

**DETERMINATION OF FACTORS THAT AFFECT DIVIDEND PAYOUT:**

**A CASE OF LISTED FIRMS AT NAIROBI SECURITIES**

**EXCHANGE**

**By**

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**KCA UNIVERSITY**

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**INNOCENT.R. RAMOS**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE  
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MANAGEMENT AT KCA UNIVERSITY**

**NOVEMBER, 2014**

**DECLARATION**

I declare that this research dissertation is my original work and has not been previously published or submitted for award of any degree program in any university. I also declare that this is my original work and contains no material written or published by other people except where due process is made and author duly acknowledged.

INNOCENT RAMOS AGHAN

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Signed: ..... Date.....

I do hereby confirm that I have examined the master's programme dissertation of

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And have certified that all the revisions that the dissertation panel and examiners recommended have been adequately addressed.

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# **DETERMINATION OF FACTORS THAT AFFECT DIVIDEND PAYOUT:**

## **A CASE OF LISTED FIRMS AT NAIROBI SECURITIES**

### **EXCHANGE**

### **ABSTRACT**

Dividend payout has been for many years a focus of debate in financial literature. This study aimed at empirically examining the factors that affect dividend payout among firms listed at the Nairobi Securities Exchange. The variables that were considered are profitability, liquidity, industry dummy and growth with the control variables being firm size and leverage. The study considered a sample of three companies from each sector of the economy as represented in the Nairobi Securities Exchange, measured for a period of five years from 2008 to 2012. Data collected was secondary in nature, collected from annual financial reports as reported by the sampled companies.

**Key Terms:** Dividend, Dividend payout

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

Financial management involves three key important decisions namely: investment, financing and dividend policy (Allen, Baker and Wurgler, 2004). The investment decision is related to what real assets the firm should acquire while the financing decisions relates to how these assets should be financed. When firm generates profits, it faces a decision on whether firm will distribute all or a portion of their earnings in form of dividends to shareholders or re-invest these earnings in assets or securities to further growth of the business. No matter what decisions managers make, they have to be in line with the goal of maximization of firm's value as well as shareholders' wealth. A firm's dividend policy is the time pattern of dividend payout (Ross and Jordan, 2010). Managers must not only consider how much earnings are needed to meet the fund requirement for investment purpose but also the possible outcome of their decisions on stock price (Bishop et al., 2000). Among these three managerial decisions, dividend policy is of great interest. In terms of research, the dividend policy adoption is not only an enduring puzzle in finance but it also remains unexplained. The question of whether businesses should pay dividends to shareholders or retain earnings to reinvest remains an open question.

Brealey and Myers (2003) stated that dividend policy is considered as one of the top ten most important unsolved puzzles in financial economics. Various theories, hypotheses and models has been postulated regarding dividend policy behavior, however empirical findings on this matter is unfortunately very mixed, inconclusive and conflicting. There is no universally accepted explanation of corporate dividend behavior that has been established.

Furthermore, dividend payout pattern is also puzzling and an important affair for all Kenyan firms, because of the asymmetric information between outsiders and insiders, investors depend on dividends as a signal about the consistency, stability and growth prospects of firms. According to Lintner (1956), firms usually had long term target on dividend payout and managers preferred stable dividend policy and hesitated to change. Other studies support for Lintner's dividend model include Farrelly and Edelman (1985), Baker, Baker and Powell (1999). However, the maintenance of a consistent dividend policy may cause firms to miss investment opportunities which can increase firm's value in the future. A dividend policy is considered effective when the payout ratio can not only satisfy shareholders' needs of a stable cash flow but also ensure a sufficient internal fund required for profitable investments. In brief, firms have to consider all potential consequences carefully before making any changes relating to dividend policy. Previous theoretical and empirical studies have suggested that there are numerous factors which play an important role in explaining dividend behavior. For example, Lintner (1956) showed the influence of current year's profit and lagged dividend payment on firm's payout pattern. Rozeff (1982), Lloyd et al (1985) found a negative relationship between historical sales growth and dividend payment. Fama and French (2001) asserted that firms with high growth rate, small size and low earnings tended to pay low dividend. Baker, Veit and Powell (2002) in their study showed a significant impact of four factors on dividend policy decisions, namely lagged dividends, stability of earnings, and the extent of current and future earnings. Lee and Ryan (2002) showed a significant impact on dividend payout by recent earnings and free cash flows.

### ***1.1.1 Nairobi Securities Exchange***

The Nairobi securities exchange (NSE) is currently a buyers' market which offers foreign and local investors with colossal bargain opportunities. This situation is a result of various factors that have converged to advance stock prices to levels that are out of influence with the fundamentals on the ground. The Nairobi Securities Exchange is an ideal frontier market, offering foreign investors exposure to the Kenyan economy, and because a number of listed firms have expanded beyond Kenya's borders it serves as an access to the regional economy. In the interim, foreign investors can capitalize by investing in the weak shilling and seek exit points as it bolsters against the US dollar. The Nairobi Securities Exchange formerly Nairobi Stock Exchange was established as a voluntary association of stockbrokers under the society act in 1954. In the past decade, the securities exchange has witnessed many changes, automating its trading in September 2006. In the year 2007 it made it possible for stockbrokers to trade remotely.

### ***1.1.2 Legal Perspective on Dividends***

The Companies Act chapter 486 of the laws of Kenya states that in public companies, directors declare interim dividend for the first six months of the company's financial year based on the accounts. A final recommendation is then done in an Annual General Meeting with respect to the full year profits. The shareholders in the meeting pass a resolution declaring the dividend. In private companies, on the other hand, profit can be distributed through paying of salaries for work done or payment of dividends. It is important to point out that dividends are tax deductible as they are investment income to shareholders.

## **1.2 Problem statement**

The primary role of company management is maximization of shareholders wealth. Other functions that maybe undertaken include: profit maximization being utility gained for entrepreneurial risk, customer satisfaction through product innovation not only to attract, but ensure repeat business, social responsibility among others. In order to fulfill these roles effectively, they have to consider factors that will affect, either positively or negatively, the firm's performance and maximization of shareholders' wealth.

Financial theories concerning dividends being highly controversial, numerous researchers have attempted to empirically examine dividend policy of firms by determining factors that affects dividend payout. Researchers like: Amidu (2007), Howatt et al. (2009), Zhou & Ruland (2006), Lie (2005), continuously advance different findings about the determinants of dividend payout. Baker (2005) examined this unsolved issue and found inconsistent results due to countries' effect. He conducted a study of factors that Norwegian managers take into account as compared to U.S managers in dividend policy decision, they found no significant correlation stand between the valuation of factors by managers of Norwegian and U.S firms. The factors that were being examined where current and past years' profits, growth, liquidity constraints and current degree of financial leverage. Research by Baker (1988) and Michel (1979) suggest that a positive correlation exists between dividend policy and industry classification.

Al-Malkawi (2007), observed that dividend payout patterns of firms are a cultural phenomenon influenced by general economic conditions, regulations, customs, beliefs, public opinions, hysteria and perceptions and several other factors all in perpetual change impacting different firms differently. Hence there exists no uniform policy for all countries at all times.

In Kenya few researches done focused on particular sectors of the economy but this research focuses on all sectors.

The important elements are not difficult to determine but the interactions between these elements are complex and no easy answer exists (Ross and Jaffe 2009). Financial researchers continue to study this topic aiming at identifying consistent factors that affect dividend payout in an attempt at reaching consensus for both developing countries and developed countries. Thus, the primary purpose of this study is to investigate the determinants of dividend payout of listed firms in Kenya during the years 2008-2012, which is one of developing countries.

### **1.3 General Objective**

The general objective of this study is to determine the factors that affect dividend payout of listed companies in the Nairobi Security Exchange.

#### ***1.3.1 Specific objectives***

- To determine the effect of industry sector on dividend payout of listed firms at Nairobi Securities exchange.
- To ascertain the effect of profitability on dividend payout of listed firms at Nairobi Securities exchange.
- To establish the effect of Growth on dividend payout of listed firms at Nairobi Securities exchange
- To deduce the effect of Liquidity on dividend payout of listed firms at the Nairobi Securities exchange.

#### **1.4 The research questions are:**

- Does industry sector of listed firms at the Nairobi Securities exchange have an effect on dividend payout?
- Does Growth of firms listed in the Nairobi Securities exchange have an effect on dividend payout?
- Does liquidity affect the dividends payout for firms listed in Nairobi Securities exchange?
- Does profitability affect the dividends payout for firms listed in Nairobi Securities exchange?

#### **1.5 Significance of the study**

The significance of this study is to help investors make informed investment decisions based on knowledge of a company's dividend policy and will provide the investor with information about the predictability of returns in the securities market.

#### **1.6 Scope of the study**

The Kenyan economy is divided into 10 sectors. The scope of this study was on all the sectors of the economy. A Sample of three companies from each sector was used to represent the various sectors.

#### **1.7 Limitations of the Study**

The study is limited to the sectors of the economy as classified in the Nairobi Securities Exchange thus limiting the findings to the industries represented by the firms. This gives the trends of only the represented industries, which might not be sufficient to generalize conclusions regarding all industries. Use of the secondary data is also another limiting factor. The validity of the results would be dependent on the reliability and validity of the collected secondary data.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Dividend

Dividends are a distribution of a firm's profits to its shareholders which is allocated as fixed units per share, shareholders receive dividends in proportion to their shareholding. Profits can be retained for future investment or distributed in part or as a whole depending on the managers' objectives. Payment can be residual after acceptable investments have been financed, constant through the establishing of a payment ratio or stable where a particular amount of dividend is paid per share. They can also be regular or irregular. Public firms usually announce dividends on a fixed basis, but may declare dividends at any time, which is at times called a special dividend in order to be distinguished from the fixed schedule dividends.

