FIRM CHARACTERISTICS ON THE PERFORMANCE OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

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Firm Characteristics on the Performance of Companies Listed at the Nairobi Securities Exchange, Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

This work has been dedicated to my family, particularly to my wife Rael Kemunto, and my children Siriba, Nyamwaya, Nyambunde, Kwamboka, and Karori for their support and perseverance during my prolonged stay-away during my academic life.

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ABBREVIATIONS AND ACRONYMS

ADF	Augmented Dickey-Fuller
AIG	American International Group Inc.
ATN	Asset Tangibility
BLUE	Best Least Squares Unbiased Estimators
CIVICON	Civil Engineering and Construction Company (Uganda)
CMA	Capital Markets Authority
CVI	Content Validity Index
IAS	International Accounting Standards
IFRS	International Financial Reporting Standards
IPO	Initial Public Offer
JB	Jarque-Bera
KCB	Kenya Commercial Bank
LM	The Breusch-Godfrey Serial Correlation Lagrange Multiplier
NSE	Nairobi Securities Exchange
OECD:	The Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
OWNC	Ownership Concentration
R&D	Research and Development

ROA	Return on Assets
ROE	Return on Equity
SME	Small and Medium Enterprises
SRM	Specialized Receiver Manager
SSE	Small-Scale Enterprises
VIF	Variance Inflation Factor.

OPERATIONAL DEFINITIONS OF TERMS

Asset Tangibility The degree to which a firm uses non-current assets in its operations. It is measured by the ratio of non-current (fixed) assets to total assets (Koksal, Orman, & Oduncu, 2013).

Financial Leverage The use of various financial instruments or borrowed capital, such as margin, to increase the potential return of an investment (Filbeck & Krueger, 2005).

Liquidity Refers to the degree to which an asset can be quickly and cheaply turned into money which by definition is completely liquid, (Mudida Robert, 2010).

Ownership Concentration The ratio of the shareholding held by the top five percent of shareholders to the total shareholding (Mukras, 2015).

Return on Assets The ratio of income to total assets (Khrawish and Khrawish, 2011).

Tobin's Q This is the ratio between the sum of the market value of equity and market value of liabilities and total asset replacement value (Muganga, 2010).

Financial Performance Financial performance measures a firm's financial health based on Assets, liabilities, revenue, expenses, equity, and profitability. It is a thorough analysis of company financial statements (Simon & Shepherd, 2014).

Debt Equity Ratio shows how much of a company is owned by creditors (people it has borrowed money from) compared with how much shareholder equity is held by the company (Precha, 2004)..

Market Value	company's overall actual value and factors in things like how profitable the company is, how much debt it may have, and even the financial health of the sector of the economy it is in (Liargovas & Scandalis, 2010).
Net Profit After Tax	this is the net profit available for the shareholders after paying all the expenses and taxes by the firm (Ibrahim, 2017)

ABSTRACT

Under the Kenya vision 2030 the financial sector aims at creating a competitive and vibrant economic and financial performance in Kenya. This study aimed to find the effect of firm characteristics on performance companies trading at the Nairobi Securities Exchange. The specific objectives were to; find the effect of financial leverage on performance of companies trading at the Nairobi Securities Exchange, find the effect of liquidity on performance of companies trading at the Nairobi Securities Exchange, find the effect of asset tangibility on performance of companies trading at the Nairobi Securities Exchange and to find the moderating effect of ownership concentration on the relationship between the selected firm characteristics and financial performance of companies trading at the Nairobi Securities Exchange. The Pecking Order Theory, Liquidity Preference Theory, Resource Based Theory and the Agency Cost Theory were used to anchor the objectives of this study. For the study, causal or explanatory research design was employed. The study targeted all trading and consistently participating on the Nairobi Securities Exchange from 2008 to las 2019. Purposive sampling technique was used to select a sample of 38 listed companies that had consistently traded at the NSE for the period from which complete data was obtained. The research used secondary data obtained from annual reports of firms listed at the NSE collected using document review method and recorded in a data collection sheet. Augmented Dickey-Fuller (ADF) Fisher Chi-square methodology was used to determine reliability; Financial leverage had a positive relation with ROA ($\beta = 0.143$, $p = 0.0469$); the effect on financial performance as measured by Tobin's the effect of financial leverage on company performance emerged to be positive on Tobin's Q as a measure of financial performance ($\beta = 0.392$, $p = 0.0204$). Liquidity had a negative effect on ROA as a measure of performance as indicated by beta coefficient and probability ($\beta = -0.130$, $p = 0.0151$). Additionally, it was revealed that the effect of liquidity on financial performance as measured by Tobin's Q is negative and significant ($\beta = -0.1263$, $p = 0.0409$). Results showed that the effect of asset tangibility on company performance measured by ROA is significantly negative ($\beta = -0.1355$, $p = 0.0000$). It was further found that the effect of asset tangibility on company performance measured by Tobin's Q is negative ($\beta = -0.2587$, $p = 0.0000$). It was further found that ownership concentration is a significant moderator of the relationship between trading companies' characteristics and their performance. Specifically, ownership concentration moderates the relationship between leverage and firm performance measured by ROA ($\beta = 0.254$, $p = 0.0000$), the relationship between liquidity and firm performance measured by, ROA ($\beta = 0.081$, $p = 0.0291$) and the relationship between asset tangibility and firm performance measured by ROA ($\beta = -0.049$, $p = 0.0484$). The study established that ownership concentration did not moderate the relationship between debt-to-equity ratio and firm's Tobin's Q ($\beta = 0.192$, $p = 0.0567$), liquidity and firm performance as measured by Tobin's Q ($\beta = -0.362$, $p = 0.4238$), and asset tangibility and firm performance measured by Tobin's Q ($\beta = -0.274$, $p = 0.5322$). From the above findings the study concluded that the financial leverage has a positive and significance in the performance of the firms listed in Nairobi Securities Exchange. The research concluded that the Asset tangibility has a negative influence on the performance of firms listed in the Nairobi Securities exchange. The study recommends for the firms to spur financial performance there

should be increase in the levels of leverage. The study also concluded that the firms should reduce the liquidity of the assets accordingly so as to spur the financial performance of listed firms in the Nairobi Securities Exchange. The study suggests further research to be done on the firms which are not listed in the Nairobi Securities Exchange but are critical in the economy.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In all modern economies, listed firms have been identified as key engines for resource mobilization centres for economic growth and development. In Kenya, the Nairobi Securities Exchange (NSE) the indicator of economic performance. It cover all sectors of the economy. Nevertheless, a great percentage of Kenya's companies trading at the Nairobi Securities Exchange are gradually facing financial challenges threatening their existence. The major aim of companies listing to trade at stock exchanges is to mobilize investible resources for capital formation. It is the imperative of boards and executives to safeguard the investments of their shareholders' investments capital by making decisions that promote efficiency and profitability. Management of companies trading at the NSE need to understand financial performance drivers in order to stay afloat. Companies trading in securities exchange seek to compete in the increasingly competitive globalised business environment. They face challenges of increased risk due to uncontrolled financial leverages, poorly managed liquidity levels, declining profits, unregulated asset mixes and a stifling economic environment, all which threaten value addition (Nairobi Securities Exchange (NSE), 2018). Additionally, the firms are relatively small and less diversified as compared to those in the developed economies, exposing them to more risk from uncertainty of macroeconomic policy and external shocks.

Firm characteristics are described as the managerial and demographic variables comprising of the internal factors of the firm (Zou & Stan, 1998). Thevariables making up firm characteristics include the knowledge and informational capabilities and processes within a business enterprise. This research will evaluate the effects of firm size, age, liquidity, leverage and tangible asset on firm performance. Leverage is the debt part of capital structure. Firms that have debts in their capital structured are said to be levered (Hovakimian, Opler & Titman, (2002). Highly levered firms are better placed to lower their free cash flow at disposal of the management. This is beneficial as it reduces possibilities of misappropriations of the funds and they are

motivated to enhance efficiencies. Firm size can be measured in terms of the asset base, value of sales and amount invested in capital which can then lead to classifying firms as either big or small. Big corporations enjoy economies of scale that accrue due to their size and enhance their financial performance as compared to small firms (O'Sullivan, Abela & Hutchinson, 2009). Firm age indicates the number of years a firm has been in operation since establishment (Pollet, 2009) and is measured using the years in operations. Older firms have established themselves in the environment and as such, they are active in the market as compared to new firms in the market. Evans (2007) indicated a positive relationship between age and profitability of firms and those older firms grow at a faster rate compared with young firms.

Liquidity refers to the firm's ability to meet its current obligations as and when they fall due. It measures the ability of a business enterprise to meet short term obligations by the available liquid assets, absolute liquid ratio is more accurate test of liquidity than current ratio and liquid ratio. According to the International Accounting Standards, IAS 38, tangible assets are things that are physical in nature. According to Grant (2009), tangible assets have strong transparency with weakness to resist efforts of duplication by competitors in the industry. They are classified into current assets and fixed or noncurrent assets. Current assets are held by firms with sole objective of trading. Current assets include cash and cash equivalents of the business organization (Dong, Charles and Chi, 2012). Noncurrent assets also called fixed assets come in various forms for example property, plant and equipment, fixtures and fitting, land and buildings. Firms hold fixed assets with purpose of enhancing productivity or provision of the goods and services.

1.1.1 Financial Performance

Almajali, Alamro, and Al-Soub, (2012), state that financial performance is measured through many parameters. For instance, return on sales is a measure that reveals how much a company earns about its sales, return on equity is an indication of the return investors take for their investment and return on assets indicates the firm's ability to make use of assets. There are three dimensions of firm evaluating a firm's performance. First is the firm's productivity or processing inputs into outputs

efficiently. The second is the net income or profitability dimension or the level of which firm's earnings exceed its costs. The third dimension is the market premium which is the level of which the firm's market value exceeds its book value (Walker, 2001). Cohen, Chang and Ledford (1997) carried out a study to find firm financial performance, employing account returns using Return on Assets (ROA). The study found opined that return on assets (ROA) is the most widely used parameter by market analysts as a measure of financial performance as it measures the efficiency of assets in generating returns. The view is supported by other researchers; McGuire, Sundgren, and Schneeweis, (1988); Russo and Fouts (1997). Stanawick and, (2000) and Erasmus (2008), concluded that financial performance involves the measuring the results of a firm's impact of implementation of policies in financial terms. Strengths of a firm are assessed by finding relationships between the items of the balance sheet and income statement. Erastus (2008), describes financial performance as the process of assessing the implementation of the firm's policies in terms of monetary achievements. Indicators of performance according to Erastus (2008) include profitability ratios, and efficiency ratio. Neely (2011) explains that, financial performance serves three purposes; as tools of management, major objectives of the firm and mechanism for control and motivations. The most frequently used performance indicators are return on sales, return on capital employed, return on assets, and return on equity (Galbraith and Schendel, 1983). For this study, return on assets (ROA) and Tobin's Q were selected as measures of performance.

1.1.2 Global Perspective of Financial Performance of Listed Firms

Recent studies have shown that there is an increase in corporate failures globally due to financial distress which are features of poor financial performance. Statistics from the United States of America show that large corporates have struggled to stay afloat. These include Philip Enron Corporation, WorldCom, Xerox, Lehman Brothers, AIG, American Airlines, Dunlop, General Motors, Kodak, and Polaroid. Evidence of poor financial performance of firms in Europe is shown by companies such as Swiss Air, Marks & Spencer, Nokia, Parmalat, Woolworths, and Thomas Cook having folded their operations in the last twenty years, an indication of poor financial performance. In Europe, Panu, Andrew and Erik (2004) using data from Finland, Germany, the

Netherlands and the UK observe that financial performance of listed firms in these countries is on the downward trend.

Sritharan (2014) notes that in Asia, the corporate sector growth is essential to economic development. It is further noted the corporate finance pattern of the listed firms is of vital importance for the financial well-being of companies in any sector. The listed firms affect the various areas of the corporate management, which determine the wealth of investors. For example, as Erasmus (2008) asserts, while listed firms in Sri Lankaare performing relatively better than those in other countries in the Middle East, corporate finance decisions made by these firms affect not only their financial soundness, but also the financial health of the nation as a whole, which makes a number of Sri Lankan Government agencies to be concerned about their wellness. Similarly, corporates in Asia and Pacific have not been spared of financial distress either with a number of firms staring at insolvency such as Pacific Gas & Electric, Shandong Jintai, Yinyi Group, Hong Kong Airlines, Jet Airways, OEM Suzlon, and Sichuan Joint WIT Medical. This shows that listed firms in the global perspective have their fair share of firms that have performed poorly in terms of financial performance.

1.1.3 Regional Perspective of Financial Performance of Listed Firms

Firms in emerging markets are subjected to more financial constraints than their counterparts in developed markets (Glen and Singh, 2004); they often of weak efficiency, face more volatile environment , and are of lesser market capitalization than developed economies(Fuss, 2000); Bekaert and Harvey, (2003) which may have difference influence on their dividend policy. Adaoglu (2000) study, in a study policy of firms listed at the Istanbul Stock Exchange concluded that the emerging market firms followed unstable cash dividend policies and the main factor that determines the amount of cash dividends was the earnings of the corporation in that year. Aivazian and Booth (2003) in their study also found that companies in developing countries exhibited stick position and therefor did not embrace change in dividend policies in contrast with corporations operating in the United States counterparts

In the age of globalization and open markets companies all over the world are now exposed to more intense competition for other nations around the world. Gomez (2005) pointed out that from the regional perspective, the past two decades have witnessed significant transformations in several firm internal factors leading to increased scholarly interest in the role of such inters factor such as financial leverage, liquidity and asset tangibility in driving corporate performance. In Africa, the increased attention on board composition has been motivated by the collapse of great corporations like Sterling Bank Bauchi, Access Bank and Guaranty Trust Bank. Most countries have made significant effort to strengthen their financial leverage, liquidity and asset tangibility levels (Sanda, 2014). In summary, African companies that have had their fair share of financial distress recently are: South Africa's ESKOM, South African Airways, Arik Airlines Nigeria, Ghana Co-operative Bank, Spencon, Uganda Steel Rolling Mills, Civil Engineering and Construction Company (CIVICON), Umeme Uganda, and Crane Bank Uganda Ltd. This calls for a closer focus on the effect of how firm characteristics such as asset tangibility, financial leverage and ownership structure on these firm's financial performance.

1.1.4 Local Perspective Financial Distress of Non-Financial Listed Firms

In Kenya specifically, several firms have been delisted from stock market; Mumias sugar, Eveready, Lonrho East Africa, Pearl dry cleaners and East African Packaging are good examples. Uchumi supermarket having over 30 years of operation was declared bankrupt in 2006 and was put under specialized receiver manager (SRM) and interim management. Through government intervention in 2010, the company had a turnaround and was relisted in NSE (NSE 2010).

