

## **Effect of Agency Costs on Value of Firms Listed in Nairobi Securities Exchange**

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### **Abstract**

The nature of the relationship between financing decisions and value of the firm remains a subject of contention among scholars and experts in corporate cycles however the dual seem to concur with the fact that financing decisions affect the value of the firm. While some scholars affirm that financing decisions negatively affect the value of a firm, others opine that financing decisions do not influence the value of the firm. These decisions are derived at after taking into account specific determinants for a firm to achieve rationality and optimality. This study measured the effect of agency costs on value of listed firms using financial statements of listed firms which covered a period of 10 years from January 2008 to December 2017. The study was anchored on traditional theory due to its optimality argument. The study was guided by positivisim research philosophy and employed both cross sectional and explanatory research designs. Cross sectional research design was appropriate in covering different sectors of listed companes while explanatory research design informed why and how the independent variables are related to the dependent. Data was analyzed using descriptive statistical methods of mean, minimums, maximums, percentages and standard deviation. Further inferential statistical methods of Karl Pearson Correlation and hierarchical regression were adopted in analysis of the panel data. The findings revealed that agency costs had statistically significant effect on value of listed firms. Expense ratio and monitoring expenses explained a significant portion of variation in value of firms while asset turn over accounted for a lower value of the variation in the value of firm. In agricultural, automobile and accessories sectors, monitoring expenses had the highest explanatory power of the variation in the value of these firms while in theenergy and petroleum as well astelecommunication firms asset turn over had a significant influence in value of the firm.

**Keywords:** Agency costs, Value of firm, Expense ratio, Asset turnover ratio, Monitoring expenses

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### **I. INTRODUCTION**

The theory and practice of corporate financing remains a contradictory subject in the most recent studies by experts and academicians. While some scholars hold the view that finance theory is not associated with finance practices others are of the opinion that finance theory has a strong correlation with the practice by finance managers. Faff, Gay & Tan (2016) established that the Board of Directors play a critical role in determining financing choices while finance managers role is to dictate on cash holding decisions. Mutairi, Tian, Hasan and Tan (2012), made a deliberate attempt to confront finance theory and practice in their study of corporate governance and corporate finance practices in firms listed in Kuwait Stock Exchange market. The scholars investigated how theory aligns with the behavior of financial managers in practice for an emerging market. The study found out that internal rate of return, capital asset pricing model and weighted average cost of capital are the most popular methods used. Further it was noted that agency problems exist in those firms while a bird in hand dividend theory was employed by some firms. This portend that finance theory has a strong positive correlation with the practice by finance managers. This study supports the view that corporate finance theory has a strong positive correlation to the practices adopted by finance managers.

Kumar, Anjum and Nayyar (2012) argues that financing decisions have no effect on firm value because the latter is a product of undertaking critical investment decisions. This fact was also supported by (Awalakki, 2015). These studies contradict the finding of Koroti (2013) which indicated that financing decisions have a negative effect on financial performance.

The connection between capital structure theory and the firm value remains a widely debatable issue in the corporate finance cycles. Modigliani and Miller 1958 in their article proposed that in perfect financial market conditions the value of a firm is independent of the capital structure. A perfect capital market is one in which there are no transaction, no bankruptcy cost, there is perfect information at the disposal of players in the market, entities can acquire funds at the same rate of interest whether corporate or individual and there are no

taxes. However the existence of perfect market conditions assumed in the proposition would not be attained in practice. Further Modigliani and Miller 1963 proposed that an increase in capital structure increases the value of a firm through the tax advantage gained by increasing debt levels.

Agency costs are legal and administration expenses incurred in monitoring and controlling the activities of management. Elizabeth (2005) argued that agency problems and costs would reduce if stakeholders are more concerned with firm value maximization rather than maximizing shareholder value. Though in actual practice, shareholders and management are often times driven by individual interests at the expense of firm value maximization. Past studies contend that high leverage leads to reduced agency costs and increased value of the firm. Jensen (2000) argued that increase in debt reduces agency costs of free cash flow by decreasing amount of cash under management control because debt commits firm to pay out fixed cash. This study posits that high leverage would lead to high agency costs such as auditing costs, legal and administration expenses and therefore decrease in value of the firm. Further in the case of financial constraints a firm may delay servicing its debts and this could inflate the costs increasing overall costs and reducing the value of the firm.

Firm value is the net realizable value of the firm over a certain period of time. Ayako and Wamalwa (2015) assert that firm value can be maximized by optimal utilization of tangible and intangible assets of the firm, deriving an optimal mix of debt and equity in financing activities of the firm, setting up an efficient and effective cash flow management system and establishing a favourable dividend policy of the firm. When asset capacity is maximumly utilized a firm stands to gain immensely hence increase in firm value in the long run. Optimal financing mix is that level where additional debt or equity could result to decrease in profit margins due to marginal costs and consequent decline in firm value. At this level the value of the firm is considered maximum because the total cost of capital is at its lowest and profit margins at their highest. Effective cash flow management safeguards the firm's resources while a favourable dividend policy sends a favourable signal to potential investors thus improving the value of the firm.

Studies on the relationship between capital structure and value of the firm in developed countries have indicated a positive relationship between the two variables. Hung *et al.* (2002) postulated that high financial leverage has a direct positive relationship on assets and inverse relationship with profit margins in Hong Kong property markets. Alonso, Iturriaga and Sanz (2005) confirmed a negative relationship between financial leverage and firm value in the presence of growth opportunities however the same study showed a positive relationship when firms have no viable investment opportunities. Similar studies in Africa have shown a negative relationship between capital structure and value of firm (Abor, 2005) for Ghana, Onadapo and Kajola (2010) for Nigeria and Kiofola (2010) for Kenya. This nature of relationship has been attributed to the fact that businesses rely heavily on bank loans which are a more expensive form of debt financing and it substantially affect their performance (Kodongo and Mokoaleli, 2014). The declining value of listed firms in developing countries remain a cause of concern and this study points to the contribution of financing decisions determinants to the value of the firm with a focus agency costs.

A firm can have high return on equity whenever external borrowing increases thus the potential to earn at a higher rate than the servicing costs. Waheed, Fawad, Adnan and Jehangir (2016) argue that investors expect a positive return from their investments both in the short term in form of dividends and in the long term as manifested in increase in share price. This in itself grounds the fact that the ultimate goal of the firm is to maximize the market value of a firm's share because this will translate to increase in wealth to the investors. Scholars have suggested various models of measuring firm value. Huang & Huang (2006) suggests that value of firm can be measured by earning capitalization model, market value added, economic value added, market value of year end stocks and tobin's Q while Gherghina, (2014) supposes that value of a firm can be measured using return on asset and earning per share.

### **1.1.1 Global Perspective of Financing Decisions**

Chowdhury & Chowdhury (2010) opined that there is a strong positive correlation between debt-equity ratio and firm value especially when stratified by industry. The study conducted in Bangladesh concluded that first, maximizing the shareholder wealth calls for an optimal mix of debt and equity, secondly, cost of capital has a negative correlation to the value of firm and finally changing the capital structure composition can also alter the market value of a firm. Cheng, Liu and Chien (2010) study in China demonstrated that a U-shaped correlation between leverage and firm value does exist and it is possible to establish a critical level beyond which further increase in debt financing does not increase proportionately to firm value.