##### *2.1.1 Dividend Policy*

Lease et al. (2000), dividend policy ascribes to the size and pattern of cash paid to shareholders. The main contents of a dividend policy are dividend per share and payment date. Bringham and Houston (2004) asserted that managers should take into consideration two points before making a decision on how much cash should be distributed to shareholders. Firstly, the main objective is to maximize shareholders' wealth, hence unless firms can use the earnings to generate higher return than shareholders' expectation, they should have a low retention ratio. Secondly, internal equity is cheaper than external equity. Thus, firms have to establish a reasonable dividend policy that can both satisfy shareholders and leave enough capital for the firms' growth. However, each firm has its own characteristic, thus one policy doesn't fit all. For firms with high profit and few opportunities for growth, most of their earnings are distributed to

shareholders in form of dividends and thereby attracting short term investors who prefer high dividends. On the contrary, firms with high growth potential and limited excess cash tend to distribute low or no dividends, in return, shareholders will enjoy the increase in firm's earnings and stock prices. Such firms draw attention of long term or strategic investors who appreciate capital gains.

## **2.2 Theories of Dividends**

There are mainly five theories on dividends and they include: Modghliani and Miller theory (MM theory), Bird in the hand theory, free cash flow, Signaling theory and the tax clientele theory.

### ***2.2.1 Modghliani and Miller theory***

MM theory is a dividend irrelevant theory. A company's dividend policy has no bearing on the price of its share or the cost of capital. Modiglaini and Miller (1961) advanced that firm value is determined by the income produced by its assets. Assumptions of this theory were that capital markets were perfect, no floatation costs on securities issued by firms, absence of taxes and certainty about the future.

### ***2.2.2 Bird in the Hand dividend theory***

Bird in the hand dividend theory was a response to the MM theory. Through this theory Gordon and Lintner emphasized the importance of current income as opposed to future income that is uncertain. Assumption being that the value of a shilling now is higher than that of its value in the future since the future income is not known when it will be earned and how much; Investors prefer to receive dividends now with certainty rather than speculate about future payments. This in effect increases the market price of the firm.

### ***2.2.3 Information-Signaling theory***

The information content of dividends was postulated by Lintner (1956) and by Miller and Modigliani (1961) and then formalized by, Millier and Rock (1985) and John and Williams (1985) as “Signaling Theory”. Signaling theory postulates that movements in dividends consist of a signal of movements in future firm earnings. Management uses dividends to confer a signal about increase or decrease of future earnings of the firm to shareholders. Lintner (1956) asserts that the main factor that managers consider in establishing dividend policy is future earnings of the firm. He argued that managers aspire to maintain the steady payout, therefore they gradually decrease or increase dividend levels to reach the desired dividend payout. Since managers have intrinsic knowledge of their cash flows and future earnings, dividend declaration is a way of discharging inside information to shareholders via the market, changes in dividends relay valuable information about changes in companies’ future earnings. Therefore, it will be echoed in the stock prices after the declaration date.

Information-signaling theory has been tested in a couple of ways. First, studies investigated the correlation amid future earnings and dividends of the firm, and secondly others investigated if the declaration of dividends resulted in divergent returns on stocks. DeAngelo and DeAngelo (1990) discovered contributory empirical affirmation on information-signaling theory; significant dividend contraction is correlated to future earnings uncertainty.

Studies by Pettit (1972), Fama et al (1969), Woolridge (1983), Venkatesh (1989), Jensen and Johnson (1995) and Lan g and Litzenberger (1989) script that the dividend movements confer information to the market of future earnings or profitability of the firm. On the flip side, DeAngelo et al (1992) and Healy and Palepu (1988) found a negative relationship.

Watts (1973), examined if there was a correlation between the instantaneous dividend movements and future earnings. He forecasted future earnings by using current dividends instead of current earnings. The study discovered a minor correlation among future earnings and instantaneous dividends changes. Penman (1984) and Genodes (1978) reached a similar conclusion. Recently studies by Grullon et al (2002, 2005), DeAngelo et al (1996) discovered modest or no supportive evidence on dividends having information content of future earnings.

#### ***2.2.4 The free cash flow hypothesis***

The free cash flow hypothesis emanates forth from agency theory by Jensen and Meckling (1976). According to them the agency issues personifies the dissociation of control and ownership of the company. It comes forth due to the clash of interest among shareholders and managers. The agency relationship is characterized by uncertainty and information asymmetry. Free cash flow hypothesis advanced by Jensen (1976), stated that management has a preference for abundant free cash flow beneath their discernment and they do not want to be beneath danger of bankruptcy, thus managers are hesitant in paying out dividends. Therefore, paying dividends is one of the avenues of reducing free cash flow beneath control of the managers while at the same time dividends help to decrease agency cost.

According to Jensen (1976) an avenue of disciplining and monitoring of managers instead of direct intervention by shareholders is dividends. Therefore, expansions in dividends have positive information in that the agency costs will be decreased and investment in NPV projects will not be probable in the future. When the management announces expansion in dividends payout, the free cash flows under their control will be minimal. Thus the declaration of dividends expansion inherently means the performance of the firm will be superior in future. The

dividends announcement have information content in that management's behavior will be parallel to the interests of shareholders and that managers will probably invest in projects with a positive NPV. Easterbrook (1984) and Rozeff (1982) backs the free cash flow hypothesis. They state that the agency costs of a firm can be minimized by dividends increases. Higher dividend payout firms often require external financing via the market. Thus, such companies are subjected to increase monitoring by the market.

### ***2.2.5 Tax Clientele Theory***

The penultimate possible justification for the correlation between the abnormal return and dividend movements is the tax clientele effect hypothesis. The dividend tax clientele effect hypothesis advances that some investors prefer earnings to be paid out with dividends while others prefer earnings to be retained by the company. While, a couple of firms aspire to attain the interest of shareholders preferring dividends and the interest of retained earnings preferring shareholders.

There are varied factors that influence dividend policy. They include but are not limited to: The liquidity position of the firm, debt covenant restrictions such that dividends are paid only if certain set out conditions are met, laws of the land, investment opportunities, tax on dividend payments and not on capital gains, retention ratio set out, earnings per share and return on equity. If a firm is liquid, it can afford to pay its shareholders dividends as well as retain some money for investments.

### **2.3 Empirical Review**

Lintner (1956) conducted a study focusing on the behavioral aspect of corporate dividend policy. He concluded that managers only increase dividends when they have confidence that the level of the firm's earnings has increased permanently.

Obino, Momanyi and James (2013) did a study on the effects of dividend policy on market stock value in the bank industry, conducting a case study of National Bank of Kenya and found that dividend declaration, payment and growth rate has a significant effect on the market value of the bank's stocks. Using explanatory research design covering a sample size of 100 out of the 47,000 shareholders of National Bank of Kenya and descriptive statistics, they were able to establish a positive correlation between payment of dividend (0.850), dividend growth rate (0.299) and regularity of dividend declaration (0.502) with the value of the stocks of the bank. Concluding, that the bank adjusts its dividend payout in line with shareholders interests and requirements. Les Picker (2013) article on why firms pay dividends argues that managers with higher access to retained earnings with respect to investment opportunities, can deviate from their primary role of maximizing shareholders wealth and misappropriate the funds.

Naeem and Nasr (2007) studied the trends and determinants of dividend policies. Results of their study showed that Pakistan firms are either reluctant in paying dividends or pay minimal amounts. Their current dividend decisions depended on the profitability ratio and previous year dividends.

Asif, Kamal and Rasool (2011) examined the relationship between financial leverage and dividend policy of listed firms of Pakistan during the period of 2002-2008 by using extended Lintners (1956) model. The results showed the negative relationship between financial leverage

and dividend payout while a positive relationship between dividend per share and dividend yield was found.

Kapoor (2009) did a study on the impact of dividend policy on the shareholder's value, concentrating on Indian firms and found out that firms with high values were paying out dividends to their shareholders. He was able to establish a positive relation between dividend payment policy of a company and the signal it sends to the market about its future investment opportunities.

Ramachandran and Packkirisamy (2010) in their study of the impact of firm size on dividend behavior, conducting a case study of 73 corporate firms across industries in India, successfully attempted and established an inverse relationship between corporate leverage and equity dividend policy of the sample firms in all sectors studied.

Okpara (2010) conducted a study on the determinants of the dividend Payout policy of firms listed at Nigeria Securities and Exchange Commission. He discovered that the payout ratio was negatively affected by profitability whereas previous year's dividend and liquidity had a positive impact on the payout ratio. He concluded that these three factors: liquidity, profit and previous year's dividends were significant in determination of dividend payout policy in Nigeria.

### ***2.3.1 Growth***

Numerous studies have concluded that there exists negative relationship between the dividend payout ratio and the growth rate of the firm, (Rozeff 1982) and (Holder et.al 1998). The commonly employed justification for the negative correlation between growth and dividend payout is that growing firms have to finance sections of their expanded investments using

retained earnings. Managers aspiring to maintain steady dividend payout have to expand their external financing.

### ***2.3.2 Profitability***

Profits are the most important factor in a firm's dividend payout decision and have been broadly used in previous empirical studies in determining its effect on the firm's payout ratio (Anil & Kapoor 2008). Profitable companies are able to pay profound amounts of dividends and thus a positive relationship is associated with firm's profitability and dividend payout.

### ***2.3.3 Liquidity***

The firm's liquidity position is a critical factor that affects the allocation of cash dividends. Liquidity measures the extent to which a firm is able to meet its payment of obligations. Firms with substantial cash availability and near cash assets, have a profound payout of dividends to shareholders than those that have insufficient cash. The positive relationship between dividend policy and liquidity is supported by signaling theory. An insufficient liquidity position means less dividend payout due to shortage of cash. Profitability does not imply liquidity, firms might have high earnings to declare dividends, but they may not have enough funds to finance the payout.

### ***2.3.4 Leverage***

Debt level is a ratio which shows the extent to which a company is financed by external funds. The agency models advance that capital structure and dividend payments can decrease the problems related with information asymmetry. Debt financing and dividends can serve as an

instrument of decreasing free cash flow under discretion of management, and help in mitigating the agency costs.