According to Otieno (2017), two-thirds of firms that are active on the Nairobi Securities Exchange reported losses or reduced earnings in their previous years. Available evidence shows that fifteen of the sixty-four listed firms that traded on the exchange reported losses, two less than in the 2015 financial year, while 25 of the listed firms, or 39%, recorded falling after-tax profits. Another 23 listed firms, or a third, declared increased profits (NSE, 2016). The analysis also finds that a third of the companies announced reduced revenues including eight firms that were

profitable. Consequently, while some firms listed in the NSE have improved in performance, there are others that have experienced declining fortunes and some have even been delisted from the NSE over the last decade. Significant efforts to turn around such companies or even liquidate them have focused mainly on restructuring of firm level factors. This is a clear indication firms trading at the Nairobi Securities Exchange are not performing to expectations and this requires empirical investigation.

1.1.5 The Nairobi Securities Exchange

The Nairobi Securities Exchange is a leading African Exchange based in Nairobi Kenya, one of the fasted growing economies in Sub-Saharan Africa. It boasts of six decades history since its establishment in 1954 listing equity and debt securities (NSE). It plays vital role in the growth of the Kenyan economy by encouraging savings and investment. NSE facilitates local and international firms' access cost-effective capital. NSE became a world class Securities Exchange through various reforms and transformation, attracting increase investment both locally and internationally. During the study period, NSE has transformed and positioned itself to international standards attracting foreign investments (NSE). It is a full member of the World Federation of Exchange (ASEA), a founder member of the African Securities Exchange Association (EASEA), a member of the Association of Futures Market and a partner exchange in the United Nations-led SSE Initiative, (Ngugi 2003).

The Nairobi Securities Exchange which embraces all the Kenyan economic sectors is reputed to be the single most important in Kenya upon which companies trading at the NSE rely for long-term finance (Mukras, 2015). The annual report by Nairobi Securities Exchange (NSE) (2017), states that trading in share was initially manual, and depended on mutual relationships up to 1950. A landmark change was made in 1954 when the Nairobi Stock Exchange, Nairobi Securities with membership made of brokers registered with Societies Act and those to join needed to be registered with the Registrar of Societies. The Exchange was boosted arising from government initiated reforms including divesture of commercial and industrial sectors which let

to privatisation of major government public ownerships. The major divesture arose with the government relinquishing20% of its shareholding in the largest banking institution in the country, Kenya Commercial Bank (KCB) in 1988. Since then, NSE has witnessed tremendous growth in trading volumes. The major government divesture strategy necessitated innovation including efficient settlement of deals though automated trading system introduced in in September at the NSE 2006. The market capitalization of the already demutualized (on July 2014) NSE as at the last day of trading in 2014 was over sh. 2.2 trillion with 64 firms listed. Growth in trading at the he Nairobi 20-Share Index had as at end of 2016 surpassed the 5000 points mark, an indication of the huge capital potential through the NSE. Bonds of sh. 494 billion were issued in 2014 up from sh. 253 billion in 2013 (NSE, 2015).

The listed firms are important drivers of the economy with the listed firms averagely contributing 18% of revenue to Gross Domestic Product (GDP) annually during 2013 and 2018 (NSE, 2019). Studies have found that listed firms have faced financial challenges exposing to shock mainly associated with unpredictable government policies.

1.2 Problem Statement

The Performance of firms listed in Nairobi Securities exchange play a pivotal role in creating a conducive environment for investment opportunities which will lead to achieving the big four agenda and consequently attaining the vision 2030.

Researchers have devoted lots of work to find the effect firm internal factors on performance since the seminal work of Jensen and Meckling (1976). Studies have measured performance of firms using return on equity (ROE), Return on investment (ROI) and Return on Assets (ROA) and other purely financial indicators. However, they have ignored growth potential, better investment opportunities as well as performance of management. These critical firm indicators are measured in this study by Tobin's Q. The outcome of the findings derived from the studies have been emerged with mixed outcomes. Some researchers have emerged with positive effect of leverage on financial performance (Berger & Bonaccorsi, 2006; Ghosh & Jain, 2000). Some have emerged with negative relationships while other have indicated no

relationship between the internal factors and firm performance. The general argument of the researchers that leverage has a positive effect on company performance so long as the earning capacity is greater than the interest rate charged on borrowed funds (Hutchinson, 1995). Berger and Bonaccorsi in their study on the banking industry arrived at the conclusion that high ratio of leverage has effect on firm performance. Other researches on the effect of the leverage on performance of firms have arrived at conclusions that leverage has a negative effect on performance of firms (Victor a& Badu, 2012; Simerly & Li, 2000; Zietun & Tian, 2007). Although studies on the effect of leverage performance of companies have majorly concentrated on developed economies, some have examined the relationship between leverage and firm perform in developing countries. In sub-Saharan Africa, Kyereboah-Coleman, and Bickpe (2006), in their study on corporate governance and financing choices of firms, concluded that there existed a significant relationship between leverage and firm financial performance. In contrast, country specific studies for the African continent Abor (2005) found a negative relationship between leverage and firm performance in Ghana. Similar effect of leverage on firm performance were found for South African Abor (2007). Negative relationship between leverage and firm financial performance were found in studies by, Onaolapo and Kanjola (2010) in Nigeria. For the Egyptian economy, Ebaid (2009) found a weak to no effect of leverage on firm performance. The foregoing findings, pose a fundamental question: does leverage have effect on financial performance of firms in Kenya? This study is an attempt to seek answers to this question. Performance is measured by return on assets and Tobin's Q.

Numerous researches have been done to find the effect of tangibility as a form of internal factor on performance for corporate entities. The studies have arrived at diverse conclusions. Khan, Shamim, and Goyal (2018), studied the effect of tangibility on telecommunication firms in India. The study was inspired by high and increasing levels of loans and worrying levels of liquidity. Bankruptcies were at increasing levels. The study focussed on manufacturing industries specifically on the telecommunications sector of the Indian economy in period 2004 and 2017. The study concluded that tangibility had no significant effect on performance of telecommunication firms listed at the National Stock Exchange of India. A study by

Pouraghajan and Bugheri on the effect of tangibility on the firms listed at the Teheran Stock Exchange Iran, found a positive relationship between tangibility and firm performance. Mohammed, Ahmed, and Mohammed (2016) investigated the effect of capital structure in the Nigerian Stock E. The study concluded that tangibility had an insignificant effect of firm performance measured by ROA. Birhan, (2017), investigated the effect of tangibility on performance of insurance companies in Ethiopia. From the data outcome the study concluded that tangibility had a significant effect on performance of firms in Ethiopia. Irungu, Muturi, Nasieku and Ngumi, (2018), did a study on the effect of tangibility on performance of firms trading at the Nairobi Securities Exchange. The conclusion of the study was that, tangibility had a significantly positive effect on performance of firms listed at the NSE. Performs of firms in the study was measured by return on assets and return on equity.

Significant efforts to turn around such companies or even liquidate them have focused mainly on the restructuring of firm-level factors. However, managers and practitioners still lack adequate guidance for attaining optimal decisions on firm level factors (Kibet, Kibet, Tenai & Muthwol, 2011).

The effect of firm characteristics on financial perforce has received increasing examination by finance researchers. However, most of these studies tested few firm characteristics leaving out critical firm characteristics influencing firm performance. However, the results of most of these findings show that there are more critical firm characteristics actually that have a significant effect on financial performance (Dogan, 2013), Lee and Dogan (2009), who investigated the effect of leverage and liquidity on listed firms' performance did not consider other potential firm internal factors that impact firm financial performance including asset tangibility which influence firm performance. Studies on liquidity also show that minimal studies have investigated the effect of liquidity on financial performance using a longer panel. Alshatti (2015) focused on listed firms but the study covered a period of three years, while Ehiedu (2015), who studied the impact of liquidity on the profitability of some selected companies in Nigeria conducted a study based on cross-sectional data which does not reveal changes of the liquidity on firm performance over time. Mathuva

(2019) investigated the effects of working capital management components on profitability of 30 listed firms in Kenya. The study however focused only on profitability which is a relative measure of financial performance. Lu, Zhou, Bruton and Weiwen, (2010), Dhanaraj & Beamish (2013) in their researchers concluded that, there existed positive relationships exists between particular firm level factors such as asset tangibility and company financial performance. On the other hand, Kilantaridis and Levanti, (2010), Poof and Heriot, (2015) in their studies concluded that there exists a negative relationship between particular firm level factors such as asset tangibility and financial firm performance. However these aforementioned studies presented various gaps including a lack of the performance in listed companies in the Nairobi stock exchange, methodology and location of the study. Therefore, there is a pertinent need to conduct a research to determine the effect of firm characteristics on the performance of firms listed in the Nairobi stock exchange, Nairobi Kenya.

1.3 Objectives of the Study

1.3.1 General Objective of the Study

The main objective of this study was to find the effect of firm characteristics on performance of firms trading at the Nairobi securities exchange during the period of the study.

1.3.2 Specific Objectives

i) To find the effect of leverage on the performance of firms trading at the Nairobi Securities Exchange during the study period.
ii) To find the effect of liquidity on performance of firms trading at the Nairobi Securities Exchange during the study period.
iii) To find the effect of asset tangibility on the performance of firms trading at the Nairobi Securities Exchange during the study period.
iv) To find the moderating effect of ownership concentration on the relationship between selected firm characteristics and financial performance of firms listed at the Nairobi Securities Exchange during the study period.

1.4 Research Hypotheses

H_0i: Financial leverage has no significant effect on the financial performance of companies trading at the Nairobi Securities Exchange.

H_0ii: Liquidity has no significant effect on the financial performance of firms trading at the Nairobi Securities Exchange.

H_0iii: Asset tangibility has no significant effect on the financial performance of companies trading at the Nairobi Securities Exchange.

H_0iv: Ownership concentration has no significant moderating effect on the relationship between selected firm characteristics and performance of companies trading at the Nairobi Securities Exchange.

1.5 Significance of the Study

Firms: the findings of this study will be vital to listed firms in the NSE to be able to identify the firm characteristics which are important in improving performance. The findings of the study will also enable the listed firms to come up with the appropriate capital structure, adequate liquidity and ensuring that the firms are compliant with the needs of the shareholders who are the investors. The findings of the study will also be vital to make a decision on the balance of either borrowing or investment at the appropriate time. The findings will also be assist the firms to make a right on appropriate mix between the current and the fixed assets. Finally the major objective of firms and shareholders is to make profit and create wealth which will be of great significance in performance of the firms and consequently the vibrant financial sector growth. This study aimed at empirically analysing and finding statistically plausible and evidence-based results that will enhance firm-level policy formulation and implementation. To enable the study make research-based findings, it was necessary to establish with support of empirical support the effect of leverage, liquidity, asset tangibility, and ownership concentration on widely used measures of firm performances; the book-based performance variable ROA and the market-based variable Tobin's Q. Additionally, the study sought to find the moderating effect of

ownership concentration on the relationship identified firm characteristics and their financial performance. The novelty of this study is that previous studies on performance of trading companies at NSE have fallen short of investigating the moderating effect on ownership concentration on relations between internal factors of listed at the NSE and their financial performance. Secondly, they failed to consider the firm growth potential, investment opportunities and performance of management. In this study, the important aspects of the firm are measured by the Tobin's Q.

The Government: Findings of the study will arm the government with empirical evidence in formulating policy and providing rational policy based on informed findings in its agenda of steering Kenya into a middle income country through implementation of Vision 2030 based on the economic, social and political pillars.

The findings of the study will have significant implication on the government regulators of business organizations which can apply the recommendations of this study in finding the relationships between firm characteristics on performance and how such relationship could be considered when evaluating the performance of the entire Kenyan economy.

Researchers and Academicians: The study aims to contribute and provide impetus to the already existing, continuous literature and future research effort. This study makes contributions to the existing literature on the effect of internal factors on financial performance of firm in providing a basis for future reference to academicians and those making related studies in conducting research and hence enriching available literature.

1.6 The Scope of the Study

The scope of this study was to use empirical evidence to find the effect of some firm characteristics on the performance of firms trading at the NSE. The internal factors examined were leverage, liquidity, and asset tangibility. Ownership concentration was used as moderating variable. The study used quantitative data collected from the companies' published annual reports and employed multiple regression techniques to

determine the effect of the selected firm characteristics and firm performance measured by return on assets Tobin's Q.

The study was conducted in the Nairobi Securities Exchange (NSE) located in City Nairobi, the capital of the Republic of Kenya. Sixty-four companies were trading at the NSE as of December 2019, out of which 38exhibited continuously trading for study the period and are the focus of this study. The companies which didn't have consistent data were dropped from the study. The research was limited to the period from January 2008 to December 2019 a period which, experience global economic swings occasioned by economic depressions in developed economies. During the period, the NSE witnessed significance reforms that took place. This is due to the International financial institutions reforms recommended by the IMF and World Bank in order to modernize the operations of the NSE to enable foreign investment through the bourse. The NSE become part of the UN sustainable stock exchange initiative in 2015 firmly committed the NSE for the provision of capital which was critical in attaining sustainable long term economic growth in Kenya.

1.7 Limitations

The study specifically focused on the effect of selected firm characteristics on performance of firms trading at the Nairobi Securities Exchange during the period 2008 and 2019. Therefore, resultant the findings, emerging conclusions, and proposed recommendations from this study will be limited to companies trading at the NSE and may not be used to include firms operating outside the frontier firms. Besides, the study did not take into consideration other internal factors of the firm such board as composition, management, organizational culture and, staffing which might also affect the companies' performance. Additionally, exogenous factors such as fiscal, monetary and other government policies, politics were beyond the scope of this study. The study findings will apply to listed firms in NSE, however there should be caution when applying the recommendations to companies not listed in the stock exchange and in the other parts of the world. The re3searcher faced a challenge of getting complete data from some firms not having complete data for the entire study period.

To delimit the study, the researcher ensured that the results reflected the empirical data obtained which was collated with the data from as many firms as possible and for a longer period of study, unlike previous studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. It first presents theoretical literature; second, it presents a conceptual framework; third, it presents a review of the empirical literature; presents a critique of the literature; fifthly, it presents a research gap, sixthly it presents summary of the review.

2.2 Theoretical Literature Review

According to Thomas (1997), a theory is a systematic generalized explanation of a phenomenon that offers a research guide. According to Creswell and Plano (2007), a theory is an interrelated set of constructs formed into prepositions or hypotheses that specify the relationship among variables in terms of magnitude and direction, which helps explain or predict phenomena that occur in the world.

2.2.1 The Pecking Order Theory

This theory was first suggested by Donaldson (1961) and later amplified by Myers and Majluf (1984). It arises from the economic principle of scarcity, implying that economic agents have to utilize the limited resources at their disposal for the highest satisfaction. This theory explains why internal finance is much more popular than external finance and why debt is classified as the most attractive external finance option. Pecking order refers to a hierarchy of financing beginning with retained earnings followed by debt financing and finally external equity financing. The theory suggests that companies with high profitability may use less debt than other companies because they have less need to raise funds externally and because debt is the ‘cheapest’ and most ‘attractive’ external option when compared to other methods of capital raising. Donaldson followed by Myers suggests that management follows a preference ordering to financing.

