December 2016. The population was characterised by the fact that all financial data is published, complete and publicly available.

The population was drawn from the Thomson Reuters Eikon database accessible through the Gordon Institute of Business Science Information Centre. Company-specific information including historical share prices was retrieved from the McGregor BFA database, also available from the Gordon Institute of Business Science Information Centre. Also, the Zephyr database was used to access comprehensive M&As data with integrated company information. The final sample was then selected from the collected data.

4.3. Sampling Method and Size

The ideal methodology would have been to use probability sampling. Probability sampling entails a selection method where members in the sample are selected from a target population on a purely random basis, where each member of the target population has an equal chance of being selected for the sample (Wegner,

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2016). Probability sampling ensures that no bias is involved when selecting the sample.

Probability sampling was not ideal for this study, as the timeframe only allows for a limited number of companies to be analysed, and therefore just a certain amount of companies will be included in the study.

Non-probability sampling was used to establish the sample for the study. Non-probability sampling can be defined as any sampling method where the sample members are not randomly selected (Wegner, 2016). More specifically, judgment sampling was used where the researcher's judgment was exercised to choose the best sampling units to be included in the sample (Wegner, 2016). The criteria for the sample was:

- The companies had to have been listed on the JSE, and form part of the JALSH as of 31 December 2016.

- The respective group or parent companies must have existed for the duration of the 10-year study, from 2007 to 2016 financial years.

- If there were a case where a particular company currently formed part of the JALSH but was not listed on the JSE for the full previous ten years, it would be excluded from the study. It is therefore not necessary for the company to be part of the JALSH in the run-up to 2016, as long as it was listed on the JSE during the 10-year period.

- Data for all the factors being analysed must have been available for the samples being studied.

In order to produce reliable and valid estimates of the population from which the sample was drawn, it was important that the sample be representative of the target population (Wegner, 2016). Therefore, the larger the sample, the more accurate the findings will be because of lower sampling errors. The sample size used in this study was 104 companies. The list of companies that were included in the final sample will be discussed in Chapter 5.

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4.4. Measurement Instrument

As mentioned in the chapter 4.1 above, the study utilised secondary data in the form of financial data which will be further discussed in the chapter below. All of the data collected was in the form of numerical data. Numerical data can be simply defined as any data that is measured using numbers (Saunders & Lewis, 2012).

4.5. Data Gathering Process

The study utilised secondary data gathered from GIBS Information centre as well as publicly available data from company websites.

The following sources were used:

- The Thomson Reuters Eikon database was used to collect the historical data of the JALSH. The data included market capitalisation data on specific dates, share histories, dividend pay-out histories, year-end financial revenues, and any other financial information used in the analyses.
- McGregor BFA Research Domain for company-specific and dividend data
- Zephyr database to access comprehensive M&As data with integrated company information
- Individual company financial statements from company websites

4.6. Unit of Analysis

The units of analyses were the following:

- To classify companies as either having an acquisitive, organic, or mixed growth strategy, the number of acquisitions over the 10-year period was used as the unit of analysis for the classification.

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- In order to measure the growth-success of the companies, the TSR of the respective companies was calculated. The unit of analysis included the share price of each company in 2007 and 2016, as well as all the dividends that were accumulated during this time.

4.7. Analysis Approach

The data analysis was conducted in four phases as mentioned in the chapter 4.1 and chapter 4.6 above.

4.7.1. Phase One: Company Growth Strategy Classification

The Thomson Reuters Eikon database was used to identify the JALSH companies by market capitalisation as of 31 December 2016. The total population identified included 163 companies. When the population was finalised, a series of clean-up steps were taken to ensure that there was continuity in the data.

The primary factor that disqualified companies from the research was that this study required companies to be listed on the JSE for the full 10-year duration from 1 January 2007 to 31 December 2016. This stringent requirement disqualified 59 companies from the sample leaving 104 companies included in the final sample.

Once the study sample was finalised, companies were classified as follows:

- Acquisitive growth strategy: These were companies that made four or more acquisitions in the 10-year study.

- Organic growth strategy: These were companies that made zero or a single acquisition in the 10-year study.

- Mixed growth strategy: These were companies that could not be categorised in either of the two growth strategies mentioned above, therefore neither acquisitive nor organic. These companies made either two or three acquisitions in the 10-year study.

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Once all the companies were placed in the above categories, the relevant data had to be extracted to complete the analysis.

4.7.2. Phase Two: Growth Strategy Success

In order to determine the most favourable growth strategy employed by the respective companies, TSR for each of the companies was calculated over the 10-year period.

4.7.2.1. Total Shareholder Return (TSR)

TSR can be defined as the percentage shareholder return appreciation or depreciation, measured as the growth or decline in share price plus the dividend reinvestment, over a certain designated period (Burgman & Van Clieaf, 2012). As mentioned before, TSR does not mean much when measured in any given year, but it remains the single best indicator of success when measured over a longer-term period (Favaro & Rotz, 2011).

TSR was calculated as per the formula below:

$$TSR = \frac{Price_{end} * Acc.Dividends}{Price_{start}} - 1$$

Where:

TSR = total shareholder returns over the 10-year period

$Price_{start}$ = mean share price at the start of the study period

$Price_{end}$ = mean share price at the end of study period

$Dividends$ = accumulated reinvested dividends over the study period

The formula above is a simple representation, and the data for the variables were collected as follows:

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4.7.2.2. Share Price Adjustments

The daily closing share prices over the 10-year period of each of the 104 companies were downloaded from the Thomson Reuters Eikon database into Microsoft Excel format. It was essential to understand what the share price meant and whether any share price adjustments had been made or still had to be made manually. The share prices on the Eikon database were adjusted for corporate actions. Typical corporate actions include share splits, spin-offs, M&As, demergers, consolidations, etc.

This was a crucial part of the study to fully understand, as other databases such as the McGregor BFA research domain did not include all adjustments to share prices because of specific corporate actions. A prime example of this occurrence would be the spin-off of Bidcorp from Bidvest in May 2016. The daily share prices of Bidvest for the 2016 calendar year obtained from the Eikon database can be seen in Figure 3 and the obtained daily share prices from the Mcgregor BFA domain in Figure 4.

Figure 3 - Bidvest share price from 01/01/2016 to 31/12/2016 retrieved from Eikon Database

In Figure 3 a sharp rise in the Bidvest share price can be seen during May 2016, when the Bidcorp demerger occurred.

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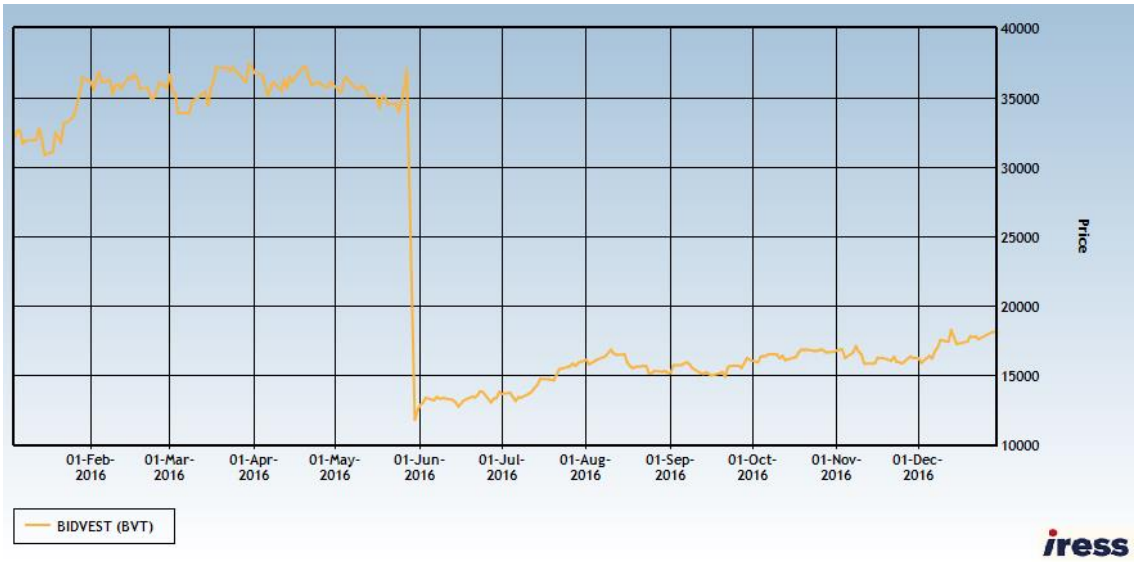

Figure 4 - Bidvest share price from 01/01/2016 to 31/12/2016 retrieved from Mcgregor BFA Domain

Contrastingly, In Figure 4 a sharp drop in the share price can be seen during the Bidcorp demerger. The share prices on the Thomson Reuters Eikon database were therefore adjusted historically for all corporate actions, where the share prices on the Mcgregor domain was not adjusted historically. As this is a long-term study, any and all adjustments to company share prices had to be taken in to account to determine an accurate TSR to investors and therefore the Thomson Reuters Eikon database was used to extract share price information.

4.7.2.3. Share Price Averaging Periods

If TSR was calculated by using a single day spot price, the calculation would be much easier. The risk of using a spot price is that the possibility of a single day extreme exists, which may impact the TSR result severely. It was therefore decided to make use of averaging periods to minimise the volatility in share prices.

The first 30 and the last 30 trading days of the 10-year period was taken as the averaging periods for this study. In order to calculate the share price at the start of the period, the closing share prices for the trading days in between 2 January 2007 and 12 February 2007 were averaged for each company and in order to calculate the share price at the end of the period, the closing share prices for the

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trading days in between 16 November 2016 and 30 December 2016 were averaged for each company.

4.7.2.4. Shares Accumulation and Reinvestment

As previously mentioned, the Eikon database share prices were used to calculate the start and end period share prices of each of the companies, because it was historically adjusted for corporate actions. In order to determine the accumulated shares, the share prices on the Mcgregor BFA domain were used, as it was important that the unadjusted share price on the dividend record date was used to reinvest the dividends into company shares.