Dranceanu & Ciobanu (2014) investigated Romanian companies and portend that capital structure has a positive impact on firm value for firms facing both low and high growth opportunities. Further to determine the optimal capital structure, the modern theories of capital structure have taken into account taxes and financial distress cost, agency costs and information asymmetry as well as effects of market imperfections.

Kauser *et al.* (2014) argued that capital structure has a significant negative impact on performance of firms listed in Karachi Stock Exchange. Further, the volume of capital structure has a significant positive effect

on a firm performance and finally firms listed in Karachi Stock Exchange depend on equity and short term financing however, debts have strong covenants which affect the firm performance. Aggarwal & Padhan (2017) of India affirmed that there is a significant relationship between firm value, firm quality, liquidity, leverage, firm size and economic growth and held the view that Modiglian and Miller proposition of capital structure irrelevance does not apply in the Indian hospitality sector.

Abdul (2014) research on firm external financing decisions sought to explain the role of firms specific and economic risks in making financing decisions in the Pakistan context. The results indicated that firms commonly take into account forms of risk whenever making debt equity choices. Further the multinomial logit regression model results showed that firms are quite considerate in prioritizing external financing over equity financing whenever firm specific risk is high. This view supports the argument that firms prefer debt over equity because of the advantages associated with its use.

Meragal and Senadheera (2016) conducted a study on the impact of financial leverage on the firms' value among manufacturing companies in Sri Lanka and affirmed that, there is a significant relationship between debt to equity ratio and return on assets ratio. Debt to equity ratio was a proxy to financial leverage while return on asset was a measure of firms' value. This means that financial leverage of manufacturing firms in Sri Lanka had a significant effect on firm value.

Akmal, Maria, Aisha, Imtiaz and Faiz (2019) study on the impact of financing decisions on firm's performance among Pakistani listed firms assert that, financing decisions have no significant impact on the firms' performance in the Pakistan context. Their study formed a departure from existing literature which has always pointed out that financing decisions have a direct and significant relationship with firm performance.

Chaleeda, Tunku and Anas (2019) sought to determine the effect of corporate financing decisions on firm value in Bursa Malaysia and did establish that short term debt to assets and long term debt to assets ratios have a positive and statistically significant relationship to value of the firm. This finding supports the view that debt and dividend payouts reduce agency costs arising from free cash flows hence increase in firm value. The study assert that debt to total assets ratio affect the value of firm negatively, implying that despite the benefits of debt there is a cost attached to its use due to the probability of bankruptcy.

### ***1.1.2 African Perspective of Financing Decisions***

Antwi *et.al* (2012) showed that in an emerging economy such as Ghana, equity capital as a component of capital structure is relevant to the value of a firm. Further the study revealed that long term debt is a major determinant of the value of a firm. It was suggested that corporate managers should utilize more long term debt than equity capital since it has more impact on a firm's value.

Ogbulu & Emeni (2012) pointed that in an emerging economy such as Nigeria equity capital as a component in the capital structure is irrelevant to the value of firm while long term debt is a major determinant of the firm's value. The dual recommended that corporate financial managers must utilize more of long term debt than equity capital in financing their assets because it leads to a positive firm value.

Adetunji, Akinyemi and Rashid (2016) study on financial leverage and firms' value for selected firms in Nigeria revealed that there exists a significant relationship between financial leverage and firm value. This implies that there is a statistically significant effect of financial leverage on the value of listed firms. This argument concurs with the work of Antwi *et al* 2012 and Ogbulu & Emeni 2012 who suggest that firms must utilize debt financing to larger extent than equity capital while financing their activities.

### ***1. 1.3 Kenyan Perspective of Financing Decisions and Value of Firm***

Kulati (2014) revealed that firm size and capital structure does affect the value of a firm positively. It was suggested that since the cost of obtaining and using short term debt is lower than in the case of long term loans, firm should utilize more of short term loans with a relative low interest rate. This will lead to increased profit levels and a positive effect of the firm value. This was in agreement with Modigliani Miller's proposition 1 which provide that capital structure does not affect value of a firm.

Kinyua (2014) affirmed that there is a negative relationship between capital structure and profitability of firms therefore agreeing with pecking order and information asymmetry theories. It proposed that firms should seek to achieve a debt/equity ratio which minimizes cost of capital and increase firm profitability. The minimization of cost of capital is largely based on external borrowing through debt due to its perceived benefits to the firm.

Masavi, Kiweu & Kinyiri (2017) conducted a study on capital structure and financial performance of agricultural companies listed in Nairobi Securities Exchange and revealed that an increase in debt ratio leads to an increase in financial performance of the firm, while increase in debt equity combination will result to a significant decline in profits after tax and therefore capital structure influence financial performance of a firm.

Muiruri and Wapukhulu (2018) study on the effect of financing decisions on financial performance of listed companies at the Nairobi Securities Exchange found out that financing decisions have a positive and

insignificant effect on return on assets, however these decisions have a positive and significant effect on return on equity. This suggests that the proxy for measuring financial performance could provide varying results.

#### **1.1.4 Global Common Stock Exchanges**

Johannesburg Stock Exchange (JSE) is the 19th largest stock exchange based in South Africa going by market capitalization and the largest stock exchange in Africa. It started in 1887 in the period of global rush in South Africa. It started as an all equity exchange but it has since diversified into a variety of products and services. The exchange has an alternative exchange segment specifically designed to accommodate small and medium sized listings. It deals with a variety of products like futures and bonds exchanges, bond based derivatives comprising of bond futures, swaps and options. JSE has 62 equities members, 92 commodity derivatives members, 120 equity derivatives members and 102 interest as well as currency derivatives all licensed in South Africa. Financial Services Board is responsible in supervising activities of JSE in a day to day basis (JSE Integrated Annual Report, 2013).

JSE links all buyers and sellers in a variety of financial markets, equities financial derivatives, commodity derivatives, currency derivatives and instruments of interest rates. JSE is licensed to operate under the Financial Markets Act of 2012. The JSE currently provides primary market, secondary market and after sale services with a full proof investor protection mechanism that provides compensation to clients. JSE has an excellent regulatory framework which has seen the exchange ranked by World Economic Forum as the best regulated exchange for four consecutive years. It obtains its revenue from listing companies and various traded financial instruments, review of regulatory content of listed companies, trading activities as well as post trade transactions of market players and though selling of market data (JSE Integrated Annual Report, 2013)

Nigeria Stock Exchange (NSE) is an exchange based in Nigeria and controlled by the Council of the Nigerian Stock Exchange. It serves an economy which is largely oil and gas dependant. The exchange caters for both primary and secondary markets which are capital and monetary in nature. In 2010 Nigeria Stock Exchange contacted with Thomson Reuters and Bloomberg, well established network global information dissemination companies, to disseminate real time market data to the global investment world. This complemented the exchange's official website and its local data centre. The data available to potential investors include bid and ask prices of the securities, the trading volumes, trading patterns observed over specific periods and market information on equities indices on the stock exchange. Nigeria Stock Exchange was the second after Nairobi Stock Exchange to be linked in Africa by Reuters for real time data. It is a 30-share index constituting of food and beverage, banking, insurance and oil and gas sectors (Okereke, 2010).