First, internal financing of investment opportunities is preferred because it avoids the outside Scrutiny of suppliers of capital and also no floatation costs associated with the use of Retained earnings. Secondly, straight debt is preferred. Not only does debt result in less intrusion in management by suppliers of capital, but floatation costs are less than with other types of external financing. Also, asymmetric information and financial signalling considerations come into play. The third in order of preference is preferred stock, which carries some features of debt. This is followed by various hybrid securities such as convertible bonds. Finally, the least desirable security to issue is straight equity.

However, the pecking order hypothesis suggests that corporations don't have a well thought capital structure. Rather a company finances overtime with the method providing the least resistance to management and there's little capital market discipline on management's behaviour's capital structure that results in a by-product and changes whenever there's an imbalance between cash flows and capital investments(Mukras 2015).

The pecking order theory advocates for companies to use liquidity, leverage (debt) and equity in financing their operations in the order in which it is less costly to the company. Since the theory is based on the liquidity and performance the pecking order advocates for positive relationship between liquid assets and financial performance. Pecking order advocates the positive relationship between liquid assets and performance and therefore the theory will play a critical role in this study. The theory anchored the first objective of the study which was to find the effect of leverage on performance of firms trading at the Nairobi Securities Exchange.

2.2.2 Liquidity Preference Theory.

Liquidity is indicated by the ratio of current assets to current liabilities within and accounting period or accounting period. As opined by Njeru and Munene (2019), the theory was proposed by Keynes in 1936 and identified three reasons why cash management practices are vital for a firm. Liquidity preference theory simply refers to the desire to have cash in your pockets. Liquidity is any form of asset that can be easily converted into cash; money is considered the most liquid of all assets. Prudent

management of liquidity balances between foregoing revenues from investible funds and the need to hold sufficient liquidity to meet short term liquidity requirements. Holding large sums of liquidity implies that management are sitting on idle cash instead of investing. In contrast, low liquidity implies that the firm is struggling to meet its short term obligations. Goddard, Tavakoli, and Wilson. (2005), Nunes, Serrasqueiro and Sequeira,(2009), in their studies concluded that liquidity has a positive and significant effect on firm performance, since it mainly consists of operating assets which is source of revenue and cash flow for the institution.

According to Keynes, demand for money is categorized into three motives; firstly, transaction motive is the desire to have cash for basic transactions such as transport, wages, or raw material payment. Secondly, the precautionary motive is holding cash to cater to any unexpected expenses, such as accidents illnesses. Thirdly, the speculative motive is to hold cash and anticipate future changes to exercise your rights in stock buying. If the stock price is expected to rise then interest rate is expected to fall so, investors will buy and wait until price rises. Money supply money is the total amount of money circulating in a country (Keynes 1936).

Pandey (2010) supported this theory and suggested that the need for cash to run the daily operations of a firm cannot be ignored. Therefore, entities should invest adequate available funds in current assets for the success of their operations and increase their financial performance. The theory highlights why different approaches are adopted in managing cash and enable the study to find how companies trading at the NSE have utilized these approaches and their financial performance. Different investors have different tastes in liquidity, whereas some may prefer illiquid assets. The more illiquid an asset is the more the interest rate. Liquidity in NSE trading firms can be affected by several factors, such as political instability in a country. The argument by Keynes was criticized by other authors such as Rothbard (2016), who argued that interest rate is influenced by other factors, not liquidity preference only as Keynes suggested. The theory does not give the optimum amount of cash that can be held at a given time or a model that can be used to arrive at the optimum amount. Keynesian theory was relevant to the current study as it considers short-run interest with no explanation on long-run interest; therefore, it addresses the issues of interest

rate regulation and capital regulation on the financial performance of the companies trading at the NSE.

2.2.3 Resource Based Theory

The resource based theory was suggested by Penrose (1959). The theory examines and interprets resources of the entity and clarifies how they are able to achieve competitive advantage over its rival in the market. The main features of the theory is the concept of difficult to imitate characteristics of the corporate as sources have superior performance and have a competitive edge over competitors (Barney, 1986; Hamel and Prahalad, 1996). The theory implies that resources cannot be economically redeployed or purchased, require major and expensive shift in organizational culture and are likely to be unique to the organization. Conner (1991), opines that performance variance among corporates primarily are differentiated by possession of unique attributes. Contributors to the literature of the resourced based view emphasise on various aspects of the theory; Andrews (1971), emphasized the internal management the firm input resources; Lippmann and Rummelt (1982) opined that sustained competitive advantage emanates from the rich connections between uniqueness of resources and causal ambiguity. Rummelt (1987); Dierckx and Cool (1989) laid emphasis on imitability barriers including causal ambiguity and isolation mechanisms like asset interconnectedness, asset stock efficiencies that impede or render it difficult for competitors to imitate. Contribution to the theory by Peteraf (1993) emphasises that corporates achieve superior performance by taking advantage and earning rent for scarce and inefficient and/from the market power in the product market. Grant (1996), in contribution to the resource based view theory emphasises on knowledge based view considering that knowledge is a key asset of the firm.

Findings of Almeida and Campello (2007), Campello and Giambona (2013), and Koralun-Bereznicka (2013) confirm that asset deployability as a determinant of capital structure has a significant on access to the relatively less costly debt financing without forcing the firm to seek to issue equity, which is a more costly process, minimizing overall financing costs and leading higher financial performance. There

exists a vast literature focusing on the effect of tangible assets on financial performance. In theory, it can reasonably be expected that a firm with high level of highly liquid assets and tangible assets with high-collateral value is likely to use trade credit (Lu-Andrews & Yu-Thompson, 2015). The liquidation advantage of these assets enables the firm to use trade credit less costly than bank loans. Thus, such a firm is likely to suffer less financial distress compared to a firm with a relatively high level of intangible assets. Tangibility, here, serves as the catalyst leading to a reduction in financial distress and improving financial performance.

This theory anchored the third objective which was to find the effect of asset tangibility on financial performance for firms NSE trading on the Nairobi Securities Exchange.

2.2.4 Agency Cost Theory

According to Gitman and Zutter (2012), an important theme of corporate governance is to ensure the accountability of managers in an organization through mechanisms that try to reduce or eliminate the principal-agent problem; however, when these mechanisms fail, agency problems arise. Agency problems arise when managers deviate from the maximization of shareholder wealth by placing their personal goals ahead of the shareholders' goals. These problems, in turn, give rise to agency costs. Agency costs are costs borne by shareholders due to the presence or avoidance of agency problems, and in either case, represent a loss of shareholder wealth. For example, shareholders incur agency costs when managers fail to make the best investment decision or when managers have to be monitored to ensure that the best investment decision is made, because either situation is likely to result in a lower stock price.

Jensen and Meckling (1976) gave this theory a rigorous theoretical underpinning. Fama and Jensen (1983), Grossman and Hart (1986), Bainbridge (1993) and Miller (1993) are some of the researchers who have contributed to the development of the theory. The theory proposes that the ownership structure of firms may influence firm financial performance by mitigating agency conflicts between the owners and debt providers. Therefore, the theory will anchor the fourth objective since the ownership

concentration of a firm greatly influences how firms make decisions that influence their financial performance.

The ownership concentration of a firm determines the board composition of a firm (Hasan & Butt, 2009), and as asserted by Miller (1958, 1963), agency cost theorists see the primary role of boards as monitoring the actions of the agents (managers) to protect the interests of the principals (owners). Similarly, legal and finance scholars emphasize the fiduciary responsibilities of the directors elected under the influence of the top shareholders as ensuring that managers are acting in the interest of shareholders. Monitoring by the board is important because of the potential costs incurred when management pursues its own interests at the expense of the shareholders' interests. According to Hillman and Dalziel (2003), when ownership and control are separated, managers may pursue their self-interest at the expense of value addition, therefore creating agency costs. The agency costs arise from the principal's monitoring of expenditures incurred by agents, bonding costs arising from drawing up contractual agreements between the principal and the agent, and the resultant residual loss.

Hasan and Butt (2009) observe that boards can monitor management activities by forcing management to uptake high levels of financial leverage, changing the mix of liquidity and assets. For example, they argue that high levels of financial leverage reduce agency costs since the conflict between managers and shareholders is reduced when managers are torn between investing in projects with positive Net Present Value (NPV) and consuming perks. Since excessive consumption of perks is likely to bankrupt the firm and, by extension, job losses for managers, high levels of financial leverage entice managers to make better investment decisions and consume fewer perks, improving firm financial performance. Therefore, it implies that boards' financial leverage decisions in their monitoring efforts can reduce conflicts between managers and shareholders by influencing decisions made by managers. Therefore, this theory anchors the fourth objective of the study in finding the effect of ownership concentration firm.

2.3 Conceptual Framework

According to Cooper &Schindler (2006), a conceptual framework refers to a group of concepts that are broadly defined as systematically organized to provide a focus, a rationale, and tool for integration, presentation, and interpretation of information. Smyth (2004) notes that a well-presented conceptual framework helps to explain a possible relationship between variables. The conceptual framework is depicted in Figure 2.1.

According to Chandran (2004), and Kothari (2004), a moderating variable (controls variable), is an independent variable included in the original independent-dependent variables relationship since it is believed to have a significant or contingent effect. The review of theoretical and empirical literature suggests that the firm's selected firm characteristics have a potential effect on the firm's performance.

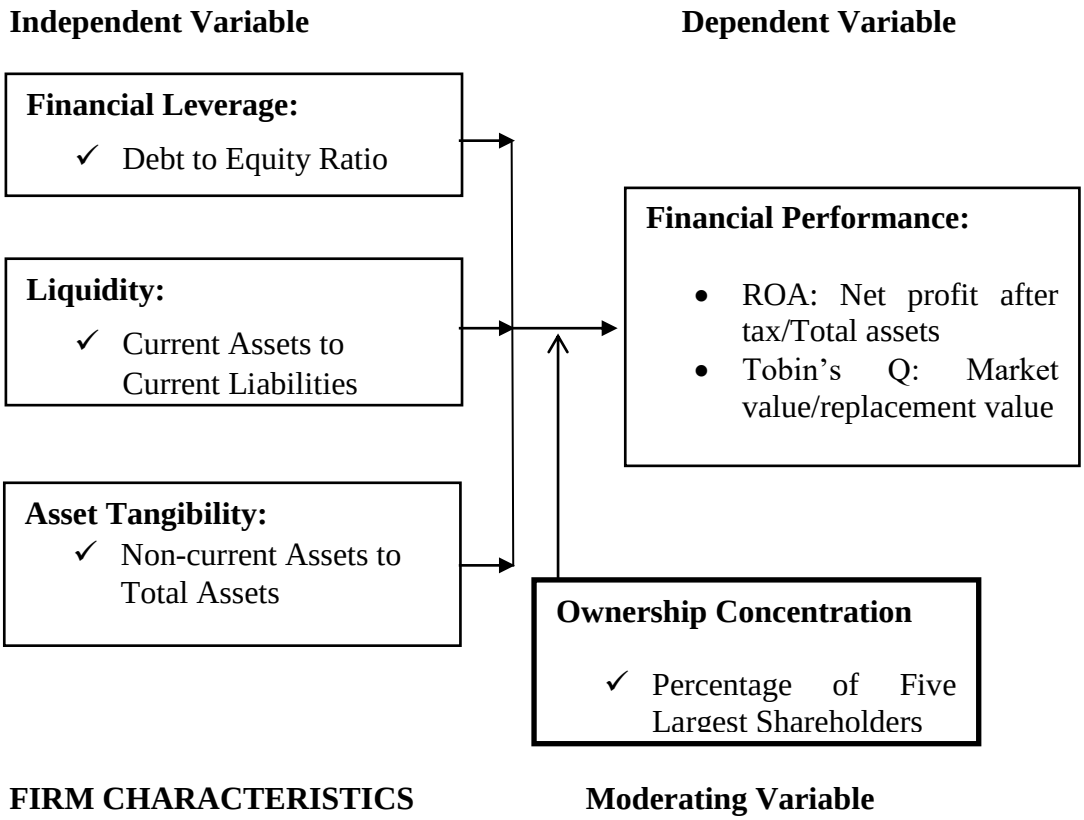

Figure 2.1: Conceptual Framework

According to Smyth (2009), conceptual framework is a structure that illustrates the possible relationship between liquidity, asset tangibility and financial leverage as independent and performance of listed at firms NSE as dependent variables of the research study The above firm characteristics as shown in the figure have influence on the financial performance of the listed firms in the Nairobi Securities Exchange. The moderating variable is the ownership concentration. This construct presents interactions between the study parameters diagrammatically. This case illustrates the relationship between asset tangibility, financial leverage and liquidity firm characteristics and ROA.

2.4 Review of Empirical Literature

Mwebia (2017) studied the effect of selected firm characteristics on the financial performance of firms trading at the NSE concluded a positive relationship between asset tangibility and performance as measured by return on equity. Similarly, the study found a positive relationship between leverage and firm performance utilizing return on equity as a measure of performance. The study covered a five-year period from 2011 to 2015. The target population for the study was non-financial companies trading at the NSE. In their study, (M'Muriungi, Muturi & Oluoch, 2019), studied the effect of firm characteristics for non-financial trading at NSE covering the period 2008-2016. The independent variables of their study were cash flows leverage and firm size. The study concluded that cash flow and leverage had the significant effect of firm performance. Dadake and Warui (2019) in a study, covering the period 2003-2017 titled Firm characteristics and financial leverage of companies trading at the NSE, found that liquidity that had negative and significant effect on firm performance. Nyabaga, and Wepukhulu, (2020) in their study targeting all banks in Kenya in the period 2010 to 2018. The study found that leverage had a positive effect on firm performance. Ongore and K'Obonyo (2011) in their study of fifty-four firms trading at the NSE found that ownership concentration had a significantly negative effect on ROA as a measure of firm performance.

2.4.1 Financial Leverage and Firm Performance

Financial leverage has internationally received intense attention in both theoretical and empirical studies. Studies have generally shown that financial leverage has a strong influence on financial decisions and can affect a firm's returns and influence its ability to compete (Ramli & Nartea, 2016). Empirical studies, however leave an inconclusive view of whether financial leverage influences firm financial performance.

On the international front, Berger and Bonaccorsi di Patti (2006) found a negative relationship between company performance to financial leverage and firm performance. In the Middle East, Zeitun and Tian (2007) studied the effect of financial leverage on the corporate performance of corporations in Jordan. The study found that a firm's capital structure has a significant negative effect on the firms' performance. Although these three studies found contradicting relationships, Berger and Bonaccorsi di Patti (2006) targeted only listed banks while Laurent (2002), and Zeitun and Tian (2007) studied all listed firms. Furthermore, Laurent (2002) used cross-sectional data. The findings from these studies cannot be generalized to listed firms at the Nairobi Securities Exchange since they were conducted using carefully-selected samples of firms and did not capture entire economy. Javeed, Hassan and Azeem (2014) carried out a research targeting 155 non-financial firms listed at the Karachi Stock Exchange with the objective of establishing the relationship between financial leverage, corporate governance measures, and firm value. The study concluded that financial leverage had a significant effect on firms' performance. In their study, financial leverage was measured using total debt to total assets ratio, while firm performance was measured by use of Tobin's Q. The average financial leverage for the firms was found to be 58% on average while Tobin's Q was found to average 0.77 on average. Using the fixed effects regression model, the study found that high levels of financial leverage significantly have effect on market performance of the firms.