The dividend record date is the date on which a specific company finalises the investors' list who qualifies for a company's dividend payment. If a historically-adjusted share price were used, the wrong share price would have been used to reinvest the dividends.

The assumption was made that each company started with a single share on the first trading day of 2007. The share prices, from the Mcgregor BFA domain, on each of the dividend record dates for each of the companies, were retrieved manually and multiplied with the share price to get the reinvestment amount. The shares were accumulated over the 10-year period and finally multiplied with the average share price at the end of the period to get the average price with dividends reinvested. The TSR and compound annual TSR could be determined from the data.

4.7.3. Phase Three: Two-tailed t-tests for Differences

In phase three, independent samples t-tests were the statistical tools used in Microsoft Excel. The aim was to determine whether the differences in TSR between each group (acquisitive, organic, and mixed) from 2007 to 2016 were statistically significant, at a specified level of significance of 95%. In addition, the difference in total accumulated shares between each group was also determined.

The first significant step was to determine whether any outliers existed in each of the groups. An outlier is an extreme value relative to the majority of the values in

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the dataset (Wegner, 2016). The quartiles approach (Wegner, 2016) was chosen to calculate the lower and upper limit of the datasets to exclude those value that did not fall within these limits.

The next step was to check the assumption of homogeneity of variance. The F-test is conducted to ensure the correct independent samples t-test is selected, either equal variance assumed, or unequal variance assumed (Wegner, 2016).

The independent samples t-test was then performed to determine a particular significance level (p-value). When the probability was sufficiently small ($p < 0.05$ at the 95% confidence interval), it was concluded that it is unlikely that the respective group means were equal in the population, and therefore accept the alternate hypothesis and reject the null hypothesis. Otherwise, the alternative hypothesis was rejected, and the null hypothesis failed to be rejected when the probability was more substantial (usually $p > 0.05$) (Wegner, 2016).

4.7.4. Phase Four: Simple Linear Regression for Prediction

The final stage was intended as a supplementary phase that can add more value to the results found in stage three. In stage four a simple linear regression analysis was conducted to test for a relationship between the dependent variable, TSR, and the independent variable, total accumulated dividends, for each of the growth groups.

The three critical measures reported included:

- The multiple correlation coefficient (R) alternatively referred to as the Pearson correlation coefficient. This coefficient is used as a measure of the quality of prediction of the dependent variable. The R coefficient range between 0 and 1, with lower values indicating that the independent variable is not closely correlated to the dependent variable.

- The adjusted coefficient of determination (adj. R^2). This coefficient indicates the proportion of variance in the dependent variable that can be explained by the independent variable ranging between 0 and 1.

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- The significance F (p-value) indicates whether the proposed model is a good fit for the data and will also give an indication whether the independent variable is a significant predictor of the dependent variable (as it is a linear regression with only one independent variable, the values were similar). If the p-value of the independent variable is less than 0.05, it can be concluded that a relationship exists between the dependent and independent variable at a 95% confidence interval (Wegner, 2016).

4.8. Limitations

The following items were limitations to the research methodology:

- Probability sampling techniques were not used, where non-probability sampling in the form of judgement sampling was applied. The study might not be representative of the entire population because of the selection bias. The results may therefore not be possible to use to infer growth strategies used by all companies listed on the JSE. The study was restricted to a selection of the JALSH companies, with the performance evaluation period of 2007-2016.

- The metric used in the study to calculate TSR was only a single evaluation technique to determine a research outcome and conclusion. There may be other techniques that could conclude with different results.

- The research only considered the data available on the GIBS Information Centre databases as well as publicly available financial data, and hence was subject to the completeness and accuracy of these data sources.

- The results of the study came only from JSE listed companies. The conclusions may therefore not apply to other developing or resource-rich countries, non-listed companies, or companies listed on other stock exchanges.

- The study focussed on multiple industries, therefore ignoring the fact that some sectors may be value-creating while other sectors might be value-destroying.

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- The existence of survivorship bias in this study. Only companies that survived during the 10-year period of the study were considered, and not any of the companies that delisted during this period. The results of the study may therefore be skewed to a higher performance level, as only companies that were successful enough to survive until the end of the period were analysed.

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5. CHAPTER 5 – RESULTS

5.1. Introduction

This chapter will set out the results of the nine listed hypotheses in chapter 3. The aim was to determine whether an acquisitive growth strategy was the most successful strategy employed by companies listed on the JALSH in the form of TSR. In addition, the aim was also to determine whether accumulated dividends are a significant predictor of TSR. In Chapter 6 the results will be discussed in detail.

In this chapter, the descriptive and statistical analyses will be laid out. The performance of each of the growth strategy groups will be shown, followed by the independent sample t-tests that were performed to test for significant differences in TSR and total accumulated shares between groups, and well as sinple linear regression to test whether relationships exist between accumulated dividends and TSR.

5.2. Sample Description

The final sample for each growth strategy group was selected as follows:

- The Thomson Reuters Eikon database was used to access all the companies listed on the JALSH on 31 December 2016. A total of 163 companies were identified.

- The next filtering step was to identify the companies that were listed for the full duration of the study from 1 January 2007 to 31 December 2016. In order to get any useful long-term performance results, all companies had to fulfil this requirement. A total of 59 companies did not meet this demand and were excluded from the sample. The final sample consisted of 104 companies.

- The last step in finalising the sample was to classify each company as either having an organic, mixed, or acquisitive growth strategy. The organic growth strategy companies that made zero or a single acquisition amounted to 43

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companies. The mixed growth companies that made either two or three acquisitions in the study period amounted to 30 companies and finally, the acquisitive growth companies that made four or more acquisitions amounted to 31 companies. The list of the final sample, in their respective groups, can be seen in Table 6 below.

Table 6 - Final sample selection

Nr	Company Name	M&As from 2007-01-01 to 2016-12-31	Growth Strategy
1	Zeder Investments Ltd	0	Organic
2	Brait SE	0	Organic
3	Intu Properties PLC	0	Organic
4	Capitec Bank Holdings Ltd	0	Organic
5	Italtile Ltd	0	Organic
6	Trencor Ltd	0	Organic
7	Lonmin PLC	0	Organic
8	PSG Group Ltd	0	Organic
9	Kumba Iron Ore Ltd	0	Organic
10	Cashbuild Ltd	0	Organic
11	Tradehold Ltd	0	Organic
12	African Oxygen Ltd	0	Organic
13	Compagnie Financiere Richemont SA	0	Organic
14	Mr Price Group Ltd	0	Organic
15	Tongaat Hulett Ltd	0	Organic
16	Wilson Bayly Holmes - Ovcon Ltd	0	Organic
17	Clicks Group Ltd	0	Organic
18	Old Mutual PLC	0	Organic
19	Anglo American PLC	0	Organic
20	Massmart Holdings Ltd	0	Organic
21	Barloworld Ltd	0	Organic
22	Pick N Pay Stores Ltd	0	Organic
23	BHP Billiton PLC	0	Organic
24	Sanlam Ltd	0	Organic
25	Emira Property Fund	1	Organic
26	Peregrine Holdings Ltd	1	Organic
27	JSE Ltd	1	Organic
28	Coronation Fund Managers Ltd	1	Organic
29	Northam Platinum Ltd	1	Organic
30	Oceana Group Ltd	1	Organic
31	Metair Investments Ltd	1	Organic
32	Lewis Group Ltd	1	Organic

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33	Assore Ltd	1	Organic
34	Caxton and CTP Publishers and Printers Ltd	1	Organic
35	Truworths International Ltd	1	Organic
36	Omnia Holdings Ltd	1	Organic
37	African Rainbow Minerals Ltd	1	Organic
38	Exxaro Resources Ltd	1	Organic
39	Woolworths Holdings Ltd	1	Organic
40	SPAR Group Ltd	1	Organic
41	Impala Platinum Holdings Ltd	1	Organic
42	ArcelorMittal South Africa Ltd	1	Organic
43	Shoprite Holdings Ltd	1	Organic
44	Octodec Investments Ltd	2	Mixed
45	Brimstone Investment Corporation Ltd	2	Mixed
46	City Lodge Hotels Ltd	2	Mixed
47	SA Corporate Real Estate Fund Managers Ltd	2	Mixed
48	Tsogo Sun Holdings Ltd	2	Mixed
49	RCL Foods Ltd	2	Mixed
50	RMB Holdings Ltd	2	Mixed
51	KAP Industrial Holdings Ltd	2	Mixed
52	Discovery Ltd	2	Mixed
53	Sun International Ltd	2	Mixed
54	Distell Group Ltd	2	Mixed
55	Reunert Ltd	2	Mixed
56	Netcare Ltd	2	Mixed
57	Nampak Ltd	2	Mixed
58	MMI Holdings Ltd	2	Mixed
59	FirstRand Ltd	2	Mixed
60	Anglo American Platinum Ltd	2	Mixed
61	Sasol Ltd	2	Mixed
62	AfroCentric Investment Corp Ltd	3	Mixed
63	Spur Corporation Ltd	3	Mixed
64	Vukile Property Fund Ltd	3	Mixed
65	Investec Ltd	3	Mixed
66	Sappi Ltd	3	Mixed
67	Astral Foods Ltd	3	Mixed
68	Avi Ltd	3	Mixed
69	Foschini Group Ltd	3	Mixed
70	Harmony Gold Mining Company Ltd	3	Mixed
71	AECI Ltd	3	Mixed
72	Nedbank Group Ltd	3	Mixed
73	Barclays Africa Group Ltd	3	Mixed
74	Resilient Reit Ltd	4	Acquisitive
75	PPC Ltd	4	Acquisitive
76	Remgro Ltd	4	Acquisitive

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77	Murray & Roberts Holdings Ltd	4	Acquisitive
78	Super Group Ltd	4	Acquisitive
79	Telkom SA SOC Ltd	4	Acquisitive
80	Afrimat Ltd	5	Acquisitive
81	Eoh Holdings Ltd	5	Acquisitive
82	Hyprop Investments Ltd	5	Acquisitive
83	Growthpoint Properties Ltd	5	Acquisitive
84	Hosken Consolidated Investments Ltd	5	Acquisitive
85	Group Five Ltd	5	Acquisitive
86	Grindrod Ltd	5	Acquisitive
87	Gold Fields Ltd	5	Acquisitive
88	Liberty Holdings Ltd	5	Acquisitive
89	Redefine Properties Ltd	6	Acquisitive
90	Advtech Ltd	6	Acquisitive
91	MTN Group Ltd	6	Acquisitive
92	Naspers Ltd	7	Acquisitive
93	Steinhoff International Holdings NV	7	Acquisitive
94	Invicta Holdings Ltd	8	Acquisitive
95	Santam Ltd	8	Acquisitive
96	Tiger Brands Ltd	9	Acquisitive
97	Famous Brands Ltd	10	Acquisitive
98	Aspen Pharmacare Holdings Ltd	10	Acquisitive
99	AngloGold Ashanti Ltd	10	Acquisitive
100	Standard Bank Group Ltd	10	Acquisitive
101	Datatec Ltd	12	Acquisitive
102	Hudaco Industries Ltd	14	Acquisitive
103	Bidvest Group Ltd	15	Acquisitive
104	Imperial Holdings Ltd	19	Acquisitive

Once the final sample was obtained, the data collection could commence. The share price and dividend data were retrieved from the Thomson Reuters Eikon database as well as the Mcgregor BFA domain, as mentioned in Chapter 4. General descriptive statistics can be seen in Table 7, and descriptive statistics of the final sample can be seen in Table 8.