London Stock Exchange (LSE), is a highly diversified market accommodating over 2200 companies in four specific markets: the main market, professional securities market, specialist fund market and alternative investment market. While Main Market Segment provides a marketing opportunity to the world's largest and highly dynamic companies as it offers quality, balance and globally respected standards on regulation and corporate governance. Alternative Investment Market is considered by the market players as the most successful in the entire world. This segment has seen over 1000 companies join the market with a total value of 72 billion sterling pounds from over 95 countries. London Stock Exchange has designed its trading services to maximize liquidity for all players. It provides for main trading services SETS-Stock Exchange Trading Services which deals with exchange of FTSE 100, FTSE 250, Exchange traded funds and products as well as FTSE small cap index constituents. Secondly, the exchange further trades in SETSqx which is a SETS for quotes and crosses, a service specifically designed for stocks less liquid than those traded at SETS. Thirdly, the exchange provides SEAQ, a non electronic executable quotation service permitting market players to make firm quotes in AIM securities. Finally, the International Order Book (IOB) services, offering a cost efficient, secure and transparent facilitation to investors to venture into the world's best premier markets through advanced technology platform as used in SETS (London Stock Exchange Group Report, 2016).

The exchange has a daily noon auction for equity securities on SETS Order Book, a mid day price forming auction model for trading large size orders. FTSE 100 weekly options are the first short timed option on UK based underlying and listed in a UK exchange. The product range in LSEDM includes FTSE 100 index options, FTSE 100 index futures, FTSE superliquid futures, UK single stock futures and stock options. Exchange Trading Fund (ETF) at LSE is currently the largest in Europe with approximately 45 percent market share in trading turnover. It has 21 registered market makers, 150 active member firms providing cash on each trading day. The basic currencies used in trading at LSE are GBP, EUR, USD, CNY, HKD and CHF. There are 2750 international fixed income issuers on London Stock Exchange from 59 countries trading on 39 currencies. With the exchange's highly liquid and clear electronic fixed order books for both primary and secondary investors, it has provided the market for Islamic finance, masala bonds, green bonds and dim sum bonds. London Stock Exchange is a partner with the United Nations Sustainable Exchanges initiative and is the key observer to the Green Bond Principles. The green finance offering is focussed on fixed income products and information services via its FTSE Russell business (London Stock Exchange Group Report, 2016).

## II. LITERATURE REVIEW

### **2.1 Traditional Approach**

The theory was propounded by Ezra and Weston in 1952 and supported by Modigliani-Miller in 1963. The theory states that there exists an optimal capital structure and this is a point at which the value of the firm is highest and the cost of capital lowest. The theory argues that up to a certain point debt-equity mix will cause the market value of the firm to rise and the cost of capital to decline, however after that point any additional debt causes a decrease in the market value of the firm and increase in cost of capital. The existence of optimality differ from firm to firm because each firm has unique considerations in making their funding mix (Jones, 1998).

The theory presupposes that the cost of debt capital remains constant up to a certain level after which it rises and the cost of equity capital remains constant or rises gradually up to a certain level but later increases at a higher rate. Further the theory assumes that the average cost of capital decreases up to a certain level but remains constant upon attaining a certain level. Despite these assumptions it is not apparently clear as to what constitute the optimal level. The normal average cost curve is U shaped and the optimum capital structure is at a point where cost of capital is the lowest. Thus the traditional theory portend that the cost of capital is not independent of the capital structure of the firm and there exists an optimal capital structure. At that point the marginal real cost of debt is the same as the marginal cost of equity in equilibrium (Sagala, 2003). The theory assumes that the rate of interest on debt remains constant for a certain period beyond which it increases with the increase in leverage. In practice this assumption may hold if the time frame is short but if its long market conditions may change (Brealey and Meyers, 2012).

Critics of traditional approach argue that Cost of equity does not practically rise unless some conditions arise. When the optimal level has been reached investors control the increasing financial risk thereby adjusting the market price of the shares. The variation in prices of shares means that a firm can have lower cost of capital with initial significant use of leverage. Solomon (2009), opines that cost of equity is saucer-shaped along with the horizontal middle range. They pose that optimum capital structure has a range where the cost of capital is minimized and value of the firm maximized. The theory hold the view that expected rate of return by shareholders does not change or increases gradually for some time until the shareholders perceive a financial risk and this is when the rate increases at a higher rate. This view is not realistic to the current challenges and open opportunities firms face and these expectations are highly subjective (Weston and Brigham 2010).

This theory is relevant to this study by holding the view that optimality is achieved when tax benefits considered one of the returns is maximized, agency costs and bankruptcy costs forming part of the total costs of the firm are minimized to their lowest point. Traditional theory interrogates the effect of capital structure optimality on the value of the firm.

### **2.2 Agency Costs and Firm Value**

Sheng (2009) examined how agency costs affect firm values in China considering 156 publicly listed companies with individual ownership for the period 2002-2007. Secondary data was extracted from the respective company financial statements for the period of study. Data was analysed using regression analysis and inferences were drawn from the analysis. The findings affirmed that agency costs have a significant negative impact on the firm value. The study concluded that divergency of controlling rights as well as cashflow rights leads to lower firm value and as agency costs increase stock returns decrease.

Jensen and Meckling 1976 argued that agency costs are expenses incurred to ensure that agents in their actions protect the interest of principals. The manifestations of the agents' actions are in the kind of policies they formulate and implement. High agency costs will tend to increase the overall cost to the firm and thus lowering the value of the firm. The dual further posited that there is an optimum leverage amount that would be associated to a minimum amount of cumulative agency costs. Jensen 1986 argued that increase in debt can reduce agency costs of free cash flow through decrease of amount of cash under management control as the debt commits firm to pay out fixed cash. Debt reduces the conflict of interest between managers and shareholders through reducing agency costs of equity by raising the share of ownership of managers in the firm. Jensen and Meckling (2000) integrated elements of theories of agency, property rights and finance to introduce a theory of ownership structure of a firm. The study examined the nature of agency costs initiated by presence of debt as well as external equity indicating who bears the costs and demonstrated the Pareto optimality of presence of costs in the firm. In conclusion these scholars indicated that the levels of agency costs depend on statutory, law and human ingenuity when drawing contracts between debt holders and owners.

Berger and Patti, (2002) conducted a study on capital structure and firm performance adopting a new approach to testing agency theory and an application to the banking industry. The paper tested the prediction of corporate governance theory that, leverage affects agency costs and influence firm performance. The study tested the theory using proficiency and employed simultaneous equations model to account for reverse causality from performance to capital structure. All banks with ownership data for the period 1980s-1990s were considered. Financial ratios, ordinary least squares, Tobins Q methodology were adopted to analyze the data

extracted. The results agreed with the agency costs hypothesis that high leverage and low equity capital is an indicator of higher efficiency. The data from the US banking industry was consistent with the theory and the results were significant statistically and economically.

Webb (2005), study on agency costs, leverage and corporate social responsibility tested the causality of the relationship between capital structure and corporate social responsibility. The study divided firms into those with social responsibility scores greater than median and those with less than median score using a sample of 485 firms in the US Compustat. Means, medians, multi-linear regression, ordinary least squares and fixed effect model of granger causality were employed in the analysis. The results indicated a positive casual relationship between leverage and specific corporate social responsibility measures thus lower cost of debt financing for firms with strong corporate social responsibility. The study concluded that cost of debt financing is lower for firms with stronger corporate social responsibility ratings than firms with low ratings. Also change in agency costs of debts affect the optimality of capital structure of a firm.