### ***2.3.5 Firm Size***

Numerous researchers have theorized that firm size is one of the leading factors that has the greatest impact on the dividend payout. Among the earlier studies that incorporated the firm size in determination of dividend payout pattern was by Lloyd et.al (1985). He advanced that large firms pay expanded dividends in an attempt in reducing agency costs, because large firms usually have exceedingly diverse equity holders.

### ***2.3.6 Industry Dummies***

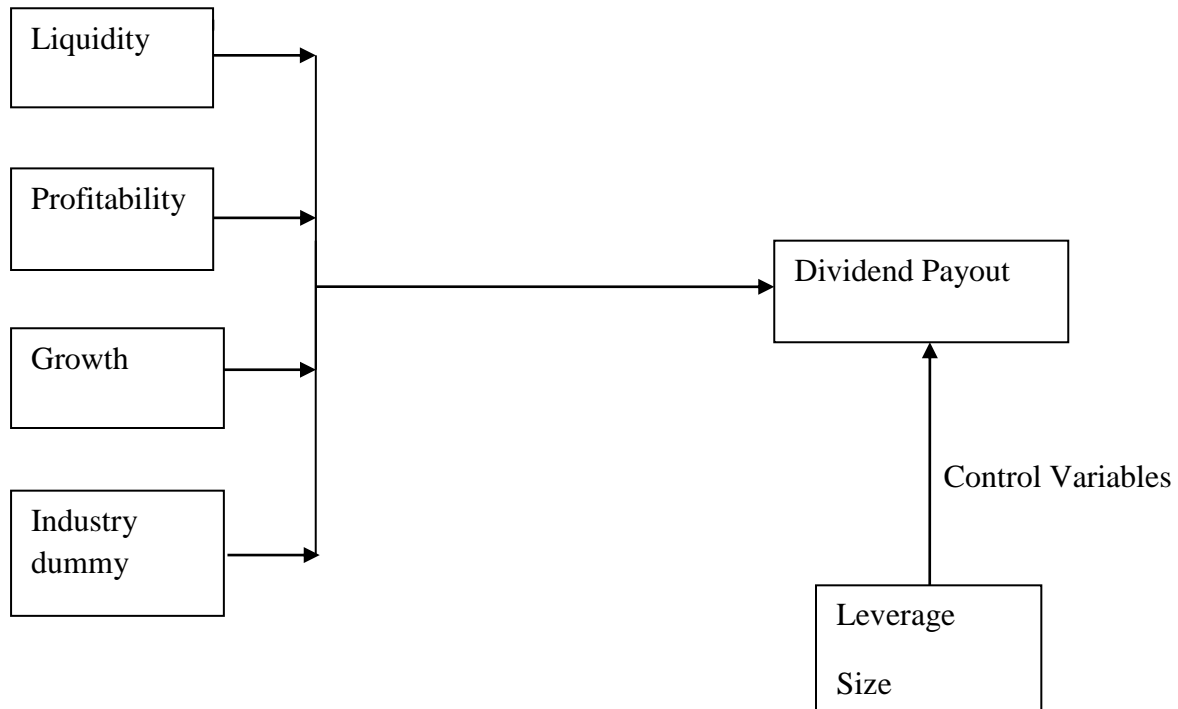
Glen, Miller, Karmokolias and Shah (1995) postulated that the industry classification differences affect the dividend policy decisions. They affirm that some industry sectors have a significant effect on the price fluctuations, and in turn on the earnings. Gill et al. (2010) advanced that the different attributes between manufacturing and service industry sector in the U.S. impacted the relationships between independent variables and dividend payout.

**FIGURE 1**

**Conceptual Framework**

Independent Variables

Dependent Variable



Source: Researcher 2014

**2.5 Description and Measurement of Variables**

The explanatory variables include profitability (PROF), liquidity (LIQ) and growth (GRO). The control variables are size (SZ) and Leverage (LEV).

**TABLE 1****Variable Description and Measurement**

Variables		Definition	
Dependent	DPO	Dividend Payout	
			Expected sign
Independent	PROF <sub>it</sub>	Profitability = Return on Equity= (Net Income (Profit after tax)/Equity for company i in time t	Positive
	LIQ <sub>it</sub>	Liquidity = current ratio of company i in time t.	Positive
	GRO <sub>it</sub>	Growth = natural logarithm of market capitalization	Negative
	SIZ <sub>it</sub>	Firm's size = natural logarithm of total assets for company i in time t	Positive
	LEV <sub>it</sub>	Leverage = the ratio of Total Debt to Total Assets for company i in time t	Negative
	IND <sub>it</sub>	Industry dummy = 1 for commercial and services, 2 for agricultural, 3 for insurance, 4 for telecommunication and technology, 5 for banking, 6 for automobile and accessories, 7 for investment, 8 for manufacturing and allied, 9 for energy and petroleum and 10 for construction and allied.	

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

Linear regression was applied and various tests conducted to ascertain the properties of the collected data in order to select the efficient model. Random effects model was applied to establish the effects of liquidity, growth, size, profitability, industry dummy and leverage on the dependent variable dividend payout.

#### **3.2 Target Population**

The target population was 57 firms listed at the Nairobi Securities Exchange by the year 2013. The 57 companies represented the ten sectors of the economy.

#### **3.3 Sample Size**

The sample size constituted three companies picked at random from each of the ten sectors: agricultural, insurance, commercial and services, investment, banking, automobile and accessories, telecommunication and technology, manufacturing and allied energy and petroleum, and construction and allied. Sectors which have less than three companies listed will be considered as they are to represent those sectors. The sample for the study constituted 27 companies listed at the Nairobi Securities Exchange for the period of five years from 2008-2012. The sample size was 27 because some counters had less than three companies.

### 3.4 Sampling Technique.

Purposive sampling was used to select samples from the ten sectors. The use of purposive sampling was to enable collection of observations that would allow answering of the research questions, this is because some companies did not have complete data or at some point where suspended from trading at the NSE. The sample for the study consisted of 27 firms listed at the Nairobi Securities Exchange NSE for the period of five years from 2008-2012.

### 3.5 Data

Data collected was secondary in nature obtained from annual reports of the companies for a period of five years, from 2008 to 2012. Information on dividends was based on the actual dividends paid out in the five years as recorded in their annual reports. The source of the data was 2013 NSE handbook.

### 3.6 Data Analysis

The paper presents several test procedures which were used to investigate the dynamic relations between dividend payout and liquidity, profitability, growth, firm size, industry dummy and leverage in an attempt at shedding more light on the dynamics of dividend payout. Panel data was used for a period of five years (2008 to 2012). The general form of the panel data model was specified more compactly as:

$$I. \quad Y_{it} = \alpha_i + \beta X_{it} + \varepsilon_{it}$$

The study used multiple linear regression equation as show below

$$II. \quad DPO = \alpha_0 + \alpha_1 PROF_{it} + \alpha_2 GRO_{it} + \alpha_3 LIQ_{it} + \alpha_4 SIZ_{it} + \alpha_5 LEV_{it} + \alpha_6 IND1_i + \alpha_7 IND2_i + \alpha_8 IND3_i \\ + \alpha_9 IND4_i + \alpha_{10} IND5_i + \alpha_{11} IND6_i + \alpha_{12} IND7_i + \alpha_{13} IND8_i + \alpha_{14} IND9_i + \alpha_{15} IND10_i + \varepsilon_{it}$$

$i = 1, 2 \dots 27, t = 1, 2 \dots 5$

Where,

DPO = Dividend payout

PROF = Profitability

LIQ = Liquidity

GRO = Growth

SZ = Size

LEV = Leverage

IND = Industry dummy

$\varepsilon$  = error term

The Hausman's test was employed to select the appropriate method from the Random Effect Model (RE) and fixed effect model (FE). Exploratory analysis of data was utilized: Maximum and minimum, median, quartiles, mean and standard deviation . Tests of serial correlation, multicollinearity and normality where also performed.

## CHAPTER FOUR

### FINDINGS AND DISCUSSION

#### 4.1 Descriptive statistics

The Table 2 below shows the descriptive statistics for six variables used in this research to examine the determinant factors of dividend payout. The dividend payout ratio of 27 firms has a mean value of 37.51% with a standard deviation of 43.86%. The results suggest that on average Kenyan firms use 37.51% of their earnings to distribute cash dividends to shareholders.

Firms have a profitability position of 0.226 on average. The maximum profitability position is 0.908, whereas the minimum is -0.885. Inversely firms have a high liquidity position of 2.21 on average and a minimum of 0.1986 while their maximum is 18.28.

The mean growth rate is at 20.93. In terms of volatility measured by the deviation of observations from the mean (standard deviation) growth appears to be the most volatile with a standard deviation of 3.645.

The mean size of firms listed at the NSE is 23.07 with the largest being 26.02 and 17.677 for the smallest in terms of log total assets. The leverage ratio on average for firms is 53.8% debt financing in their capital structure. The least financial leverage is 0.008 while the highest one is 0.88.