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Table 7 - Descriptive statistics: general

Descriptive Statistics	Initial Sample	Final Sample
General		
Population Size	383	
Population End Date	2016/12/31	
Sample Size (2007-01-01 to 2016-12-31)	163	104
Growth Strategies		
Organic	85	43
Mixed	43	30
Acquisitive	35	31

The population included all the companies listed on the JSE and the initial sample of companies included all companies forming part of the JALSH on 31 December 2017. The descriptive statistics of the final sample of companies, as per growth strategy group, can also be seen in Table 8.

Table 8 - Descriptive statistics: final sample

Descriptive Statistics: Final Sample	Organic	Mixed	Acquisitive	All
Market Capitalisation (2016-12-31)				
Mean (Rm)	R77 927,21	R52 486,93	R85 112,64	R72 730,48
Median (Rm)	R25 076,95	R24 652,75	R32 051,14	R28 037,89
Standard Deviation (Rm)	R203 179,32	R72 917,41	R166 509,06	R163 041,33
Minimum (Rm)	R4 173,88	R3 406,20	R2 757,06	R2 757,06
Maximum (Rm)	R1 264 597,26	R304 752,11	R882 694,92	R1 264 597,26
Mergers & Acquisitions				
Mean	0,44	2,40	7,29	3,05
Median	0	2	6	2
Standard Deviation	2,68	0,83	5,69	3,55
Minimum	0	2	4	0
Maximum	1	3	19	19
Total Shareholder Return (TSR)				

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Mean	353,6%	169,0%	370,1%	305,2%
Median	149,2%	149,5%	196,6%	162,9%
Standard Deviation	490,4%	208,8%	565,5%	451,1%
Minimum	-99,0%	-67,6%	-68,0%	-99,0%
Maximum	2286,7%	599,6%	2792,7%	2792,7%
Compound Annual TSR				
Mean	10,37%	8,45%	11,30%	10,10%
Median	9,56%	9,57%	11,49%	10,15%
Standard Deviation	13,93%	7,73%	12,26%	11,82%
Minimum	-36,89%	-10,67%	-10,78%	-36,89%
Maximum	37,33%	21,48%	40,00%	40,00%
Accumulated Shares				
Mean	1,39	1,47	1,38	1,41
Median	1,32	1,41	1,34	1,35
Standard Deviation	0,26	0,39	0,25	0,30
Minimum	1,00	1,05	1,00	1,00
Maximum	2,33	3,01	2,01	3,01

The two largest companies by market capitalisation included in the study on 31 December 2016 were BHP Billiton and Naspers with R1 264 597m and R882 694m respectively. The two smallest companies were Group Five and Afrocentric Investment Corp with R2 757m and R3 406m respectively. Notable mention needs to be made for British American Tobacco at a R1 459m market capitalisation and Glencore at R676 253m, the largest and fourth largest companies in SA, as they were excluded from the study because both companies only listed after the 1 January 2007 requirement.

The most number of acquisitions during the study period, with a total of 19 M&As, was completed by Imperial Holdings, followed by Bidvest Group at 15 M&As. There were 24 companies that made zero acquisitions during the study period.

5.3. Total Shareholder Return Results

The TSR and compound annual TSR descriptive statistics were also listed in Table 8. The companies in each growth strategy group were divided into five quantiles as can be seen in Figure 5. The reason for this was to illustrate the best

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and worst performing companies in each group. In addition to this, a mean compound annual TSR column was included to show the average compound annual TSR in each group. Finally, the compound annual TSR of the JALSH was used as a benchmark, but it must be noted that the accumulated shares used for this calculation were the average of all the JALSH companies included in the sample. Hence, this may not give a true reflection, as the JALSH is rebalanced on a regular basis, and it includes the top 160 companies and not the 103 companies included in this sample. It will however give a rough indication of the JALSH market performance versus the specific growth groups.

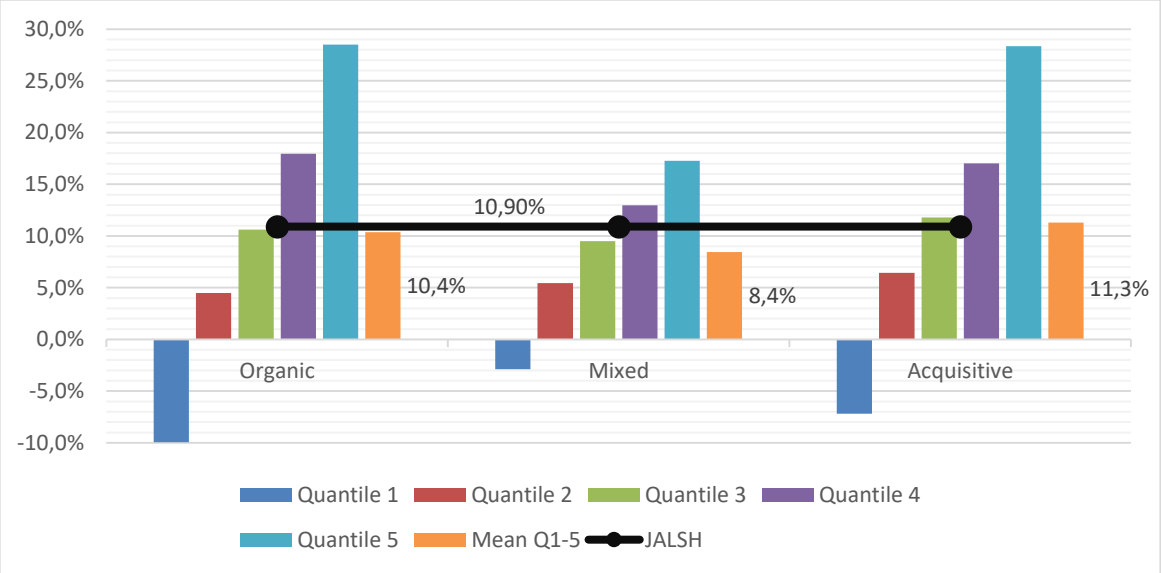

Figure 5 - Impact of growth strategy on TSR

From a visual inspection, the performance of organic and acquisitive growth companies was mostly similar in each quantile, while that of mixed growth companies seemed to have less high and low performing (Q1 and Q5) companies in their sample. The companies included in organic growth Q5, which are the top-performing companies, delivered a compound annual TSR of 28.5% over the 10-year period while the companies in acquisitive growth Q5 achieved 28.4%. The mixed growth companies lagged with 17.3% in Q5.

When you consider the other side of the charts, the low-performing companies in each group, organic growth companies delivered the worst results in Q1 with a

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compound annual TSR of -10.0%, acquisitive growth companies in Q1 with -7.2%, and mixed growth companies with -2.9% over the study period.

The most important performance indicators in Figure 5 were arguably the average performance (Q1-5). Acquisitive growth companies delivered the highest compound annual TSR with a 11.4% return, followed by organic growth companies at 10.4%, and finally mixed growth companies at 8.4%. If these values are compared to that of the JALSH performance, at a compound annual TSR of 10.9% (taking the accumulated dividend assumptions mentioned above into account), during this period, only acquisitive growth companies delivered superior returns.

The descriptive statistics results shown above were calculated without excluding any outliers. The statistical methods, in the form of independent samples t-tests and simple linear regression, were however conducted with and without the outliers. In order to identify the outliers, the quartiles approach (Wegner, 2016) was chosen to calculate the lower and upper limit of the datasets to exclude those values that did not fall within these limits. Only two TSR outliers were identified in the sample of 103 companies.

The first outlier, Lonmin, classified as an organic growth company, delivered a compound annual TSR of -36.89%. The lower bound for this group was -19.55%. The second company that was identified as an outlier, EOH Holdings, classified as an acquisitive growth company delivered compound annual TSR of 40% while the upper limit was 36.34%.

5.4. Accumulated Shares Results

The accumulated shares (assuming dividends are reinvested) were also tabulated in Table 8 above. The company that paid the highest amount of dividends to shareholders was Vukile Property Fund, a mixed growth company, with accumulated shares of 3.01. What this means is a shareholder that bought a single share on 2 January 2007 (the first trading day of 2007) managed to grow the single share to 3.01 shares through reinvesting (buying more shares) all the

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dividends that were paid out during the study period. Vukile Property Fund was followed by Tsogo Sun Holdings with accumulated shares of 2.36.

The company that paid the least amount of dividends to shareholders, also coincidentally the company that delivered the lowest TSR, was Lonmin with accumulated shares of 1.0005, followed closely by Super Group, an acquisitive growth company, with accumulated shares of 1.003. Figure 6 captures the average accumulated shares of each growth strategy group, as well as that of the entire sample.