In Africa, a rigorous empirical study was done by Enekwe, Agu, Eziedo and Nnagbogu, (2014), who examined the effect of financial leverage on the financial

performance of pharmaceutical firms targeting a sample of three listed pharmaceutical companies listed on the Nigeria Stock Exchange. Results of the study found that leverage had a negative but insignificant negative relationship with Return on Assets (ROA).

Prior empirical studies on the relationship between financial leverage and firms' financial performance carried out on the NSE similarly show a diversity of results. Maina and Ishmail (2014) report findings on a census study of all firms listed at the NSE from 2002 to 2011 using a causal research design and panel data methodology that involved pooling observations on a cross-section of units over several time periods. The study measured performance through ROA, ROE and Tobin's Q while the debt equity ratio was used to measure financial leverage. Descriptive statistics showed mean value for ROE as 16.51% while ROA was 51.80% indicating relatively good performance of the listed firms. Tobin's Q reported a high percentage of 1828.11% attributed to an increase in firms price and equity without an increase in real activities of performance for the firms. The capital structure ratios showed listed firms had an average of 31.85% financial leverage. The study further found evidence of a negative and significant relationship between financial leverage and all measures of performance that were used of ROE, ROA and Tobin's Q. This implies that firms that used more debt as a source of finance experienced low performance. The study concluded that companies trading at NSE used more short-term debts than long term debts and recommended that the firms should take into cognizance the amount of leverage incurred because it is a major determinant of firms' performance.

Mukras (2015) investigated the effect of leverage on firm performance of 38 listed companies over a period 2007 and 2011. Performance measurement used in the study were Return on assets t, Tobin's Q and Return of Equity (ROE). The findings were that leverage significantly negatively influence financial performance of firms listed. Past investigation including those of Laurent, 2002; Berger and Bonaccorsi di Patti (2006); Zeitun and Tian, (2007); Javeed et al. (2014); Maina and Ishmail, (2014); Enekwe, Agu, Nnagbogu, (2014); Mukras, (2015) provide insights into the relationship between financial leverage and firm performance. Berger and Bonaccorsi di Patti (2006) showed a positive significant relationship between

financial leverage and firm performance for listed US firms possibly due to the developed financial markets. The study however sampled listed commercial banks only. Laurent (2002) using cross-sectional data reported inconsistent relationships for selected listed firms in France, Germany and Italy. The use of cross-sectional data indicated spurious interpretation of results and the relationship between financial leverage and value-based was not found. In their study, Zeitun and Tian (2007) concluded that leverage had a significant and negative effect on firm performance of firms in Maina and Ishmail (2014) as well as Mukras (2015) in their studies found inconsistent relationships between financial leverage and firm performance measured in terms of Tobin's Q, ROE and ROA, for firms trading at the NSE.

Studies on the effect of leverage on financial performance have been inconclusive. According to Almajali et al. (2012), leverage has a positive effect on firm performance. Gleason, Mathur, and Mathur, (2000), conclude that, there is a negative relationship between company profitability and the firm characteristic leverage.

2.4.2 Liquidity and Firm Financial Performance

Liquidity refers to a condition where a company can convert current assets to cash at minimal or no cost. Enekwe et al. (2014), opined that assets are considered to be liquid if they can within a short period be converted into cash at little or no loss of value. The firms are therefore expected to hold onto a certain percentage of their liquid assets. Kenyan banks for instance have a statutory requirement are to maintain minimum of twenty per cent (20%) of all their deposit liabilities, in form of liquid assets. The requirement leads to opportunity cost of holding liquid assets with low returns rather than venturing into riskier ventures with higher returns. Effect of liquidity on firm financial perform has been an area of intensive research interest. Notable research by Alshatti (2015) was set to determine the effect of liquidity management financial performance Jordanian banking sector and strategies for commercial banks can enhance their liquidity operations into profitability positions. Based on the research findings, the study concluded that, liquidity management had a significant firm performance. In the study, profitability was measured by ROE and ROA, where the effect of the investment ratio and quick ratios on the profitability is

positive when measured by ROE and the effect of capital ratio on profitability is positive as measured ROA. The study was however conducted among banks. The present study will be conducted among all trading firms in the NSE.

Dong and Su (2010) conducted a study that investigated the effect of liquidity on firm performance in Vietnam. Using pooled data for the period 2006 to 2008 to assess the performance of companies listed in the Vietnam Stock Exchange, the study focused on the cash conversion cycle to measure working capital management. The study found that a firm's profitability and liquidity are affected by negatively working capital management. The study found that the relationship among variables were strongly negative, suggesting that profit is negatively influenced by an increase in the cash conversion cycle. The study also found that as the debtor's collection period and inventory conversion period decreases, profitability increases. While the study focused on listed firms, it covered a period of three years. The present study will cover a longer period of twelve years and covers all the sectors of the economy as represented at the NSE. While the other study was carried in Vietnam the current study will be in the Kenyan context.

Ehiedu (2015) studied the effect of liquidity on profitability of companies in Nigeria. The study found that three quarters of the firms exhibited situations where their current ratio had a significantly positive relationship with firm performance as measure by profitability. This implies that this positive relationship between current ratio and profitability arises because idle funds, especially when borrowed, generates profits and less costs in the business. The two companies depicted a negative correlation between Acid test ratio and return on assets respectively. Thus, from the above results, 50% of the companies analysed indicated a significant negative correlation between current ratio and profitability in this analysis. While the study found mixed results, it was however based on cross-sectional data which does not reveal changes of the liquidity on firm performance over time. The present study was based on panel data which reveals effects of variables over time. While the Ehiedu (2015) based his study in Nigeria the current is in the Kenyan context.

In Kenya, Mathuva (2019) studied the nature of effects working capital management components on profitability of half of NSE trading companies. The study used cash collection cycle to measure working capital. While the study found that the mean financial leverage of the listed firms is 0.5, it also found significantly negative relationship between profitability and the time it takes for firms to collect cash from their customers. Further, the study found a significantly high and positive relationship between profitability and the period taken to convert inventories to sales and time it takes for firms to pay.

In study in Kenya, Nyamao (2012) which investigated the effects of working capital management practices on firm performance of Small-Scale Enterprises (SSEs) in Kisii South, Kenya. The study which adopted a cross-sectional survey research design, found that working capital management practices were low amongst SSEs as majority of them had not adopted formal working capital management routines. Similarly, their financial performance was on a low average. The study concluded that working capital management practices and especially liquidity influence the financial performance of the SSEs. The study however relied on primary qualitative data to measure working capital management practices.

2.4.3 Asset Tangibility and Firm Financial Performance

Asset tangibility is the degree to which a firm holds non-current assets. Kenton (2022) describes tangible asset an asset that has a finite, transactional monetary value and is usually physical in nature. The effect of tangibility on company performance has received rigorous examination by researchers. Empirical evidence on the effect of asset tangibility on financial performance shows mixed results. There are two categories of tangible assets, fixed and current. Current assets include cash, inventory and market securities. Lifespan of current assets expire with one accounting period and can be easily sold to raise can in in cases of emergencies (O'Sullivan & Sheffrin, 2003; Kenton 2017; Birch, 2016; Downs & Goodman, 2003). On the other hand, fixed or non-current assets are those assets used in the business for more than one accounting period. These assets are quoted on statement of financial position as property, plant and equity (PPE) and include assets like motor vehicles office

furniture and buildings among others (O'Sullivan & Sheffrin 2003; Kenton, 2017). Asset tangibility has been to be to be an important determinant of companies' ability to finance investment externally (Almeida & Campello 2007. Basically, the reasoning is that tangibility of assets determines the external financiers' valuation of a company's default (Demo, 2007). Since financiers rely, to some extent on the option to liquidate a company's assets in order to cope with the opportunistic behaviour or asymmetric information issues, the degree of overall asset tangibility finally finds an upper bound of a firm's total debt capacity (Almeida & Campello, 2007; Diemo, 2007; Diamond & Rajang, 2000; Diamong & Rajan 2001). In a study on Turkey, Koksal, Orman, and Oduncu, (2013) investigated the factors that determine the capital structure choices of firms using tangibility as a proxy for the type of assets. They found that a significant positive effect of tangibility on firm performance measured by ROA, but is not important for short-term leverage measured by ROE. While the study shows mixed findings, the empirical findings lead to the conclusion that the trade-off theory is a better description of the capital structure of Turkish firms than the pecking order theory. The study focused on firms in general while this study focusses on companies trading at the NSE.

In a study in the United States of America, Campello and Giambina (2011) examined the relation between corporate asset structure and capital structure by exploiting variation in the saleability of tangible assets of firms listed on the NYSE. The study asserts that tangible assets are often illiquid, and so they show that redeployability tangible assets is the main determinant of corporate leverage for firms that are more likely to face credit frictions, especially during periods of tight credit. Evidence from the study shows that tangible assets drive capital structure to the extent that they are redeployable and that the component of asset tangibility that responds to saleability has explanatory power over firm leverage. They found that the relation between redeployability and leverage is important and pronounced in firms for which the collateral resource is particularly important in the borrowing process. For large firms, in contrast, redeployability is an irrelevant driver for leverage. The study was however based in a developed country. The present study focused on firms trading at the NSE of Kenya which is an emerging economy.

Voung (2017), using multivariate regression analysis set to empirically find the determinants of financial performance of firms in the Vietnamese Stock Exchange. The study focussed on 58 real estate firms and ROA and ROE were used as proxy for performance. Data from the research pointed to a negative relationship between tangibility and firm performance. Psillaki and Daskalakis (2008) investigated the capital structure of Greek, French, Italian and Portuguese small and medium-sized enterprises. They argue that the costs of financial distress depend on the types of assets that a trading company employs. If a firm retains large investments in land, equipment and other tangible assets, it will have smaller costs of financial distress than a firm that relies on intangible assets. Thus, firms with more tangible assets should issue more debt. On the other hand, large holdings of tangible assets may imply that a firm has already a stable source of return, which provides more internally generated funds and discourages it from turning to external financing. Therefore, the negative relationship between leverage and asset structure indicates that firms employ lots of tangible assets and seem to rely more on internal funds generated from these assets, which is predicted by the pecking order theory. They found that asset structure is significant and negatively correlated with leverage. A possible explanation is that firms with lots of tangible assets may have already found a stable source of return, which provides them more internally generated funds and discourages them from turning to external financing. The study however focused on the effect of asset tangibility on leverage. An investigation of the effect on tangibility on performance of frontier firms at the Borsa Istanbul Stock Exchange, Turkey was done by Mehmet and Mehmet (2018), based on data of 8 years for the period 2008-2015. From the outcome of the study focussing on Energy sector concluded that the tangibility had a negative effect on the firms in the sector over the 8 years of the study. AL-Jafari and Samman (2015), set to use ordinary least squares (OLS) in finding the effect of tangibility on performance of companies listed at the Muscat Securities Market. Performance in the study was measured using ROA and ROE. Data from the output of the study led to the conclusion that tangibility exhibited a positive effects performance of trading companies. A study by Kristina and Dejan (2017) employing panel data to find the effect of tangibility on firm performance for a period of 2011 to 2014 for agricultural sector of East European countries of Serbia,

Bosnia-Herzegovina, Hungary and Romania. In the study, tangibility was measured by the ratio of fixed assets and total assets. Data from the study led to the conclusion that tangibility had a significant and negative effect on firm performance.

Regionally, Olantuji and Tajudeen (2014) researched on the effect of tangibility as measured by fixed assets financial performance of the banking sector in Nigeria. Performance was measured by net profit while tangibility was measured by current assets of balance sheet items of Building, Land, Leasehold premises, and other movable and immovable assets. Examination of the data led to the conclusion that investments in fixed assets had a strong and positive effect on performance of firms in the banking sector of Nigeria.

Locally, Mukras (2015) investigated the relationship between asset tangibility and the financial performance of 47 NSE trading firms using annual data for the period 2007 to 2011. The study uses ROA, Tobin's Q and ROE as measures of firm performance. Using various panel procedures, the study found that asset tangibility for an average firm in Kenya was 0.6 and that the effect of asset tangibility on financial performance of the listed firms depended on the measure of performance used. The study used a shorter panel data.

2.4.4 The Moderating Effect of Ownership Concentration on Firm characteristics.

Lee (2008) conducted a study on Ownership Structure and Financial Performance: Evidence from Panel Data of South Korea. The study sought to examine the effect of equity ownership structure on firm financial performance in South Korea. Using panel data for South Korea in 2000--2006, Lee found that firm performance measured by the accounting rate of return on assets generally improves as ownership concentration increases, but the effects of foreign ownership and institutional ownership are insignificant. Lee also found that there exists a hump-shaped relationship between ownership concentration and firm performance, in which firm performance peaks at intermediate levels of ownership concentration. The study provides some empirical support for the hypothesis that as ownership concentration increases; the positive monitoring effect of concentrated ownership first dominates

but later is outweighed by the negative effects, such as the expropriation of minority shareholders.

Phung and Mishira (2015) conducted a study on Ownership Structure and Firm Performance among Vietnamese Listed Firms and found a non-linear relationship between the two. The study found that state ownership has a convex relationship with firm performance. The paper found that firm performance increases beyond 28.67 percent level of state ownership. Foreign ownership has a concave relationship with firm performance.

Evidence from Zagreb Stock Exchange. The study examined the relationship between ownership structure and firm performance using a sample of firms listed on the Zagreb Stock Exchange in period 2003-2009. Results obtained using panel estimation with fixed effects showed a significant negative relationship between the existence of a block holder owning more than 30% of the equity and the value of the firm's Tobin's Q. However, if there was a family-type second block holder, the effect disappears. Further, the study gave evidence of the negative effect of the fraction of equity owned by management on labour efficiency confirming the quiet-life hypothesis from (Bertrand & Mullainathan, 2003).

Owen, Kirchmaier and Grant (2006) conducted a study on Corporate Ownership Structure and Performance in Europe. They based their analysis on a new and unique dataset of uniform ownership data of the largest 100 firms in the five major European economies. They quantified that the differences in ownership by comparing three distinct ownership structures of firms and relating them to performance. For the first time they employed a Hodrick-Prescott Filter, a methodology widely used in macroeconomics to isolate the trend growth components from cyclical fluctuations, to estimate the share price trend of each firm. They observed that ownership structures in Europe are not consistent with value maximization principles. Ultimately, their results showed that dominant shareholders destroy value. These findings are in contradiction to similar research based on US samples. Their results remain robust after controlling for industry and country effects, liquidity, and the type of owner.

Abdulsamad and Yusoff (2011) conducted a study on Ownership Structure and Firm Performance among Malaysian Trading and Services Sector. The study findings indicated that concentrated or managerial ownership enhances firm performance, while inversely occurs in government ownership firms. The Trading and Services firms are not affected by ownership structure under pre crisis period.

A study by Kuznetsov and Muravyev (2001) investigated the effect of ownership concentration in Russia for the years 1995-1997. The study focussed on financial privatized companies often known as blue chips in the Russian context. The outcome of the study was inconclusive as ownership concentration results in higher technical efficiency of enterprises, but productivity improvement did not translate higher profitability and market value of companies.

