The impact of institutional investors on dividend policy in South Africa

University of Cape Town

Sinesipho Mvovo

(MVVSIN 001)

Department of Finance and Tax

Supervisor: Dr Akios Majoni

March 2020

Plagiarism Declaration

COMPULSORY DECLARATION:

1. This dissertation has been submitted to Turnitin (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor.

2. I certify that I have received Ethics approval (if applicable) from the Commerce Ethics Committee.

3. This work has not been previously submitted in whole, or in part, for the award of any degree in this or any other university. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

Student number	MVVSIN001
Student name	MVVSIN001
Signature of Student	SM
Date:	09/02/2020

DocuSigned by:

0457CC1661014...

Signed by candidate

Abstract

Agency theory suggests that with enhanced monitoring, companies are more likely to pay out their free cash flow. Institutional investors may be great monitors given that they are professional investors with specialized expertise in evaluating firm's financial performance, management quality and governance. This study investigates the impact of institutional investors on dividend policy in South Africa, during the period from 2009 to 2018. Examining the effect of institutions as a whole can obscure the important variation in the subset of institutions, as they are not homogeneously incentivised to monitor firms. As a result, this paper segregates institutional investors into subcategories based on their monitoring abilities. Through the employment of a panel data regression model, this study finds a positive but statistically insignificant relation between institutional ownership and the dividend pay-out ratio; the positive relation is stronger in monitoring institutions. This paper used firm-fixed effect models to control for the possible endogeneity coming from unobserved firm-level, time-invariant factors that determine both dividend policy and institutional ownership at the same time. The results of this paper do not support models that predict that institutional investors cause an increase in firm dividend pay-out ratio.

Even though it is possible that firms pay dividends to reduce agency conflicts, this study did not find evidence that supports that the portion of shares held by institutional investors are related to the dividend pay-out policy. Secondly, although it is likely that institutions are more competent in monitoring management actions than individuals, there is no evidence to support that they use dividends as their monitoring device. The results of this study therefore caution those that invest in companies in South Africa and expect to receive more dividends by merely confirming the presence of institutional investors in their potential investee company.

Contents Page

1. Introduction

Institutional owners are one of the most crucial investor groups across the globe. In 2017, institutions held over eighty percent of the large-cap S&P 500 index and seventy eight percent of the U.S. broad-market Russell 3000 index, which is about $18 trillion and $21.7 trillion, respectively (McGrath, 2017). The momentousness of institutions has resulted in the effect of institutional investors on firm dividend policy being widely studied in developed countries (see, Short et al, 2002; Grinstein & Michaely, 2005; Chang et al., 2016; Huang & Paul, 2017) and in developing countries (see, Azzam et al., 2010; Jeon et al, 2011; Lahiri,2013; Firth et al., 2016; Jacob & Lukose 2018).

Literature investigating the effect of institutional investors on dividend policy reported mixed results around the world. Some studies found positive and significant relations between institutional investors and dividend policies (see, Short et al., 2002; Firth et al., 2016; Chang et al., 2016; Cao, 2017; Huang & Paul, 2017), while other studies found no evidence to support positive relations between institutional ownership and dividend pay-out levels (see, Grinstein & Michaely, 2005; Amidu & Abor, 2006; Azzam et al., 2010; Jacob & Lukose, 2018). Though these studies focused on both developed and emerging markets, none of them focused on South Africa, except for Abor and Fiador (2013).

South Africa is the most mature financial market in Africa, it is advanced in terms of its legal and regulatory framework and by far has the largest amount of Assets under Management in Africa (PwC Market Research Centre, 2020:19). In the study conducted by Abor and Fiador (2013), institutional investors were not segregated into their subcategories, rather, they were treated as one homogeneous group. Given that literature has established that examining the effect of institutions as a whole, obscures the important variation in the subset of institutions, this paper segregates institutional investors into monitoring and non-monitoring institutions (Bushee, 1998; Chen et al., 2007). Segregating institutional investors is crucial as it allows one to determine which institutional investors monitor; the presence of institutional investors that monitor is likely to strengthen the corporate governance of the investee firm. The rise in corporate scandals and collapses globally has resulted in institutional investors in South Africa adopting a more active approach in investee companies' corporate governance matters which is expected to provide an additional monitoring function (Bikha, 2014). The dividend decision is therefore an instrument that this study uses to assess the monitoring abilities of institutional investors in South Africa.

1.1 Research Objectives and Contributions

This study investigates the effect of institutional investors on firm dividend policy in South Africa, using data from all the firms listed on the Johannesburg Stock Exchange (JSE) for the period 2009 to 2018. The evidence from the panel data regression models show a positive but statistically insignificant association between institutional investors and the firm dividend policy in all the subcategories of institutions in this paper.

This paper contributes to literature in its examination of the effect of institutional investors on dividend policy, it segregates the institutional investors into monitoring and non-monitoring institutions; and as far this study is aware, no other study has segregated institutional investors into subcategories in South Africa. The segregation of institutional investors is deemed to be important as monitoring institutions play an active role in the corporate governance matters of the investee firms.

The results from the panel data regression model find a positive but insignificant relation between total/monitoring/non-monitoring institutional investors and the dividend pay-out policy. That is, the results were insignificant for all the different categories of institutional investors. This infers that there is no evidence to support that institutional investors affect or cause an increase in the investee firm's dividend policy in South Africa. These results do not support the predictions and results of Short et al (2002:108), Firth et al. (2016) and, Huang and Paul (2017), that state "that institutional investors will use dividends as a monitoring device," and thereby cause an increase in the dividend pay-out ratio. Further, given that the results were insignificant across all three models, it means that there is no evidence to show that institutional investors in South Africa are unique, which is inconsistent with existing theory (see, Bushee, 1998; Firth et al., 2016).

1.2 Research Outline

The structure of the study is as follows; section two analyses the relations between dividend policy and institutional ownership in the context of existing theories and empirical evidence. Section three of this paper provides the hypothesis that will be tested. Section four analyses the research sample, variables and the empirical method to be used in determining the association between dividends and institutional ownership. Section five and six provide the results and the discussion of the empirical analysis. Lastly, section seven presents the conclusion of this dissertation.

Literature Review

2.1 Introduction

This chapter covers current knowledge and substantive findings of the relationship between institutional investors and firm's dividend policy. It is divided into four sections: the first section addresses the agency problems and dividends, the second section discusses monitoring by institutional investors, the third section discusses the categories of institutional investors and monitoring and lastly, the fourth section discusses institutional ownership and dividend policy.

2.2 Agency problems and dividends

Jensen and Meckling (1976) explain an agency relationship as an agreement under which one or more principal(s) employ an agent to work on their behalf including giving the agent some decision-making power. The disconnection of management and ownership in a company gives rise to potential agency conflicts, where the managers may not act in the best interest of the company (Jensen & Meckling, 1976). The agency costs are then defined as "the costs incurred to monitor by the principal, the bonding costs by the agent, as well as the residual loss" (Jensen & Meckling, 1976:308).

Firms with a great amount of free cash flows are said to have an inclination to have high agency costs (Jensen, 1986). The presence of free cash flow is inclined to incentivise management to undertake unfavourable investments and thereby not act in the best interest of shareholders. Reducing the discretionary funds available to managers has been proposed as one of the processes that can be executed to decrease the agency costs (Jensen, 1986). Easterbrook (1984) proposed that dividends may be functional in lowering the agency costs of management. The declaration of dividends may send firms to the capital market, where managers are observed at a reduced cost (Easterbrook, 1984). Returning excess cash to shareholders reduces the likelihood that funds will be divested to unprofitable investments, thereby reducing agency costs (Jensen, 1986).

Consequently, Rozeff (1982) justifies an optimal dividend pay-out model which engages two market imperfections; being the costs incurred in issuing external finance, as well as the agency costs of external finance. Rozeff (1982:258) argues that "increasing dividends relative to earnings lowers agency costs but raises the transaction costs of external financing and the sum of these two opposing costs is said to determine an optimal dividend pay-out."

Mahmoud et al. (1995) conducted a study to investigate the agency/transaction cost argument set forth by Rozeff (1982) and Easterbrook (1984) to test a model of optimal dividend pay-out. They conducted the study using 341 firms reported in the COMPUSTAT Industrial File over the period 1972-1989 (Moh'd, Perry & Rimbey, 1995). By employing a time-series cross-sectional regression analysis, they found a firm's dividend policy was established to be impacted by the size of the firm, the rate in which the firm grows by, the financial/operating leverage mix of the firm, the business risks that are inherent to the firm as well as its ownership structure (Moh'd, Perry, & Rimbey, 1995). They established that "firms do act to minimize the sum [aggregate] of agency costs and the transaction costs towards a favourable level of dividend pay-out" (Moh'd, Perry, & Rimbey, 1995:368). Firms are said to adjust their pay-out to be in alignment with the movement in the agency/transaction cost composition, to a favourable level (Moh'd, Perry, & Rimbey, 1995). Pertinent to the research done in this dissertation, they observed firms to establish higher dividend pay-outs as institutional ownership increases (Moh'd, Perry, & Rimbey, 1995).

Mollah et al. (2011) furthermore tested the impact of agency costs on dividend policy in Bangladesh an emerging market post the financial crisis in the Bangladesh Stock Market 1997-1998, as major changes in institutional settings, regulatory framework and trading activities were put in place. The empirical results generated definitive evidence that agency costs and transaction costs impact firm dividend policy in the pre and post- reform sample (Mollah, 2011).