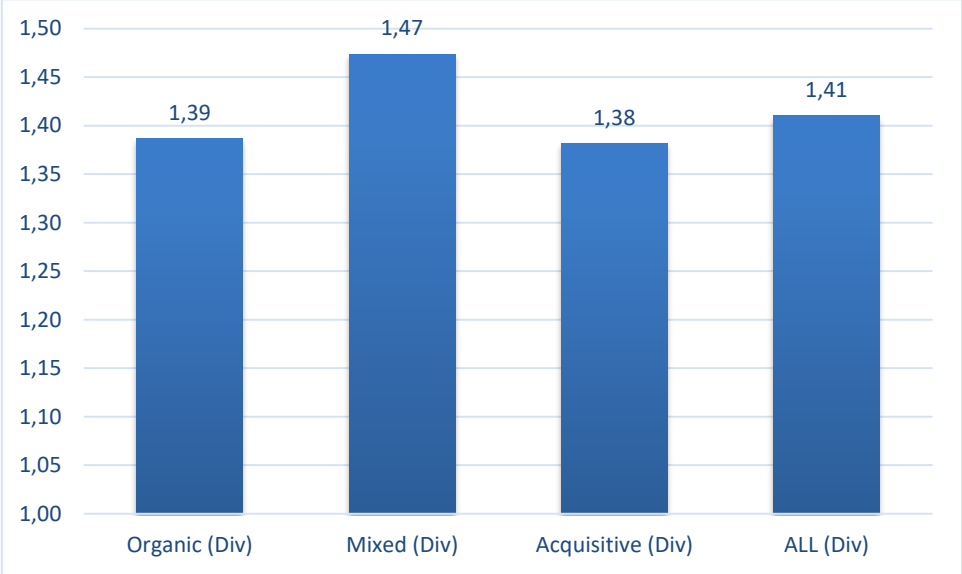

Figure 6 – Average accumulated shares

In contrast to the TSR results, mixed growth companies paid the largest amount of dividends to shareholders, while organic and acquisitive growth companies again delivered similar results. The 1.41 average accumulated shares of the entire sample, was however more than what the organic and acquisitive growth companies yielded.

It must however again be noted that all outliers related to accumulated shares were included in the descriptive statistics. Making use of the quartile approach, the outliers were identified as shown in Table 9.

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Table 9 - Accumulated share outliers

Company Name	Accumulated Shares	Growth Strategy
Emira Property Fund	1,87	Organic
Metair Investments Ltd	2,20	Organic
Italtile Ltd	2,33	Organic
SA Corporate Real Estate Fund Managers Ltd	1,96	Mixed
Tsogo Sun Holdings Ltd	2,36	Mixed
Vukile Property Fund Ltd	3,01	Mixed

The upper and lower bound for organic growth companies were 1.75 and 0.93 respectively, and for mixed growth companies 1.87 and 0.90 respectively. There were no outliers in the acquisitive growth group, with upper and lower bounds of 2.23 and 0.58 respectively.

5.5. Hypothesis Testing Results

5.5.1. Hypothesis 1 Results

Before the various hypotheses could be tested, any existing outliers first had to be identified from the respective samples to ensure a normal distribution was achieved. The histogram for the compound annual TSR of organic growth companies can be seen in Figure 7 below.

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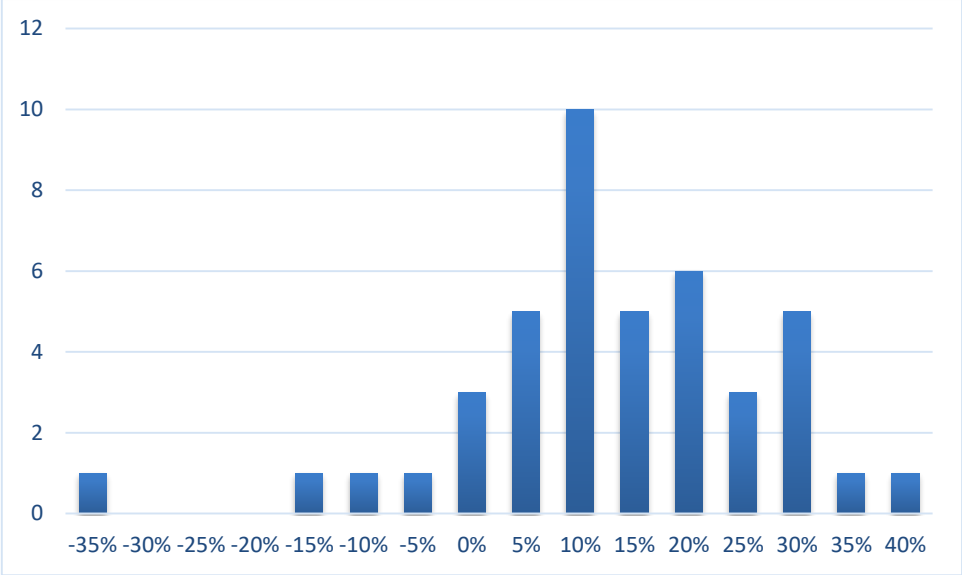

Figure 7 - Histogram of compound annual TSR of organic growth companies with Lonmin outlier

In the case of organic growth companies, the distribution of the data was negatively skewed because of the Lonmin outlier. Lonmin was excluded from the dataset resulting in a distribution that did not show significant skewness and consequently met the assumptions of the independent samples t-tests. The mixed growth companies were the next dataset tested for a normal distribution and can be seen in Figure 8.

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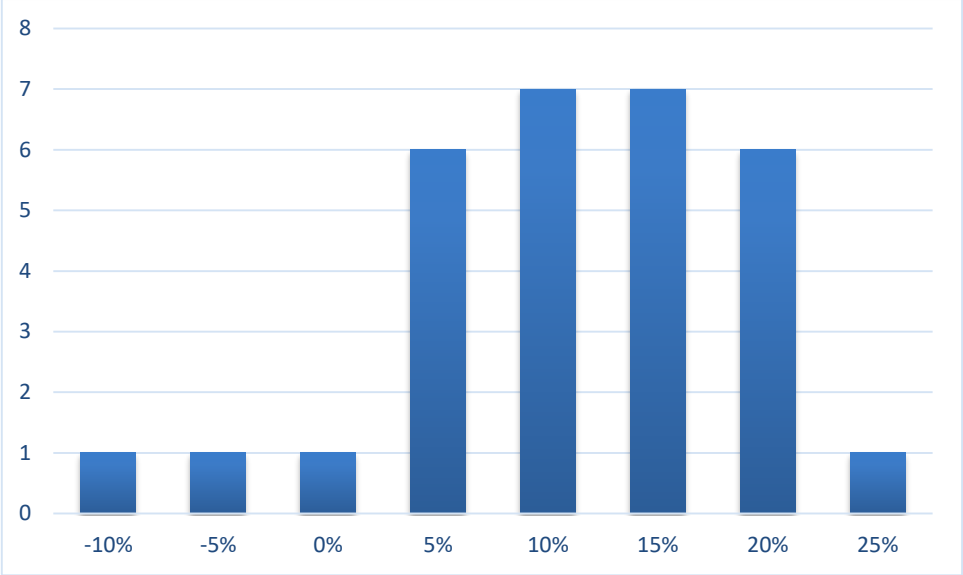

Figure 8 - Histogram of compound annual TSR of mixed growth companies

In the case of mixed growth companies, the distribution of the data was slightly negatively skewed. The quartiles approach was also used to determine whether any outliers existed in this dataset, but none were found. The mixed growth companies therefore also met the assumptions of the independent samples t-tests.

Hypothesis 1 was then tested with and without the inclusion of the outlier to determine whether the presence of the outlier has any significant effect on the results. As two independent groups, organic and mixed growth, were tested, an independent samples t-test was used. The results can be seen in Table 10 below.

Table 10 - Hypothesis 1 t-tests results

	Mean	SD	N	t-value	df	p
Organic	11,50%	11,96%	42			
Mixed	8,45%	7,54%	30	1,325	69	0,190
Organic with outliers	10,37%	13,93%	43			
Mixed with outliers	8,45%	7,54%	30	0,760	67	0,450

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Hypothesis 1

$H1_0$: The TSR of organic growth companies (TSR_{OG}) equals that of mixed growth companies (TSR_{MG}); $TSR_{OG} - TSR_{MG} = 0$

$H1_A$: $TSR_{OG} - TSR_{MG} \neq 0$

Whether the Lonmin outlier was included or excluded in the analysis, the null hypothesis could not be rejected. It was therefore concluded that TSR_{OG} equals TSR_{MG} with p = 0.19 and p = 0.45 for the respective samples as shown in Table 10.

5.5.2. Hypothesis 2 Results

In identifying any outliers, the histogram for the compound annual TSR of acquisitive growth companies can be seen in Figure 9 below.

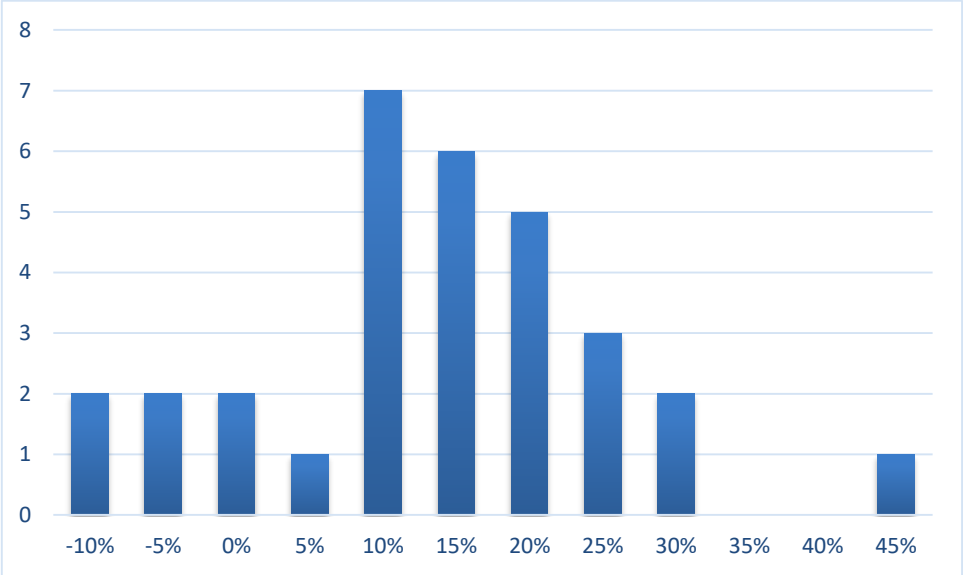

Figure 9 - Histogram of compound annual TSR of acquisitive growth companies with EOH Holdings outlier

In the case of acquisitive growth companies, the distribution of the data was positively skewed because of the outlier, EOH Holdings. EOH Holdings was excluded from the dataset and the resultant distribution did not express significant

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skewness and consequently met the assumptions of the independent samples t-tests. Hypothesis 2 was then tested similar to Hypothesis 1 above, and the results can be seen in Table 11.