Naiker et al. (2005) carried out a study on the agency cost effect of unionization on firm value in New Zealand using a sample size of 99 companies listed in New Zealand Stock Exchange. The study employed agency framework and strategy typology in determining the extent to which unionization legislation affect the value of firms. The findings confirmed that firms characterized by strategy of higher growth suffer higher loss in value because of higher agency costs connected to the kind of strategies adopted by the firms. It was concluded that the results are true upon controlling variables such as firm size, industry membership, labour intensity as well as the proportion of unionized workers.

Magdalena (2008) held the view that agency costs are expenses depended on legal regulations and willingness of people to sign contracts. These costs are incurred to ensure compliance to the laid down agreements in a manner that protects the interest of stakeholders. This scholar argued that the higher expected cost of governance translates to higher interest rates and lower market value of the firm. He concluded that restrictive covenants reduce the cost of bankruptcy resulting to increased value of the firm. Yang (2009), pointed out that free cash flow and over investment are the key problems of agency with high effect on cost of capital. Richardson (2006) established that situations of over investment emanate from firms with high cash flows. However, upon management realizing that all benefits derived from investment projects may be due to debt holders only, they could not engage in projects which are profitable to the firm.

Cheng and Tzeng (2010), indicate that debt can create asset substitution effect, where management is highly encouraged to invest in more risk projects by shareholders unlike the expectations of debt holders. In the event that these projects generate substantial returns as expected then the debt holders may only gain regular returns and all other extra benefit to shareholders, but if the project does not yield as expected the debt holders must share the losses jointly with shareholders. This provides the prompt for debt holders to monitor the firm incurring monitoring costs and utilizing covenants. Cheng & Tzeng (2014) on assessing the effect of leverage on firm value and how the firm financial quality influence on this effect confirmed that large institutional managers have favorable monitoring tools that reduce agency costs however, large individual investors do not have access to them.

Young and Kunsu (2019) conducted a study on foreign ownership, agency costs and long term firm growth as evidenced from Korea. The study sought to establish the association between foreign ownership and value of the firm in a setting of dividend payouts and long term growth. Descriptive statistical methods of mean, median and standard deviation were used in the analysis of data. Also inferential technique of Karl Pearson coefficient of correlation was employed. The study found out that foreign ownership is positively related to the value of the firm and change in foreign ownership is negatively associated with change in agency costs which then translates to increment or decrement of the value of firm. The study concluded that foreign ownership had a moderating role on dividend payments as well as long term growth of the firm. The dual recommended that foreign investors should motivate managers to pursue long term addition of value for sustained wealth maximization for shareholders.

Achjen and Chokri (2017) did a study on the impact of cashflow and agency costs on firm performance. The study re-examined the free cash flow hypothesis versus agency theory. Data was obtained from publicly listed companies in French Stock Exchange covering the years 2003 to 2007. Descriptives of minimum, maximum, mean and standard deviation were employed to enable understanding of the characteristics of the variables. Further, Multiple linear regression models were used to analyse the panel data and derive inferences. The findings indicated that there is a positive effect of the free cashflows on agency costs of the firms and the availability of free cash flows is a motivator for management to invest in less viable projects thus increase in agency costs and decline in value of firms. The study concluded that, there is association of free cashflows and value of the firm hence supporting the free cash flow hypothesis. The scholars recommended appropriate and minimum cash flows to be at the disposal of managers to avoid investment in projects which are not viable.

Kung'u and Munyua (2016) studied the relationship between corporate governance practices and agency costs of manufacturing and allied firms listed in Nairobi Securities Exchange. The study sought to link corporate governance practices to agency costs of these firms. Correlation research design was employed and data from all manufacturing companies listed at Nairobi Securities Exchange for a six year period was collected. Descriptive statistical methods of minimum, maximum, mean and standard deviation were adopted in data analysis. Also correlation, linear regression and ANOVA analysis techniques were used to infer the results. The findings revealed that there is a significant positive relationship between director ownership and agency costs. This meant that poor corporate governance practices would lead to increased agency costs. The study concluded that there is a significant association between corporate governance and agency costs. The study recommended that firms should embrace good governance practices to minimize agency costs and improve on performance. Also regulatory authorities should encourage firms to establish guidelines and ensure strict adherence to those guidelines.

Most scholars seem to concur with the fact that high leverage reduces total agency costs through liquidation threat by the lenders and the use of fixed covenants by debtholders. However, this work held the view that high leverage causes an increase in total agency costs such as auditing costs, legal and administration expenses among others. In the case of delays to service the debts, or default due to liquidity problems it could inflate the costs for the firm. In effect the reputation and value of the firm will gradually decline. Therefore this study sought to test the hypothesis that agency costs have no significant contribution to the value of the firm.

### **2.3 Firm Value**

Theoretical views on firm value maximization have been presented in various perspectives. Primos, Igor and Suzana (2017) carried out a study on the theoretical views on corporate governance models with a focus of perspectives of shareholder theory and stakeholder theory. Shareholder theory define the main objective of the firm as value maximization for the shareholders and the later designated firm objective more broadly so as to include other stakeholders to the firm. According to this perception a firm value is maximized when expected benefits are maximized in the long term. However value maximization of equity is not similar to profit maximization. While profit present the historical performance of a firm, it will not meet investors expectations from the firm. In the perspective of the shareholder value maximization expected future cash flow is the appropriate measure.

Firm value is determined by various elements and in the past various scholars have made an attempt to explore these specific determinants of firm value. Ayako and Wamalwa (2017), conducted a study on determinants of firm value in Kenya and narrowed to commercial banks listed at the Nairobi Securities Exchange. Their study used secondary panel data covering the period 2001 to 2012. The data was analysed using descriptive statistics and multi-variate regression analysis. The results demonstrated that the effect of tangible assets, capital structure, cash flow, dividend payout and intangible assets accounted for 30 percent of the value of commercial banks listed at the NSE. There was a significant and positive correlation between the dividend payout and market share value. Also their findings concurred with Modiglian-Miller's second proposition that capital structure is relevant in determining the value of the firm.

### **2.4 Summary of Research Gap**

Webb (2005) argues that high leverage may reduce agency costs leading to high market value of firm. Further, three situations may arise as a consequence of these costs, that is, overinvestment, underinvestment and asset substitution. While overinvestment is when a firm undertakes ambitiously in highly risk project expecting high returns, underinvestment is when the shareholders decide not to invest in viable projects because it does not benefit them directly. Asset substitution is when the management has the endorsement of shareholders to undertake investments in highly risk projects and in the event that the expected yield is achieved the shareholders take all the returns while bondholder take what is due from their contracts. But in the event of the projects backfiring both shareholders and bondholder share the losses. This work considers the perception that high leverage translates to high agency cost on expenses like monitoring costs, legal and administration expenses. This is the case because any delays to service the debts, or default due to liquidity problems facing the firm could inflate the costs for the firm in terms of penalties, legal and administration costs. This increased agency cost have to be paid by the firm promptly thus reducing firm resources and firm value. The three common situations mentioned by past scholars may not arise at all in the life time of a firm if adequate monitoring tools are regularly applied by the firm management and the regulatory authority. Further if all players in the firm and the market have equal investment information, investor rationality would act as the watchdog of their own interest in the investments.