The theoretical framework and empirical evidence discussed above contributes towards the research done in this dissertation by establishing the theory that suggest that dividends can be used to mitigate agency problems that exist in firms and further that the dividend policy of companies is impacted by the firm's ownership structure among other things mentioned above. Further the research done in this dissertation will extend the sample to companies in different industries listed in the JSE, and not just industrial firms which was the focus of Mahmoud et al (1995) research. The research conducted by Mollah et al (2011) likewise contributes to the research done in this dissertation as it ascertains that agency problems exist in emerging markets and can be reduced by the declaration of dividends. The theories discussed above set a great foundation for the research done in this dissertation, however we are yet to explore how ownership structure impacts the dividend decision, essentially which owners have the powers and incentive to convince management to declare dividends and use that as a tool to mitigate agency costs.

2.3 Monitoring by institutional owners

Jensen (1986) proposes that companies would be more inclined to pay out their free cash flow, thereby reduce their agency costs, if monitoring levels were increased. Chen et al (2007:282) states that "monitoring is the process of information gathering and efforts to influence management, which is distinguished from trading by both the type of information gathered (long term versus short term) and the effort to influence management rather than to simply trade on that information". The benefits of monitoring are the prospects of the resulting financial gain from executing such influence and better information, for example as noted by Jensen (1986), monitoring companies by ensuring that they declare excess cash as dividends reduces the likelihood that funds will be divested into unprofitable investments which results in an increase in shareholder wealth.

Evaluating the firm's financial wellbeing and the corporate governance of the firm forms part of institutional investors' professional experiences and expertise, which puts them in a more competent level to be able to monitor management (Crane, Michenaud, & Weston, 2016). Their large stock positions enable them to reduce collaboration costs, generate economies of scale in monitoring technologies and give them easier access to management and the board and thereby enhances their likelihood to monitor firms relative to individuals (Shleifer & Vishny, 1986; Bushee, 1998; Carleton et al., 1998; Chen et al., 2007). Further, institutions that have held the shares in a firm for long periods of time are better positioned to process new information about the firm, as they already have good grasp of the existing information of the firm, resulting in lower monitoring costs (Chen et al., 2007).

Consequently, all companies encounter a benefit-cost analysis when deciding between monitoring and trading in their investee firm, and based on the result of their analysis, some may choose to monitor and play an active role in the corporate governance of the firm, while others may merely decide to trade (Chen et al., 2007). As a result, Nagel et al (2005:350) argues that "institutional investors tend to actively monitor only the firms that form a significant percentage of their portfolio, where their reward for monitoring is the greatest".

2.3.1 Empirical Review

Hatzell and Starks (2003), Aggarwal et al (2011) and Kim et al (2019) found evidence that suggest that institutional investors actively monitor and impact the corporate governance of their investee firms. Their research questions were different; however, the conclusions of their major findings were the same; being that institutional investors monitor firms to reduce the

agency problems between shareholders and managers. Hatzell and Starks (2003) analysed how institutional investors impact the pay-for-performance of executive compensation, whereas Aggarwal et al (2011) analysed whether institutional investors were more likely to terminate poorly performing Chief Executive Officers and lastly, Kim et al (2019) analysed whether the presence of institutional investors prompted firms to generate greater corporate innovation outputs through the use of patents and patents citations.

Hatzell and Starks (2003) performed their analysis using 1914 firms included on the Standard and Poor's ExecuComp database from 1992 through 1997. They found that the assemblage of institutional investor ownership was positively related to the performance sensitivity of managerial compensation (Hatzell & Starks, 2003). Their results imply that institutional investors impact executive pay and thereby support the theory that institutional investors play a monitoring role (Hatzell & Starks, 2003

Kim et al (2019) conjectured that long-term institutional investors are crucial in stimulating corporate innovation as they are inclined to resolve the problem of managerial short-termism through their monitoring activities. The results of their analysis were consistent with their hypothesis which further supports the notion that institutional investors play a crucial monitoring role.

The empirical findings discussed above support the suggestions that the presence of institutional investors increase monitoring levels as institutions are better equipped to be able to monitor firms. These findings to an extent support Jensen's (1986) proposal that to mitigate agency costs, monitoring levels need to be enhanced, they do so by showing us that institutions do monitor firms. It is therefore worth noting that though these findings suggest that institutional investors monitor, they were not necessarily explicit as to how institutional investors monitor which is the focal point of the research done in this dissertation. Further, the results produced by Kim et al (2019) specifically stated it is long-term institutional investors that monitor, which contributes to the research done in this paper as in the section below we explore if whether all institutional investors monitor.

2.4 Categories of institutional ownership and monitoring

Bushee (1998) and Chen et al. (2007), among others, argue that analysing the effect of institutions as a whole, suppresses the heterogeneity of institutions and assumes that they behave in a uniform manner. As a result, they segregated institutional investors into categories in their analyses and found that not all institutions monitor, rather it is institutions with certain

traits that monitor and influence managers as they have more incentives to do so (Bushee, 1998; Chen et al., 2007). Institutions will only monitor when the benefit of monitoring exceeds the cost of monitoring (as mentioned in the subsections above), therefore certain characteristics of institutions provide them with a greater incentive and prospects to monitor, as such the influence of these traits can only be identified when institutions are segregated.

Bushee (1998) segregated the institutional investors into 'dedicated institutions', 'quasi-indexers institutions' and 'transient institutions'; whereas Chen et al. (2007) segregated them into 'grey institutions' and 'independent institutions.'

Transient institutions are those who hold small positions in multiple firms and trade often in and out of stocks, generally "building their trades on a value proxy such as current earnings" (Bushee, 1998:309). Their short-term focus makes them to be unlikely to dedicate to monitoring. Quasi-indexers indexing or buy and hold strategies that are characterized by low portfolio turnover and high diversification (Bushee, 1998). Quasi-indexers have very low incentives to monitor managers due to their fractured ownership which allows them to gather a limited amount of data on the business they invest in (Bushee, 1998). Dedicated institutions on the other hand are characterized by having large and long-term holdings, which are concentrated in a few firms, which provides incentives for them to monitor (Bushee,1998).

Grey institutions are those with business ties with firms and would rather shield existing and latent business relations with companies than challenge management decisions as they could lose current and possible business opportunities and it would cause harm to their relationships with management (Chen et al., 2007). Independent institutions are those that do not search for business relationships with companies that they invest in, and therefore when the benefits of monitoring exceed the costs, have incentives to monitor (Chen et al., 2007).

2.4.1 Empirical Review

Chen et al (2007) and Ferreira and Matos (2008) found that it is independent institutional investors that monitor firms as they do not have business ties with their investee firms and are always therefore likely to be objective. Chang et al (2016) and Kim et al (2019) found that it is long-term institutional investors that monitor firms as these institutions make long-term portfolio adjustments rather than trading for short-term gains. Whereas Firth's et al (2016) findings are a combination of the above, they found that independent institutions with a longer investment focus and that have larger holdings are better positioned to monitor as they have a greater exit threat.

After segregating the institutional investors, Bushee (1998) found that transient institutional investors are less likely to monitor, in fact a significant level of these type of institutions is more likely to cause managers to be short-term orientated. This is because the short-term orientated attitude of these investors puts pressure on management to sacrifice research and development for the sake of higher current earnings (Bushee, 1998). In a similar vein, Firth et al (2016) found that institutional investors such as banks, insurance companies and securities companies are less likely to monitor as they have a lower exist threat, as they have business relations with their investee firms which they are not willing to compromise.

Chen's at el (2007) findings were observed when they conducted a study to determine which institutional investors matter when it comes to monitoring. Using US mergers announced between 1 January 1984 and 31 December 2001 they analysed the relationship between institutional holding and acquisition quality to determine if whether they have any impact on post-merger performance (Chen et al, 2007). They found that only concentrated holdings by independent long-term institutional investors impact post-merger performance and further that total institutional holdings and holdings by other types of institutions show no monitoring effect (Chen et al, 2007).

Though the focus of the studies discussed above was not to answer the same research question as this dissertation, their major findings (that certain institutional investors monitor) contribute greatly to this dissertation as they provide an additional layer to the established foundation that institutional investors monitor. This additional layer therefore ensures that this dissertation does not just analyse the impact of institutional investors on dividend policy as a whole but rather segregate the institutions into those that are likely to monitor and those that are predicted to not be likely to monitor.

As the foundation has been laid in the discussions above, the remainder of this literature review will focus on the interaction of institutional investors with dividend policy, which is the research question of this dissertation.

2.5 Institutional ownership and dividend policy

This subsection addresses the interaction between institutional ownership and firm dividend policy. It does so by discussing how institutional owners use dividends a monitoring device; by discussing how differences in institutional framework and differential tax treatments impact institutional investors preference for dividends, as well as discussing the established low-

dividend preference puzzle of institutions and lastly discusses the institutional investors' need for funds on an ongoing basis which also impacts their interaction with firm dividend policy.

2.5.1 Dividends as a monitoring device

Adjusting firm dividend policy has been found to be the instrument through which institutional investors execute their monitoring of firms (Firth et al, 2016; Chang et al, 2016; Kilincarslan & Ozdemir, 2018); as it has been stated that the declaration of dividends reduces the amount of discretionary funds available to management, thereby reducing the agency cost.

Hussain and Khan (2014), Firth et al (2016), Chang et al (2016) and Kilincarslan and Ozdemir (2018) found a positive and significant relationship between a certain category of institutional investors and the firm dividend policy. Chang et al (2016) found this positive relationship with dividends to only be present in concentrated institutional investors with large stakes and long-term investment horizons. Whereas Kilincarslan and Ozdemir (2018) found this positive effect with just longer-term institutional investors, and they found a negative impact on dividends corresponds with institutional investors with short-term investment. Similar with Chang et al (2016), Firth et al (2016) found this positive relation to exist in long-term institutional investors, however they found that the institutions also had to be independent of the management of the firm to be able to influence objectively.