#### TABLE 2

### Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
DPO	135	.375063	.4385825	-2.5787	2.31
PROFITABIL~Y	135	.2262533	.2385458	-.885	.908
LIQUIDITY	135	2.211751	2.803703	.19855	18.287
GROWTH	135	20.93054	3.644645	13.019	26.126
SIZE	135	23.07067	1.65857	17.677	26.025
LEVERAGE	135	.5379933	.2198412	.008	.887

Source: Researcher 2014

**TABLE 3**  
**Linear regression**

Source	SS	df	MS	Number of obs = 135		
Model	2.0347648	5	.406952961	F( 5, 129) = 2.21		
Residual	23.7407521	129	.184036838	Prob > F = 0.0570		
Total	25.7755169	134	.192354603	R-squared = 0.0789		
				Adj R-squared = 0.0432		
				Root MSE = .429		

DPO	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PROFITABILITY	.3193712	.1613729	1.98	0.050	.0000909	.6386516
LIQUIDITY	-.0082917	.0160959	-0.52	0.607	-.0401379	.0235544
GROWTH	.0114023	.0128835	0.89	0.378	-.014088	.0368925
SIZE	-.0467683	.0360119	-1.30	0.196	-.1180188	.0244821
LEVERAGE	-.1799986	.2242858	-0.80	0.424	-.6237536	.2637563
_cons	1.258303	.6695109	1.88	0.062	-.0663412	2.582946

**Source: Researcher 2014**

#### ***4.1.1: Heteroskedasticity test***

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of DPO

Chi2 (1) = 0.01

Prob > chi2 = 0.9073

There is no presence of heteroskedasticity.

#### ***4.1.2 Multicollinearity analysis***

There is no presence of multicollinearity since all the VIF's are less than 10 and 1/VIF's are greater than 0.10.

#### **TABLE 4**

#### **Multicollinearity test**

Variable	VIF	1/VIF
SIZE	2.60	0.384981
LEVERAGE	1.77	0.564909
GROWTH	1.61	0.622907
LIQUIDITY	1.48	0.674380
PROFITABIL~Y	1.08	0.926819
Mean VIF	1.71	

**Source: Researcher 2014**

#### **4.1.2: Correlation analysis**

The results in Table 4:2 showed that all of the exogenous variables have coefficient less than 0.7, which meant there was no presence of correlation. The results indicated a weak significant positive correlation between growth and profitability. Financial leverage and firm size are negatively correlated with dividend payout ratio. Even though, financial leverage is positively related with size, its correlation coefficient is moderately statistically significant. Additionally, there were positive correlations between growth and firm size. Firm size and leverage are negatively correlated with liquidity. Profitability has a weak positive correlation with growth.

**TABLE 5**

**Correlation coefficients of the tested variables**

	DPO	PROFIT~Y	LIQUID~Y	GROWTH	SIZE	LEVERAGE
DPO	1.0000					
PROFITABIL~Y	0.0606 0.4853	1.0000				
LIQUIDITY	0.1260 0.1453	-0.0766 0.3773	1.0000			
GROWTH	0.1151 0.1836	0.2590 0.0024	-0.1971 0.0220	1.0000		
SIZE	-0.0903 0.2978	0.0617 0.4775	-0.5348 0.0000	0.6810 0.0000	1.0000	
LEVERAGE	-0.0985 0.2558	0.0041 0.9620	-0.5788 0.0000	0.1727 0.0452	0.6375 0.0000	1.0000

**Source: Researcher 2014**

#### ***4.1.3: Normality test***

The null hypothesis is rejected. This is because the p-value is less than 0.05.

**TABLE 6**

**Normality test**

Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	z	Prob>z
PROFITABIL~Y	135	0.86218	14.656	6.053	0.00000
LIQUIDITY	135	0.55828	46.973	8.679	0.00000
GROWTH	135	0.85149	15.792	6.221	0.00000
SIZE	135	0.96404	3.824	3.024	0.00125
LEVERAGE	135	0.96905	3.292	2.686	0.00362

**Source: Researcher 2014**

**4.2 Panel Data analysis**

The fixed and random effects model were estimated and then the Hausman test was applied to select the appropriate model. The dummy variable trap was eliminated by suppressing the constant term in the equation.

**TABLE 7**

**Regression results of fixed effects model**

Fixed-effects (within) regression		Number of obs	=	135		
Group variable: FIRM1		Number of groups	=	27		
R-sq: within	= 0.1212	Obs per group: min	=	5		
between	= 0.0217	avg	=	5.0		
overall	= 0.0203	max	=	5		
corr(u_i, Xb) = -0.8843		F(5,103)	=	2.84		
		Prob > F	=	0.0192		
DPO	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PROFITABILITY	.3895109	.1492215	2.61	0.010	.0935652	.6854566
LIQUIDITY	.0068726	.022039	0.31	0.756	-.0368365	.0505816
GROWTH	.1887113	.0920685	2.05	0.043	.0061151	.3713074
SIZE	-.1401352	.1065722	-1.31	0.191	-.3514961	.0712258
LEVERAGE	-.194428	.704874	-0.28	0.783	-1.592379	1.203523
_cons	-.3404821	2.623342	-0.13	0.897	-5.543263	4.862299
sigma_u	.67089577					
sigma_e	.34837192					
rho	.78762797	(fraction of variance due to u_i)				
F test that all u_i=0:		F(26, 103) =	3.56	Prob > F = 0.0000		

Source: Researcher 2014

**TABLE 8**

**Regression results of Random effects model**

Random-effects GLS regression		Number of obs	=	135
Group variable: FIRM1		Number of groups	=	27
R-sq: within	= 0.0882	Obs per group: min	=	5
between	= 0.0760	avg	=	5.0
overall	= 0.0770	max	=	5
corr(u_i, X) = 0 (assumed)		Wald chi2(5)	=	11.49
		Prob > chi2	=	0.0424

DPO	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
PROFITABILITY	.3785153	.1415815	2.67	0.008	.1010207	.65601
LIQUIDITY	-.0016894	.0175919	-0.10	0.923	-.0361689	.0327902
GROWTH	.0154527	.0196617	0.79	0.432	-.0230836	.0539889
SIZE	-.0470147	.0491761	-0.96	0.339	-.1433981	.0493687
LEVERAGE	-.1908975	.3295712	-0.58	0.562	-.8368452	.4550502
_cons	1.157088	.9114714	1.27	0.204	-.6293633	2.943539
sigma_u	.27274981					
sigma_e	.34837192					
rho	.38002751	(fraction of variance due to u_i)				

**Source: Researcher 2014**

**4.2.1: Hausman test.**

The Prob > chi2 = 0.4010, hence the random effects model would be more appropriate.

**TABLE 9**

**Cross-section random effects test comparisons**

	— Coefficients —			
	(b) FIXED	(B) RANDOM	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
PROFITABIL~Y	.3895109	.3785153	.0109956	.0471353
LIQUIDITY	.0068726	-.0016894	.0085619	.0132755
GROWTH	.1887113	.0154527	.1732586	.0899446
SIZE	-.1401352	-.0470147	-.0931205	.0945481
LEVERAGE	-.194428	-.1908975	-.0035305	.6230812

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V\_b-V\_B)^(-1)](b-B)  
= 5.12  
Prob>chi2 = 0.4010

**Source: Researcher 2014**

**TABLE 10**

**Regression results of random effects model with dummy variables**

```

Random-effects ML regression                Number of obs      =       135
Group variable: FIRM1                      Number of groups   =        27

Random effects u_i ~ Gaussian              Obs per group: min =         5
                                           avg =         5.0
                                           max =         5

                                           Wald chi2(15)     =       157.96
Log likelihood = -53.878285                Prob > chi2       =        0.0000

```

DPO	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
PROFITABILITY	.3082471	.1415864	2.18	0.029	.0307429	.5857514
LIQUIDITY	-.0025813	.0161804	-0.16	0.873	-.0342943	.0291317
GROWTH	.0031026	.0140851	0.22	0.826	-.0245037	.0307088
SIZE	-.0390517	.0433122	-0.90	0.367	-.1239421	.0458388
LEVERAGE	-.5292883	.3039692	-1.74	0.082	-1.125057	.0664803
INDS1	1.464567	.887145	1.65	0.099	-.274205	3.203339
INDS2	1.112549	.8034764	1.38	0.166	-.4622362	2.687334
INDS3	1.634286	.8428174	1.94	0.052	-.0176055	3.286178
INDS4	1.3053	.9238439	1.41	0.158	-.5054007	3.116001
INDS5	1.445949	.8770104	1.65	0.099	-.2729593	3.164858
INDS6	1.718561	.8369985	2.05	0.040	.0780739	3.359048
INDS7	1.748936	.9428154	1.86	0.064	-.0989488	3.59682
INDS8	1.390316	.8887214	1.56	0.118	-.3515458	3.132178
INDS9	1.068529	.8744465	1.22	0.222	-.6453542	2.782413
INDS10	1.225153	.8911519	1.37	0.169	-.5214724	2.971779
/sigma_u	.1029135	.0496248			.0399966	.2648017
/sigma_e	.3477917	.0237564			.3042122	.3976141
rho	.0805105	.0754146			.0083986	.3401059

```

Likelihood-ratio test of sigma_u=0: chibar2(01)=    1.46 Prob>=chibar2 = 0.113

```

This positive relationship of profitability is as expected and is supported by the results of previous scholars (Amidu & Abor 2006) (Anil & Kapoor 2008) (Hedensted & Raaballe 2006).

Firms that are profitable tend to pay dividends aiming at sending a signal of positive information

about firm's future earnings. Thus greater profitability enables firms' dividend payouts to be higher.

Liquidity appears with a negative unexpected sign, having an insignificant coefficient with t-statistic of -0.16 and a p-value of 0.873. Although Rozeff (1982), Contrary to expectations the relationship between dividend payout and growth is positive but insignificant at five percent significance level. The p-value is 0.826. The positive sign might be explained by high growth firm's ability access to capital markets, for the purpose of raising funds at a lower derivation costs for external financing. Hence they are able to finance dividend payments without need of retaining earnings.

As expected leverage has a negative correlation with the dividend payout, suggesting that firms may be using debt to distribute dividends Al-Malkawi (2005), Faccio et al. (2001). This is also supported by agency cost theory and transaction cost theory. According to agency cost theory, firm with high leverage ratio pay low dividend to reduce agency conflicts among bondholders and managers. More debts mean more risks, thus bondholders set strict restriction on dividend payout pattern of firm to protect their benefits.

Furthermore, the accessibility of highly levered firm to capital financial market is much more difficult and is charged high transaction cost. In general, the financial leverage is in inversely proportional to dividend payout ratio. Despite its negative sign, the leverage for the 27 firms is insignificant.