III. MATERIAL AND METHODS

3.1 Research Philosophy

A research philosophy is a belief in the way data should be collected, analyzed, interpreted and used in a particular phenomenon. It is the development of a research background, knowledge and nature (Saunders and Thornhill, 2007). This study employed positivism research philosophy because in this philosophy knowledge generated which is based on empirical evidence and logical reasoning can be verified. Equally the positivism philosophy permits the use of probability and deductive logic in arriving at meanings of situations. Further it accommodates a scientific analysis of the data as well as the use of theoretical basis of the concepts.

3.2 Research Design

A research design is a structure or plan or blue print strategy of investigation adopted to derive answers to the research questions in a study (Kerlinger 1986; Kothari, 2004). This study employed cross sectional and explanatory research designs. Kothari(2009) argued that research design is an arrangement of conditions for collection and analysis of data in a manner to combine relevance of research purpose with procedure.

3.6 Data Collection Procedures

Data collection refers to the gathering of empirical evidence in order to gain insights about a situation and answer questions that prompt research (Flick, 2008). Document analysis guide was applied to derive secondary data from published statements of financial performance and those of financial position for the period 2008 to 2017. Kahn (2006) portend that document review is concerned with deriving information by cross examining written documents.

3.6.1 Validity of the Instrument

According to Krishnaswamy (2009), validity is an indication of the degree to which an instrument measures what it is supposed to measure. Mutai (2001) define validity as the level at which results obtained from the use of the instrument represents the phenomena under study. Kothari (2004) argued that validity of instruments is ascertaining the quality of the data gathering instruments and procedures that measure what is intended to be measured. Peer reviews ensured face validity while content validity employed experts opinion.

3.7 Data Analysis and Presentation

Descriptive analysis methods of mean, percentages, and standard deviation were adopted to enable the reasercher understand the characteristics of the variables used. Karl Pearson Coefficient of correlation was used to determine the relationship between agency costs and value of firm while hierachical regression analysis was employed to determine the effect of agency costs on value of firms listed in Nairobi Securities Exchange.

Therefore, to measure the effect of the independent variables on the dependent variable the following multi-linear regression model was used;

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_i \dots\dots\dots (i)$$

where  $\beta_0$  is the constant representing the gradient,  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are the coefficients of the proxies of agency costs,  $X_1$ ,  $X_2$ ,  $X_3$  and  $X_4$  comprising of expense ratio, asset turnover ratio, and monitoring expenses respectively and  $e_i$  - is the error term

Significance values derived from ANOVA tables and t-test values were employed in testing the hypotheses. The results were then presented in the form of tables.

Table 3. 1 Research Methodology Matrix

Objective	Hypothesis	Method of Analysis
To determine the effect of agency costs on value of listed firms	H <sub>02</sub> : Agency costs have no significant contribution to the value of the firm	Minimums, Maximums, Mean, Standard deviation,Skewness, Kurtosis, Karl Pearson Correlation, Regression Model Y= $\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_i$ t-test and F test

IV. RESULTS

4.1 Descriptives on Agency Costs

The descriptive statistical methods of minimum, maximum,mean, standard deviation, skewness were employed to understand the pattern of behaviour for expense ratio, asset turnover ratio and monitoring expenses. Results are as shown in table 4.1



**Table 4.1 Agency Costs Descriptives**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
ExpRatio	400	.01	1.51	.1993	.25019	2.691	8.288
AssetTurnoverR	400	.05	6.59	.7533	.95664	2.901	10.271
MonExp	399	1500.00	11292736	161265.1554	901994.208	9.649	99.070
Valid N							

Source: Field Data 2019

Table 4.1 indicates that expense ratio had a minimum of 0.01, maximum of 1.51 and a mean of 0.1993. This implies that listed firms made an effort to minimize operating expenses as they targeted to maximize income and accumulate wealth for shareholders. Asset turnover ratio returned a minimum of 0.05 and a maximum of 6.89 with a mean of 0.7533. This means that net sales for the listed firms is proportionate to the investment in assets of the respective firms. Therefore situations of overtrading and underrading were avoided by the firms over the period of study. The standard deviation of 0.25019 for expense ratio and 0.95664 for asset turn over ratio depicts that the level of variation among listed firms in various sectors in terms of operating expense proportion to total capital and net sales levels to total assets is quite minimal. Monitoring expenses indicated a minimum of 1500 and a maximum of 11292736 among the firms constantly listed at NSE for the period 2008 to 2017. The mean of 161265.1554 serves to emphasize the rationale for this expense in most listed companies due its substantial nature. Listed firms have found it necessary to incur this expense to ensure compliance and protect the interest of various stakeholders. However monitoring costs standard deviation of 901994.2082 show a very high level of variation between firms listed at NSE. The skewness and kurtosis values of the variables show that the distribution is symmetrical since they are low.

**4.2 Regression Model of Agency Costs on Firm Value**

To determine the effect of agency costs on value of firms listed at NSE a regression model of the form  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_i$  was used where Y represent firm Value,  $\beta_0, \beta_1, \beta_2, \beta_3$  represent constants of Y intercept, Expense ratio ( $X_1$ ), Asset Turnover ratio ( $X_2$ ) and Monitoring Costs( $X_3$ ) respectively. The results are as shown in table 4.2

**Table 4.2 Effect of Agency Costs on Value of Firm**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	74.881	16.848		4.445	.000
ExpRatio	-106.565	56.566	-.116	-1.884	.060
AssetTurnOverR	-9.127	14.758	-.038	-.618	.032
MonExp	-1.953	.000	-.078	-1.563	.119

Source: Field Data 2019

The regression model  $Y = 74.881 - 106.565X_1 - 9.127X_2 - 1.953 X_3$  was derived from table 4.2 Standard beta coefficients results in table 4.35 indicates that holding asset turnover and monitoring expenses constant expense ratio can explain 11.6 % of the variation in the value of a firm. Also holding expense ratio and monitoring expenses constant asset turnover ratio can explain 3.8% of the variation in the value of the firm. If expense ratio and asset turnover ratio are held constant monitoring expense can explain 7.8% of the variation in the value of firms listed at NSE. This results indicate that expense ratio has the highest effect of value of the firm while asset turn over ratio has the least effect. The R square returned a value of 2.5 % with a p value of .020 meaning that the variation in value of firm is statistically significant.

**4.3 Testing of the Null Hypothesis that Agency Costs have no Significant Contribution to Value of Firm**

In testing this hypothesis the researcher used the F value and p value in the ANOVA table 4.3. The table indicates that the regression model of agency costs as measured by expense ratio, asset turnover ratio and monitoring costs and firm value as measured by price to book value has a statistically significant effect on value of the firm.

**Table 4.3 ANOVA on Agency Costs and Value of Firm**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	500876.518	3	166958.839	3.329	.020 <sup>b</sup>
Residual	19861865.476	396	50156.226		
Total	20362741.995	399			

Source: Field Data 2019

This is depicted from table 4.3 which shows F=3.329 and p=.020 since p value is less than 0.05 significance level. This then means that the null hypothesis that agency costs have no significant contribution on value of firm is rejected and therefore the alternate hypothesis is accepted.