Table 11 - Hypothesis 2 t-tests results

	Mean	SD	N	t-value	df	p
Organic	11,50%	11,96%	42			
Acquisitive	10,35%	11,16%	30	0,414	70	0,680
Organic with outliers	10,37%	13,93%	43			
Acquisitive with outliers	11,30%	12,20%	31	-0,298	72	0,767

Hypothesis 2

$H2_0$: The TSR of organic growth companies (TSR_{OG}) equals that of acquisitive growth companies (TSR_{AG}); $TSR_{OG} – TSR_{AG} = 0$

$H2_A$: $TSR_{OG} – TSR_{AG} \neq 0$

Again, whether the outlier in the form of EOH Holdings was included or excluded in the analysis, the null hypothesis could not be rejected. It was concluded that TSR_{OG} equals TSR_{AG} with $p = 0.680$ and $p = 0.767$ for the respective samples as shown in Table 11.

5.5.3. Hypothesis 3 Results

The final hypothesis related to TSR was then tested, similar to that of hypothesis 1 and 2, with the results illustrated in Table 12.

Table 12 - Hypothesis 3 t-tests results

	Mean	SD	N	t-value	df	p
Mixed	8,45%	7,54%	30			
Acquisitive	10,35%	11,16%	30	-0,772	51	0,444
Mixed with outliers	8,45%	7,54%	30			
Acquisitive with outliers	11,30%	12,20%	31	-1,103	50	0,275

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Hypothesis 3

$H3_0$: The TSR of mixed growth companies (TSR_{MG}) equals that of acquisitive growth companies (TSR_{AG}); $TSR_{MG} - TSR_{AG} = 0$

$H3_A$: $TSR_{MG} - TSR_{AG} \neq 0$

Whether the outlier in the form of EOH Holdings was included or excluded in the analysis, the null hypothesis could not be rejected. It was concluded that TSR_{MG} equals TSR_{AG} with p = 0.444 and p = 0.275 for the respective samples as shown in Table 12 above.

5.5.4. Hypothesis 4 Results

The same process utilised for testing Hypotheses 1-3 related to TSR was also used to test Hypotheses 4-6 related to accumulated shares. Before the hypotheses were tested, the outliers were identified from the respective samples to ensure a normal distribution is achieved. The histogram for the accumulated shares of organic growth companies can be seen in Figure 10 below.

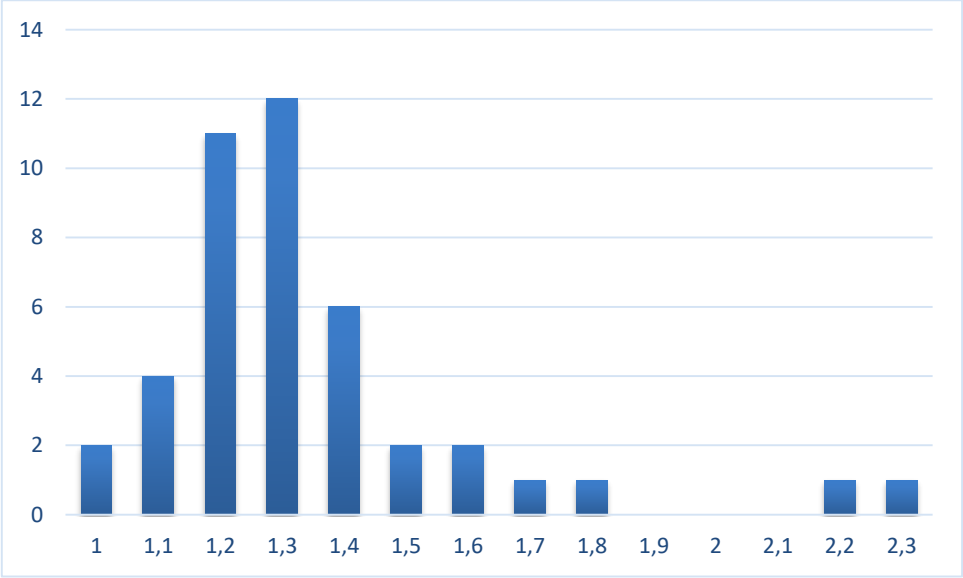

Figure 10 - Histogram of accumulated shares of organic growth companies with Emira Property Fund, Metair Investments & Italtile outliers

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The distribution of accumulated shares of organic growth companies was substantially positively skewed because of the following outliers: Emira Property Fund, Metair Investments and Italtile. By excluding the outliers from the dataset, the resultant distribution does not show significant skewness and therefore meets the assumptions of the independent samples t-tests. The mixed growth companies were the next dataset tested for a normal distribution and can be seen in Figure 11.

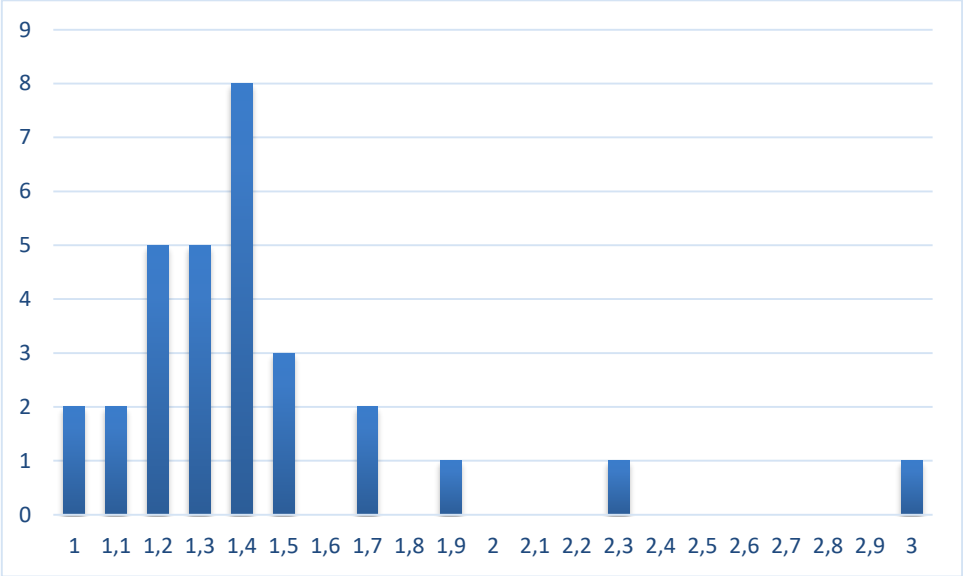

Figure 11 - Histogram of accumulated shares of mixed growth companies with SA Corporate Real Estate Fund Managers, Tsogo Sun Holdings & Vukile Property Fund outliers

In the case of mixed growth companies, the distribution of the data was also positively skewed. By excluding the outliers from the dataset, the mixed growth companies met the assumptions of the independent samples t-tests. Hypothesis 4 was then tested, and the results can be seen in Table 13.

Table 13 - Hypothesis 4 t-tests results

	Mean	SD	N	t-value	df	p
Organic	1,331	0,155	40			
Mixed	1,366	0,165	27	-0,901	65	0,371
Organic with outliers	1,387	0,261	43			
Mixed with outliers	1,474	0,390	30	-1,070	47	0,290

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Hypothesis 4

$H4_0$: The accumulated shares of organic growth companies (AS_{OG}) equals that of mixed growth companies (AS_{MG}); $AS_{OG} - AS_{MG} = 0$

$H4_A$: $AS_{OG} - AS_{MG} \neq 0$

Whether the outliers were included or excluded in the analysis, the null hypothesis could not be rejected. It was concluded that AS_{OG} equals AS_{MG} with $p = 0.371$ and $p = 0.290$ for the respective samples as shown in Table 13 above.

5.5.5. Hypothesis 5 Results

The outliers were identified by utilising a histogram with the data of accumulated shares for acquisitive growth companies and can be seen in Figure 12 below.

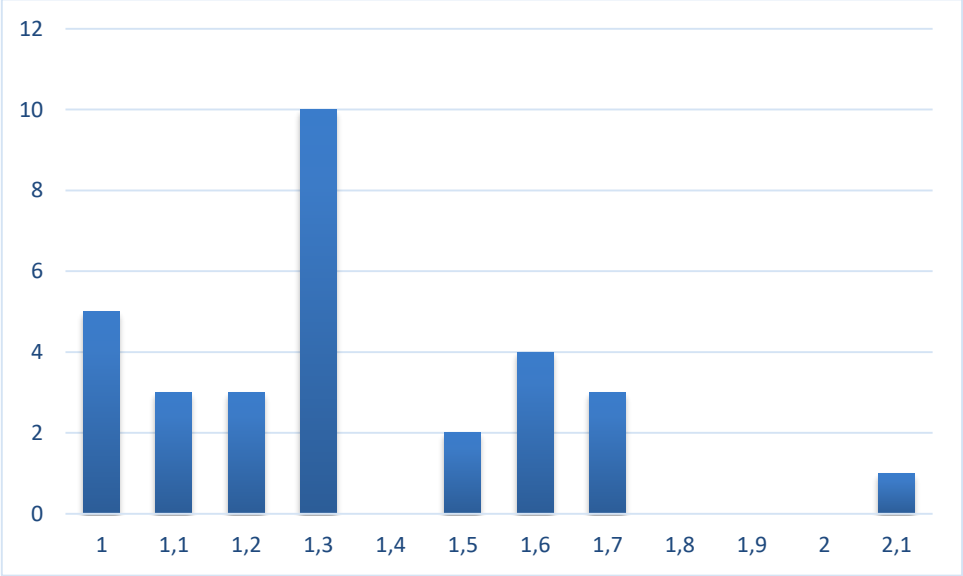

Figure 12 - Histogram of accumulated shares of acquisitive growth companies

The distribution of the data was slightly positively skewed, but interestingly by using the quartiles approach, no outliers were identified. The acquisitive growth companies therefore met the assumptions of the independent samples t-tests. Hypothesis 5 was then tested, and the results can be seen in Table 14.