To study the relationship between institutional investors and dividend policy, Hussain and Khan (2014) segregated the institutions as joint stock companies, foreign companies, insurance companies, banks, modabaras and mutual funds. They used 104 firms listed on the Karachi Stock Exchange for a period of eight years in their analysis. They employed a fixed effect model of panel data regression and found the holdings of joint stock companies, foreign companies and insurance companies have a positive and significant effect on dividend payment because of their high concentration in Pakistani firms which gives them a good basis of influence on decision making power of the firms' managers (Hussain & Khan, 2014). Banks, modabaras and mutual funds on the other hand were found to have no significant relationship with dividend pay-out due to their lack of power to influence.

Firth's et al (2016) study was conducted in China using firms listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange from 2003-2011. Using a fixed-effect panel data regression model they investigated the effect of institutional investors on firm's cash dividend policy (Firth et al., 2016). They found mutual funds influence firms to declare higher cash dividends, as these institutional investors are the most salient and powerful type in China; the

results were more pronounced for firms with higher free cash flow (Firth et a., 2016). They had hypothesized that mutual funds would have a positive and strong relationship with the firm's cash dividends because they have a greater exit threat, as they are independent of the firm and have long-term and larger stakes; the results of their test were in line with their hypothesis as already mentioned (Firth et al., 2016). On the other hand, they found banks, insurance companies and securities company do not cause firms to pay more dividends, as they have a lower exit threat (Firth et al., 2016).

In the context of the agency theory, Chang et al (2016) examined the effect of institutional ownership on dividend pay-out using publicly traded U.S firms in the CRP and COMPUSTAT data base between 1995-2009. They straight away conjectured that only institutional investors with particular characteristics were likely to monitor firms (Chang et al.,2016). Also using a fixed effect regression model, they found that long-term institutional investors with large stakes cause firms to declare more dividends; their results were also more pronounced in firms with high agency costs. The results of their test permitted them to conclude that long-term institutions monitor firms, and they use dividends as the tool through which they execute their monitoring (Chang et al., 2016).

Kilincarslan and Ozdemir (2018) on the other hand specifically looked at how the investment horizon of institutional investors impact their relationship with firm dividend policy using non-financial UK firms over the period 2000-2010. They used the churn rate of institutions' overall stock position to measure their investment horizons. They calculated quarterly churn rates for each institutional investor to determine the frequency with which they rotate their positions on all stocks of their portfolio (Kilincarslan & Ozdemir, 2018). Consistent with existing literature they found that institutions with lower churn rates (longer term institutional investors) are more concerned with monitoring, whereas institutions with higher churn rates (shorter term investment horizon) have a negative impact on dividends (Kilincarslan & Ozdemir, 2018).

The existing literature that has been discussed above narrates the notion that only certain institutional investors monitor firms. For institutions to be able to monitor they must be in a position of power to be able to execute their monitoring; this evident as it is seen that the institutional investors must have large stakes and must have a long-term investment horizon to be able to influence management. This is apparent as Firth et al (2016) found mutual funds to be the most powerful investors in China (therefore influence management) and insurance companies to not be powerful; whereas Hussain and Khan (2014) found mutual funds to not be

powerful in Pakistan but rather insurance companies to be the ones that influence management. In addition to having the power to monitor, they must have the desire or incentive to monitor in that they must be independent of the firm, which allows them to act objectively and not be concerned about compromising business opportunities. All this evidence contributes greatly to the research done in this dissertation as shows that the context in which the research is done matters a lot; it allows one to be curious as to how institutional investors behave in a South African context. This empirical evidence also contributes to the research done in this dissertation as it guides one to know that institutional investors must be segregated to be able to identify the true impact, that they exert on dividend policy. To the best of my knowledge, the impact of institutional investors on dividend policy has not been analysed in the South African context where institutions are segregated into the traits discussed in this literature review.

2.5.2 Differences in institutional framework

Some authors such as Hofler et al. (2004) and Lahiri (2013) have argued that traditional agency problems may be greatly reduced or do not exist in their countries, Germany and India respectively, and therefore there is no incentives for institutional investors to use dividends as a monitoring tool.

Hofler et al (2014) examined relationship between institutional ownership and dividend pay-out behaviour of the firms in Germany given the fact that institutional frameworks and ownership structures tend to vary around the world, using a sample which consisted of the largest 100 firms across 28 industrial branches, mostly manufacturing, from 1970-1986.

The evidence they found showed that neither institutional ownership nor bank control is statistically important in figuring out dividend pay-outs, meaning institutional ownership does not lead to lower/higher dividend pay-outs in Germany (Hofler, Elston & Lee, 2004). This insignificance of institutional control stems from the stylized facts regarding the unique environment of German corporate governance (Hofler, Elston & Lee, 2004). They argued that the traditional agency problems may be extensively reduced by the German commercial code which “gives management the option to retain earnings of fifty percent or more of the firm’s net income before any dividend decision or pay-out is made, which then reduces the scope of the agency conflict over whether funds should be retained or declared a dividend, thereby reducing the size of the funds in question” (Hofler, Elston & Lee, 2004:6).

Lahiri (2013:450) also argued that "the well-protected rights of minority shareholders in India, help Indian firms to distribute more dividends, hence, in India, dividend is neither used as a means of monitoring activities of outside institutional investors or as a substitute mechanism of monitoring activities." Further, he argued that the traditional agency cost problem does not exist in India (Lahiri, 2013).

The vast majority of the literature that has been covered proposes that institutional investors use firm dividend policy to mitigate agency problems that exist between management and shareholders. However, the evidence and arguments set forth under this subheading cautions that the agency problem may not exist in every country as discussed above. This contributes towards the research done in this dissertation as the research question looks for the impact of institutional investors on dividend policy and this subsection then brings in the possibility that there may no impact if the agency problem does not exist.

2.5.3 Differential tax treatment

Shareholders' demand for dividends is often influenced by the differential tax treatment between dividends tax and capital gains tax, as most investors are more concerned in after-tax return on their investment (Al-Malkawi et al., 2010).This differential tax treatment may impact the managers' decision regarding the dispersal of dividends, when they answer to the shareholders' tax preference in order to make the most of shareholder wealth (Al-Malkawi et al., 2010).

Dividends are taxed instantaneously, relative to taxes on capital gains that are only taxed when the investment is sold (Al-Malkawi et al., 2010). Further, most countries tax dividends at a relatively higher tax rate compared to capital gains, which positions investors that have a tax advantage on capital gains to choose companies that reinvest their earnings instead of paying them out as dividends (Al-Malkawi et al., 2010). As a result, based on different investors' situation, taxes and transaction costs may cause investors to be attracted to firms that follow dividend policies that best suit their situation (Al-Malkawi et al., 2010).

There are clear incentives for tax exempt institutions to demand high levels of dividends (Short et al, 2002). As a result, Short et al. (2002) and Grinstein and Michaely (2005) found opposing results of how institutional investors impact dividend policy due to the significant differences in the outcomes of the tax systems in the United Kingdom and in the United States. The US tax system is largely neutral in relation to dividend policy, whereas the UK tax system provides clear incentives for tax-exempt institutions to demand dividends (Short et al., 2002).

Short et al. (2002:109) state that "the US operates a classical company tax system whereby companies are taxed separately from their shareholders; firms pay a flat rate on their profits and shareholders pay income tax on the dividend income they receive at their marginal rates of income." As dividends are essentially taxed twice, the result is that basic and high rate income taxpayers would choose profits to be kept in the firm instead of being paid out in dividends, whereas shareholders who are exempt from tax would be neutral on the matter (Short et al., 2002).

Whereas, the "UK operates a partial imputation company tax system whereby corporation tax is charged on firm profits but part of that is considered when assessing shareholders' liability to income tax" (Short et al., 2002:109). This results in "tax-exempt shareholders to prefer dividends to retentions, basic rate taxpayers being neutral with respect to dividends and retention, and higher rate taxpayers prefer retention to dividends" (Short et al., 2002:107).

Given that "tax-exempt shareholders such as pension funds were the most influential investors in many UK companies," Short et al. (2002:107), using well-established dividend pay-out models, found that a positive association exists between dividend pay-out policy and institutional ownership (Short et al., 2002).

In contrast, Grinstein's and Michaely's (2005) results did not support models that predicted that institutions cause firms to increase dividend pay-out. They found that though institutions prefer firms that pay-out dividends, among those firms, they prefer firms that pay fewer dividends (Grinstein & Michaely, 2005). Despite a potentially larger tax advantage that pension funds have, their results did not show that pension funds prefer high dividends (Grinstein & Michaely, 2005). Their evidence rather indicate that institutional ownership is higher for repurchasing firms and that changes in their repurchase policy cause institutional holding to change in the same direction (Grinstein & Michaely, 2005).

In analysing the results of their investigation, Grinstein and Michaely (2005) initiate a strong time trend in institutions' partiality for dividend paying firms and repurchasing firms in the Unites States. They found an important positive relationship between dividend levels and institutional holdings between 1980 and 1984, which gradually became negative and from 1987 onward (Grinstein & Michaely, 2005). Prior to the enactment of the SEC rule 10b-18 in the mid-1980s, which allowed firms to repurchase their shares more freely, institutions as a whole, preferred firms that paid more dividends (Grinstein & Michaely, 2005). After the enactment of

the SEC rule 10b-18, institutions partiality for dividends changed and showed an aversion to high dividends and shifted towards preferring repurchases (Grinstein & Michaely, 2005).