Traditionally, ownership concentration has been expected to provide more efficient monitoring oversight and incentives meant to lead to better performance (Leech & Leahy, 1991). However, ownership concentrating on few shareholders is a recipe that may lead to extraction of private benefits by the majority shareholders at the expense of the minority shareholders as found in the study by (Maher and Anderson, 1999). Studies have found that through the principal-agent model that managers are unlikely to engage in investment opportunities for the benefit of firm owners (Prowse, 1992; Agrawal & Knoeber, 1996). On the other hand, in cases where principal -controlled are more profitable than agent control ones, the conclusion will be that, concentrated ownership provides better oversight leading to better company performance. Shleiver and Vishny (1997) in their study conclude that according to standard agency theory choice of a privately optimal share ownership structure constitutes a trade-off incentive and risk efficiency. Keeping other factors, constant, investors with dominating ownership will tend to have more incentive to monitor managers more dominating authority to enforce their interests which compel managers to maximize owners' earnings. Theoretically, however, the shareholders' portfolio risk will generally increase and so will be the associated risk.

According to Demsetz and Lehn, (1985), the unique complexity of activities implemented by specific companies are likely to be different, and therefore also may

lead to the marginal effect of monitoring on the shareholder value of individual firms. Due to their small shareholding, small shareholders do not feel obligated to maximize the overall value because the benefits will go the dominant shareholder. Should one of the very small groups. However, a concentrated ownership in a firm indicates a less than fully diversified portfolio on the part of the owner so that the owner risk aversion ma will lead a firm to trade off expected returns for lower risks. This is because a risk averse investor, who has most of his investments in a particular line of assets, is always wary of the chances of his capital being substantially reduced or even wiped out in a hostile investment environment (Short, 1994). To conclude, distinction as regards to the firm, separation between ownership and management is unclear as ownership share increases with the added risk or owner anchorage due to private perks associated with control. From the above literature, and in accordance with Morck, Shleifer and Vishny (1988), the following hypothesis is suggested: There is a positive relationship between ownership concentration and firm performance.

Empirical studies on the effect of ownership concentration have yielded mixed findings. Cornett, Marcus, Saunders and Tehranian (2007), analysed the relationship between institutional ownership structure and company profitability. The research revealed a high positive correlation between the number of institutional shareholders and the ratio of cash flow to sales. Elsewhere, Bruton and Filatotchen (2010) sampled firms in the U.K and France. They analysed the effects of a firm's governance and ownership structure on the IPO performance. They concluded that ownership with a higher concentration improves a firm's IPO and overall financial performance. The study however did not use ownership concentration as a moderating variable.

Elsewhere, Dana (2015) conducted an investigation on the effect of ownership structure had an effect on performance for firms listed in Jordan's Amman Stock Exchange (ASE. The study measured performance using Return on Assets (ROA) and Return on Equity (ROE). The study used data regression to study a sample which constituted 82 non-financial firms listed at Amman Stock Exchange (ASE) in Jordan from 2005 to 2013. The findings revealed weak evidence of any correlation between

deep ownership and performance. This was because of the fact that there are advantages and disadvantages of deep ownership and they have an influence on the level of risk in investment decisions by managers and in return, they affect the overall firm performance.

A study conducted by Djankov and Simeon (2008) revealed a positive correlation between ownership concentration and provision of general and specific knowledge to the local company. The study which was conducted on listed firms across Europe showed that ownership concentration has no effect of financial performance of firms. A study by Huang, Lin and Huang (2011) made the same conclusion when they investigated Chinese firms from 2002 to 2005. However, they explained that closely held firms have investors who possess significant experience in monitoring managers. They have a better ability to obtain and interpret information on firm performance. Consequently, closely held firms helps to either control the managers' problem of over investment or reduce the agency cost between managers and shareholders.

Li, Yue and Zhao (2009) conducted research in non-publicly traded Chinese corporations and found that ownership concentration is negatively correlated to all measures of leverage, which include total debt, long-term debt and short-term debt divided by total assets. The study revealed that the outcome was caused by companies with high foreign ownership, due to their reputation, have a better access to sources of capital than local firms and Foreign-owned firms in China attract a lower corporation tax than local firms, therefore utilizing less debt.

In a local study, Bwire (2012) conducted a study to find whether there were profitability differences between listed foreign and local banks. He did it by analysing the determinants of their profitability. The sample constituted three foreign listed banks and six local listed banks. The data was examined using correlation analysis, descriptive analysis and regression analysis. The data revealed no significant differences in performance between the foreign and local banks. The study also found that none of the variables had significantly affected ROA and ROE. The regression analysis revealed that bank profitability was not influenced by foreign

ownership. The study therefore concludes that foreign banks do not perform better than local banks.

Ongore and K'Obonyo (2011) conducted a study targeting all firms listed on the Nairobi Securities Exchange. Specifically, the study had the objective of establishing the effect of selected corporate governance characteristics on the Nairobi Securities Exchange. The study examined the interrelationships between ownership, board and managerial firm characteristics of firm listed on the NSE. Firms' ownership structure was found through grouping firms into diverse ownerships, government, foreign firms and institutional firms. Financial performance was measured using financial ratios; return on assets, return on equity and dividend yield. The outcome of the study was that there is a significant negative relationship between ownership concentration and firm performance. The researchers attributed the negative relationship to overzealous nature of the shareholders in their monitoring, ratifications and control roles on managers. The attitude of shareholders toward managers has the consequence of stifling managerial skills, innovativeness and creativity. Ongore and K'Obonyo (2011) in the same study recommend that firms should consider diversifying to reduce ownership concentration for managers to demonstrate their corporate skills.

Mang'unyi (2011) found that there is a high correlation between ownership concentration and financial performance. This was after he analysed the effects of ownership concentration over management and performance of a sample of Kenyan banks. He argues that banks with a closely held ownership perform better than banks with a domestic investor. Uddin and Suzuki (2011) obtained similar results in their study which aimed at banks in Bangladesh operating between 2001 and 2008. Alimehmeti and Paletta (2012) analysed the relationship between shareholder concentration and value of the firm in their research conducted from 2006 to 2009. They surmised that there was a positive correlation between ownership concentration and firm value.

2.5 Critique of the Literature

The review of literature on the relationship between financial leverage and firm performance reveals plausible but inconsistent relationships between the variables. The studies (Laurent, (2002); Berger & Bonaccorsi di Patti, (2006); Zeitun & Tian (2007); Javeed et al., (2014); Maina & Ishmail (2014); Enekwe et al. (2014); and Mukras (2015) provide insights into the relationship between financial leverage and firm performance. Berger and Bonaccorsi di Patti (2006) showed a positive significant relationship between financial leverage and firm performance for listed US firms possibly due to the developed financial markets. The study however sampled listed commercial banks only.

Laurent (2002) using cross-sectional data reported inconsistent relationships for selected listed firms in France, Germany and Italy. Applying cross-sectional data indicated led to spurious interpretation of results and the relationship between financial leverage and value-based was not found. Zeitun and Tian (2007) reported a negative significant effect of financial leverage on corporate performance of firms in Jordan. Javeed et al. (2014); Akhtar, Javed, Maryam and Sadia (2012) showed a significant negative effect of financial leverage on firm value using conveniently selected samples indicating that the results are cautiously interpreted. Enekwe et al. (2014) equally conveniently studied a small sample of three Nigeria listed pharmaceutical companies. Maina and Ishmail (2014) and Mukras (2015) similarly reported inconsistent relationships between financial leverage and firm performance measured by ROA, ROE and Tobin's Q for listed firms on the NSE. Few studies have used a longer panel data to study the effect of financial leverage on financial performance of firms listed on the NSE.

A review of empirical literature shows that a number of studies have been conducted to investigate the effect of liquidity on form performance. Alshatti (2015) who conducted research seeking to find the degree to which effective liquidity management affects profitability in Jordanian commercial found the effect of the investment ratio and quick ratios on the profitability is positive when measured by ROE and the effect of capital ratio on profitability is positive as measured ROA. The

study was however conducted among banks. The present study will be conducted among all listed firms in the NSE. Dong and Su (2010) in their study on the effect of liquidity on firm performance of companies trading in the Vietnamese Stock Exchange using pooled data. Data obtained from analysis of the study led to the conclusion that liquidity had a negative effect on firm performance. The study focused on listed firms and covered a short period of three years. This present study will cover a longer period of twelve years.

Ehiedu (2015) studied the effect of liquidity on performance of Nigeria trading companies employing cross-sectional data. Data output from the study led to the conclusion that seventy five percent of the trading companies exhibited a significant and positive correlation between liquidity and firm performance. However, the study utilized cross-sectional data and did not consider time series which does not reveal changes in liquidity on firm performance over time. This study is set to close this gap, since it based on panel data which reveals effects of variables over time.

Locally, Mathuva (2019) examined the effects of working capital management components on profitability of 30 firms listed at the NSE. The study also found a highly significant positive relationship between profitability and the period taken to convert inventories to sales and time it takes for firms to pay. The study however focused on profitability which is a relative measure of financial performance. Nyamao (2012) investigated the effects of working capital management practices on financial performance of Small-Scale Enterprises (SSEs) in Kisii South, Kenya. The study focused on SMEs.

Asset tangibility is the degree to which a firm holds non-current assets. Empirical finding on the effect of asset tangibility on company performance have emerged with diverse results... Koksal et al. (2013) investigated the factors that determine the capital structure choices of firms using tangibility as a proxy for the type of assets. While the study shows mixed findings, the study focused on firms in general. The present study focused on listed firms. Campello and Giambina (2011) examined the relation between corporate asset structure and capital structure by exploiting variation in the saleability of tangible assets of firms listed on the NYSE. They found

a positive significant effect of asset tangibility on financial performance of firms. Psillaki and Daskalakis (2008) investigated the capital structure of Greek, French, Italian and Portuguese small and medium-sized enterprises and found a negative relationship between leverage and asset structure. The study however focused on the effect of asset tangibility on leverage.

2.6 Research Gaps

Literature on the effect of financial leverage on firm performance shows a diversity of results. All the reviewed studies focus on either accounting-based or market-based financial performance measures which are becoming less useful due to their exclusion of intellectual capital. While studies conducted in Kenya have attempted to link financial leverage and firm performance, the effect of financial leverage on value-added financial performance has not been analysed for firms listed at the NSE.

Studies on liquidity also show that minimal studies have investigated the effect of liquidity on financial performance using a longer panel. Alshatti (2015) who conducted research seeking to find the degree to which effective liquidity management affects profitability in Jordanian focused on listed firms but the study covered a period of three years. The present study will cover a longer period of twelve years. Ehiedu (2015) who studied the impact of liquidity on profitability of some selected companies in Nigeria conducted a study based on cross-sectional data which does not reveal changes of the liquidity on firm performance over time. The present study was based on panel data which reveals effects of variables over time cross-sectionally and longitudinally. Mathuva (2019) examined the effects of working capital management components on profitability of thirty firms listed at the NSE. The study however focused on profitability which is a relative measure of financial performance.

Empirical studies on asset tangibility show mixed results. Koksal et al. (2013) investigated the factors that determine the capital structure choices of firms using tangibility as a proxy for the type of assets. The study focused on firms in general. Campello and Giambina (2011) examined the relation between corporate asset structure and capital structure of firms listed on the NYSE. The firms in the USA

cannot however be compared with those in the NSE which is a growing market. Psillaki and Daskalakis (2008) investigated the capital structure of Greek, French, Italian and Portuguese small and medium-sized enterprises. The study however focused on the effect of asset tangibility on leverage. Okwo, Ugwaunta and Nweze (2012) assessed the impact of a company's investment in fixed assets on its operating profit margin. The study used only four non-listed firms limited the generalization of the findings to other firms. Olantuji, and Tajudeen (2014) examined the effect of investment in fixed assets on profitability of selected Nigerian banks. The study however focused on only banks. Mukras (2015) investigated the relationship between asset tangibility and the financial performance of 47 listed firms in Kenya using annual data for the period 2007 to 2011. The study used a short panel data.

2.7 Summary

The foregoing chapter reviews both the theoretical and empirical literature related to the investigation into the effect of firm characteristics and their underlying relationships. The review provided a basis for development of a conceptual framework that facilitated a quick understanding of the connection between the response, explanatory and moderating variables. This connection is particularly important in ascertaining the economic plausibility of variables so that only the variables that have logical and defensible relationship are related. Failure to do a background check on variables is likely to result to spurious relations or relations that do not make business sense. In addition, the chapter provides a positive critique to the literature that forms the basis of identifying the research gaps

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was adopted in the study including the research design, study area, data sources and collection methods, methods of data processing, analysis and presentation.

The study used secondary data extracted from annual firm financial reports for the period 2008-2019 for a sample of 38 firms quoted on the Nairobi Securities Exchange in Kenya. The financial statements from which data was extracted from include the income statement, statement of financial position, and notes to the accounts. Data was extracted using data collection sheet in Appendix II. EViews Computer Application was used in analysing the data.

3.2 Research Philosophy

According to Saunders, Lewis and Thornhill (2009), a research philosophy is an underlying term for knowledge advancement and the nature of that knowledge and contains important assumptions about the way researchers view the world. According to Robson (2011), the first step in conducting a research is selecting the research paradigm. A philosophy encompasses both theories and methods used in the study. Creswell and Plano (2014) argue that there are two main philosophies that are applicable in research; quantitative and qualitative. The quantitative paradigm is termed the traditional and positivist, while the qualitative research is considered constructivist and experiential. The present research adopted the quantitative paradigm, and since the cause-and-effect relationship between quantitative variables was sought, a correlational research design was adapted. This research philosophy represented an epistemological position that involved working with an observable social reality. In this approach the positivists believe that reality is stable and can be observed and described from an objective view point without interfering with the phenomena being studied,(Wambugu, 2016).This approach included elements of

both the deductive reasoning strategies with the theory testing role of research. The research task was described as involving the collection of information on which to base generalizable proposals that could be evaluated and hence considered as the ideal research philosophy for the study. Bell, Bryman and Harley, (2018) opine that in positivist approach, the researcher has no powers to alter the information obtained from the data collection instrument and instead works with the observed social reality. Consequently, positivism advocates for organized methods to discover and confirm a set of probabilistic variable relationships that can be used to predict general patterns of human characteristics in precise empirical analysis of behaviour patterns (Neuman, 2011).

3.3 Research Design

Research design as defined by Kothari (2004) is the conceptual structures within which research is conducted and constitutes the blue print for collection, measurement and analysis of data. A research design guides the study in answering the initial question unambiguously. This study used causal which is designed to collect raw data and creates data relationships that allows the researcher to model the cause and effect relationships between dependent and independent variables enabling explanation the causes of such changes (Kerlinger & Lee, 2000). This study has employed this model of study which has been used by Mwangi, Muathe and Kosimbei (2014). This explanatory study was based on secondary data obtained from published statements of accounts of firms listed at the Nairobi Securities Exchange for eight years from 2008 to 2019. The method in most cases uses quantitative data as is the case with this study. According to Copper and Pamella (2006) this causal design eases the understanding, explanation and prediction of the relationship between variables under the study. The regression of performance of listed firms listed in NSE on financial leverage, liquidity and asset tangibility was carried out to detect the causality between the variables. In view of the foregoing, since sufficient data and which cannot be manipulated for this case of validity check was used, the application for the design is justified.