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Table 14 - Hypothesis 5 t-tests results

	Mean	SD	N	t-value	df	p
Organic	1,331	0,155	40			
Acquisitive	1,382	0,248	31	-1,011	47	0,317
Organic with outliers	1,387	0,261	43			
Acquisitive with outliers	1,382	0,248	31	0,078	72	0,938

Hypothesis 5

$H5_0$: The accumulated shares of organic growth companies (AS_{OG}) equals that of acquisitive growth companies (AS_{AG}); $AS_{OG} – AS_{AG} = 0$

$H5_A$: $AS_{OG} – AS_{AG} \neq 0$

Whether the outliers were included or excluded in the analysis, the null hypothesis could not be rejected. It was concluded that AS_{OG} equals AS_{AG} with p = 0.317 and p = 0.938 for the respective samples as shown in Table 14 above.

5.5.6. Hypothesis 6 Results

Hypothesis 6 also related to accumulated shares and the test results can be seen in Table 15 below.

Table 15 - Hypothesis 6 t-tests results

	Mean	SD	N	t-value	df	p
Mixed	1,366	0,165	27			
Acquisitive	1,382	0,248	31	-0,289	52	0,774
Mixed with outliers	1,474	0,390	30			
Acquisitive with outliers	1,382	0,248	31	1,095	49	0,279

Hypothesis 6

$H6_0$: The accumulated shares of mixed growth companies (AS_{MG}) equals that of acquisitive growth companies (AS_{AG}); $AS_{MG} – AS_{AG} = 0$

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$H6_A$: $AS_{MG} - AS_{AG} \neq 0$

Whether the outliers were included or excluded in the analysis, the null hypothesis could not be rejected. It was concluded that AS_{MG} equals AS_{AG} with p = 0.774 and p = 0.279 for the respective samples as shown in Table 15 above.

5.5.7. Hypothesis 7 Results

Hypothesis 7 was aimed at determining whether a relationship exists between the dependent variable, TSR_{OG}, and the independent variable, AS_{OG}, of organic growth companies. The results can be seen in Table 16.

Table 16 - Hypothesis 7 simple linear regression results

	Pearson's R	Adjusted R^2	p-value
Organic	0,2806	0,0538	0,0836
Organic with outliers	0,3273	0,0853	0,0322

The sample including the outliers delivered a Pearson's R value of 0.33, which indicates a moderate to poor linear relationship. Only 8.5% of the variance in TSR_{OG} could be explained by AS_{OG}, which suggests a weak association between the dependent and independent variable. The p-value of 0.032, which is below 0.05, indicates that AS_{OG} is a significant predictor of TSR_{OG}. It can be concluded that there is a moderate to weak positive relationship between AS_{OG} and TSR_{OG} in the population, and therefore the null hypothesis can be rejected at a 95% confidence interval.

When the sample was considered without the outliers, similar results were found for the Multiple R and adjusted R Square values, 0.28 and 0.54 respectively, but the p-value of 0.08 was above 0.05. Therefore, one can conclude that TSR_{OG} cannot be predicted from AS_{OG}. The null hypothesis can henceforth be accepted in this case.

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5.5.8. Hypothesis 8 Results

Hypothesis 8 was aimed at determining whether a relationship exists between the dependent variable, TSR_{MG}, and the independent variable, AS_{MG}, of mixed growth companies. The results can be seen in Table 17.

Table 17 - Hypothesis 8 simple linear regression results

	Pearson's R	Adjusted R^2	p-value
Mixed	0,4281	0,1506	0,0259
Mixed with outliers	0,4160	0,1435	0,0222

The sample including the outliers delivered a Pearson's R value of 0.42, which indicates a moderate to poor linear relationship. Only 14.4% of the variance in TSR_{MG} could be explained by AS_{MG}, which means a weak association between the dependent and independent variable. The p-value of 0.022, which is below 0.05, indicates that AS_{MG} is a significant predictor of TSR_{MG}. It can be concluded that there is a moderate to weak positive relationship between AS_{MG} and TSR_{MG} in the population, and therefore the null hypothesis can be rejected at a 95% confidence interval. The sample without outliers showed similar results, and thus the null hypothesis can be rejected in this case as well.

5.5.9. Hypothesis 9 Results

Hypothesis 9, the final hypothesis, also aimed to determine whether a relationship exists between the dependent variable, TSR_{AG}, and the independent variable, AS_{AG}, of acquisitive growth companies. The results can be seen in Table 18.

Table 18 - Hypothesis 8 simple linear regression results

	Pearson's R	Adjusted R^2	p-value
Acquisitive	0,1934	0,0030	0,3059
Acquisitive with outliers	0,1108	-0,0218	0,5531

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The sample including the outliers delivered a Pearson's R value of 0.11, which indicates a poor linear relationship. The negative adjusted R Square value of -0.02 suggests that the model fits the data poorly. The p-value of 0.55, which is above 0.05, indicates that AS_{AG} is not a significant predictor of TSR_{AG}. It can be concluded that there is no relationship between AS_{AG} and TSR_{AG} in the population, and therefore the null hypothesis can be accepted at a 95% confidence interval. The sample without outliers showed similar results and therefore the null hypothesis can be accepted in this case as well.

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6. CHAPTER 6 – DISCUSSION OF RESULTS

Chapter 6 provides a discussion of the results recorded in Chapter 5 and is divided into sub-sections addressing the TSR differences, dividend accumulation differences and relationship between TSR and accumulated dividends results. Where applicable, this chapter will refer to historical studies documented in the previous chapters.

6.1. Descriptive Statistics: Total Shareholder Return

The TSR was calculated for the three sets of samples. These included organic, mixed, and acquisitive growth companies, to determine which growth strategy had delivered the superior result from the 2007 – 2016 calendar years. The TSR for each growth strategy was illustrated in Figure 5, with acquisitive growth companies delivering annualised TSR of 11.3%, organic growth 10.4%, and mixed growth 8.4%.

The study conducted by Cools et al. (2004), which included 700 US companies, delivered similar results, with acquisitive growth companies also delivering superior results. They found annualised TSR of 10.8% for acquisitive growth, 9.9% for mixed growth, and 9.6% for organic growth companies while excluding the top and bottom quantiles because of extreme values. If this study took a similar approach by eliminating the top and bottom quartiles, acquisitive growth companies still delivered superior TSR of 11.8%, organic growth 11.0% and mixed growth 9.3%. Interestingly, this study found mixed growth companies to be the lowest-performing group. It must however be noted that the study of Cools et al. (2004) excluded all banks and financial institutions from their research.

The results of this study are however in contrast with the studies of Favaro, Meer, and Sharma (2012) and Goedhart and Koller (2017). Both studies found an organic growth strategy delivering superior TSR over the long-term. In the Goedhart and Koller (2017) study, all banking and insurance sectors were excluded from their study because of severe underperformance during the 2008 financial crisis. It is important to note that the historical studies mentioned above

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were all based on companies operating in developed nations. In addition, Goedhart and Koller (2017) stated that the primary reason for acquisitive growth companies underperforming when compared to organic growth companies was the high initial capital input with a large part allocated to the M&A premium. This study did not however consider takeover premiums, and it may well be that the M&A premiums of the deals or companies considered in the Favaro, Meer, and Sharma (2012) and Goedhart and Koller (2017) research was much different to this research.

Numerous historical research in the field of M&As excluded specific sectors from the study, as it either skewed the results negatively or positively, while this study did not exclude any sectors. It must however be noted that the companies included in the Industrial Metals and Mining sector, as defined by the JSE, severely underperformed during the study period.

There were 13 companies from the above sector included in this study with an average annualised TSR of -5.8%, which negatively affected all three of the growth strategy groups. Nine of these 13 companies formed part of the organic growth group, while two companies each for acquisitive and mixed growth groups. When the annualised TSR were calculated for each of the groups, excluding the Industrial Metals and Mining sector and including any outliers, organic growth companies came out on top with 14.3%, followed by acquisitive growth with 12.6% and mixed growth with 9.8%, which is much different compared to the results of the entire sample. While the financial sectors typically skewed historical studies negatively, those in the metals and mining sector in South Africa were the underperforming entities. This study did not investigate any sectors to exclude from the study, and therefore the above was obtained from observations only, and not from any statistical analysis. There may be other sectors that also skewed the results negatively or positively.

6.2. Descriptive Statistics: Accumulated Shares

In order to determine the TSR over a specified period, the two core factors are share price appreciation/depreciation and the accumulated dividends

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(reinvestment assumed). The accumulated shares for each growth strategy were calculated and illustrated in Figure 6, with acquisitive growth companies accumulating 1.38 shares, organic growth 1.39, and mixed growth 1.47 shares. It must be noted again that to complete the calculations, a single share of each company was purchased on the first trading day of the study. Taking this into account, the actual accumulated dividends (reinvested on record-date) are 0.38, 0.39, and 0.47 shares respectively.

Cools et al. (2004) found that highly acquisitive high-growth companies had an average dividend yield of only 0.4% while all other companies delivered a 1.8% dividend yield. They therefore found that low dividend yields typically characterised acquisitive companies. From the descriptive results of this study, acquisitive and organic growth companies delivered similar dividend yields, while mixed growth companies had the highest dividend yield. Chapters 6.3.2 and 6.3.3 below will further discuss whether there are significant differences in accumulated dividends between growth groups and whether dividend yields are a significant predictor of TSR.