Contrary to what Grinstein & Michaely (2005) found, using a Tobit analysis based on a maximum likelihood estimation procedure, Han et al. (1999), empirically examined the relationship between institutional ownership and dividend policy using a sample of 5500 firms in the US, from 1988-1992. The results of their analysis showed "that dividends are positively related to institutional ownership, therefore supporting the tax-based hypothesis," suggesting a certain type of dividend clientele (Han, Lee & Suk, 1999:53). Han et al. (1999) argues that even after the 1986 Tax Reform Act, which decreased the exemption rate for dividends from 85 percent in 1986 to 70 percentage in 1988, institutional shareholders' preference for dividends still remained (Han, Lee & Suk, 1999).

Strickland (1996) also investigated whether the tax disadvantage of dividends results in a relationship between institutional portfolio allocation and dividend yield. He analysed the holdings of tax exempt and taxable institutions and found that taxable institutions prefer low dividend yield stocks, while tax-exempt institutional investors do not exhibit a preference for either high or low yield securities, after controlling for size, performance and risk (Strickland, 1996).

Amidu and Abor (2006) examined the determining factor of dividend pay-out ratios in Ghana, they found a significantly positive relationship between cash flow and dividend pay-out ratio. They also found a surprisingly positive relationship between corporate tax and dividend pay-out ratio, meaning increasing tax is associated with an increase in dividend pay-out, which is in contradiction with existing literature (Amidu & Abor, 2006).

The empirical evidence analysed and discussed above clearly depict that evidence on whether differential tax treatment causes institutional investors to impact firm dividend policy in favour of their tax respective advantage has been mixed, the debate however is valid and strong as some scholars have found this relationship to be significantly positive. Again, this contributes to the research done in this dissertation as it opens a foundation to the possibility of institutional investors impacting dividend policy in line with their respective tax position. The results of this dissertation possibly will contribute to this unsettled relationship between institutional investors and dividend policy in the lens of differential tax treatment, as South Africa has its own unique tax laws from the above analysed countries.

2.5.4 Low-dividend preference puzzle

In analysing institutional investors' preference for dividends, Strickland (1996), Grinstein and Michaely (2005) and Jacob and Lukose (2018:65) came across the "apparent low-dividend-preference puzzle in which institutional investors have higher holdings in dividend-paying firms, but among dividend payers, prefer firms that pay low dividends." Grinstein and Michaely obtained this observation when they were analysing US firms, whereas Jacob and Lukose (2018) were analysing firms in India. As a result, they found no evidence to support that the levels of dividends in firms were improved by the presence of institutional investors (Grinstein & Michaely, 2005; Jacob & Lukose, 2018).

Huang and Paul (2017) examined the relationship between institutional investors and dividend policy by jointly considering investment style and firms' growth opportunities, to help resolve the apparent low-dividend-preference puzzle. They classified institutional investors by growth and value styles and sorted the firms by dividend levels and investment opportunities (Huang & Paul, 2017). They documented that "growth style institutional investors have higher holdings in firms with high investment opportunities, whereas value style institutional investors have higher holdings in firms with low investment opportunities, an obvious first order effect" (Huang & Paul, 2017:153). They stated that "when controlling for investment style, institutional investors' preference for dividends are based on whether pay-out levels are consistent with firms' needs to fund growth opportunities" (Huang & Paul, 2017:153). The results of their regression analysis also found that "within the set of firms that match their style, institutions prefer dividend policies aligned to their investment opportunities" (Huang & Paul, 2017:153).

Value style institutions have more holdings in value firms with high dividends, whereas growth style institutions have more holdings in growth firms with low or no dividends (Huang & Paul, 2017). Huang and Paul (2017:157), show that "the understanding of the dividend and pay-out preferences of institutions is incomplete without considering both investment opportunities and institutional investor style." They also found suggestive evidence that "available cash flow is an important consideration for institutional investors when choosing firms based on the interaction of their investment opportunities and pay-out policy" (Huang & Paul, 2017:157).

2.5.5 Institutional Investors' need for funds

Short et al. (2002:108) argues that "a related issue is the need of institutional investors for funds on an ongoing basis." They argue "that institutions invest in equities in order to provide returns to fund their activities, such as pension funds paying out cash in insurance policies" (Short et

al., 2002:108). Further, irrespective of any tax induced biases, it is impractical for institutions to depend on capital gains to service their liabilities, and hence, some level of dividend payment is needed (Short et al., 2002). Even further, the actuarial value of pension funds is in part based on dividend income (Short et al, 2002). And therefore, "these institutions' requirements for certain levels of dividends to meet their own liabilities may force companies to pay out dividends at a higher level than they would otherwise prefer" (Short et al., 2002:108).

Gholamhossein (2012:339) found "that joint stock companies' ownership, foreign companies' ownership and insurance companies' ownership have positive and significant effect on dividend payment." Institutional investors would rather have cash dividend in the place of increasing their percentage shares in Pakistani firms because of the political instability and the economic conditions. Insurance companies on the other hand prefer cash dividend as they must settle their customer claims (Gholamhossein, 2012). Kilincarslan and Ozdemir (2018) also found evidence that institutional investors influence dividend policy in line with their liquidity needs.

The findings discussed above suggest that amidst a lot of reasons as to why some institutional investors may want firms to declare their excess cash as dividends, it is their constant need for cash, which obviously will not apply to all institutional investors. This contributes to the debate as to how institutional investors interact with dividends which is the research question that this dissertation is looking into. As it has been established and discussed in subsections above, not all institutional investors may want firms to declare their cash as dividends, however those that need cash on a constant basis are likely to be inclined to influence management to declare dividends.

2.6 Summary and Conclusion

Chapter two of this dissertation analysed and discussed the various theories and empirical evidence that has been established regarding the impact of institutional investors on dividend policy around the world. The cornerstone of this relationship seems to lie in the institutional investors' desire to mitigate agency costs and therefore use dividends as the instrument through which they execute their monitoring. There are also other established reasons as to why institutional investors would want firms to declare dividends, such as their favourable tax position when it comes to dividends and to meet their liquidity needs.

Literature investigating the effect of institutional investors on dividend policy reported mixed results around the world. Some studies found positive and significant relations between

institutional investors and dividend policies (see, Short et al., 2002; Firth et al., 2016; Chang et al., 2016; Cao, 2017; Huang & Paul, 2017), while other studies found no evidence to support positive relations between institutional ownership and dividend pay-out levels (see, Grinstein & Michaely, 2005; Amidu & Abor, 2006; Azzam et al., 2010; Jacob & Lukose, 2018). Though these studies focused on both developed and emerging markets, none of them focused on South Africa, except for Abor and Fiador (2013). This dissertation contributes to literature in its examination of the effect of institutional investors on dividend policy, it segregates the institutional investors into monitoring and non-monitoring institutions; and as far I am aware, no other study has segregated institutional investors into subcategories in South Africa.

3. Hypothesis statement

In light of the findings presented in the literature review, above, this paper will now seek to test the hypothesis given below:

H_0: Independent institutional investors have no effect on firm dividend policy.

H_1: Independent institutional investors have a positive effect on firm dividend policy.

This hypothesis is drawn from the submissions made in the literature review; that not all institutional investors monitor, but it those that have incentives to monitor that monitor management. Being independent of the firm positions institutional investor to be objective and therefore able to monitor management.

4. Data and Variables

4.1 Sample selection

To test the hypothesis of this study, this study used information from all the firms listed on the Johannesburg Stock Exchange (JSE) for the period 2009 to 2018. This study used a period of nine years this is consistent with the period covered by prior studies (see, Abor and Fiador,2013; Lahiri, 2013; Cao et al, 2017). Extending the sample period to 2003 significantly reduces the sample size, as many companies delisted during the period covering 2007-2009. This study used Thomson Reuters' institutional common stock holdings data for the institutional ownership variables. The information includes precise institutions and individuals, their relationship to the company, their holdings, and their most recent trades. Dividend and other financial data are obtained from Bloomberg. Consistent with Grinstein and Michaely (2005), Chang et al (2016), Firth et al (2016) and Huang and Paul (2017), the paper excluded firms that are in the financial sector, because they are heavily regulated and their financial ratios are not comparable with other industry sectors; firms that delisted during the sample period and firms with missing data have also been removed, which is consistent with Chang et al (2016). After imposing the above restrictions, the sample of this study contains 12 960 firm-year observations from 144 firms over 2009-2018. The sample size of this study is greater than the minimum requirement for a sample to possess statistical power, given that it is greater than 50 + 8m as proposed by Green (1991). The minimum sample size for this study should be 50 + 8(8), which is 114 (Green, 1991).

Table 1 Panel Sample Selection Criteria (2009-2018)

Criteria	Number of Companies
Initial sample	360
Less firms in the Financial sector	43
Less firms that delisted & firms with missing data	173
Total firm-year observations for analysis	144

4.2 Variables

4.2.1 Dependent Variable (s)

This study used the annual cash dividend over the book value of total assets (DIV/TA) of a firm, to measure the amount of dividend payment, which is in line with the definition made by

Grinstein and Michaely (2005) and Huang and Paul (2017). The dividends are scaled with total assets instead of stock price to warrant that disparities in price do not influence the results in any manner (Jacob & Lukose, 2018). Other studies used pay-out ratio as a proxy for dividend pay-out level, however such a measure can easily be influenced by accounting manipulations (Jacob & Lukose, 2018).

4.2.2 Independent Variable (s)

Consistent with Thompson Reuters, this study defines "institutional investors as organizations whose primary purpose is to invest their own assets or those entrusted to them by others," which include banks, employee pension funds, insurance companies, mutual funds and hedge funds.