The negative relationship of size although it is statistically insignificant determinant of the dividend payout, it is inconsistent with the findings of Fama and French (2001). However, the justification for the results is that the period under review is abnormal since it was the time

when the global financial crisis was experienced. Thus this might explain the contradictions in the signs of growth and size and also the insignificance of liquidity, leverage, growth and size given the interdependence of the financial markets. The fact that the foreign traders control a big share at the Nairobi securities exchange and that the period 2008 -2012 was dominated by the bearish market behavior could have a great bearing on the results.

The results showed that only IND 6 (Manufacturing and Allied) has a significant and positive coefficient. The Manufacturing and Allied steps into mature stage, thus the dividend payout of this industry is much more stable hence the significant payout ratio. Although IND1 (commercial and services), IND7 (banking), IND 3 (Construction and Allied) and IND 5(Insurance) had coefficients in the range of those of IND 6, but they were not statistically significant. IND2 (Agricultural), IND4 (Energy and Petroleum), IND8 (Telecommunications and Technology), IND 9 (Investment) and IND10 (Automobile and Accessories) have the least coefficients and are not statistically significant.

## **CHAPTER FIVE**

### **SUMMARY AND CONCLUSION**

The Kenyan market has different characteristics as compared to developed and other developing markets. Economic and political factors are very dynamic. These factors have a strong impact on the firm behavior.

The study sought to establish the determinants and effect of micro economic factors on dividend payout and also to examine the differences in each sector of the economy. The study reached a conclusion that profitability, liquidity, growth, size and leverage are key important factors in determination of dividend policy despite some being statistically insignificant. The willingness and ability to pay stable dividends as well as the ability to increase dividend payout ratio is appreciated by shareholder and attractive to investors.

Finally, an appropriate dividend policy is a policy that can cooperate effectively with investment and financing policy to maximize the value of firms. The current move by Capital Markets Authority to introduce taxation on capital gains is likely to change the dynamics of dividend policy whereby investors will look at both capital gains and cash dividends when making their investment decision since the two will be taxable incomes.

#### **5.1: Recommendations**

Investor preferring high dividend should: Understand the determinants of dividend policy has significant implication on individual investors' investment policy depending on their dividend preference.

Investors who want to select the high dividend payout firms might have to look into the investigated factors before selecting companies to be included in their portfolio.

Managers of listed firms should aspire at having high growth opportunities, high liquidity and have low leverage or gearing ratio, thus this would yield high profits and in turn high dividend payout which will improve investors' confidence in the firm hence value of the firm.

Future research could be conducted in various other ways: First, the inclusion of additional variables such as the insider ownership, Impact of age of the firm institutional ownership, previous dividend, business risk and tax on dividend payout of the firm could be examined.

Second, the application of macroeconomic variable is another potential extension of the present research. Finally, determining dividend payout behavior of individual industry sectors and the factor they take into consideration when selecting

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## APPENDICES

### APPENDIX I

NSE listed firms As at December, 2013

<b>Agricultural Sector</b>
1. Eaagads Limited.
2. Kakuzi Co.Ltd.
3. Kapchoroua Tea Co. Ltd.
4. Limuru Tea Co. Ltd.
5. Rea Vipingo Plantations Limited.
6. Sasini T &C Limited.
7. Williamson Tea K. Co. Ltd.
<b>Automobiles &amp; Accessories</b>
8. C & G (K) Limited.
9. CMC Holdings Limited.
10. Marshalls (EA) Limited.
11. Samer group Africa Limited.
<b>Banking</b>
12. Barclays Bank K Ltd.
13. CFC Stanbic Bank Limited.
14. Co-operative Bank k ltd.
15. DTB(Kenya) Ltd.
16. Equity Bank Ltd

17. Housing Finance Company Limited.
18. Kenya Commercial Bank Limited.
19. National Bank Of Kenya Limited.
20. NIC Bank Limited.
21. Standard Chartered Bank Kenya Limited.
<b>Commercial &amp; Services</b>
22. Express Limited.
23. Kenya Airways Limited.
24. Longhorn Kenya Limited.
25. Nation Media Group Limited.
26. ScanGroup Limited.
27. Standard Group Limited.
28. TPS EA (Serena) Limited.
29. Uchumi Supermarket Limited.
<b>Construction &amp; Allied</b>
30. Athi River Mining Cement Limited.
31. Bamburi Cement Company Limited.
32. Crown Paints Kenya Limited.
33. East African Cables Limited.
34. East African Portland Cement Limited.
<b>Energy &amp; Petroleum</b>
35. Kenol Kobil Limited.

36. Kenya Electricity Generating Company Limited.
37. Kenya Power & Lighting Company Limited.
38. Total Kenya Limited.
39. Umeme Limited.
<b>Insurance</b>
40. Britam Limited.
41. CIC Insurance Limited.
42. Jubilee Holdings Limited.
43. Kenya Reinsurance Corporation Limited.
44. Liberty Kenya Holdings Limited.
45. Pan Africa Insurance Holdings Limited.
<b>Investment</b>
46. Centum Investment Company (ICDCI) Limited.
47. Olympia Capital Holdings Limited.
48. Trans-Century Limited.
<b>Manufacturing &amp; Allied</b>
49. Boc Kenya Limited.
50. British American Tobacco Kenya Limited.
51. Carbacid Investments Limited.
52. EABL Co. ltd.
53. Eveready East Africa Limited.
54. Mumias Sugar Company Limited.

55. Unga Group Limited.
<b>Telecommunication &amp; Technology</b>
56. AccessKenya Group Limited.
57. Safaricom Limited.

Source: Nairobi Securities Exchange.

## APPENDIX II

### Data Collection Sheet

FIRM	YEAR	PROFITABILITY	LIQUIDITY	GROWTH	SIZE	LEVERAGE	DPO	IND
	2008							
	2009							
	2010							
	2011							
	2012							

## APPENDIX III

### Variables

FIRM	YEAR	PROFITABILITY	LIQUIDITY	GROWTH	SIZE	LEVERAGE	DPO	INDS1
------	------	---------------	-----------	--------	------	----------	-----	-------

KQ	2008	0.838	1.519	23.901	25.064	0.663	0.2088	1
KQ	2009	-0.885	0.907	22.933	25.054	0.774	0.1131	1
KQ	2010	0.441	0.868	24.045	25.017	0.727	0.2268	1
KQ	2011	0.766	1.063	23.424	25.089	0.706	0.1957	1
KQ	2012	0.036	0.919	22.586	25.073	0.703	0.2252	1
NMG	2008	0.181	1.854	23.052	22.613	0.348	0.303	1
NMG	2009	0.07	2.128	23.546	22.606	0.283	0.701	1
NMG	2010	0.097	1.988	23.991	22.8	0.32	0.817	1
NMG	2011	0.076	2.313	23.814	22.9	0.306	0.104	1
NMG	2012	0.159	2.253	24.275	23.091	0.314	0.626	1
TPS	2008	0.021	1.229	22.438	22.6	0.424	0.5942	1
TPS	2009	0.036	1.541	22.284	22.669	0.419	0.45	1
TPS	2010	0.034	1.409	23.041	23.202	0.371	0.685	1
TPS	2011	0.0415	1.5	22.821	23.298	0.387	0.55	1
TPS	2012	0.0333	1.012	22.503	23.325	0.393	0.4	1
KL	2008	0.13	1.075	13.019	22	0.411	0.11	2
KL	2009	0.21	1.497	13.333	21.85	0.343	0.14	2
KL	2010	0.18	2.074	14.284	21.67	0.313	0.16	2
KL	2011	0.23	3.345	14.125	21.81	0.278	0.13	2
KL	2012	0.15	8.475	14.16	21.95	0.216	0.19	2
LTC	2008	0.14	3.95	19.025	17.677	0.375	0.7087	2
LTC	2009	0.22	3.837	19.718	18.03	0.34	0.3337	2
LTC	2010	0.62	7.97	19.702	18.807	0.246	0.1203	2

LTC	2011	0.33	18.287	19.812	19.04	0.217	0.2223	2
LTC	2012	0.84	12.41	20.062	19.55	0.243	0.884	2
RVPL	2008	0.28	1.427	20.743	21.213	0.464	0.07	2
RVPL	2009	0.24	2.239	20.317	21.05	0.31	0.2	2
RVPL	2010	0.11	1.342	20.795	21.258	0.421	0.71	2
RVPL	2011	0.77	2.103	20.601	21.551	0.358	0.14	2
RVPL	2012	0.63	3.409	20.743	21.589	0.275	0.17	2
ARM	2008	0.5	1.02	22.917	22.572	0.665	0.2459	3
ARM	2009	0.65	1	23.121	23.22	0.66	0.2301	3
ARM	2010	0.1	1.32	23.621	23.531	0.703	0.1612	3
ARM	2011	0.11	0.84	23.474	23.744	0.703	0.1722	3
ARM	2012	0.25	1.22	23.816	24.017	0.736	0.1988	3
EACL	2008	0.22	1.66	22.394	21.836	0.551	0.4376	3
EACL	2009	0.14	1.362	22.134	21.988	0.531	0.684	3
EACL	2010	0.908	1.283	21.914	22.231	0.503	1.1014	3
EACL	2011	0.12	1.161	21.705	22.331	0.545	0.4021	3
EACL	2012	0.2	1.197	21.809	22.556	0.532	0.4849	3
CPKL	2008	0.4	1.336	13.283	21.39	0.578	1.09	3
CPKL	2009	0.1	1.436	13.293	21.343	0.55	1	3
CPKL	2010	0.1	1.492	13.658	21.402	0.542	1	3
CPKL	2011	0.12	1.464	13.095	21.519	0.525	0.72	3
CPKL	2012	0.11	1.536	13.823	21.538	0.479	0.94	3
KKL	2008	0.78	1.295	22.997	24.045	0.606	0.4459	4
KKL	2009	0.87	1.302	22.719	24.105	0.6661	0.3695	4
KKL	2010	0.13	1.378	23.412	24.137	0.631	0.3996	4