6.3. Hypothesis Testing Discussion

6.3.1. Hypothesis 1 – 3 Discussion

Hypotheses 1 – 3 were grouped together, as each of the three hypotheses tested for TSR differences between the three growth strategy groups. Independent samples t-tests were used to test for significant differences between samples. For each of the cases, outliers were included as well as excluded when the statistical test was performed to determine whether the inclusion of outliers had any noteworthy effect on the outcomes.

Hypothesis 1 aimed to determine whether TSR_{OG} was significantly different from TSR_{MG}. The p-value of 0.45 including the outliers and a p-value of 0.19 excluding the outliers (which are both above 0.05) meant that in both cases the null hypothesis could not be rejected in a 95% confidence interval. What this means

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is that in the larger context of the entire population of JSE listed companies, TSR_{OG} is not significantly different from TSR_{MG}.

Hypothesis 2 aimed to determine whether TSR_{OG} was significantly different from TSR_{AG}. The p-value of 0.77 including the outliers and a p-value of 0.68 excluding the outliers (which are both above 0.05) meant that in both cases the null hypothesis could not be rejected in a 95% confidence interval. Similar to the findings of Hypothesis 1, in the context of the entire population, TSR_{OG} is not significantly different from TSR_{AG}.

Finally, Hypothesis 3 aimed to determine whether TSR_{MG} was significantly different from TSR_{AG}. The p-value of 0.28 including the outliers and a p-value of 0.44 excluding the outliers (which are both above 0.05) meant that in both cases the null hypothesis could not be rejected in a 95% confidence interval. Therefore, for hypothesis 1 – 3, there were not any significant TSR differences between the three growth groups.

Even though this study found in the descriptive statistics that an acquisitive growth strategy delivered superior TSR, the independent samples t-tests proved that there are no significant differences between the respective samples, therefore in the context of the entire population, the three growth strategies defined in this study delivered equal TSR.

When considering historical M&A research, as many studies show that M&As destroys value as those showing M&As create value. The inconclusive nature of M&A studies can be largely attributed to the diverse range of methodologies applied and timeframe of the studies, either short or long-term, even though the bulk of the studies has however focused on short-term returns.

Even though this study is of a long-term nature, it is still essential to understand how it compares to both short and long-term studies. From the historic short-term share price performance event studies listed in Table 1, Dodd (1980), Asquith, Bruner and Mullins (1987), Varaiya and Ferris (1987), Servaes (1991), Jennings and Mazzeo (1991), Bannerjee and Owers (1992), Byrd and Hickman (1992),

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Kaplan and Weisbach (1992), Sirrower (1994), Mitchell and Stafford (2000), Walker (2000), Houston, James and Ryngaert (2001) all found that M&As delivered significant negative cumulative abnormal returns at a 95% confidence interval.

In contrast to the above studies, from the historic short-term share price performance event studies listed in Table 2, Dodd, Ruback (1977), Kummer, Hoffmeister (1978), Bradley, Desai and Kim (1982), Eckbo (1983), Dennis and McConnell (1986), Bradley, Desai and Kim (1988), Jarrell and Poulsen (1989), Loderer and Martin (1990), Mulherin (2000), Kohers and Kohers (2000) all found that M&As delivered significant positive cumulative abnormal returns at a 95% confidence interval.

Even though a bulk of the studies found statistically significant results, consensus does not exist whether M&As create any value over the short-term when considering share-price performance studies.

When considering historic long-term share price performance event studies listed in Table 3, Langetieg (1978), Asquith (1983), Bradley, Desai and Kim (1983), Malatesta (1983), Agrawal, Jaffe and Mandekler (1992), Gregory (1997), Rau and Vermaelen (1998), Louis (undated), Pettit (2000) and Ferris and Park (2001) all interestingly enough found that M&As delivered significant negative cumulative abnormal returns at a 95% confidence interval while none delivered significant positive returns. What this means is following an acquisitive growth strategy could be detrimental to a company. It must however be noted that different measures were used to determine value creation, but it assists in creating a broader understanding of the M&A field.

While it is not possible to extrapolate the findings of this study, which is South African-based, to the broader emerging market context, it may add value to the limited historical studies conducted on M&As in emerging markets. Al Rahahleh and Wei (2012) and Grigorieva and Petrunina (2015) both found that M&As destroy value over the longer term.

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As mentioned before, limited comparative studies on growth strategies have been conducted, but numerous on M&A events. It is not possible to compare a singular M&A event to that of a company growth strategy, as multiple factors play a role when considering shareholder returns, but it assists in better understanding the phenomenon of growing through acquisitions.

6.3.2. Hypothesis 4 – 6 Discussion

Hypotheses 4 – 6 were a precursor for Hypothesis 7 – 9, as the aim was first to determine whether significant differences exist between the accumulated dividends of the respective growth strategy groups before determining whether accumulated dividends is a significant contributor to TSR of each group.

Independent samples t-tests were used to test for significant differences between samples. For each of the cases, outliers were included as well as excluded when the statistical test was performed to determine whether the inclusion of outliers had any significant effect on the outcomes.

The resultant p-values for Hypothesis 4 were 0.29 and 0.37 for the sample with and without outliers respectively. What this meant, is that at a 95% confidence interval, the null hypothesis could not be rejected in each case as AS_{OG} was not significantly different from AS_{MG}. Similar to Hypothesis 4, the results of Hypothesis 5 and Hypothesis 6 showed that neither AS_{OG} and AS_{MG}, nor AS_{MG} and AS_{AG} are significantly different at a 95% confidence interval, as the respective p-values all exceeded 0.05. It can therefore be concluded that in the context of the entire population, the accumulated dividends of organic, mixed, and acquisitive growth companies are equal.

6.3.3. Hypothesis 7 – 9 Discussion

The final set of statistical analyses was conducted in the form of simple linear regression. Accumulated dividends were selected as the independent variable, while TSR was the dependent variable. The aim was to determine whether a relationship exists between accumulated dividends and TSR for each growth strategy group.

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Three crucial measures were considered in determining the quality and significance, should a relationship exist. The first measure, the Pearson correlation coefficient R, determines how well the accumulated dividends were able to predict the TSR. The second measure, adjusted R^2, represents the proportion of variation in TSR that can be explained by accumulated dividends. Finally, the third measure, p-value, seeks to understand whether accumulated shares is a significant predictor of TSR. Once these three measures were determined and understood, the relationship between accumulated shares and TSR for each group were established.

Hypothesis 7 aimed to determine whether AS_{OG} is a significant predictor of TSR_{OG}. The R coefficient of organic growth companies with outliers was 0.33 and 0.28 excluding outliers. What this indicates, is the strength of the relationship between the two variables. The closer the values are to 1.00, the stronger the relationship. In addition, the R-value can also take on a positive and a negative value, thus indicating the direction of the relationship. From the above values, there exists a moderate positive relationship between AS_{OG} and TSR_{OG}.

The adjusted R^2 values of organic growth companies with outliers were recorded as 0.085, and 0.054 excluding outliers. What this indicates, is that only 8.5% and 5.4% respectively of the variance in TSR_{OG} can be explained by AS_{OG} suggesting a weak association between variables.

Finally, the p-value of organic growth companies with outliers was 0.032, and 0.084 excluding outliers. These values assist in determining whether the statistical relationship between AS_{OG} and TSR_{OG} is a genuine relationship or if it is due purely to chance in the context of the entire population. At a confidence interval of 95%, when the p-value is less than 5% (0.05), strong enough evidence exists to conclude that the population correlation coefficient is not zero. Therefore, a genuine relationship exists between AS_{OG} and TSR_{OG}. In considering the three measures above, it can be concluded that a statistically-significant moderate to weak positive relationship exists between AS_{OG} and TSR_{OG} for a sample containing outliers. The null hypothesis can thus be rejected.

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In the case of the sample without outlier, the relationship is not significant, and therefore the null hypothesis fails to be rejected.

The regression results of Hypothesis 8 were shown in Table 17. The three measures for mixed growth companies containing and excluding outliers were as follows: Pearson's R of 0.416 and 0.428; adjusted R^2 of 0.144 and 0.151 and p-values of 0.022 and 0.026 respectively. In both cases, it can be concluded that a statistically-significant moderate positive relationship exists between AS_{MG} and TSR_{MG}. The accumulated dividends of mixed growth companies are therefore an important predictor of TSR, even though the independent variable can explain only 14.4% and 15.1% of TSR respectively. The null hypothesis was thus rejected in both cases.

The final hypothesis of this study, Hypothesis 9, illustrated the regression results in Table 18. Acquisitive growth companies were considered in this case for a sample with and without outliers resulting in the following: Pearson's R of 0.111 and 0.193; adjusted R^2 of -0.022 and 0.003 and p-values of 0.306 and 0.553 respectively. As both p-values are below 0.05, it can be concluded that a significant relationship between AS_{AG} and TSR_{AG} does not exist, and therefore the null hypothesis fails to be rejected.

When considering historical studies that intended to determine whether companies with high dividend payouts realised in future earnings growth as discussed in chapter 2.5, several comparisons can be made. It must be noted that none of the historical studies divided companies into certain growth strategy groups, but instead included companies into a single sample.

When considering studies conducted in developed countries, Arnott and Asness (2003) and Zhou and Ruland (2006), which included the two most comprehensive historical studies, found that dividend payouts were a significant predictor of future earnings growth. From an emerging market perspective, Vermeulen and Smit (2011), Murekefu and Ouma (2012) and Osamwonyi and Lola-Ebueku (2016) similarly found that a significant positive relationship exists between dividend yields and company earnings growth. In this study, accumulated

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dividends was a significant predictor of TSR for organic growth companies with outliers and mixed growth companies with and without outliers, which is in line with the above studies.

In contrast, Stanley (2009) stated that roughly half of the historical studies, dating back to the 1960's, found that dividend yields were not a significant predictor of future earnings. In the emerging market context, Al-Twaijry (2007) found that for listed Malaysian companies, dividend yields did not significantly influence future earnings growth. These findings are in line with this study's outcomes on organic growth companies without outliers and acquisitive growth companies with and without outliers where accumulated dividends were not a significant predictor of TSR. It can be safe to say when considering past or future earnings growth, it is important to consider and understand the role dividend yields play.