This study used one measure of institutional holdings and three categories of institutional holdings. The first category is ownership by all institutions and then segregating institutional investors into monitoring and non-monitoring institutions as defined by existing literature.

All institutional investors

Consistent with Firth et al (2016), all institutional ownership is the percentage of total institutional holdings in relation to all the outstanding shares in a company.

Categorizing institutional investors

Using votes on management initiated anti-takeover amendments, Brickely et al. (1988), found that only certain investors actively partake in the voting process and successfully oppose management's decisions. Their evidence suggests that "it is only institutions that are less subject to management influence, such as mutual funds, foundations, and public-employee pension funds that are more likely to oppose management than banks, insurance companies and trusts, which frequently derive benefits from lines of business under management control" (Brickely et al., 1988:270). This calls for the need to categorise institutional investors based on their monitoring incentives. This study categorises them into two main groups, monitoring and non-monitoring.

Monitoring Institutions

Consistent with Brickely et al. (1998), this study classifies investment companies (including mutual funds), investment advisors and public pension funds as monitoring institutions because

of their independence from management. They are less likely to have business relations with investee firms which would impair their objectivity, hence their ability to monitor management.

Monitoring institutions is measured as the percentage of monitoring institutional holdings in relation to all the outstanding shares in a company.

Non-monitoring Institutions

Consistent with Brickley et al. (1998), this study classifies non-monitoring institutions as banks, trusts, insurance companies and corporate pension funds, due to their lack of independence from management which disables them from monitoring management.

Non-monitoring institutions is measured as the percentage of non-monitoring institutional holdings in relation to all the outstanding shares in a company.

4.2.3 Control Variable (s)

The dividend distribution decision is one which involves the "determination of which portion of cash earnings should be retained in the firm for reinvestment and which funds should be paid out to investors from either current or accumulated retained earnings" and is therefore influenced by multiple factors (Kania, 2005:4); Factors such as financial limitations, investment chances and choices, firm size, pressure from investors and regulatory regime (Anjanthan, 2013).

Profitability

Profitability is expected to be inversely related to dividends, because as profitability increases, earnings are channelled into reinvestment opportunities rather than into dividends, to increase firm's return on equity (Kania, 2005). Kania hypothesized that profitability will be negatively related to firm dividend pay-out, and she found that profitability is significantly and negatively related to dividend pay-out (Kania, 2005).

Sugiastuti et al. (2018) and Anjanthan (2013) also conducted research to establish whether a relation exists between dividend pay-out and firm performance. By employing a multiple regression analysis on listed hotels and restaurants companies in Sri Lanka, Anjanthan (2013) found that dividend policy has a significant and positive impact on profitability (Anjanthan, 2013); Meaning that, an increase in a firm's financial well-being tends to positively affect the dividend pay-out levels of a firm (Anjanthan, 2013). Similarly, Sugiastuti et al. (2018)

concluded that profitability is one of the factors that positively and significantly affect dividend policy. These findings are however in contradiction with those of Kania (2005).

The return on asset ratio (ROA) is therefore used to control for firm profitability as it is a vital determinant of pay-out policy (Fama & French, 2001; Jacob & Lukose, 2018).

Sales growth

"Higher growth or abundant investment opportunities are suggested to induce lower cash dividends as earnings are retained to finance the growth, by the pecking order theory" (Firth et al., 2016:97). However, the impact of growth and market-to-book ratio on dividend policy are equivocal, given that the substitute theory suggests that "firms with better growth prospects want to establish a good reputation in the eyes of capital providers through paying out more cash dividends" (Firth et al, 2016:97).

Kania (2005), also hypothesized that sales growth will be negatively related to dividend policy. She further argued that firms with high growth opportunities should pay smaller dividends as earnings are reinvested to fuel growth (Kania, 2005). Her results were consistent with her hypothesis (Kania, 2005).

The sales growth (previous year's) (growth) is used to control for expected growth and future investment opportunities (Jacob & Lukose, 2018).

Market-to-book ratio

In investigating the determinants of dividend policy in Ghana, Amidu and Abor (2006) used the market-to-book ratio as a proxy for the firms' prospects and investment opportunities. They found that "the market-to-book ratio is significantly and negatively associated with dividend pay-out, given that growing firms require more funds in order to finance their growth and therefore would retain a greater proportion of their earnings by paying low dividends" (Amidu & Abor, 2006: 142). Further, firms with high market-to-book ratio retain more of their funds because they typically have good investment opportunities (Amidu & Abor, 2006).

As a result, the market-to-book ratio (MB) is used to control for expected growth and future investment opportunities (Jacob & Lukose, 2018).

Financial Leverage

Kania (2005) hypothesized that financial leverage will be negatively related to dividend pay-out, because as debt levels increase, a company is unlikely to pay dividends as it must contend

to interest payments and debt covenants. However, financial leverage produced an unexpected positive relation with dividend pay-out which is consistent with the findings of Sugiastuti et al. (2018) (Kania, 2005).

Further, in terms of the pecking order hypothesis, greater incentives to retain accumulated earnings and thereby pay lower dividends are allocated to firms with higher debt ratios (Jacob & Lukose, 2018). Firth et al. (2016:97) also argues that "as debt and dividends might be used to reduce cash flows, they could be substitutes in resolving agency problems."

The debt ratio is used to measure leverage (Firth et al., 2016).

Firm Size

Redding (1997) established a model that forecasted that large firms are more relatively inclined to pay cash dividends. The archetype is extracted from the narrative that institutional investors for tax and fiduciary reasons, prefer companies that pay dividends and that markets are imperfectly liquid. As a result, big investors choose to invest in big companies since it decreases their business costs (Redding, 1997). Large corporations therefore respond to institutional investors' preference for dividends and declare more dividends relative to small companies that are owned by individuals (Redding, 1997). The empirical evidence of the study, therefore, indicates that firm size impacts the decision to pay dividends, as it shows that large companies are more likely to declare dividends than small companies (Redding, 1997).

The logarithm of total sales is used to control for differences in firm size (Jacob & Lukose, 2018).

Firm Age

Existing literature shows that the age cycle of companies is one of the most important factors companies consider when determining the method of dividend payment (Stepanyan, 2011). Tamimi et al. (2014) therefore investigated the relationship between the age of a firm and its dividend policy. They found a significantly positive relationship between the age of the company and the dividend ratio (Tamimi et al., 2014).

The logarithm of firm age is incorporated in the test to control for differences in firm age (Jacob & Lukose, 2018).

Market Risk

Consistent with Chang et al (2016), this study controls for market risk using the standard deviation of firms' monthly stock return over the year.

4.3 Table 2 Descriptive Statistics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	N	mean	Median	P25	P75	sd	Min	max
DIVTA	1296	0.0244	0.00986	0	0.0352	0.0396	0	0.399
TotalInst $_{t-1}$	1296	0.49	0,45	0,09	0,88	0.3836	0	1
MonitoringINST$_{t-1}$	1296	0.48	0,435	0,09	0,87	0.3788	0	1
NonMonitoringInst$_{t-1}$	1296	0.01	0	0	0,01	0.02436	0	0,32
LogSales$_{t-1}$	1296	3.387	3.550	2.8874	4.0902	0.957	-1.218	5.307
SalesGrowth$_{t-1}$	1296	34.61	8.167	0.0988	16.3561	697.8	-99.53	24,579
ROA$_{t-1}$	1296	5.601	5.9595	2.0777	10.4652	14.73	-269.8	120.8
MB$_{t-1}$	1296	3.883	1.4719	0.8879	2.6336	28.90	0.0215	736.4
Leverage$_{t-1}$	1296	0.467	0.461	0.3308	0.5939	0.195	0	2.033
LogofAge$_{t-1}$	1296	1.552	1.556	1.3010	1.7993	0.317	0.602	2.223
Vol$_{t-1}$	1296	0.107	0.0794	0.0576	0.1150	0.160	0	4.222
Number of Completed	144	144	144	144	144	144	144	144

Table 2 presents the descriptive statistics of the variables used in the study's analysis. The full sample contains 12 960 firm-year observations over the years 2009-2018. For the DIVTA measure, the mean is 0.0244 and the median is 0.00986, meaning the data is skewed to the right. This right skewness is confirmed by the maximum being 635% more than the median; meaning that there are companies that pay very high dividends in the sample causing the skewness.

The total institutional ownership measure has a mean value of 0.49 and a median of 0.45 which also means that the total institutional ownership data is skewed to the right; the data for monitoring institutions is also skewed to the right. This is expected given that the maximum of both total institutional investors and monitoring institutional investors is 100%, meaning there are high holdings that are skewing the mean to the right. The mean for non-monitoring institutional investors is very low, at 1%, which shows that non-monitoring institutions hold very small holdings. Looking at the mean values of total institutional holdings (0.49) and monitoring (0.48%), it appears that the majority of the institutions are monitoring institutions, however they have very moderate holdings.

4.4 Methodology

4.4.1 Panel regression model

This section presents the results of how institutional ownership can influence companies' cash dividend pay-outs using the methodologies in Desai and Jin (2011) and Firth et al (2016). This study investigates the impact of institutional ownership on the future dividend payments, by regressing the measures of dividend policy on the one-year-lag values of institutional ownership and another explanatory variable. Similarly, as Firth et al. (2016), this study used firm-fixed effect models to control for the possible endogeneity coming from unobserved firm-level, time-invariant factors that determine both dividend policy and institutional ownership at the same time.