**4.4 Effect of Agency Costs on Value of Firm Per Industry**

Karl Pearson’s product moment correlation was used to determine the extent and nature of the relationship between expense ratio, turnover ratio and monitoring expenses and price to book value. In this section the analysis on effect of agency costs on value of firm was carried out using hierarchical regression analysis technique. In this case the three measures of agency costs namely expense ratio, turnover ratio and monitoring costs were ranked from the one with the highest effect on value of firm to the one on the least effect for each sector of the industry

**4.4.1 Effect of Agency Costs on Value of Agricultural Firms**

Table 4.4 shows the correlations between the various indicators of agency costs and value of agricultural firms listed in Nairobi Securities Exchange. It could be noted that monitoring expense has a strong positive correlation with price to book value for these firms with  $r = .574$ . This is also statistically significant for both two tailed and single tailed tests at 95% confidence level because its  $p = .041$  which is less than .05 threshold of significance. On the other hand expense and asset turnover ratios have weak negative correlation with the value of agricultural firms with values of  $r = -.337$  and  $-.169$  respectively. The significance levels indicate that expense ratio and asset turnover ratio have statistically insignificant relationship on price to book value with  $p = .171$  and  $p = .321$  which are greater than .05 significance level.

**Table 4.4 Correlation between Agency Costs and Value of Agricultural Firms**

		PriceBkVal	AssetTurnOverR	MonExp	ExpRatio
Pearson Correlation	PriceBkVal	1.000	-.169	.574	-.337
	AssetTurnOverR	-.169	1.000	-.670	.881
	MonExp	.574	-.670	1.000	-.798
	ExpRatio	-.337	.881	-.798	1.000
Sig. (1-tailed)	PriceBkVal		.321	.041	.171
	AssetTurnOverR	.321		.017	.000
	MonExp	.041	.017		.003
	ExpRatio	.000	.000	.003	
N	PriceBkVal	10	10	10	10
	AssetTurnOverR	10	10	10	10
	MonExp	10	10	10	10
	ExpRatio	10	10	10	10

Source:Field Data 2019

The R square analysis in table 4.5 show that the value of R square change when monitoring expense is combined with asset turnover ratio is .415 with an  $F = 5.156$  and  $p = .153$ . This means that monitoring expenses and asset turnover can explain 41.5% of the variation in the value of the firm. On the other hand the value of  $R^2$  change when expense ratio is added to monitoring expense and asset turnover ratio in the regression model is .001 with an  $F$  of .014 and  $p = .908$ . This shows that expense ratio had a statistically insignificant effect on value of firm. Secondly monitoring expense and expense ratio can explain 37.1% of the variation in the value of agricultural firms. Inclusion of asset turnover ratio causes an R square change of .046 with  $F = .468$  and  $p = .519$ . This change is statistically insignificant because the value of  $p > .05$  significance level. Finally, when expense

and asset turnover variables are combined they can explain 18.7% of the variation in the value of agricultural firms listed in Nairobi Securities Exchange and upon inclusion of monitoring expense in the model then the explanatory power increases by 22.9% to 41.6%. This implies that monitoring expense had the highest explanatory power of 22.9% on the variation of value of firm, followed by asset turn over ratio with 4.6% and finally expense ratio with value of 0.1% of the value of these.

**Table 4.5 Model Summary on Effect of Agency Costs on Value of Agricultural Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.644	.415	.248	59.80	.415	2.481	2	7	.153
2	.645	.416	.124	64.56	.001	.014	1	6	.908
1	.609	.371	.191	62.017	.371	2.061	2	7	.198
2	.645	.416	.124	64.515	.046	.468	1	6	.519
1	.433	.187	-.045	70.483	.187	.806	2	7	.484
2	.645	.416	.124	64.515	.229	2.355	1	6	.176

Source:Field Data 2019

**4.4.2 Effect of Agency Costs on Value of Automobiles and Accessories Firms**

The R square change value in table 4.6 shows that monitoring expense and asset turnover can account for 46.3% of the variation in the value of automobiles and accessories firms listed in Nairobi Securities Exchange. However inclusion of expense ratio causes an increase in R square value by 10.5% which is statistically significant with p=.22. This boosts the explanatory power of the regression model used to 56.8% of the variation in value of the firm.

**Table 4.6 Model Summary on Effect of Agency Costs on Value of Automobile and Accessories Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.680	.463	.309	41.63	.463	3.012	2	7	.114
2	.754	.568	.352	40.32	.105	1.462	1	6	.022
1	.724	.524	.388	39.18	.524	3.852	2	7	.044
2	.754	.568	.352	40.32	.044	.610	1	6	.465
1	.085	.007	-.277	56.58	.007	.025	2	7	.975
2	.754	.568	.352	40.32	.561	7.785	1	6	.032

Source : Field Data 2019

Further monitoring expenses and expense ratio can account for 52.4% of the variation in the value of firms while inclusion of asset ratio as an additional indicator causes the value of R square to change to 56.8% which is a marginal increase in the explanatory power of the regression model of 4.4%. This is considered statistically insignificant with p=.465 since this value is greater than .05 significance level. Table 4.6 also depicts that expense ratio and asset turnover ratio can explain 0.7% of the variation in the value of firm and this value is statistically insignificant with a p value of .975. However upon including monitoring expenses in the model the value of R square increase to 56.8%. The R square change of 56.1% is largely very significant with a p=.032. This means that monitoring expense have the highest (56.1%) effect on the value of automobiles and accessory firms listed in NSE, followed by expense ratio (10.5%) and finally asset turnover ratio (4.4%).

**4.4.3 Effect of Agency Costs on Value of Banking Firms**

In banking sector table 4.7 depicted the results of the various attributes of agency costs and the extent to which they affect the value of a firm. A combination of asset turnover and monitoring expenses could explain 2.8% of the variation in the value of banking firms listed in NSE which is statistically insignificant with p=.056. On the other hand expense ratio can explain a marginal 1.6% as per the R square change and this is statistically insignificant with a p=.206 and F=1.622.

**Table 4.7 Model Summary on Effect of Agency Cost on Value of Banking Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.166	.028	.008	171.9	.028	4.381	2	97	.056
2	.209	.044	.014	171.4	.016	1.622	1	96	.206
1	.207	.043	.023	170.6	.043	2.168	2	97	.120
2	.209	.044	.014	171.4	.001	.105	1	96	.747
1	.115	.013	-.007	173.4	.013	.647	2	97	.526
2	.209	.044	.014	171.4	.031	3.080	1	96	.082

Source: Field Data 2019

Further monitoring expenses and expense ratio can account for 4.3% of the change in the value of these firms while asset turnover ratio can explain 0.1% of the variation in the value of firm. The level of significant was determined using the F values and p values of the two regression models. F=2.168 and p= .120 for expense ratio and monitoring expenses while F=.105 and p= .747 in the case of asset turnover ratio. Since p>.05 level of significance, then the effect is considered statistically insignificant. Lastly asset turnover ratio and expense ratio can account for 1.3% of the variation in the value of the firm and inclusion of monitoring expense introduces a differential explanation of 3.1%. This means that Monitoring expenses have the highest (3.1%) power to account for the change in the value of banking firms listed in NSE followed by asset expense ratio (1.6%) and finally asset turn over ratio (0.1%).