KKL	2011	0.22	1.224	23.407	24.551	0.747	0.4496	4
KKL	2012	-0.45	0.968	23.716	24.21	0.803	0	4
KECL	2008	0.26	1.3445	24.71	25.396	0.363	0.3355	4
KECL	2009	0.09	2.173	24.189	25.411	0.417	0.5308	4
KECL	2010	0.14	4.713	24.35	25.738	0.532	0.3345	4
KECL	2011	0.09	1.736	24.117	25.805	0.569	0.5284	4
KECL	2012	0.12	1.486	23.663	25.818	0.57	0.4673	4
TKL	2008	0.4	1.237	22.446	23.399	0.655	0.6218	4
TKL	2009	0.27	1.116	22.362	24.174	0.716	0.3585	4
TKL	2010	0.52	1.177	22.336	24.137	0.685	0.1983	4
							-	
TKL	2011	-0.04	1.103	21.672	24.284	0.739	2.5787	4
							-	
TKL	2012	-0.115	1.302	21.609	24.219	0.55	0.1732	4
CIC	2008	0.24	0.65	15.277	21.831	0.75	0.16	5
CIC	2009	0.24	0.819	14.271	21.973	0.716	0.14	5
CIC	2010	0.19	1.045	15.781	22.605	0.603	0.01	5
CIC	2011	0.14	1.006	15.831	23.132	0.614	0.33	5
CIC	2012	0.25	1.012	15.216	23.367	0.611	0.16	5
PAI	2008	-0.08	1.523	21.599	22.531	0.805	0	5
PAI	2009	0.1	1.894	21.599	22.762	0.828	0.69	5
PAI	2010	0.32	0.712	21.781	23.091	0.828	0.49	5
PAI	2011	0.23	0.921	21.376	23.167	0.816	0.43	5
PAI	2012	0.03	1.723	22.004	23.525	0.84	0.41	5
JHL	2008	0.16	0.813	22.434	23.729	0.841	0.268	5

JHL	2009	0.2	0.927	22.367	23.89	0.84	0.222	5
JHL	2010	0.41	1.046	22.932	24.147	0.818	0.148	5
JHL	2011	0.35	1.456	22.856	24.362	0.824	0.153	5
JHL	2012	0.38	1.978	23.061	24.58	0.817	0.202	5
BOC	2008	0.14	2.079	21.862	21.445	0.293	0.66	6
BOC	2009	0.1	2.641	21.798	21.411	0.229	0.86	6
BOC	2010	0.05	2.48	21.67	21.426	0.247	2.31	6
BOC	2011	0.11	1.94	21.392	21.32	0.269	0.88	6
BOC	2012	0.14	2.079	21.387	21.411	0.269	0.5	6
BAT	2008	0.35	1.051	23.296	23.056	0.5285	0.1	6
BAT	2009	0.32	0.979	23.602	23.08	0.557	0.1	6
BAT	2010	0.35	1.17	24.019	23.132	0.54	0.99	6
BAT	2011	0.48	1.307	23.901	23.344	0.534	0.98	6
BAT	2012	0.46	1.178	24.621	23.443	0.532	0.99	6
CBDI	2008	0.147	14.231	21.163	20.914	0.153	0.6792	6
CBDI	2009	0.754	10.625	21.976	21.043	0.152	1.9881	6
CBDI	2010	0.0904	5.786	22.391	21.137	0.144	0.5527	6
CBDI	2011	0.88	8.843	21.858	21.277	0.157	0.5622	6
CBDI	2012	0.114	4.258	22.17	21.423	0.179	0.5237	6
CBK	2008	0.183	0.254037	24.094	25.148	0.845	0.13	7
CBK	2009	0.19	0.8156	23.976	25.43	0.859	0.24	7
CBK	2010	0.229	0.6719	24.746	25.762	0.871	0.31	7
CBK	2011	0.256	0.9066	24.251	25.849	0.876	0.26	7
CBK	2012	0.263	0.9205	24.733	26.025	0.854	0.27	7
HFK	2008	0.04	0.27549	15.311	23.383	0.7445	0.38	7

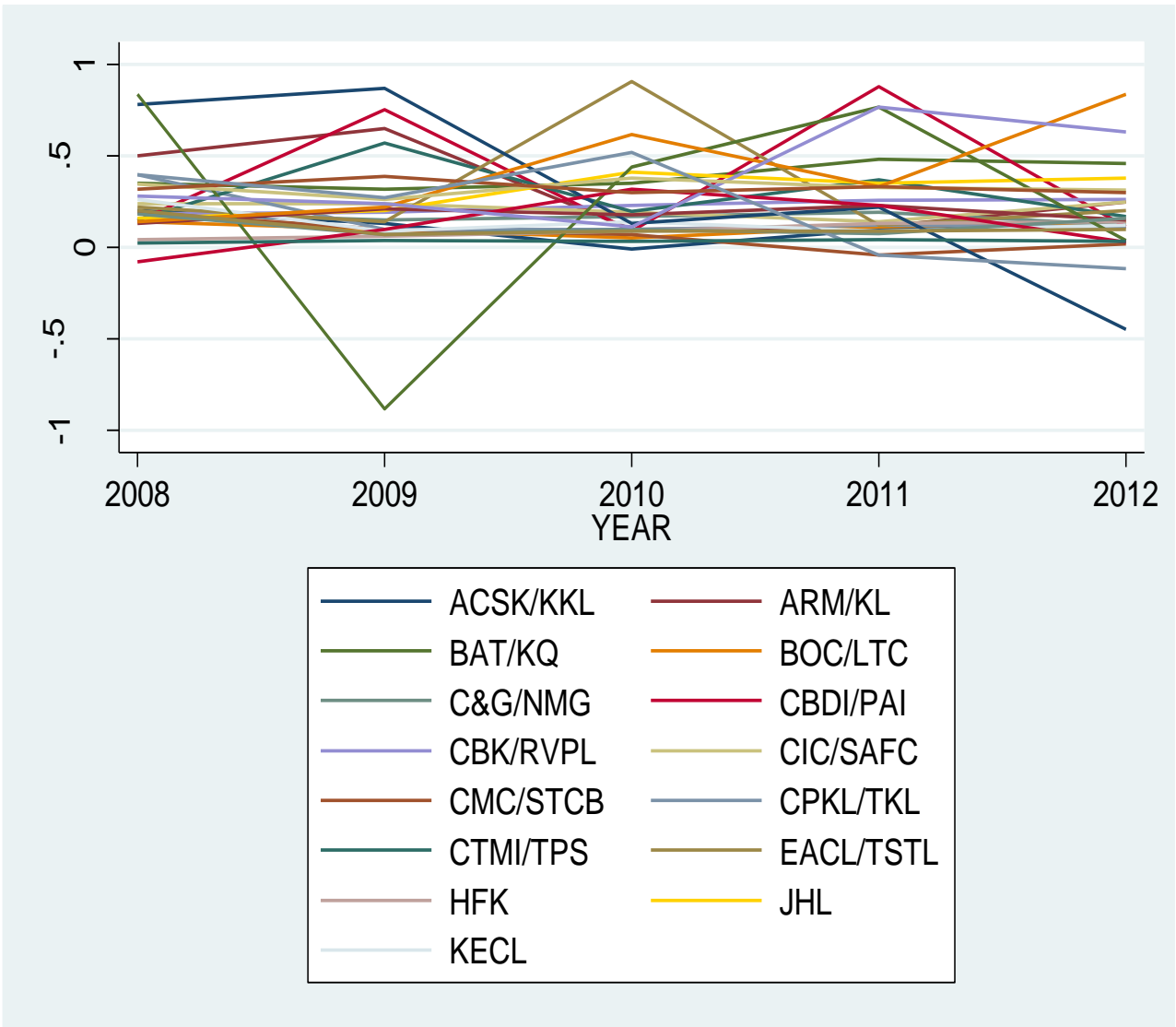
HFK	2009	0.06	0.19855	15.236	23.627	0.777	0.49	7
HFK	2010	0.09	0.51975	15.622	24.1	0.855	0.42	7
HFK	2011	0.13	0.27358	14.865	24.185	0.852	0.44	7
HFK	2012	0.14	0.3422	15.086	24.436	0.875	0.43	7
STCB	2008	0.32	1.11966	24.496	25.319	0.884	0.88	7
STCB	2009	0.39	1.1261	24.503	25.542	0.887	0.73	7
STCB	2010	0.3	1.1372	25.028	25.684	0.858	0.73	7
STCB	2011	0.33	1.09722	24.556	25.823	0.874	0.57	7
STCB	2012	0.3	1.16556	25.009	26	0.843	0.47	7
ACSK	2008	0.2	1.497	15.19	21.168	0.335	0.42	8
ACSK	2009	0.13	1.094	15.211	21.564	0.502	0.42	8
ACSK	2010	-0.01	0.711	14.796	21.727	0.623	0	8
ACSK	2011	0.1	0.734	13.839	21.605	0.546	0	8
ACSK	2012	0.12	0.535	13.776	21.541	0.449	0.43	8
SAFC	2008	0.346	0.511	25.693	25.032	0.427	0.1444	8
SAFC	2009	0.2634	0.489	25.51	25.242	0.442	0.3796	8
SAFC	2010	0.3787	0.667	26.126	25.369	0.402	0.5281	8
SAFC	2011	0.3289	0.636	25.747	25.458	0.408	0.608	8
SAFC	2012	0.3156	0.563	25.575	25.526	0.409	0.6969	8
CTMI	2008	0.15	4.566	23.344	22.821	0.008	0.259	9
CTMI	2009	0.5694	0.309	22.453	22.579	0.084	0	9
CTMI	2010	0.198	1.293	22.873	22.834	0.048	0	9
CTMI	2011	0.37	1.386	23.268	23.233	0.223	0	9
CTMI	2012	0.17	0.681	22.885	23.171	0.132	0	9
TSTL	2008	0.2	1.753	22.537	22.814	0.618	0.04	9