Consistent with Firth et al. (2016), the dividend policy of firm *i* in year *t*, measured by either DIV*i,t* or DIVDM*i,t*, the regression model is as follows:

$$DIV_{i,t(DIVDMi,t)} = \alpha_{1,i} + \alpha_2 INST_{i,t-1} + \alpha_3 Control_{i,t-1} + Dummy(year) + \varepsilon_{i,t} \quad (1)$$

$$DIV_{i,t(DIVDMi,t)} = \alpha_{1,i} + \alpha_2 MonitoringINST_{i,t-1} + \alpha_3 Control_{i,t-1} + Dummy(year) + \varepsilon_{i,t} \quad (2)$$

$$DIV_{i,t(DIVDMi,t)} = \alpha_{1,i} + \alpha_2 Non\text{-}MonitoringINST_{i,t-1} + \alpha_3 Control_{i,t-1} + Dummy(year) + \varepsilon_{i,t} \quad (3)$$

Where $INST_{i,t-1,}$ MonitoringINSTi,t-1, $Non\text{-}MonitoringINST_{i,t-1,}$ is the equity ownership of all/monitoring/non-monitoring institutional investors in firm *i* in year t-1, respectively. Firm specific control variables are discussed in the previous section. In line with Firth et al. (2016), year dummies are added to capture possible year-specific effects and this study used heteroscedasticity-consistent standard errors clustered as the firm level. The root cause of the unobserved heterogeneity could be due to differences in corporate governance policies, managerial risk aversion or influences of the founding family on corporate policies, to name a few (Jacob & Lukose, 2018).

Consistent with Grinstein and Michaely (2005), Firth et al. (2016) and Jacob and Lukose (2018), this study used lagged ownership as institutional shareholders may take time to impact managerial decision making, and therefore have a slower impact on dividend policy.

4.5 Univariate analysis

In this study, a univariate analysis is conducted by comparing the mean and median of all the variables included in the regression analysis of firms with and without institutional holdings.

4.6 Table 3 Data analysis of all variables

	MonitoringInst$_{t-1}$	Non_MonitoringInst$_{t-1}$	DIVTA	Total_INST$_{t-1}$	LogSales$_{t-1}$	SalesGrowth$_{t-1}$	ROA$_{t-1}$	MB$_{t-1}$	Leverage$_{t-1}$	LogOfAge$_{t-1}$	Vol$_{t-1}$
MonitoringInst	1.00										
Non_MonitoringInst	0.16***	1.00									
DIVTA	0.16***	0.04	1.00								
Total_INST	1.00***	0.23***	0.16***	1.00							
LogSales$_{t-1}$	0.54***	0.18***	0.11***	0.54***	1.00						
SalesGrowth$_{t-1}$	0.03	-0.02	0.00	0.03	-0.02	1.00					
ROA$_{t-1}$	0.08***	-0.01	0.37***	0.08***	0.16***	-0.05*	1.00				
MB$_{t-1}$	-0.05*	-0.02	0.00	-0.05*	-0.10**	0.00	-0.07**	1.00			
Leverage$_{t-1}$	0.15***	0.05*	-0.19***	0.15***	0.28***	-0.05*	-0.18***	0.08***	1.00		
LogOfAge$_{t-1}$	0.30***	0.14***	-0.06**	0.31***	0.30***	-0.03	-0.03	0.00	0.09***	1.00	
Vol$_{t-1}$	-0.22***	-0.05*	-0.10***	-0.22***	-0.31***	0.01	-0.06*	0.01	0.04	-0.16***	1.00

*** p<0.01, ** p<0.05, * p<0.1

The analysis of correlation is a statistical technique "through which the order that a variable can be related to another variable linearly can be measured" (Tamimi et al., 2014:58). The relationship between the variables of this study has been presented in table 3. The correlation coefficient between the independent variables applied in the analysis should not be large, because the correlation between independent variables in a model can lead to the bias in the regression results (Tamimi et al., 2014).

Multicollinearity is not a concern in this study's analysis, as the correlation coefficients between the independent and controlled variables within models is not greater than 70% (Gujarati & Porter, 1999).

5. Results analysis

5.1 Univariate analysis

Table 4 Descriptive Statistics for firms without and with institutional ownership

	(a) Without institutional holding				(b) With institutional holding		
	N	Mean	Median		N	Mean	Median
DIVTA	243	0.0165	0		1053	0.0264	0.01195
DIVDM	243	0.4606	0		1053	0.6548	1
$LogSales_{t-1}$	243	2.3692	2.4254		1053	3.678	3.74773
$SalesGrow_{t-1}$	243	16.913	6.8884		1053	39.0431	8.3310
ROA_{t-1}	243	2.2803	4.1014		1053	6.4179	6.2141
MB_{t-1}	243	9.8374	1.1778		1053	2.5327	1.5295
$Leverage_{t-1}$	243	0.4307	0.4217		1053	0.4779	0.4685
$LogofAge_{t-1}$	243	1.4033	1.3802		1053	1.5909	1.6021
Vol_{t-1}	243	0.1754	0.1245		1053	1.5909	0.0725
Number compltd	27	27	27		117	117	117

Table 4 above presents the descriptive statistics for firms with high institutional ownership, that is, those firms who have 5% or more of their equity held by institutional investors and for firms with low institutional ownership, that is, those firms who do not have institutional investors holding 5% or more of their equity, respectively. In a sample of 144 firms, 117 firms have high institutional ownership and 27 firms have low institutional ownership.

The mean of the DIVDM variable for firms with high institutional ownership is 0.65, which is higher than that of firms with low institutional ownership which is 0.46. This means that 65%

of the firms with high institutional ownership pay dividends compared to the 46% of firms with low institutional ownership. That is, in a sample of 117 firms, which is the number of firms with high institutional ownership, 77 of the firms pay dividends. Compared to only 13 of the 27 firms with low institutional ownership, paying dividends.

The mean of the DIVTA variable for firms with high institutional ownership is 0.02636 which is 60% higher than that of firms with low institutional ownership, which is 0,0165. This means, the value of dividends paid by firms with high institutional ownership is greater than that of firms with low institutional ownership.

The mean of the LogSales variable for firms with high institutional ownership is 3.67781 which is 55% higher than that of firms with low institutional ownership, which is 2,3692. That means, institutional investors invest in large firms.

5.2 Hausman test analysis

Table 5 Hausman Test results

Model	**$\chi 2$**	**Recommendation**
$TotalINST_{t-1}$	99.90***	Fixed effects
$MonitoringINST_{t-1}$	99.66***	Fixed effects
$Non\_MonitoringInst_{t-1}$	106.3***	Fixed effects
***p<0.01, **p<0.05, * p<0.1		

When examining "the effect of institutional ownership on dividend pay-outs, neglected unobservable firm characteristics may lead to deceptive results due to endogeneity concerns" (Chang et al., 2016: 25553). Given that "some firms may have founding chief executive officers who are reluctant to pay dividends and this morale may then become a part of the corporate culture" (Chang et al., 2016:2552). "We can consider the concern that neglected time-invariant firm characteristics drive our results by controlling for firm-fixed effects in the regression models" (Chang et al., 2016:2552).

A Hausman test is conducted, to see if the study should be running tests based on the fixed effects model or random effects model, if random effect, the study would need to do a further test based on the Breusch Pagan test to check if it should be a random or a pooled regression model (Park, 2011). If the Hausman test recommends fixed effects model, then one does not need to conduct a Breusch and Pagan test (Park, 2011).

The tests for the three models separately showed that they should all be conducted based on the fixed effects model, as the chi-square statistic from the Hausman test is highly significant, in Table 5.

5.3 Effects of Institutional ownership on dividend policy

Table 6 Regression results

Variables	Model 1	Model 2	Model 3
	Total Inst	Monitoring Inst	Non-monitoring Inst
$TotalINST)_{t-1}$	0.005		
	(0.004)		
Monitoring $INST_{t-1}$		0.005	
		(0.004)	
$Non\_MonitoringInst_{t-1}$			0.004
			(0.031)
$LogSales_{t-1}$	-0.004	-0.004	-0.004
	(0.003)	(0.003)	(0.003)
ROA	0.0002***	0.0002***	0.0002***
	(0.0001)	(0.0001)	(0.0001)
SalesGrowth	0.00000	0.00000	0.00000
	(0.00000)	(0.00000)	(0.00000)
MB	0.00005*	0.00005*	0.00005*
	(0.00003)	(0.00003)	(0.00003)
Leverage	-0.024***	-0.024***	-0.025***
	(0.007)	(0.007)	(0.007)
Vol	-0.005	-0.005	-0.004
	(0.005)	(0.005)	(0.005)
LogofAge	-0.049***	-0.046***	-0.047***
	(0.012)	(0.012)	(0.012)
Constant	0.064***	0.065***	0.063***

	(0.010)	(0.010)	(0.010)
Observations	1296	1296	1296
Number of Completed	144	144	144
R-squared	0.059	0.058	0.057
Adjusted R-squared	-0.065	-0.066	-0.068
F test	8.964*** (df = 8; 1296)	8.812*** (df = 8; 1296)	8.581*** (df = 8; 1296)
*** p<0.01, ** p<0.05, * p<0.1			

5.3.1 Total Institutional Investors

The panel data firm-fixed effects regression model results in Table 6 column 2 show that ownership by all institutions is positively associated with the dividend pay-out ratio, though not significantly. The direction of this relationship is consistent with past papers, because existing theory states that institutional investors may be good monitors, given that they are "professional investors with specialized expertise in evaluating firms' financial performance, management quality and governance" (Crane, Michenaud, & Weston, 2016:1378). The relationship between institutional investors and dividend policy is expected to be positive, given that institutions are likely to monitor and use dividends as a tool to mitigate firms' agency problems, as dividends are an effective and credible monitoring device. Short et al. (2002) examined the link between dividend policy and institutional investors and did not segregate them into different categories, their results produced positive and significant evidence that institutions as a whole cause an increase in the dividend pay-out ratio of companies. Therefore, these signs of the coefficients are consistent with those of Short et al. (2002), however they were insignificant.