**4.4.4 Effect of Agency Costs on Value of Commercial and Services Firms**

The value of R square in table 4.8 shows that monitoring expense and asset turnover ratio can account for 1.1% of the variation in value of firm and it has a p=.693 which is greater than .05 significance level, therefore insignificant. The R square change upon inclusion on expense ratio in the model show a value of .039, which infers that expense ratio can explain 3.9% of the changes in the value of commercial and services listed in Nairobi Securities Exchange. Monitoring expenses and expense ratio can account for 1.9% of the variation in the value of the firm, however when operating together with asset turn over ratio, the three can explain 4.9% of the variation in the value of firm.

**Table 4.8 Model Summary on Effect of Agency Costs on Value of Commercial and Services Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.104	.011	-.019	220.6	.011	.366	2	67	.693
2	.222	.049	.006	217.9	.039	2.673	1	66	.107
1	.138	.019	.010	219.6	.019	.652	2	67	.524
2	.222	.049	.006	217.9	.030	2.103	1	66	.152
1	.186	.035	.006	217.9	.035	1.201	2	67	.307
2	.222	.049	.006	217.9	.015	1.025	1	66	.315

Source: Field Data 2019

Expense ratio and asset turnover can account for 3.5% of the variation in the value of commercial and services listed in NSE while monitoring has a unique explanatory power of 1.5%. This implies that expense ratio has the highest accountability value (3.9%), followed by asset turnover ratio and monitoring costs respectively.

**4.4.5 Effect of Agency Costs on Value of Construction and Allied Firms**

In the construction and allied sector, monitoring expenses and asset turnover ratio accounts for 7.6% of the variation in the value a firm while expense ratio introduces and additional explanatory value of 1.8% which is statistically insignificant with p=.406. Also monitoring expenses and expense ratio can account for 6.9% of the changes in the value of construction and allied firms listed at NSE. Table 4.9 shows that p for this regression model is .026 which is less than .05 level of significance. R square value changes by 2.5% in the positive direction thus an improvement in the explanatory power of the model.

**Table 4.9 Model Summary on Effect of Agency Costs on Value of Construction and Allied Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.276	.076	.026	156.7	.076	1.530	2	37	.030
2	.307	.094	.019	157.3	.018	.708	1	36	.406
1	.263	.069	.019	157.3	.069	1.373	2	37	.026
2	.307	.094	.019	157.3	.025	.997	1	36	.325
1	.229	.053	.001	158.7	.053	1.027	2	37	.368
2	.307	.094	.019	157.3	.042	1.653	1	36	.207

This is considered statistically insignificant with F=1.027 and p=.368 since the value of p>.05 significance level. Monitoring expense causes R square change of 4.2% in the regression model improving the explanatory power of the model to 9.4% of the variation in the value of firm. This means that monitoring expenses can explain the highest variation (4.2%), followed by asset turnover ratio (2.5%) and finally expense ratio (1.8%).

**4.4.6 Effect of Agency Costs on Value of Energy and Petroleum Firms**

Table 4.10 depicts the R square value of .285 for monitoring and asset turnover model against price to book value of energy and petroleum firms. This infers that these two can explain 28.5 % of the variation in the value of the firm. This regression model returned indicates that F=7.360 and p=.002, implying that the effect of monitoring and asset turnover ratio on value of these firms is statistically significant since p<.05 significance level. When asset turn over is incorporated an increase in value of R square change of .228 is witnessed with F=11.4570 and p=.002. This shows that the increase in the value of R square give more power to the model to explain 28.5% of the variation in the value of firm.

**Table 4.10 Model Summary on Effect of Agency Costs on Value of Energy and Petroleum Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.533	.285	.246	217.7	.285	7.360	2	37	.002
2	.534	.285	.225	220.6	.000	.013	1	36	.911
1	.239	.057	.006	249.9	.057	1.118	2	37	.338
2	.534	.285	.225	220.6	.228	11.470	1	36	.002
1	.517	.268	.228	220.2	.053	1.027	2	37	.003
2	.534	.285	.225	220.6	.017	.866	1	36	.358

Source: Field Data 2019

When expense ratio is included in the model R square value does not change at all, meaning that expense ratio has no effect on value of energy and petroleum firms. Secondly, expense ratio and monitoring expenses can account for 5.7% of the variation in the value of these firms. On the other hand asset turnover ratio and expense ratio can account for 26.8% of the changes on the value of firm. This is largely significant statistically with F=1.027 and p=.003. However inclusion of monitoring expenses improves that value of R square by 1.7% which is considered statistically insignificant with p=.358.

**4.4.7 Effect of Agency Costs on Value of Insurance Firms**

In the insurance sector the results confirmed that monitoring costs and asset turnover ratio explain 12.2% of the variation in value of a firm and this was significant with F=2.571 p=.030 which is less than .05. Incorporating expense ratio drives R square value higher by a marginal 1.2 % which is statistically insignificant with p=.492. Further, monitoring expenses and expense ratio can explain 13.3% of the variation in the value of insurance firms and this is significant with F=2.841 and p=.041. However, when Asset turnover was added to the regression model there was no change in the value of R square, meaning that asset turn over ratio does not affect the value of insurance firm.

**Table 4.11 Model Summary on Effect of Agency Cost on Value of Insurance Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.349	.122	.075	209.1	.122	2.571	2	37	.030
2	.366	.134	.061	210.6	.012	.482	1	36	.492
1	.365	.133	.086	207.8	.133	2.841	2	37	.041
2	.366	.134	.061	210.6	.000	.020	1	36	.888
1	.157	.025	-.028	220.4	.025	.467	2	37	.631
2	.366	.134	.061	210.6	.109	4.529	1	36	.040

Source: Field Data 2019

Expense ratio and asset turnover ratio can explain 2.5% of the variation in the value of insurance firm, though this margin is statistically insignificant with  $F=.467$  and  $p=.631$ . Monitoring expense introduces incremental R square value of .109, implying that it can account for 10.9% of the variation in the value of insurance firms. This is statistically significant with  $F=4.529$  and  $p=.040$  which is less than .05 significance level.

#### 4.4.8 Effect of Agency Costs on Value of Investment Firms

The results in table 4.12 indicate that monitoring expense and asset turnover ratio had R square value .093 and  $F=1.868$  with  $p=.043$ . This means that, these two can explain 9.3% of the variation in the value of investment firms listed in Nairobi Securities Exchange. This effect is statistically significant since  $p<.05$  significance level. Including expense ratio in the model causes R square change value of .016 with  $F=.286$  and  $P=.600$ . This is a change considered very marginal and statistically insignificant. Further monitoring expenses and expense ratio can account for 10.8% of the variation in the value of investment firms and this is significant at  $F=1.030$  and  $P=.037$ . Incorporating asset turnover ratio causes R square change of .001 which is insignificant with  $p=.925$ .

**Table 4.12 Model Summary on Effect of Agency Costs on Value of Investment Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.304	.093	-.014	106.3	.093	1.868	2	17	.043
2	.330	.109	-.058	108.6	.016	.286	1	16	.600
1	.329	.108	.003	105.3	.108	1.030	2	17	.037
2	.330	.109	-.058	108.6	.001	.009	1	16	.925
1	.330	.109	.004	105.3	.109	1.036	2	17	.037
2	.330	.109	-.058	108.6	.000	.000	1	16	.999

Source: Field Data 2019

Expense ratio and asset turnover ratio can jointly explain 10.9% of the variation in the value of investment firms and this is regarded as statistically significant with  $F=1.036$  and  $p=.037$ . The introduction of monitoring expenses in the model causes no change in the value of R square, implying that this indicator has no effect on the value of investment firms. This finding infers that these indicators jointly can explain the variation in the value of these firms significantly, however separately the effect is very negligible.