3.4 Target Population

A research target population is a well-defined collection of individuals or objects known to have similar characteristics or trait that the researcher wishes to study (Kumar, 2005). Kombo and Tromp (2006), define population as a well-defined set of people, services, elements and group of households that are being investigated from which to generalize results. The implication of this definition is that population is homogeneous. In another definition, Lumley (2004) defines population as large collection of all subjects from where a sample will be selected. The various definition of target population can be summarised to refer to all members of a real or hypothetical set of people, events or objects from which the researcher wishes to generalize the results of their research while accessible population is all the individuals who realistically can be included in the sample (Gall, Gall & Borg, 2007).

The study targeted all firms listed and continuously participating on the Nairobi Securities Exchange from the first quarter of 2008 to the fourth quarter 2019. As at closure of 31st December of 2019 as depicted in appendix II, there were 64 listed firms at the NSE (NSE, 2020). This choice of listed firms is due to their huge capital raising potential and is also more accountable not only to their shareholders but also to the public by way of information provision, since they are required by law to be audited, and therefore the data is bound to be available and reliable. In addition, being in the same market, the firms have almost the same reporting pattern, design and the bare minimum disclosures as required by the regulator. As noted by Kothari (2004), a population of study must have common characteristics conforming to a given specification. Accessible population were those firms whose data was available.

3.5 Sample Size and Sampling Technique

Purposive sampling technique was used to select the sample of 38 listed firms that had consistently been listed at the NSE for the period to December 2019. According to Sekaran (2000), purposive sampling is a non-probabilistic sampling design in which the researcher consciously selects participants to be included in a study

because they have particular characteristics that are of interest to the researcher. The method was considered suitable since it allowed a longer longitudinal and broader cross-sectional market-wide study using balanced panel data, thus a data set in which each panel member if observed every year. Cavana, Delahaye, and Sekaran, (2001) opine that balanced panel data is a more sensitive measurement of changes that could occur between two points in time and the results produced are more robust, consistent and stable to make generalizations about the population.

3.6 Data Collection

The research used secondary data that was obtained from annual financial reports of the listed firms. The data collected was on financial leverage, liquidity, asset tangibility, ownership concentration and financial performance. Data on the control variables of firm size, firm age and asset tangibility was also collected. The data was collected from audited published annual financial statements available in the NSE Handbooks. Secondary data from annual financial reports was used because, being statutory documents, the reports facilitate easy comparisons since they are produced on an annual basis by all companies (Branco et al., 2011). Furthermore, since they are audited annually in accordance to International Financial Reporting Standards (IFRS), data reliability and validity is enhanced making them more credible sources of data.

3.7 Data Collection Instruments

Document review method was used to collect the secondary data on the study variables. The data collected was based on the constructs required as per the data collection sheet (Appendix III). The data collection sheet was tested for both validity and reliability.

3.7.3 Stationarity Test

Longitudinal data consists of observations that are considered to be random variables that can be described by some stochastic processes. In order to analyse the series, the data is required to be stationary. A stationary process has the statistical properties of

mean, variance and covariance that do not change over time. It is important therefore that one should test a time series to see if it is stationary or not (Brockwell, 2011). If we wish to analyse the relationship of two or more time series variable, we must assume some level of stability over time. A stochastic process which fails to satisfy these requirements is said to be a non-stationary process. A non-stationary series can have a strong influence on its behaviour and its properties leading to spurious regressions.

Augmented Dickey-Fuller (ADF) Fisher Chi-square methodology was used to Stationarity of data series used was tested employing EViews Statistical Package. The null hypothesis was that the data series under consideration is non-stationary or has a unit root. According to Gujarati (2007) to achieve stationarity, a non-stationary time series at levels has to be differenced until it became stationary. Summary results of the Augmented Dickey-Fuller (ADF) stationarity test (Appendix III) for each series are depicted in Table 3.1 below.

Table 3.1: Summary ADF-Fisher Chi-Square Test

Series	Stat	Prob.	Cross Sections
Financial Leverage	154.28	0.000	38
Liquidity	114.67	0.003	38
Asset Tangibility	121.79	0.001	38
Return on Assets	123.16	0.001	38
Tobin's Q	118.41	0.001	38
Ownership Concentration	97.587	0.048	38

The first independent variable was financial leverage. The time series for the variable was subjected to the Augmented Dickey-Fuller (ADF) Fisher Chi-square stationarity test with the null hypothesis being that the series under consideration is non-stationary or has a unit root. As depicted in Table 3.1, the ADF Fisher Chi-square statistic for the financial leverage series is 154.277 ($p = 0.0000$). The p-value leads us to reject the null hypothesis of there being a unit root. It was therefore concluded that the series had no unit root and was therefore stationary.

The second independent variable of the study, was Liquidity. Series of the variable were put to test using Augmented Dickey-Fuller Fisher Chi-square stationarity test and as can be similarly observed in Table 3.1with an ADF Fisher Chi-square value of 114.7 with a p-value of 0.0028, the null hypothesis that the series has a unit root is rejected. It was therefore concluded that the series is stationary at levels.

Asset tangibility was the third independent variable of the study. Data on the series was similarly analysed Augmented Dickey-Fuller (ADF) Fisher Chi-square stationarity test. Outcome of the results of the test are displayed in Table 3.1, the ADF Fisher Chi-square statistic is 122.0 (p = 0.001). The outcome of the data was that the series is stationary since the null hypothesis was rejected.

The dependent variable of the study was firm performance as measured by using depended variables Tobin's Q and Return on Asset (ROA). The dependent variable series for ROA was subjected to Augmented Dickey-Fuller (ADF) stationarity. Table 3.1depicts the ADF Fisher Chi-square statistic is 123.2 (p = 0.001). A visual observation of the p-value found that the series is stationary. The other dependent variable of firm performance tested with the help of the market-based Tobin's Q. The outcome of series of Tobin's Q was tested with the help of Augmented Dickey-Fuller (ADF) Fisher Chi-square stationarity test and summary data outcome displayed on Table 3.1. As observed in the table, the ADF Fisher Chi-square statistic is 118.412 (p = 0.001). This led to the conclusion that the series is stationary since the null hypothesis was rejected.

The moderating variable of the study was ownership concentration. The series was subjected to Augmented Dickey-Fuller (ADF) stationarity test whose summary results are depicted in Table 3.1. As observed in the Table 3.1, the ADF statistic is 97.5875 (p = 0.05). This leads us to conclude that the series is stationary since the null hypothesis of there being a unit root is rejected.

The study hypotheses were estimated using two panel data regression equations.

3.8 Data Analysis, Interpretation and Presentation

For this study, Panel data estimation methods were employed because the observations have two dimensions; cross-section and time-series. As opined by Hsiao (2005), panel data estimation methodology contains more degrees of freedom and less multicollinearity leading to more efficient estimates. Moreover, it allows for greater flexibility in modelling differences in behaviour across entities which enables the control for unobserved heterogeneity (Wooldridge, 2002).

The panel data analysis method has three approaches; pooled model, the fixed effects model and the random effects model. As observed by Hilmer and Hilmer (2014), in the pooled model, the data from the different time periods is lumped into one large cross-section and estimations made using the Ordinary Least Squares (OLS) methodology. However, OLS methodology does not yield the best estimators because it fails to exploit the significant advantages offered by the panel nature of the data (Hilmer & Hilmer, 2014) and therefore, for more plausible results, a choice between the random effects models is made.

The study used fixed effects approaches for analysis. Hierarchical panel data correlation and regression was analysed with the aid EViews Statistical Package.

For each model and where applicable;

FLG_{it}: Firm financial leverage for firm i during time t;

LQD_{it}: Liquidity of firm i during time t;

ATN_{it}: Asset Tangibility for firm i during time t;

ROA_{it}: is the ratio of pre-tax profits to total asset for firm i in time t. This represents financial performance of companies trading at the Nairobi Securities Exchange.

TOB'sQ$_{it}$: it the ratio of market capitalization to book value of assets for firm i in period t. This also represents financial performance of companies trading at the Nairobi Securities Exchange.

LEV$_{it}$ is the ratio of total debt to total capital for firm ii in time period t, representing financial leverage of companies trading at the Nairobi Securities Exchange.

TANG$_{it}$ refers to asset tangibility defined as fixed tangible assets divided by the total assets for firm i in period t.

OWNC$_{it}$: Ownership Concentration of firm i during time t;

Z is OWNC$_{it}$ (Ownership Concentration of firm i during time t)

$ROA = \beta_0 + \beta_1 FLG_{it} + \beta_2 LQD_{it} + \beta_3 ATN_{it} + \varepsilon$……. 3.1

$ROA = \beta_0 + \beta_1 FLG_{it} + \beta_2 LQD_{it} + \beta_3 ATN_{it} + \beta 4 FL_{it} G*Z + \beta 5 LQD_{it}*Z + \beta ATN_{it}*Z + Eit$ …3.2

Where ROA– is firm's financial performance measured by ROA

$\beta_0$is the constant term

β_1, $\beta_2$and β_3, are regression coefficients to be estimated

εitare the error terms while $_{iti}$ and $_t$ represent company). Error term, that is a surrogate for all other variables influencing financial performance but which are not included in the model.

Equation 3.1 depicts the unmoderated multiple regression model of the firm characteristics on performance.

Equation 3.2 depicts the regression model after moderation using ownership concentration as the moderating variable.

$$TOBIN'S\ Q = \beta_0 + \beta_1 FLG_{it} + \beta_2 LQD_{it} + \beta_3 ATN_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.3$$

$$Tobin's\ Q = \beta_0 + \beta_1 FLG_{it} + \beta_2 LQD_{it} + \beta_3 ATN_{it} + \beta_4 FLG_{it}{}^{*}Z + \beta_5 LQD_{it}{}^{*}Z + \beta_6 ATN_{it}{}^{*}Z + \varepsilon \quad \ldots\ldots 3.4$$

Where Tobin's Q – is firm's financial performance measured by Tobin's Q

Z is $OWNC_{it}$ (Ownership Concentration of firm i during time t).

β_0 is the constant term

$\beta_{1,}$ - $\beta_{6,}$ are regression coefficients to be estimated

ε is error term, that is a surrogate for all other variables influencing financial performance but which are not included in the model.

The choice of two performance metrics is motivated by the fact these measures have different interpretations regarding company performance as opined by (Mesquita & Lara, 2002). Cole and Mehran (1998); Ongore, (2011); Heracleas, (2001); Laffont and Triole, (1991) opined that for a study like this to have a firm foundation, it is necessary to select measures that are quantifiable, expressive and comparable. This study therefore employs the two performance metrics because they met the characteristics. These are Return on Assets (ROA) and Tobin's Q.

3.9 Diagnostic Tests for Assumptions in the Regression Model

Before regressing data for analysis purposes, the data was checked to avoid violation of the assumptions of classical linear regression model as opined by Hair et al. (2010). This was to ensure that the data yields best least squares unbiased estimators (BLUE). According to Field (2000), the common tests that should be conducted are; normality, homoscedasticity, multicollinearity and serial correlation (autocorrelation). The results for these tests are explained in the sub-sections below.

3.9.1 Testing for Normality of Residuals

The assumption of normality of residuals signifies the generalizability of findings (Gujarati, 2007). In this study, normality was diagnosed using a histogram of regression standardised residuals along with their summary statistics for value-added financial performance of the listed firms. The histogram of residuals is a simple graphical device that is used to learn something about the shape of the probability density function (PDF) of a random variable.

Specifically, skewness and kurtosis tests and the Jarque-Bera (JB) test of normality were analysed. Skewness measures the degree of asymmetry of the distribution while kurtosis measures the relative peakedness or flatness of the distribution relative to the normal distribution. According to Tabachnick and Fidell (2007), data is considered normal if the skewness value for its residuals is zero or close to zero, and kurtosis value for the residuals is 3.0 or close to 3.0. The rule of the thumb is that in a normally distributed sample, the JB statistic is zero, and if the residuals are not normally distributed, the statistic will assume increasingly larger values. The null hypothesis for the JB is that the residuals are normally distributed (Gujarati, 2007).

3.9.2 Testing for Homoscedasticity

The homoscedasticity condition is fulfilled when at each level of the predictor variables, the variance of the residuals terms are constant. Whenever the assumption does not hold, and the data is heteroscedastic, the regression analysis will yield biased standard errors, spurious results and incorrect conclusions about significance of the regression coefficients (Field, 2000). Mukras (2015) assert that the use of panel data allows identification and measurement of effects that are not detectable in pure cross-sectional or pure time-series data. Panel data therefore, allowed the researcher to account for heteroscedasticity which may have arisen due to the variations in several dimensions for the listed firms under study.

3.9.3 Testing for Multicollinearity

According to Hair et al. (2010), multicollinearity refers to a situation where two or more explanatory variables are linearly related. Testing for multicollinearity is necessary before data analysis because highly collinear explanatory variables result to estimators that are not best linear unbiased estimators (BLUE). This is because as multicollinearity increases, the standard error of coefficients increases making them less reliable. Multicollinearity was tested in the present study by means of tolerance and variance inflation factor (VIF). Pallant (2007) observes multicollinearity among explanatory variables is present if VIF and tolerance values of above 10 and below 0.1 respectively are observed.

3.9.4 Testing for Autocorrelation/Serial Correlation

Autocorrelation or serial correlation is where error terms in time series transfer from one period to another. Thus, the error for one time period α is correlated with error for subsequent time period β. It refers to deficiency of independence between the residual terms of observations (Field, 2000). For data to have high predictive power, the residual terms between any two observations in different time periods should not be autocorrelated (Maddala, 2001). The Breusch-Godfrey Serial Correlation Lagrange Multiplier (LM) test was used to test autocorrelation. The null hypothesis for the test is that there is no serial correlation while the alternative hypothesis is that there is serial correlation.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

In this chapter, results and discussion for each objective are presented. The descriptive statistics on the study variables are presented first before the effect of the independent variable on the dependent variable and the effect of the moderating variable on the relationship between the independent and the dependent variables are investigated. Subsequently, the effect of the selected firm characteristics on financial performance, and that of ownership concentration on the relationship between the selected firm characteristics and financial performance measured by ROA and Tobin's Q are presented along with the discussions.

The study initial targeted sample 38out of a population of 64 listed firms which had continuously traded and continuously provided their annual reports during the period of the study. Out of these 38 companies continuously traded at the NSE for the twelve-year period of January 2008 to December 2019.The 38 firms represented 59% of the listed firms. Rogelberg and Stanton (2007) assert that for studies carried out at the organizational level, the acceptable data collection rate should be over 35%. Therefore, the data collection in the present study met this criterion and hence was suitable in ensuring accuracy and minimization of bias.