5.3.2 Monitoring Institutional Investors

The panel data firm-fixed effects regression model results in Table 6 column 3 shows that ownership by monitoring institutions is positively associated with the dividend pay-out ratio, though not significantly. Apart from them not being significant, these results are consistent with the findings of Firth et al. (2016) and Chang et al. (2016), as these studies segregated

institutions into monitoring and non-monitoring institutions, and they found a positive and significant relationship between monitoring institutions and dividend policy. The relationship between monitoring institutions and dividend policy is expected to be positive, given that active and independent institutional investors are able to objectively govern managerial behaviours, as they do not seek business relations with their investee firms (Firth et al., 2016).

5.3.3 Non-Monitoring Institutional Investors

The panel data firm-fixed effects regression model results in Table 6 column 3 show that ownership by non-monitoring institutions is positively associated with the dividend pay-out ratio, though not significant, which is consistent with the results of Firth et al. (2016). These results are consistent with existing literature (see, Firth et al., 2016; Jacob & Lukose, 2018), as grey institutions, being those that would rather protect existing and potential business relationships with firms than challenge management decisions as that could damage their relationship with management and lose existing and potential business opportunities, as defined by Chen et al. (2007), were found to not have any significant influence on firms' dividend policy (Firth et al., 2016).

5.3.4 Control variables

The results of the controlled variables were consistent across all three categories of institutional investors, in the three models that the study ran. The dividend pay-out ratio increases with profitability, sales growth and market-to-book ratio and decreases with leverage, firm size, firm age and market risk. This suggests that different firm characteristics impact the dividend pay-out ratio differently (Chang et al. 2016).

The negative and significant coefficients on leverage are consistent with existing literatures' predictions (see, Firth et al, 2016; Chang et al. 2016), and "reinforces the conclusions of Jensen (1986), that leverage is a substitute for cash dividend in reducing agency costs" (Firth et al., 2016:98). The coefficients on ROA are positive and statistically significant, which shows that more profitable firms pay higher dividends, these results are consistent with existing literature (see, Firth et al., 2016). The market-to-book ratio is positively and significantly associated with the dividend pay-out ratio, which is inconsistent with existing literature (see, Huang & Paul, 2017), given that growing firms need more cash flow to be able to finance their expanding operations, they would keep a large proportion of their earnings by paying few/little dividends (Amidu & Abor, 2006). Firm age is negatively and significantly associated with the dividend

pay-out ratio, which is inconsistent with Tamimi et al. (2014) whose results found a significantly positive relationship between the age of the company and the dividend ratio.

6. Robustness Check

Table 7

Variables	Model 1	Model 2	Model 3
	Total Inst	Monitoring Inst	Non-monitoring Inst
TotalINST(DM)$_{t-1}$	0.00584945		
	(0.00421157)		
Monitoring INST$_{t-1}$		0.0066	
		(0.0039)	
Non_MonitoringInst$_{t-1}$			0.00204489
			(0.0460089)
LogSales$_{t-1}$	0.00271250	0.0027	0.00337126
	(0.003117130	(0.0031)	(0.00309437)
ROA	0.00003819***	0.0004***	0.00035026***
	(0.00009107)	(0.0001)	(0.00009143)
SalesGrowth	-0.00002559	-0.00003	-0.00002745
	(0.00002916)	(0.00003)	(0.00002920)
MB	0.00316328***	0.0032***	0.00317061***
	(0.00045537)	(0.0005)	(0.00045701)
Leverage	-0.03639446***	-0.0375***	-0.03789008***
	(0.00731571)	(0.0075)	(0.00754725)
Vol	-0.01556319	-0.0153	-0.01494119
	(0.00922076)	(0.0092)	(0.00922277)
LogofAge	-0.03408752***	-0.0323**	-0.03348578**
	(0.01246542)	(0.0125)	(0.01260999)
Constant	0.064***	0.065***	0.063***
	(0.010)	(0.010)	(0.010)
Observations	1296	1296	1296
Number of Completed	144	144	144
R-squared	0.09743034	0.0981	0.09578650
Adjusted R-squared	-0.02170254	-0.0209	-0.02366778
F test	15.4365*** (df = 8; 1144)	15.5617*** (df = 8; 1144)	15.13525*** (df = 8; 1144)
*** p<0.01, ** p<0.05, * p<0.1			

Given that the results in section five above were insignificant for the independent variables, the study then performed a robustness test where it winsorised all of the ownership and control variables at the 1% and 99% levels to alleviate the possible effect of outliers, which is consistent with Aggarwal et al (2011), Firth et al (2016), Chang et al (2016) and Kim et al (2019).

There are essentially three common ways of treating outliers; keeping the outlier and treating it like any other data point, winsorize the data or eliminate the extremes from the sample (Ghosh and Vigt, 2012). This study has opted to winsorize the data as mentioned above which is consistent to the prior year studies identified. Winsorizing is the process of replacing any data value above the 99% percentile by the 99% percentile and any value below the one percentile with by the one percentile (Ghosh and Vigt, 2012). The benefit of this method is that the sample size is not reduced.

The results of the regressions after winsorizing remained consistent with the main test in Table 6, except for Market-to-Book ratio which became more statistically significant after the possible effects of the outliers were alleviated.

7. Conclusion

Even though the agency theory predicts that monitoring institutional investors will demand higher dividend pay-outs, as dividends are an effective and reliable monitoring device, empirical evidence for this expectation has been mixed. The lack of homogeneity in institutional ownership may have driven these mixed results, given that different institutions have different incentives and therefore their choice between monitoring and trading vary. This study investigates the impact of total, monitoring and non-monitoring institutions on firm dividend policy in South Africa from 2009 to 2018. The results from the panel data regression model find positive and insignificant relations between total/monitoring/non-monitoring institutional investors and the dividend pay-out policy. These results do not support the predictions and results of Short et al. (2002), Firth et al. (2016) and Huang and Paul (2017), that institutional investors will use dividends as a monitoring device, and thereby cause an increase in the dividend pay-out ratio. The insignificant results across all three models means there is no evidence to show that institutional investors in South Africa are unique and that they influence dividend policy of their investee firm.

The general implications of the results produced by this study are as follow: Even though it is possible that firms pay dividends to reduce agency conflicts, there is no evidence that supports that the portion of shares held by institutional investors are related to the dividend pay-out policy. Secondly, although it is likely that institutions are more competent in monitoring management actions than individuals, there is no evidence to show that they use dividends as their monitoring device. The results of this study therefore caution those that invest in

companies in South Africa and expect to receive more dividends by merely confirming the presence of institutional investors in their potential investee company.

A potential reason as to why the findings in this paper are not consistent with prior year studies is that institutional investors in South Africa only take an active monitoring role when fundamental issues arise (Bhikha, 2014); this is mainly due to the existing structures that encourage companies to adopt good corporate governance practises, such as the JSE listing requirement, requiring listed entities to apply the King Code.

Future research could improve this study by increasing the sample size through the extension of the sample period prior to 2009 to 2000, for example. This study could also be improved by updating the proxies for the independent variables. This study could also be improved by considering the share buy backs as an alternative for cash dividends.

To the best of my knowledge, this study produces the first results which analyse the impact of different categories of institutional investors on dividend policy in South Africa, and therefore highlight the importance of segregating institutional investors into subcategories when analysing their effect, to determine whether they are homogenous or heterogenous.

Reference List

Abor, J. & Fiador, V. 2013a. Does corporate governance explain dividend policy in Sub-Saharan Africa? *International Journal of Law and Management.* 55(3):201-225. DOI:10.1108/17542431311327637

Adedokun, B.K., Babatunde, A.A. 2017. Dividend Policy: A Review of Literatures and Empirical Evidence. *Singaporean Journal of Business, Economics and Management Studies.* 5(10):38-45. DOI:10.12816/0037572

Admati, A.R., Pfleiderer, P. 2009. The "wall Street Walk" and shareholder activism: Exit as a form of voice. *Review of Financial Studies.* 22(7):2645-2685. DOI:10.1093/rfs/hhp037.

Ajanthan, A. 2013. The relationship between dividend payout and firm profitability: A study of listed hotels and restaurant companies in Sri Lanka. *Journal of scientific research publications.*

Allen, F., Bernardo, A.E. & Welch, I. 2000. A theory of dividends based on tax clienteles. *The Journal of Finance.* 55(6):2499-2536.

Al-Malkawi, H.N., Rafferty, M. & Pillai, R. 2015. Dividend Policy: A Review of Theories and Empirical Evidence Dividend Policy : A Review of Theories and Empirical Evidence. *International Bulletin of Business Administration.* 9(1):171-200.

Al-Najjar, B., Kilincarslan, E. 2016. The effect of ownership structure on dividend policy: evidence from Turkey. *Corporate Governance: The International Journal of Business in Society.* 16(1):135-161. DOI:10.1108/CG-09-2015-0129

Aggarwal, R., Erel, I., Ferreira, M., Matos, P. 2011. Does governance travel around the world? Evidence from institutional investors. *Journal of financial economics.*

Amidu, M., Abor, J. 2006. Determinants of dividend payout ratios in Ghana. *The Journal of Risk Finance.* 7(2):136-145. DOI:10.1108/15265940610648580

Azzam, I. 2010. The Impact of Institutional Ownership and Dividend Policy on Stock Returns and Volatility: Evidence from Egypt. *International Journal of Business.* 15(4):443-458.

Bhikha, V. 2014. Corporate governance in South Africa: The role of Institutional Investors.