#### 4.4.9 Effect of Agency Costs on Value of Manufacturing and Allied Firms

In this sector R square value for monitoring and asset turnover ratio was .018 as depicted in table 4.13 with  $p=.590$ , implying that, the two can explain 1.8% of the variation in the value of manufacturing and allied firms. This is statistically insignificant since the p value is higher than .05. Including expense ratio causes an R square change of .013 thus improving the model marginally by 1.3%. Further, monitoring expenses and expense ratio accounts for 1.3% of the variation in the value of firm and introducing asset turnover in the regression model causes R square change value of .018. In either case the effect is regarded statistically insignificant by the model.

**Table 4.13 Model Summary on Effect of Agency Costs on Value of Manufacturing and Allied Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.135	.018	-.016	241.3	.018	.532	2	57	.590
2	.178	.032	-.020	241.8	.013	.766	1	56	.385
1	.115	.013	-.021	242.0	.013	.380	2	57	.685
2	.178	.032	-.020	241.8	.018	1.065	1	56	.306
1	.136	.018	-.016	241.3	.018	.535	2	57	.589
2	.178	.031	-.020	241.8	.013	.761	1	56	.387

Source: Field Data 2019

Equally table 4.13 shows that expense ratio and asset turnover ratio can jointly explain 1.8% of the variation in the value of the firm upon inclusion of monitoring expenses indicator then the model can explain 3.2% of the variation in the value of the firm. This level of significance is higher than .05 implying that the effect is considered statistically insignificant. The effect of expense ratio is equal in proportion to that of monitoring expenses (1.3%) and the effect of asset turnover ratio is highest at 1.8%, though all these are statistically insignificant.

**4.4.10 Effect of Agency Costs on Value of Telecommunication Firms**

In this sector monitoring expenses and asset turnover can account for 64.4% of the variation in the value of telecommunication firms as per table 4.47. The value of F=6.332 with p=.027, indicating that the effect of monitoring expenses and asset turnover is statistically significant. The value of R square increases to .730 when expense ratio is included in the model, therefore, causing an R square change of .086.

**Table 4.14 Model Summary on effect of Agency Costs on Value of Telecommunication Firms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.803	.644	-.542	72.8	.644	6.332	2	7	.027
2	.855	.730	-.595	68.4	.086	1.916	1	6	.216
1	.295	.087	-.174	116.6	.087	.334	2	7	.727
2	.855	.730	-.595	68.4	.643	14.302	1	6	.009
1	.836	.699	.613	66.9	.699	8.137	2	7	.015
2	.855	.730	.595	68.4	.031	.689	1	6	.438

Source: Field Data 2019

Secondly, monitoring expense and expense ratio can account for 8.7% of the variation in value of firm and this is statistically insignificant with F =.334 p=.727. However inclusion of asset turnover ratio in the model causes an R square change of .643, which means that turnover ratio can explain 64.3% of the variation in the value of telecommunication firms

The results also affirm that expense ratio and asset turnover ratio accounts for 69.9% of the variation in the value of telecommunication firms listed in Nairobi Securities Exchange. This is associated with F value 8.37 and p value of .015. Incorporating monitoring costs in the model boosts the explanatory power of the regression model by 3.1% with F=.689 and p=.428. This finding implies that, asset turnover ratio had the highest explanatory power (64.3%) followed by expense ratio (8.6%) and finally monitoring expenses (3.1%).

## **V. DISCUSSION**

This finding that agency costs have significant effect of value listed firms is in agreement with the work of Sheng (2009) who examined how agency costs affect firm values in China. His findings argued that agency costs have a significant negative impact on the firm value. Further, Naiker et al. (2005) study on the agency cost effect of unionization on firm value in New Zealand established that firms which are characterized by strategy of higher growth suffer higher loss in value because of higher agency costs connected to the kind of strategies adopted by the firms. This concurs with the argument that agency costs have a significant effect on the value of a firm. Magdalena (2008) argued that the higher expected cost of governance translates to higher interest rates and lower market value of the firm. This implies that the measures put in place by firms to ensure that appropriate procedures of governance are adhered to attracts agency costs which increases total expenses for the firm and reduction on profits generated.

Yang (2009) opined that free cash flow and over investment are the key problems of agency with high effect on cost of capital. This means that those firms with excess cash flow are often times tempted to invest in high risky projects without appropriate evaluation on their viability. In the event that such funds were obtained through debt then the monitoring costs are likely to be high thus affect the value of the firm negatively. Achjen and Chokri (2017) study on the impact of cashflow and agency costs on firm performance re-examined the free cash flow hypothesis versus agency theory. The findings provided that there is a positive effect of the free cashflows on agency costs of the firms and availability of free cash flows drives management to invest in less viable projects hence increase in agency costs and reduction in value of firms. The arguments by these scholar point to the fact that free cash flow increases agency costs of the firm which in turn reduces the value of a firm. This is in tandem with the finding in this study that agency costs have a significant effect on value of the firm.

Kung'u and Munyua (2016) study on the relationship between corporate governance practices and agency costs of manufacturing and allied firms listed in Nairobi Securities Exchange sought to link corporate governance practices to agency costs of those firms. The findings opined that there is a significant positive relationship between director ownership and agency costs. This means that poor corporate governance practices leads to increased agency costs. The study concluded that there is a significant association between corporate governance and agency costs. Essentially poor corporate governance drives the agency costs higher and these translates to reduced value of firm. The works of these scholars affirm the finding that agency costs have a significant effect on the value of the firm.

## **VI. CONCLUSION**

Empirical finding affirmed that expense ratio and monitoring expenses could explain a significant portion of variation in value of firms while asset turn over accounts for a lower value of the variation in the value of firm. The implication of this finding is that agency costs have a significant effect on the value of firms listed in NSE.

In agricultural, automobile and accessories sectors monitoring expenses had the highest explanatory power of the variation in the value of these firms followed by expense ratio. This means that these two sectors are closely monitored by the relevant stakeholders to ensure that their interest is well protected and therefore the higher the monitoring expense the higher is the value of firms.

Banking sector had marginally low effect of monitoring expense, expense ratio and asset turnover on value of firms. Similarly the effect of these three attributes was low on value of commercial and services, construction and allied firms, investment, manufacturing and allied firms. This imply that agency costs had insignificant effect on the value of firms in these sectors. While this view could be easily acceptable in the case of all sectors enlisted, it was fairly contradictory in the case of banking industry which is highly regulated and controlled due to its nature of trade. The expectation could be that monitoring expenses in particular could have a high impact on the value of the firms but the empirical revelation is otherwise. Instead monitoring expense explained a significant portion of the variation in the value of insurance firms listed in NSE.

In the energy and petroleum sector asset turn over significantly influenced the value of energy and petroleum and telecommunication firms. The implication is that investment in assets could easily be justifiable in the volumes of trading and this affects the value of these firms substantially. Therefore efficient utilization of the assets and increase in turnover translates to value increment of the energy and petroleum as well as telecommunication firms.

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