TSTL	2009	0.07	1.805	22.661	22.89	0.597	0.15	9
TSTL	2010	0.09	1.592	22.622	23.142	0.529	0.16	9
TSTL	2011	0.09	1.225	22.707	23.833	0.704	0.19	9
TSTL	2012	0.1	1.285	22.585	23.807	0.657	0.24	9
CMC	2008	0.19	1.456	16.219	23.21	0.598	0.28	10
CMC	2009	0.1	1.44	15.582	23.311	0.603	0.38	10
CMC	2010	0.07	1.391	15.844	23.409	0.628	0.29	10
CMC	2011	-0.04	1.367	15.77	23.403	0.647	0	10
CMC	2012	0.02	1.538	15.768	23.285	0.557	0	10
C&G	2008	0.19	8.793	19.643	21.735	0.486	0.07	10
C&G	2009	0.15	9.889	19.877	21.89	0.476	0.08	10
C&G	2010	0.17	9.701	19.503	22.077	0.473	0.07	10
C&G	2011	0.19	6.499	20.113	22.439	0.442	0.07	10
C&G	2012	0.12	5.36	20.048	22.465	0.487	0.07	10

## OVERLAY PLOTS

### FIGURE 2

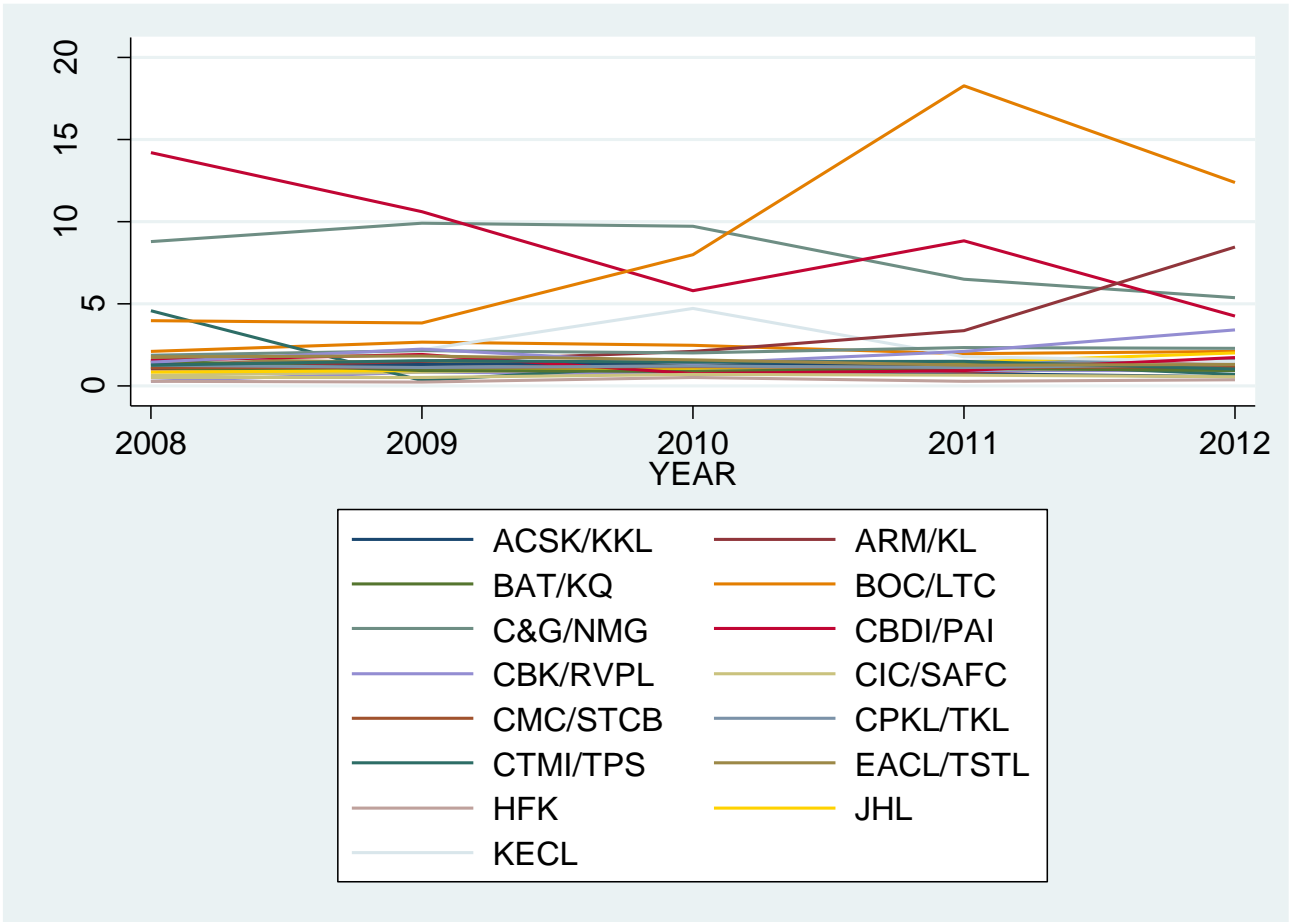
#### Profitability overlay plot



Source: Researcher 2014

**FIGURE 3**

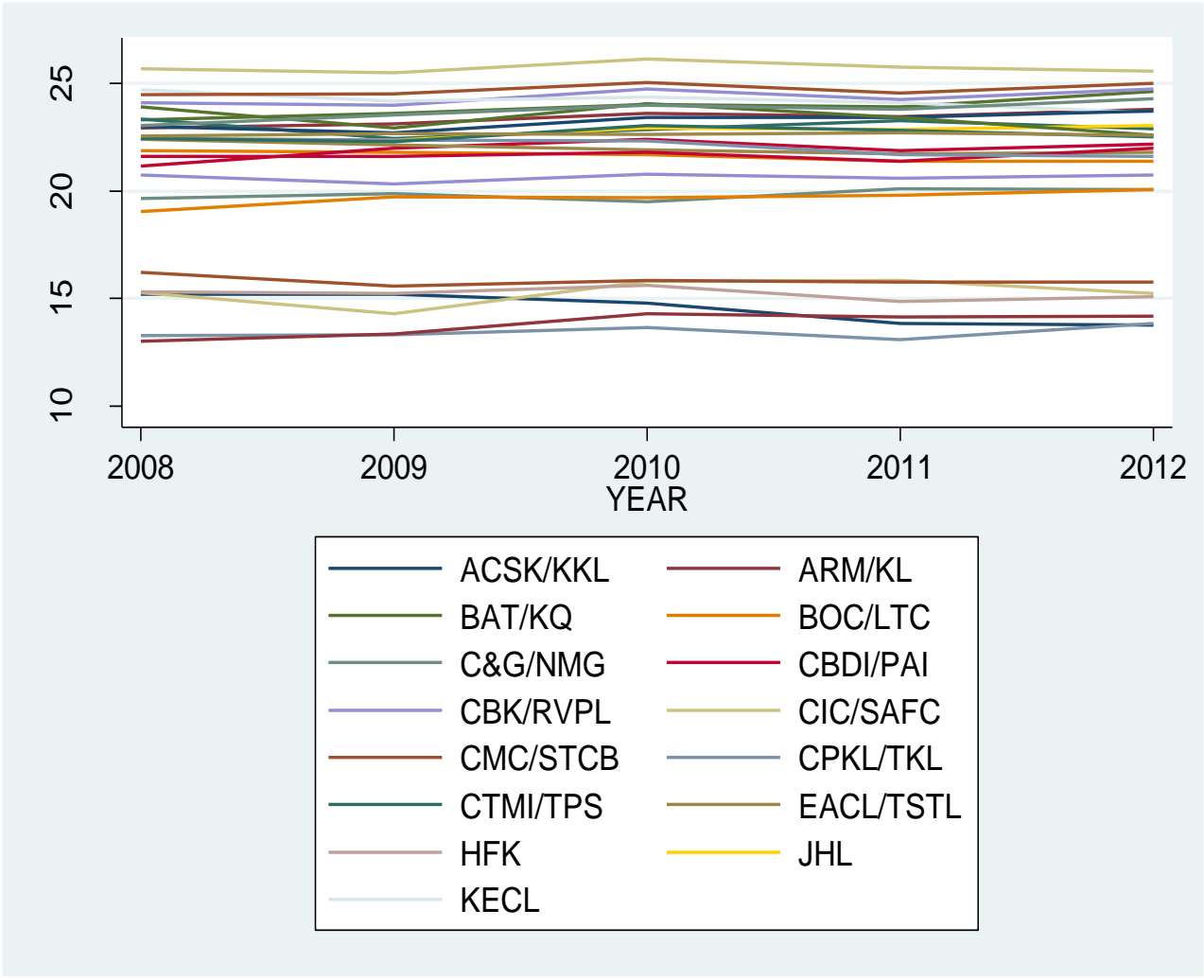
**Liquidity overlay plot**



Source: Researcher 2014

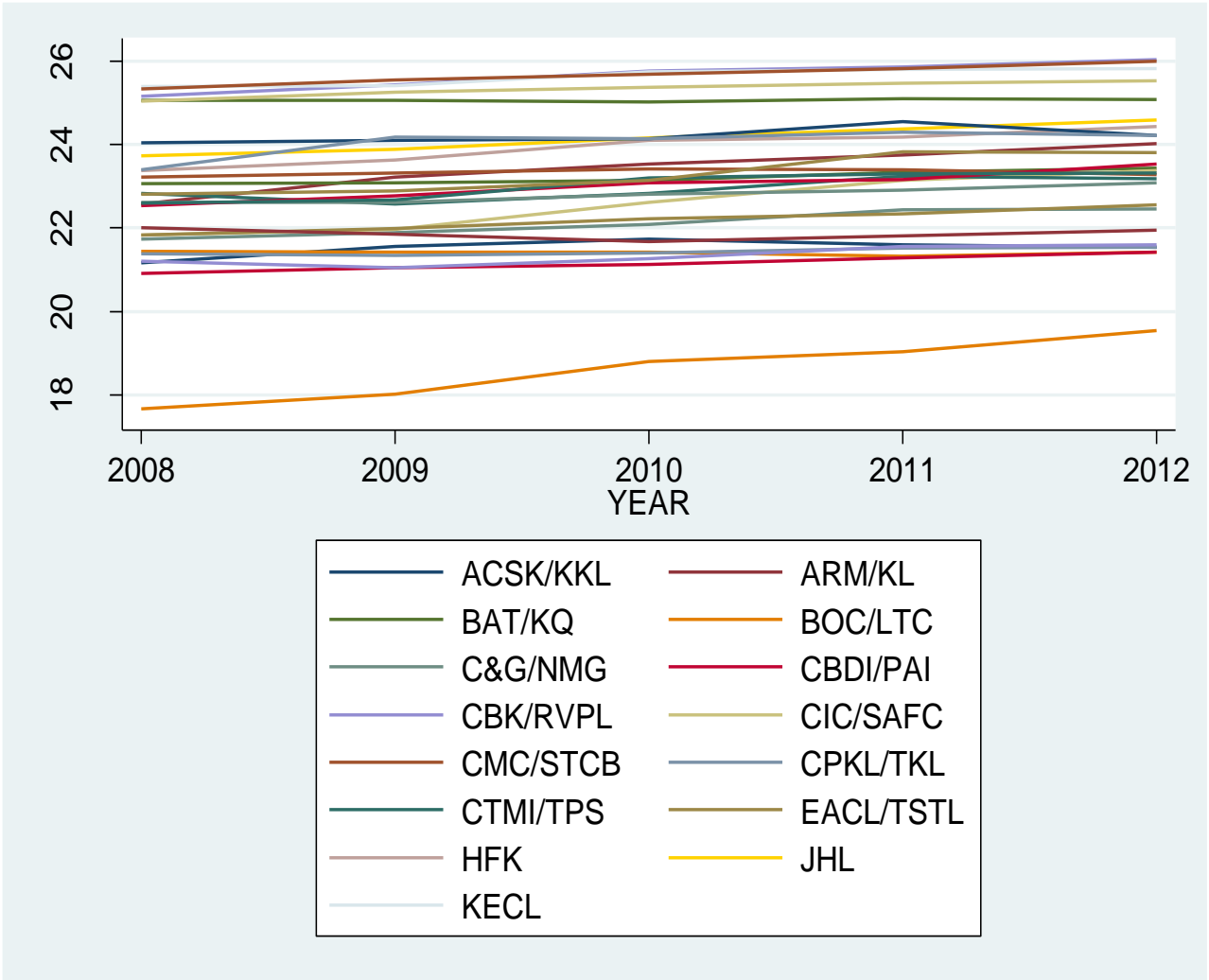
**FIGURE 4**

**Growth overlay plot**



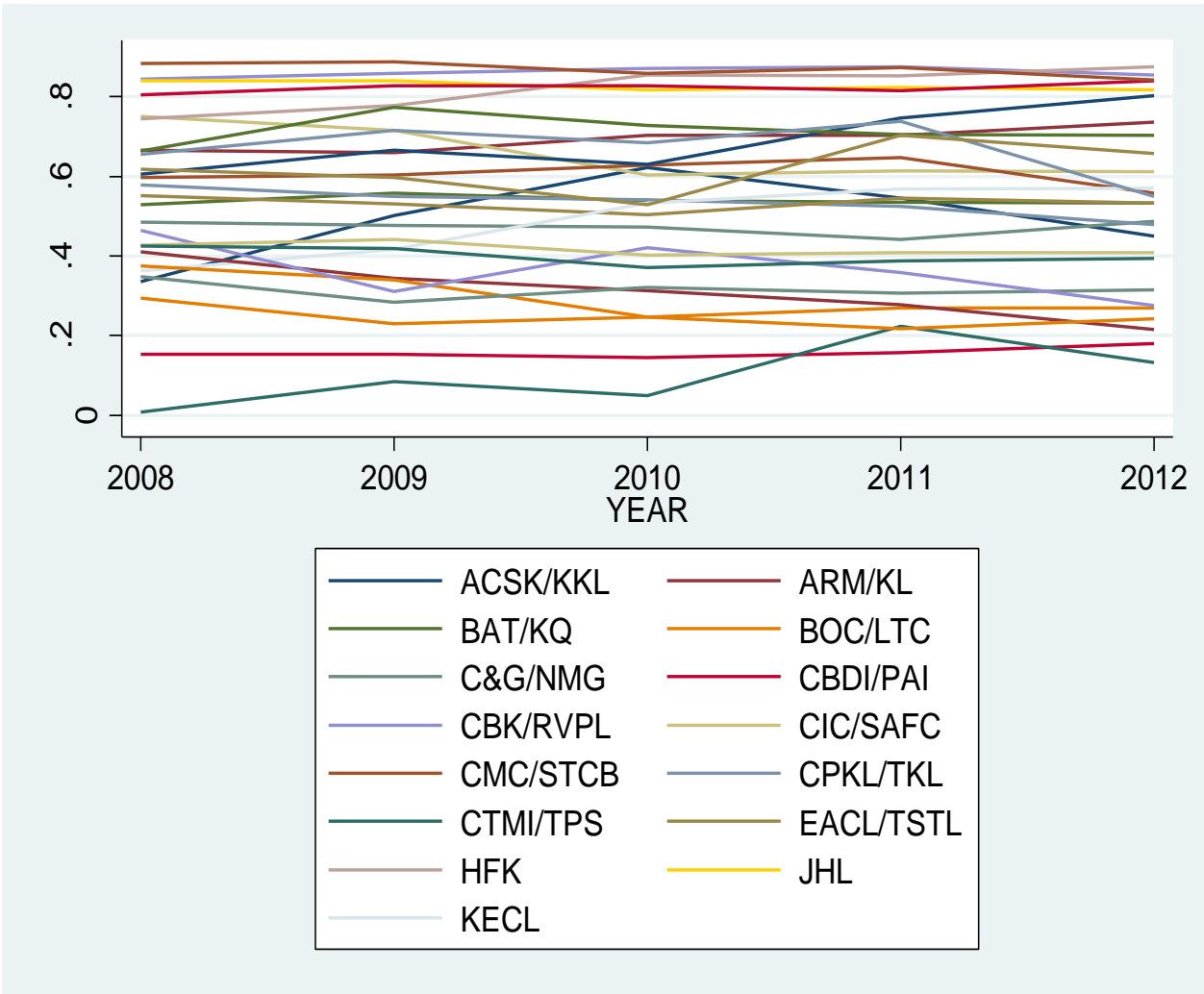
Source: Researcher 2014

**FIGURE 5**  
**Size overlay plot**



Source: Researcher 2014

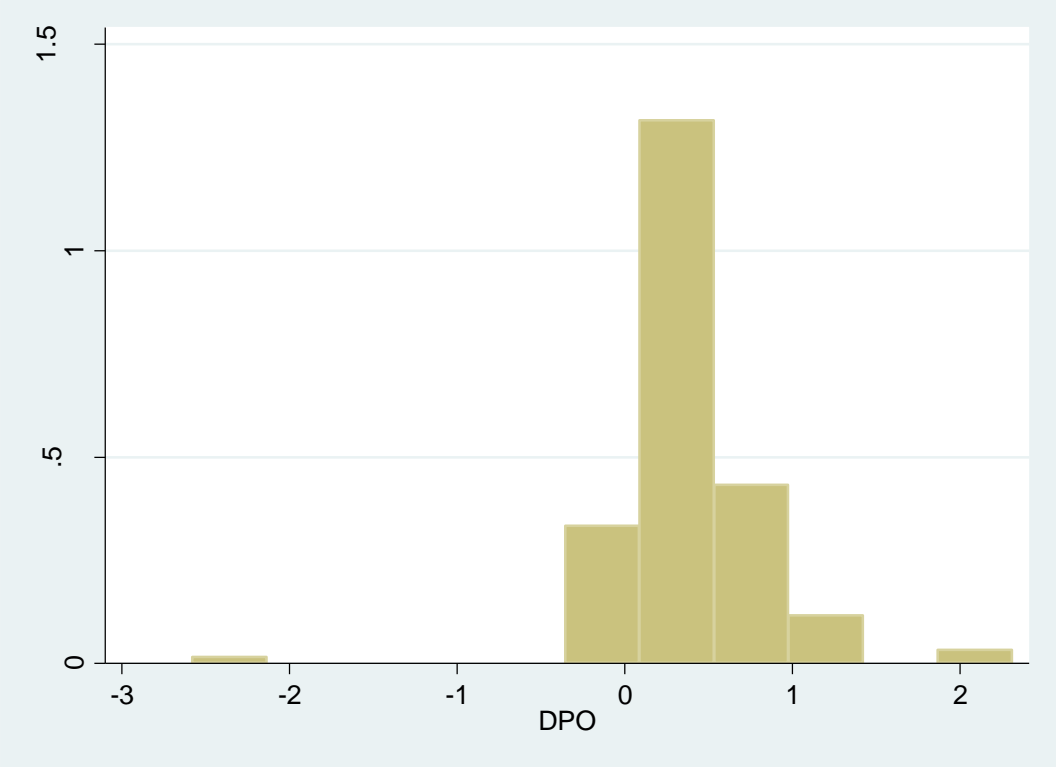
**FIGURE 6**  
**Leverage overlay plot**



Source: Researcher 2014

**FIGURE 7**

**DPO**



**Source: Researcher 2014**