4.2 Summary Descriptive Statistics

Table 4.1 depicts the descriptive statistics of the study variables of financial leverage, liquidity, asset tangibility, Return on Assets, Tobin's Q and ownership concentration.

Table 4.1: Summary Descriptive Statistics

	FLG	LIQ	TANG	ROA	TOBQ	OWN
Mean	0.602057	0.498820	0.407758	0.495425	2.321754	0.263537
Median	0.634037	0.327298	0.416391	0.540000	2.170000	0.178287
Maximum	0.926122	2.487694	1.023677	0.820973	5.424615	0.932353
Minimum	0.010000	0.02000	0.00000	0.138610	0.878264	0.031080
Std Dev	0.251824	0.459591	0.340714	0.207248	0.946073	0.220607
Skewness	0.299138	1.370671	0.04935	0.663430	0.745831	1.327704
Kurtosis	1.540090	5.136763	1.414830	2.592825	2.890531	3.801800
Jarque-Beta	4.29616	9.53364	7.92761	6.60071	2.50371	6.18743
Probability	0.065784	0.065840	0.071200	0.075549	0.066248	0.056771
Sum	2745378	227.4618	185.9375	225.9140	1058.720	120.1726
Sum Sq Dev	31.19105	96.10671	52.81926	19.54310	407.2500	22.14378
Observations	456	456	456	456	456	456

Mean financial leverage reported in Table 4.1 is 0.602 with the highest and lowest being 0.926 and 0.010 respectively. Financial leverage is measured using the Debt-to-Equity Ratio with a ratio of 1.00 indicating that the firm's assets are fully financed by liabilities, and a ratio of 0.00 indicating that the firm's assets are all equity financed (Pandey, 2010). The mean Debt Ratio value obtained for listed firms in the NSE implies that the assets of the listed firms are averagely financed by 60.2% liabilities. This implies that the listed firms are highly financially leveraged.

The firm with the highest financial leverage ratio finances its activities with 92.6% liabilities while that with the lowest leverage has a 1.0% liability financing. This means financial leverage value obtained compares unfavourably with that reported by Ayot (2011) of 46% with a maximum and minimum of 100% and 14.4% respectively. The wide disparity in the minimum value may be attributed to the

difference in samples between the two studies with Ayot (2011) studying non-financial listed firms only. Javeed et al. (2014) report average financial leverage of 57.9% for firms in Pakistan. Nevertheless, this implies that on average, listed firms in Kenya rely more on borrowed funds to finance their activities which further implies that the firms are exposed to risk.

In prior studies (Ayot, 2011; Njuguna & Obwogi, 2015), liquidity was measured by the ratio of current assets to current liabilities with a value of 1.00 indicating that current assets equal current liabilities. The mean liquidity value obtained of 0.499 depicts that firms on average have current assets that are half their current liabilities. However, the largest firm has current assets equalling to 2.488 times the current liabilities while the smallest firm has current assets equalling to 0.020 of current liabilities. This value compares favourably with the mean value obtained by Mathuva (2019) of 0.5 who examined the effects of working capital management components on profitability of 30 firms listed at the NSE.

Values obtained for mean, maximum and minimum asset tangibility for the listed firms in the NSE are 0.408, 1.023 and 0.00 respectively. In tandem with prior studies (Ayot, 2011; Mukras, 2015) asset tangibility is operationalized as the ratio of non-current assets to total assets. This implies that across the sample of listed firms in the NSE, 40.8% of the assets are non-current and about 59.2% are current. The wide difference between the firms with high tangibility ratios of 97.3% and those with low tangibility ratios of 0.00% indicate that some firms have high levels of non-current assets while others have high levels of current assets. The mean value for asset tangibility obtained in the current study compares favourably with that reported by Mukras (2015) of 55.6%, and that of 56% reported by Ayot (2011).

Financial performance was operationalized by Return on Assets (ROA) and Tobin's Q. Return on Assets was measured by the ratio between Net Profit after Tax (NOPAT) to Total Assets. Table 4.1 depicts that the average ROA for the listed firms is 0.495 which implies that the NOPAT is on average 0.495 times the total assets. On the other hand, Tobin's Q was on average found to be 2.32 implying that the average firm in the NSE is overvalued by almost two times. Ownership concentration, which

is the moderating variable in the study, was measured by the proportion of ownership held by the top five largest shareholders. Table 4.1 depicts that the mean ownership concentration is 0.26 implying that on average, the top five biggest shareholders hold 26% of shares in the listed firms. This can be interpreted that the listed fives are highly held by few large shareholders.

4.3 Diagnostic Tests for Assumptions in the Regression Model

Before regressing data for analysis purposes, the data was checked to avoid violation of the assumptions of classical linear regression model as asserted by Hair et al. (2010). This was to ensure that the data yields best least squares unbiased estimators (BLUE). According to Field (2000), the common tests that should be conducted are; normality, homoscedasticity, multicollinearity and serial correlation. The results for these tests are explained in the sub-sections below.

4.3.1 Testing for Normality of Residuals

The assumption of normality of residuals signifies the generalizability of findings (Gujarati, 2007). In this study, normality was diagnosed using a histogram of regression standardised residuals along with their summary statistics for value-added financial performance of the listed firms. The histogram of residuals is a simple graphical device that is used to learn something about the shape of the probability density function (PDF) of a random variable.

Specifically, skewness and kurtosis tests and the Jarque-Bera (JB) test of normality were analysed. Skewness measures the degree of asymmetry of the distribution while kurtosis measures the relative peakedness or flatness of the distribution relative to the normal distribution. According to Tabachnick and Fidell (2007), data is considered normal if the skewness value for its residuals is zero or close to zero, and kurtosis value for the residuals is 3.0 or close to 3.0. The rule of the thumb is that in a normally distributed sample, the JB statistic is zero, and if the residuals are not normally distributed, the statistic will assume increasingly larger values. The null hypothesis for the JB is that the residuals are normally distributed (Gujarati, 2007). Results for the normality test are depicted in histogram in Figure 4.1.

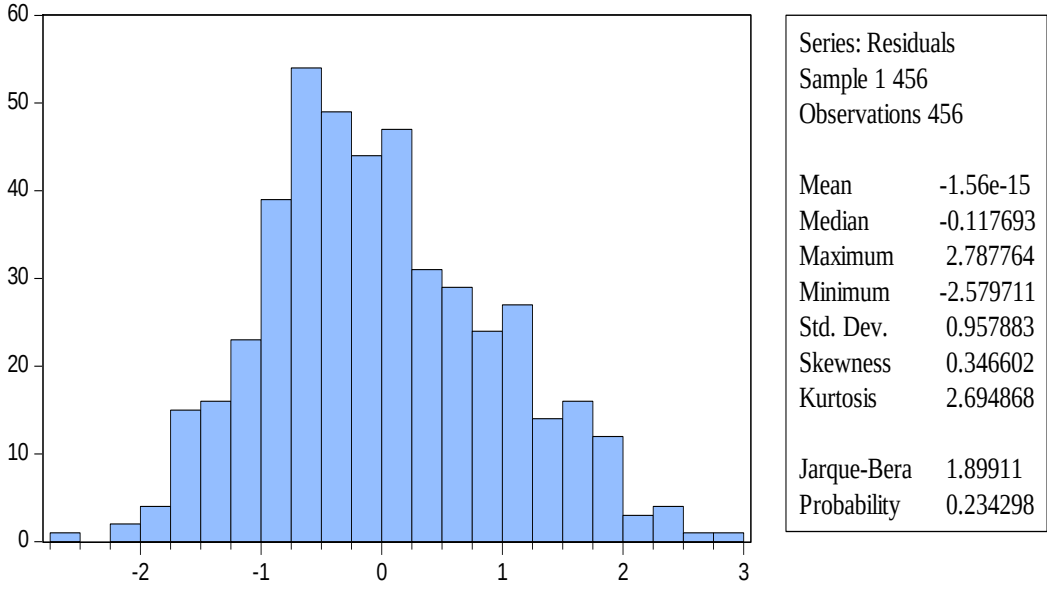

Figure 4.1: Histogram of Residuals

Overally, the histogram of regression standardised coefficients for financial performance and the JB statistic in Fig 4.1 indicate that there is no reason to reject the null hypothesis that the error terms are not normally distributed. Additionally, the values for skewness and kurtosis lie within the limits suggested by Tabachnick and Fidell (2007) of close to 1.0 and 3.0 respectively. The assumption for normality of data was therefore met.

4.3.2 Testing for Homoscedasticity

The homoscedasticity condition is fulfilled when at each level of the predictor variables, the variance of the residuals terms are constant. Whenever the assumption does not hold, and the data is heteroscedastic, the regression analysis will yield biased standard errors, spurious results and incorrect conclusions about significance of the regression coefficients (Field, 2000). This condition was not tested in the present study since it is not considered a serious problem for panel data (Gujarati, 2007). Mukras (2015) assert that the use of panel data allows identification and measurement of effects that are not detectable in pure cross-sectional or pure time-series data. Panel data therefore, allowed the researcher to account for heteroscedasticity.

4.3.3 Testing for Multicollinearity

According to Hair et al. (2010), multicollinearity refers to a situation where two or more explanatory variables are highly linearly related. Testing for multicollinearity is necessary before data analysis because highly collinear explanatory variables result to estimators that are not best linear unbiased estimators (BLUE). This is because as multicollinearity increases, the standard error of coefficients increases making them less reliable. Multicollinearity was tested in the present study by means of tolerance and variance inflation factor (VIF). Pallant (2007) observes multicollinearity among explanatory variables is present if VIF and tolerance values of above 10 and below 0.1 respectively are observed.

Table 4.2: VIF for Study Variables

Variable	Tolerance	VIF
FLG	0.437	2.288
LIQ	0.624	1.602
TANG	0.609	1.641

As observed in Table 4.2, all the VIF values lie below 10 whereas the tolerance values are all more than 0.1, indicating that there are no issues of multicollinearity among the variables.

4.3.4 Testing for Autocorrelation/Serial Correlation

Autocorrelation refers to deficiency of independence between the residual terms of observations (Field, 2000). For data to have high predictive power, the residual terms between any two observations in different time periods should not be auto correlated (Maddala, 2001). The Breusch-Godfrey Serial Correlation Lagrange Multiplier (LM) test was used to test autocorrelation. The null hypothesis for the test is that there is no serial correlation while the alternative hypothesis is that there is serial correlation. Table 4.3 depicts the initial result of the test.

Table 4.3: Test of Autocorrelation/Serial Correlation

F-statistic	0.43592	Prob. F(2,448)	0.7900
Obs*R-squared	0.98721	Prob. Chi-Square (2)	0.7868

Based on the probability value of the observed R-squared value in the Breusch-Godfrey LM test results presented in Table 4.3, the null hypothesis was accepted and the conclusion was the residuals have no serial correlation (autocorrelation).

4.4 Regression Results

4.4.1 Effect of Financial Leverage on Financial Performance

Correlation analysis for financial leverage on financial performance that was done before regression depicts the direction, strength and significance of the relationships among the variables of study (Sekaran, 2000).The results for the correlation between financial leverage measured by ROA and Tobin's Q are presented in Table 4.4.

Table 4.4: Determining the Correlation between Financial Leverage and Financial Performance

	FLG	**ROA**	**TOBQ**
FLG	1.000000	0.343235	0.108602
ROA	0.343235	1.000000	0.901320
TOBQ	0.108602	0.901320	1.000000

Table 4.4 indicates that there is a positive relationship between leverage and firm performance as measured by both measures of firm performance is positive. Specifically, the relationship between financial leverage and Return on Assets (ROA) was found to be positive (r = 0.343). These findings are in tandem with findings by Alshatti (2015), Taub, (1975), Roden and Lewellen (1999), Hadlock and James (2002) and Berger and Bonaccorsi, (2006). The conclusion of the researchers in general is that returns from borrowed funds exceed the interest charged on the funds.

Data from correlation results implies that the relationship between financial leverage and financial performance as measured by Tobin's Q is positive (r = 0.1086). This implies that there is a positive association between increase in financial leverage in the average firm listed in the NSE and the firms' market value. Mukras arrived at similar conclusion of a positive relationship between leverage and financial performance.

The study employed Panel data estimation methods because the observations have two dimensions; cross-section and time-series. Hsiao (2005) opines that panel data estimation methodology is more preferred because it contains more degrees of freedom and less multicollinearity rendering estimated output more efficient. In statistical analysis, panel data analysis method has three approaches; random effect model, pooled model, the fixed effects model. To make the choice between fixed effects model and the random effects model, the study used the Hausman Test with result below was conducted with the null hypothesis being that the errors are not correlated with the regressors (Hsiao, 2005). Where the null hypothesis is supported, the random effects model is adapted otherwise, the fixed effects model is adapted.

Results for the Hausman test are presented in Table 4.5.

Table 4.5: Testing For Model Selection With Hausman Test

Cross-Section and Period Random Effects Test Comparisons

Variable	Fixed	Random	Var(Diff)	Prob
FLG	-0.001712	0.017827	0.003256	0.7320

Results from the Hausman test in Table 4.5 indicate that the null hypothesis of fixed effects model is not rejected. The study therefore adopted the fixed effects model.

Results for the regression analysis for the objective are depicted in Table 4.6 and 4.7.

Table 4.6: Estimating the Effect of Leverage on Firm Return on Assets

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.470	0.024	19.283	0.000
FLG	0.14	0.004	3.856	0.047
Root MSE	0.207	R-squired	0.729	
Mean dependent var	0.495	Adjusted R-squared	0.727	

As it is presented in Table 4.6, financial leverage has a positive relationship with financial performance as is measured by ROA ($\beta = 0.14$, $p=0.04$ interpreted to mean that a unit increase in leverage leads to 14.3 percent improvement in company financial performance measured by ROA.

Table 4.7: Estimating the Effect of Leverage on Tobin's Q

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.085	0.111	18.846	0.000
FLG	0.392	0.168	2.328	0.020
Root MSE	0.939	R-squired	0.711	
Mean dependent var	2.322	Adjusted R-squared	0.710	

Table 4.7depicts depicts the impact of leverage on company performance as measured by Tobin's Q is significantly positive ($\beta = 0.39$, $p = 0.02$). Conclusion from the table output is that a unit increase in financial leverage corresponds to 39% a Tobin's Q increase in financial performance. The outcome of results lead to rejection of the null hypotheses which was set as financial leverage has no significance effect on financial performance of listed companies in Kenya at the NSE. Several studies on the relationship between leverage and company performance are supported by the finding.

Results on impact of financial leverage on company financial performance support the signalling theory which, as opined by Ross (1977), a firm signals an increase in the firm's asset value by increasing its leverage since it has the confidence of meeting the debt obligation. In practice, however especially in fierce competition market, some signals are less or not reliable and can be imitated by those who wish to give the impression of having the quality, without actually possessing it (Smith & Harper, 2003). Empirically too, using data for 1419 farms in Illinois Zhao, Katchova and Barry (2004) found that unlike corporate firms which use high leverage as signals, farming concerns mainly depend on their large size and good historical operation records, invalidating Ross (1977) generalization. This theory was therefore supported by findings of the present study since the uptake of debt may signal to stakeholder that the firm is doing well hence increase its financial performance.