Brickley, J.A., Lease, R.C., & Smith, C. 1998. Ownership structure and voting on antitakeover amendments. *Journal of financial economics.*

Bushee, B.J. 1998. The influence of institutional investors on myopic R&D investment behaviour. *The accounting Review.*

Carleton, W.T., Nelson, J.M., Weisbach, M.S. The influence of institutions on corporate governance through private negotiations: Evidence from TIAA-CREF. *The journal of finance.*

Cao, L., Du, Y. & Hansen, J.Ø. 2017. Foreign institutional investors and dividend policy: Evidence from China. *International Business Review.* 26(5):816-827. DOI:10.1016/j.ibusrev.2017.02.001

Chang, K., Kang, E. & Li, Y. 2016. Effect of institutional ownership on dividends: An agency-theory-based analysis. *Journal of Business Research.* 69(7):2551-2559. DOI:10.1016/j.jbusres.2015.10.088

Chen, X., Harford, J. & Li, K. 2007. Monitoring: Which institutions matter? *Journal of Financial Economics.* 86(2):279-305. DOI:10.1016/j.jfineco.2006.09.005.

Crane, A.D., Michenaud, S. & Weston, J.P. 2016. The Effect of Institutional Ownership on Payout Policy: Evidence from Index Thresholds. *Review of Financial Studies.* 29(6):1377-1408. DOI:10.1093/rfs/hhw012.

Dempsey, M. 2014. The modigliani and miller propositions: The history of a failed foundation for corporate finance? *Abacus.* 50(3):279-295. DOI:10.1111/abac.12030.

Desai, M.A. & Jin, L. 2011. Institutional tax clienteles and payout policy. *Journal of Financial Economics.* 100(1):68-84. DOI:10.1016/j.jfineco.2010.10.013

Fama, E.F., French, K.R. 2001. Disappearing dividends: changing firm characteristics or lower propensity to pay. *Journal of financial economics.*

Ferreira, M. & Matos, P. 2008. The colors of investor's money: The role of institutional investors around the world. *Journal of Financial Economics.*

Firth, M., Gao, J., Shen, J. & Zhang, Y. 2016. Institutional stock ownership and firms' cash dividend policies: Evidence from China. *Journal of Banking and Finance.* 65:91-107. DOI:10.1016/j.jbankfin.2016.01.009.

French, I. 2020. Africa asset management 2020. South Africa: PwC Market Research Centre.

Gholamhossein, M., Sarikhani, M., Ebrahimi, F. & Maharlouie, M.M. 2012. The impact of institutional ownership on risk-taking behaviours. *African journal of business management*.

Green, S.B. 1991. How many subjects does it take to do a regression analysis. *Multivariate Behavioral Research.*

Grinstein, Y., Michaely, R. 2005. Institutional holdings and Payout policy. *Journal of Finance.*

Gujarati, D.N. & Porter, D.C. 1999. Essentials of econometrics. Irwin/McGraw-Hill Singapore

H, B. 1984. American Economic Association Two Agency-Cost Explanations of Dividends Author (s): Frank H . Easterbrook Source : The American Economic Review , Vol . 74 , No . 4 (Sep ., 1984), pp . 650-659 Published by : American Economic Association Stable

Hartzell, J. & Starks, L. 2003. Institutional investors and executive compensation. *Journal of Finance.*

Howard, M. 2012. The Case for Emerging Market Corporates. *CFA Digest.* 42(1):67-68. DOI:10.2469/dig.v42.n1.1.

Han, K.C., Lee, S.H. & Suk, D.Y. 1999. Institutional Shareholders and dividends. *Journal of Financial and Strategic Decisions* 12(1):53-62.

Hofler, R., Elston, J.A. & Lee, J. 2004. Dividend Policy and Institutional Ownership: Empirical Evidence using a Propensity Score Matching Estimator. *Papers on Entrepreneurship, Growth and Public Policy.* 2704

Huang, W. & Paul, D.L. 2017. Institutional holdings, investment opportunities and dividend policy. *Quarterly Review of Economics and Finance.* 64:152-161. DOI:10.1016/j.qref.2016.06.008

Huang, W. & Zhu, T. 2015a. Foreign institutional investors and corporate governance in emerging markets: Evidence of a split-share structure reform in China. *Journal of Corporate Finance.* 32:312-326. DOI:10.1016/j.jcorpfin.2014.10.013.

Hussain, A., Khan, A. 2014. The impact of institutional ownership on dividend policy in Pakistan. *Journal of applied environmental and biological sciences.* Available:

Jacob, C., Lukose, P.J. 2018. Institutional Ownership and Dividend Payout in Emerging Markets: Evidence from India. *Journal of Emerging Market Finance.* 17(1_suppl) DOI:10.1177/0972652717751538.

Jeon, J.Q., Lee, C. & Moffett, C.M. 2011. Effects of foreign ownership on payout policy: Evidence from the Korean market. *Journal of Financial Markets.* 14(2):344-375. DOI:10.1016/j.finmar.2010.08.001.

Jensen, M. 1986. American Economic Association Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers Author (s): Michael C . Jensen Source : The American Economic Review , Vol . 76 , No . 2 , Papers and Proceedings of the Ninety-Eighth Annual Meeting of the. *American Economic Review.* 76(2):323-329.

Jensen, M.C. & Meckling, W.H. 1976b. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics.* 3(4):305-360. DOI:10.1016/0304-405X(76)90026-X

Kania, S.L. 2005. What factors motivate the corporate dividend decision?

Kim, H., Park, K. & Roy, K. 2019. Do long-term institutional investors foster corporate innovation? *Journal of Accounting and Finance.* 1164-1195

Kilincarslan, E., Ozdemir, O. 2018. Institutional investment horizon and dividend policy: An empirical study of UK firms. *Finance research letters.*

Lahiri, P. 2013. The Relationship between Dividend Payout Policy and Foreign Institutional Investment in India. *Foreign Trade Review.* 48(4):437-459. DOI:10.1177/0015732513504709

McGrath, C. 2017. 80% of equity market cap held by institutions. Pensions&Investments. 25 April.

Mehrani, S., Moradi, M., & Esk, H. 2011. Ownership structure and dividend policy: Evidence from Iran. *African Journal of Business Management.* 5(17):7516-7525.

Moh'd, M.A., Perry, L.G. & Rimbey, J.N. 1995. An Investigation of the Dynamic Relationship between Agency Theory and Dividend Policy.

Mollah, S. 2011. Do emerging market firms follow different dividend policies: Empirical investigation on the pre-and post-reform dividend policy and behaviour of Dhaka Stock Exchange listed firms. *Studies in Economics and Finance.* 28(2):118-135. DOI:10.1108/10867371111137120.

Nagel, G.L., Qayyum, M.A. & Roskelley, K.D. 2015. Do motivated institutional investors monitor firm pay-out and performance? *Journal of Financial Research.* 38(3):349-377. DOI:10.1111/jfir.12063

Park, M.H. 2011. Practical Guides to Panel Data Modelling: A Step by Step Analysis Using Stata. *International University of Japan.*

Pattenden, K. & Twite, G. 2008. Taxes and dividend policy under alternative tax regimes. *Journal of Corporate Finance.* 14(1):1-16. DOI: 10.1016/j.jcorpfin.2007.09.002.

Redding, L.S. 1997. Firm size and dividend payouts. *Journal of financial intermediation.*

Rozeff, M.S. 1982. Growth, Beta, Agency Costs as Determinants of Dividend Payout Ratios. *Journal of Financial Research.*

Sasan, M., Mohammad, M., Hoda, E. & ar. 2016. Ownership structure and dividend policy: Evidence from Iran. *African Journal of Business Management.* 5(17):7516-7525. DOI:10.5897/ajbm11.468.

Senepue, P.J.C. & Gourlay, B.M. 1983. Dividend policy and practice in South Africa. *Investment Analysts Journal.* 12(21):35-41. DOI:10.1080/10293523.1983.11082209.

Shleifer, A., Vishny, R.W. 1986. Large shareholders and corporate control. *Journal of political economy.*

Short, H., Zhang, H. & Keasey, K. 2002. The link between dividend policy and institutional ownership. *Journal of Corporate Finance.* 8(2):105-122. DOI:10.1016/S0929-1199(01)00030-X.

Stepanyan, G.G. 2012. Revisiting firm life cycle theory for new directions in finance. *Asian journal of finance & accounting.*

Strickland, D. 1996. Determinants of Institutional Ownership: Implications for Dividend Clienteles.

Sugiastuti, R.M ., Dzulkirom, M. & Rahayu, S.M. 2018. Effect of profitability, Leverage toward dividend policy and firm value. *Russian journal of agricultural and socio-economics science.*

Tamimi, M., Takhtaei, N., & Makchi, F. 2014. Relationship between firm age and financial leverage with dividend policy. Asian journal of finance & accounting.

Thanatawee, Y. 2012. Ownership Structure and Dividend Policy: Evidence from Thailand. *Ssrn.* 5(1):121-132. DOI:10.2139/ssrn.2138186.

Ullah, H., Fida, A., Khan, S. 2012. The Impact of Ownership Structure on Dividend Policy Evidence from Emerging Markets KSE-100 Index Pakistan. *International Journal of Business and Social Science.* 3(9):298-307.

Vaughn, M., Ryan, L.V. 2006. Corporate Governance in South Africa: A bellwether for the continent? *Corporate Governance: An International Review.* 14(5):504-512. DOI:10.1111/j.1467-8683.2006.00533.x.

Zeckhauser, R.J., Pound, J. 1990. Are Large Shareholders Effective Monitors? An Investigation of Share Ownership and Corporate Performance. *Journal of business.*