6.4. Summary

While this study did not find statistically significant results overall which indicated that TSR of acquisitive companies was superior to that of organic and mixed growth companies, the study did attempt to add to the limited body of knowledge in comparative growth strategy studies, and especially in the South African context. The research aimed to add to the existing body of knowledge by considering the following main outcomes:

- Determining whether companies listed on the JSE employed acquisitive, organic, or mixed growth strategies.

  Considering the full sample of 104 companies included in this research, there was a relatively equal distribution between the three growth strategy groups, with the organic growth sample containing somewhat more companies than the mixed and acquisitive growth samples with 41, 30 and 31 companies respectively. The samples were determined by purely the number of M&As during the 10-year study period, while many other techniques exist, some which include the value of the M&As compared to that of individual company revenues or market capitalisations.

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- Determining whether companies growing through acquisitions delivered significant different historical total shareholder returns (TSR) compared to that of organic and mixed growth companies on the JSE.

  The descriptive statistics showed that acquisitive companies in South Africa yielded the highest TSR. In order to determine whether this finding is a significant finding that can be extrapolated from the sample to the entire population, Hypotheses 1 – 3 were tested by independent samples t-tests. The findings of the three hypotheses were insignificant in each case, as the results meant that the TSR of the three groups were equal in the context of the population. Compared to historical research, the bulk of the long-term share-price studies indicates that M&As are of a value-destroying nature. It was also noted that previous studies excluded certain underperforming sectors from the studies, while this study did not exclude any sectors, even though it was determined from observations that the Industrial Metals and Mining sector underperformed severely.

- Determining whether a relationship exists between accumulated dividends and TSR for each of the three growth strategy groups, and also the strength of the relationship.

  Hypotheses 4 – 6 explored whether differences existed between dividends accumulated by each strategy group. As share price appreciation/depreciation and accumulated dividends are the critical factors in calculating TSR, a better understanding around the role dividends play was required. Similar to Hypotheses 1 – 3, the results showed that no significant differences existed between groups.

  Hypotheses 7 – 9 explored whether accumulated dividends is a significant predictor of TSR. It was found that accumulated dividends were a significant predictor of TSR for organic growth companies with outliers and mixed growth companies with and without outliers, while insignificant results were found for organic growth companies without outliers and acquisitive growth companies with and without outliers. When considering historical studies, pre-2003

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studies supported the notion that dividend yields were not a significant predictor of future earnings growth, while this idea was challenged post-2003 where researchers found the opposite to be true. In the context of emerging markets, and more specifically South Africa, the bulk of the evidence supported the idea that dividend yields played an important part in future earnings growth. As no previous comparative study of this nature between growth strategies could be found, a direct comparison could not be made from this study's results.

The research therefore contributed to the body of knowledge in the following ways:

- It specifically focussed on growth strategies of companies in South Africa listed on the JSE, which may be the first of its kind.

- Determining the TSR of each growth strategy, and for that matter, each company included in the final sample for a 10-year period to establish the best performing strategy.

- Determining whether relationships exist between dividend yields and TSR for the respective growth strategies in South Africa, where previously this was only considered for individual companies.

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7. CHAPTER 7 - CONCLUSION

The purpose of this research was to determine whether companies listed on the JSE employed acquisitive, organic, or mixed growth strategies; whether companies growing through acquisitions delivered significant different historical total shareholder returns (TSR) compared to that of organic and mixed growth companies on the JSE; and whether a strong or weak relationship exists between accumulated dividends and TSR for each of the three growth strategy groups for the ten years between 2007 and 2016.

The study was undertaken to add to the existing body of knowledge, given that a lack of growth strategy comparative studies exists, especially in the South African context. Total Shareholder Returns (TSR) was utilised as the company growth measure that consists of share price appreciation or depreciation and the accumulated dividends in the research period.

7.1. Principal Findings

The final sample included in this study included 104 companies that formed part of the JALSH. This sample was further divided according to the number of M&As during the 10-year study period which resulted in 43 organic growth, 30 mixed growth and 31 acquisitive growth companies. In order to determine whether significant differences exist between these samples, independent samples t-tests were conducted and simple linear regression was applied to determine whether relationships exist between accumulated dividends and TSR.

The literature review identified that multiple M&A studies have been conducted historically, with the bulk of the studies conducted in developed countries. M&A research could be split into three general research approaches: share-price performance studies that are event-based, operating performance or accounting studies or executive surveys and clinical studies (Bruner, 2002). This study was a share-price performance study, with the incorporation of accumulated dividends.

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While the results of the short-term share-price performance studies in developed countries were somewhat ambiguous, the majority of the long-term studies suggested that M&As destroys value. From the limited research in this field conducted in developed countries, the results also seem to indicate that M&As are value-destroying. Additional factors such as corporate governance quality, institutional development and government involvement were also highlighted as reasons why developed and developing countries may deliver different results.

When considering growth strategy comparative studies with TSR as a measure, contradicting results were found. Favaro, Meer, and Sharma (2012) and Goedhart and Koller (2017) found that an organic growth strategy outperformed an acquisitive growth strategy, while the study of Cools et al. (2004) found contradicting results.

The literature on whether dividend yields were a significant predictor of future earnings also indicated that it was a fiercely contested topic. When considering historical studies, pre-2003 studies supported the notion that dividend yields were not a significant predictor of future earnings growth, while this idea was challenged post-2003 where researchers found the opposite to be true. In the context of emerging markets, and more specifically South Africa, the bulk of the evidence supported the idea that dividend yields played an essential part in future earnings growth.

Even though descriptive statistical results showed that an acquisitive growth strategy delivered superior TSR in the 10-year study, this study did not find statistically significant results indicating that acquisitive growth companies delivered superior TSR compared to that of organic or mixed growth companies. It can therefore be concluded that companies listed on the JSE growing through acquisitions do not deliver superior returns compared to organic and mixed growth strategies. Even though this study provided considerable insight in to growth strategies employed by listed companies, definitive conclusions cannot be made as to which strategy has historically been most successful and which strategy companies should follow when entering the South African market. Therefore, further research is required in this field.

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The previous comparative studies excluded specific sectors, especially financial and insurance entities, because of severe underperformance during the 2008 global financial crisis. This study did not exclude any sectors, but it was observed that the Industrial Metals and Mining sector severely underperformed in the study period which impacted the results negatively.

Finally, it was found that accumulated dividends is a significant predictor of TSR for organic growth companies with outliers and mixed growth companies with and without outliers, while insignificant results were found for organic growth companies without outliers and acquisitive growth companies with and without outliers. The results are largely ambiguous but showed similarities to the study of Vermeulen & Smit (2011) which showed that dividend yields are a significant predictor of future earnings growth in South Africa and the USA. The reasons for the findings can be investigated in future research, but what the results do show, is that distributing dividends is important for the future wellbeing of companies and should not be disregarded in any sense.

7.2. Implications for Management

In the South African context, it is crucial for managers and decision-makers to understand what the effects are when implementing and executing an acquisitive growth strategy. The first step would be to understand what strategy has historically delivered superior returns before other factors such as political instability, investment status downgrade, regulatory uncertainty, quality of institutions, and any other factors are considered. This study did not find significant differences between growth strategies, but managers can use the core of this study and include various other elements that can assist in improving decision making.

This study has shown managers that companies listed in South Africa are diverse in terms of growth strategies adopted. It is therefore recommended that each M&A transaction should be considered as unique until further research proves otherwise.

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In the global context, it is just as important for multi-national companies to understand the local context. In expanding into South Africa, will it be more prolific to acquire an established company with existing customers in the market, or will it be better to enter without any acquisitions or partnerships, and gain market share through organic growth. While numerous other factors play a role in making such a significant decision, looking at the numbers of the current market conditions will give valuable insight which this study has provided to a certain extent.

This study has highlighted that M&As are intricate events, and should not be placed into a certain basket without considering all factors involved, which proved to be quite a large number. Assumptions should be clear, motivated and proved in order to advance research in this field.

7.3. Limitations of Research

The following items were limitations to the research study:

- The study only considered companies forming part of the JALSH from 1 January 2007 to 31 December 2016. A study over a longer term may have given different results.

- The timeline of the study includes the global financial crisis of 2007-2008, which is described by many as the worst financial crisis since the Great Depression in the 1930's. The effects of the crisis may impact the reliability of the study.

- The TSR metric used to determine company performance was only a single evaluation technique, while other techniques could conclude with different results.

- The results of the study came only from JSE listed companies. The conclusions may therefore not apply to other developing or resource-rich countries, non-listed companies, or companies listed on other stock exchanges.

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- The study included all sectors of the JSE and did not take in to account any outlier sectors that may positively or negatively skew the results.

- The existence of survivorship bias in this study. Only companies that survived during the 10-year period of the study were considered, and not any of the companies that delisted during this period. The results of the study may therefore be skewed to a higher performance level, as only companies that were successful enough to survive until the end of the period were analysed.

- The study categorised companies into growth strategy groups according to the number of M&A transactions and not the value of the deals or any other methods. In considering the value, big or small deals, different samples may be obtained.

7.4. Suggestions for Future Research

This study was the first comparative study of this kind that could be found in South Africa, and a future study can be undertaken in other developing markets to see whether similar results are obtained. By increasing the studies from developing countries, better comparisons can be drawn with the studies in developed countries.

This study only focused on a single performance measure, TSR. Future research can incorporate different measures of growth strategies that can also include financial ratios such as leverage, liquidity, profitability and other market ratios. Given that this study only considered share-price performance data, including operating performance data, could deliver fruitful results.

As this study required companies to be listed on the JSE for the full 10-year period of the study, future studies can find alternative methods to also include delisted companies in the study that will provide a better understanding of this topic.

Finally, this study only considered companies forming part of the JALSH, which includes the most frequently traded companies. Future research can expand the

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selection to the entire JSE, and also consider incorporating private companies, even though the collection of data may be challenging.

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