4.4.2 Effect of Liquidity on Financial Performance

The correlation analysis for liquidity is results are depicted in Table 4.8.

Table 4.8: Assessing Correlation between Liquidity and Financial Performance

	LIQ	**ROA**	**TOBQ**
LIQ	1.000000	-0.167248	-0.113640
ROA	-0.167248	1.000000	0.901320
TOBQ	-0.113640	0.901320	1.000000

Table 4.8 indicates a negative relationship between liquidity and financial performance of the firms listed at the NSE. It is shown that the relationship between liquidity on both Return on Assets and Tobin's Q is negative (r = -0.167, and r = -0.1136 respectively).

Table 4.9: Estimating the Effect of Liquidity on Return on Assets (ROA)

Variable	Coefficient	Std. Error	t-Statistic	Pro.
C	0.511	0.0143	35.666	0.0000
LIQ	-0.130	0.021	-6.171	0.015
Root MSE	0.207	R-squared	0.105	
Mean dependent var	0.495	Adjusted R-squired	0.207	

Table 4.9 depicts that liquidity affects financial performance negatively and significantly (β = -0.130, p = 0.0151). This implies that a unit increase in liquidity leads to a 13.0% drop in financial performance as measured by Return on Assets.

The effect of liquidity of the second measure of financial performance, Tobin's Q is depicted in Table 4.10.

Table 4.10: Measuring the Effect of Liquidity on Tobin's Q

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	2.384	0.0665	36.480	0.0000
LIQ	-0.1263	0.096	-1.310	0.0399
Root MSE	0.943	R-squared	0.811	
Mean dependent var	2.321	Adjusted R-squared	0.810	

Results in Table 4.10 depict that the effect of liquidity on financial performance as measured by Tobin's Q is also negative and significant (β = -0.1263, p = 0.0399). This implies that holding all factors constant, a unit increase in liquidity leads to a 12.63% decrease in financial performance as measured by Tobin's Q.

These findings on liquidity contradict findings by Alshatti (2015) whose study evaluated the relationship between effective liquidity management and profitability in Jordanian trading companies. The study established that investment ratio and quick ratios has a positive effect on the profitability as measured by ROE. The same

study also established that capital ratio has a positive effect on profitability as measured by ROA. The results contradict Mathuva (2019) who established a high significant positive relationship between profitability and the period taken to convert inventories to sales and time it takes for firms to pay. Generally, the null hypothesis for the objective which was set as liquidity has no significant effect on financial performance of firms listed at the Nairobi Securities Exchange was rejected. It was concluded that liquidity has a negative significant effect on financial performance of firms listed at the Nairobi Securities Exchange. Data outcome the study therefore does not support the liquidity preference theory.

4.4.3 Effect of Asset Tangibility factor on Performance of Firms Trading at the NSE

In relation to asset tangibility**,** a null hypothesis was set that asset tangibility has no significant effect on financial performance of firms listed at the Nairobi Securities Exchange. Correlation and regression analyses for the objective are depicted in Table 4.11, Table 4.12 and Table 4.13.

Table 4.11: Assessing the Correlation between Asset Tangibility and Financial Performance

	TANG	**ROA**	**TOBQ**
TANG	1.000000	-0.222795	-0.233621
ROA	-0.222795	1.000000	0.901320
TOBQ	-0.233621	0.901320	1.000000

Table 4.11 depicts that the association between asset tangibility and financial performance as measured by both ROA and Tobin's Q is negative. This is depicted by the correlation coefficient of -0.2 for ROA and -0.23 for Tobin's Q. This generally depicts that as asset tangibility increases, financial performance measured by both ROA and Tobin's Q decreases for the average listed firm at the NSE.

Table 4.12: Estimating the Effect of Asset Tangibility on ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.551	0.0147	37.256	0.0000
TANG	-0.135	0.0278	-4.869	0.0000
Root MSE	0.202	R-squared	0.715	
Mean dependent var	0.495	Adjusted R-squared	0.714	

Table 4.12 depicts that the effect of asset tangibility on financial performance is significantly negative ($\beta = -0.1355$, $p = 0.0000$). This implies that holding all factors constant, a unit increase in asset tangibility leads to a 13.55% drop in financial performance as measured by ROA.

Table 4.13: Estimating the Effect of Asset Tangibility on Tobin's Q

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.586	0.0673	38.428	0.0000
TANG	-0.2587	0.1267	-2.0416	0.0000
Root MSE	0.9188	R-squared	0.7154	
Mean dependent var	2.3217	Adjusted R-squared	0.7152	

It is further depicted that the effect of asset tangibility on financial performance measured by Tobin's Q is negative ($\beta = -0.26$, $p = 0.0000$) implying that a unit increase in asset tangibility leads to a 26% decrease in financial performance as measured by Tobin's Q.

The on the influence of asset tangibility on firm performance as measured by both ROA and Tobin's Q for firms listed at the NSE depict that an increase of non-current assets leads to a drop in financial performance. These findings are in tandem with those by Psillaki and Daskalakis (2008) who investigated asset structure of Greek, French, Italian and Portuguese small and medium-sized enterprises and found a

negative relationship between leverage and asset structure. The results contradict those by Koksal, Orman, and Oduncu (2013), who investigated asset tangibility choices of firms and depicted mixed findings. The results also contradict those by Campello and Giambina (2011) who examined the relation between corporate asset structure and capital structure by exploiting variation in the saleability of tangible assets of firms listed on the NYSE and who found a positive significant effect of asset tangibility on financial performance of firms.

Results of the third objective therefore negate the pecking order theory. The pecking order theory considers the effect of tangible assets on capital structure over debt issuance, as these assets can be used as collateral for debt financing. Findings of Almeida and Campello (2007), Campello and Giambona (2013), and Koralun-Bereznicka (2013) confirm that asset redeployability as a determinant of capital structure positively affects access to the relatively less costly debt financing without forcing the firm to issue equity, minimizing overall financing costs and leading higher financial performance.

4.4.4 Moderating Effect of Ownership Concentration on Companies' Performance Trading at the NSE.

The fourth objective of the study was to find the moderating effect of ownership concentration on the relationship between firm characteristics and financial performance of firms listed at the Nairobi Securities Exchange. A hypothesis was set that ownership concentration has no significant moderating effect on the relationship between the study firm characteristics and financial performance was formulated. Hierarchical multiple regression panel data methodologies were used to test the hypothesis based on the following equations:

$$Y = \beta_0 + \beta_1 FLG_{it} + \beta_2 LQD_{it} + \beta_3 ATN_{it} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.1$$

Where Y – is firm's financial performance measured alternatively by ROA and Tobin's Q

$\beta_0$is the constant term

β_1, β_2 and β_3, are regression coefficients to be estimated

ε is error term, that is a surrogate for all other variables influencing financial performance but which are not included in the model.

Since there were two measures of financial performance, the effect of the study firm characteristics on each of them was tested separately. The findings for the objectives based on the collected data and ROA as the measure of financial performance were found as tabulated in Table 4.14.

Table 4.14: Unmoderated Multiple Regression for ROA

Variance	Coefficient	Std Error	t-Statistic	Prob.
C	0.599	0.037	16.210	0.000
FLG	0.158	0.042	3.778	0.016
LIQ	-0.113	0.022	-5.234	0.0523
TANG	-0.153	0.032	-4.789	0.000
Root MSE	0.201	R-squared	0.815	
Meandependentvar	0.495	Adjust R-squared	0.814	
S.D.dependent var	0.207	S.E. or Regression	0.202	

From the coefficients above, the following regression if formulated:

ROA = 0.599+0.1584FLG – 0.113LIQ – 0.1153

Table 4.14 depicts the unmoderated multiple regression output for the effect of the selected firm characteristics on financial performance measured by ROA. As the table depicts, financial leverage has a positive significant effect on financial performance measured by ROA ($\beta = 0.158$, $p = 0.0164$). It is shown that liquidity has a negative significant effect on financial performance measured by ROA ($\beta = -0.113$, $p = 0.0553$). Further, asset tangibility was found to have a significant negative effect on ROA ($\beta = -0.153$, $p = 0.0000$). These multiple regression results are consistent with those found in the simple linear regression for the three variables.

Table 4.15: Moderated multiple regression results for ROA.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.558	0.032	17.537	0.000
FLG	0.113	0.041	2.745	0.0063
LIQ	-0.097	0.030	3.247	0.026
TAN	-0.140	0.037	-3.764	0.032
FLG-OWN	0.254	0.078	3.258	0.000
LIQ-OWN	0.081	0.012	6.620	0.029
TAN-OWN	-0.049	0.010	-5.177	0.048
Root MSE	0.171	R-squared	0.832	
Mean dependent var	0.495	Adjusted R-squared	0.831	
S.D. dependent var	0.207	S.E. of regression	0.172	

From the above coefficients above, the following regression is formulated:

ROA = 0.558 + 0.113 FLG – 0.097LIQ – 0.140TANG + 0.254FLG_OWN + 0.081LIQ_OWN -0.049TAN_OWN

As it can be observed in Table 4.14 above, ownership concentration is a significant moderator of the relationship between the selected firm characteristics and financial leverage as measured by ROA. Ownership concentration moderates leverage (β = 0.254, p = 0.0000) from its original value in the unmoderated value (β = 0.113, p = 0.0063). This implies that in the model, a unit increase in financial leverage leads to an 11.3% increase in firm performance measured by ROA, but after introducing the effect of ownership concentration, the performance increases to a significant 25.4%. This implies that ownership concentration is a significant positive moderator of the relationship between financial leverage and firm financial performance as measured by ROA.

Results in Table 4.14 also reveal that ownership concentration moderates the relationship between liquidity and financial performance measured by ROA. As it is depicted, ownership concentration moderates liquidity (β = 0.081, p = 0.0291) from its original value in the unmoderated value (β = -0.0974, p = 0.0262). This implies that in the original model, a unit increase in liquidity leads to a 9.74% decrease in firm performance measured by ROA, but after introducing the effect of ownership

concentration to the model, the performance increases to a positive significant 8.1%. The implication is that on average, ownership concentration is a significantly a positive moderator of the relationship between liquidity and firm financial performance as measured by ROA.

Table 4.14 similarly indicates that ownership concentration is a significant positive moderator of the relationship between asset tangibility and financial performance measured by ROA. The results depict that ownership concentration moderates asset tangibility ($\beta = -0.049$, $p = 0.0484$) from its original value in the unmoderated value ($\beta = -0.141$, $p = 0.0315$). The implication of this result is that in the original model, a unit increase in asset tangibility leads to a 14.1% decrease in firm performance measured by ROA, but after introducing the effect of ownership concentration to the model, the performance decreases to a negative significant 4.9%. This implies that ownership concentration is a significant positive moderator of the relationship between asset tangibility and firm financial performance as measured by ROA.

The moderating effect of ownership concentration on the relationship between the selected firm characteristics and financial performance measured by Tobin's Q was also analysed. The results for the analysis is depicted in Table 4.15 and Table 4.16.

Table 4.16: Unmoderated Multiple Regression for Tobin's Q

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob**
C	2.6097	0.1687	15.467	0.0000
FLG	0.2234	0.0913	2.446	0.037
LIQ	-0.1184	0.0983	-1.2043	0.0084
TANG	-0.2513	0.1158	-2.1695	0.0000
Root MSE	0.9188	R-squared	0.715	
Mean dependent var	2.3217	Adjusted R-squared	0.714	

From the coefficients above, the following regression model is formulated:

TOBQ = 2.610 + 0.223FLG – 0.118LIQ – 0.251TANG

Table 4.16 depicts the unmoderated multiple regression output for the effect of the selected firm characteristics on financial performance measured by Tobin's Q. As the table depicts, financial leverage has a positive significant effect on financial performance measured by Tobin's Q ($\beta = 0.223$, $p = 0.0370$). It is also depicted that liquidity has a negative significant effect on financial performance measured by Tobin's Q ($\beta = -0.118$, $p = 0.0084$). Further, asset tangibility was found to have a significant negative effect on Tobin's Q ($\beta = -0.251$, $p = 0.0000$). It is apparent that these multiple regression results are consistent with those found in the simple linear regression for the three variables.

Table 4.17: Moderated multiple regression results for Tobin's Q.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.4459	0.1558	15.697	0.0000
FLG	0.210	0.070	2.995	0.0012
LIQ	-0.0915	0.0411	-2.226	0.0356
TANG	-.0.2151	0.0828	-2.595	0.0051
FLG-OWN	0.1923	0.3825	0.502	0.0567
LIQ-OWN	-0.3619	0.4520	-0.8006	0.424
TAN-OWN	-0.2743	0.4387	0.6251	0.5322
Root MSE	0.8358	R-squared	0.721	
Mean dependent var	2.321	Adjusted R-squared	0.720	

From the coefficients above, the following regression model is formulated:

TOBQ = 2.446 + 0.210FLG – 0.092LIQ – 0.215TANG + 0.192FLG_OWN – 0.362LIQ_OWN -0.274TAN_OWN

As it can be observed in Table 4.17 above, ownership concentration is not a significant moderator of the relationship between the selected firm characteristics and financial leverage as measured by Tobin's. As it can be observed from the table, ownership concentration does not moderates financial leverage ($\beta = 0.192$, $p = 0.0567$) from its original value in the unmoderated value ($\beta = 0.210$, $p = 0.0012$).

This implies that in the model, a unit increase in financial leverage leads to21.0% increase in firm performance measured by Tobin's Q, but after introducing the effect of ownership concentration, the performance reduces to insignificant 19.2%. This implies that ownership concentration is not a significant positive moderator of the relationship between financial leverage and firm financial performance as measured by Tobin's Q.

It is also revealed that ownership concentration does not moderate the relationship between liquidity and financial performance measured by Tobin's Q. As it is depicted, ownership concentration does not moderate liquidity (β = -0.4, p = 0.4) from its original value in the unmoderated value (β = -0.1, p = 0.04). This implies that in the original model, a unit increase in liquidity leads to a 10% decrease in firm performance measured by Tobin's Q, but after introducing the effect of ownership concentration to the model, the performance decreases to a negative insignificant 36.2%. This implies that ownership concentration is not a significant positive moderator of the relationship between liquidity and firm financial performance as measured by Tobin's Q.

Table 4.16 also depicts that ownership concentration is not significant positive moderator of the relationship between asset tangibility and financial performance measured by Tobin's Q. The results depict that ownership concentration does not moderate asset tangibility (β = -0.3, p = 0.6) from its original value in the unmoderated value (β = -0.2, p = 0.01) implying that in the original model, a unit increase in asset tangibility leads to a 22% decrease in firm performance measured by Tobin's Q. When ownership structure is introduced in the model the performance goes down by 27 percentage point meaning the ownership attribute of the firm is a negative moderate Tobin's Q.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter summary of findings, conclusion and also recommendations are made. This is the final chapter of the thesis in which the findings, as well as the whole thesis, are summarized. Generalizations in the form of findings have been produced, and recommendations for resolving the problem identified in the study has been communicated to various stakeholders involved. Summary, conclusions and the recommendations on the research findings have been done in line with the study objectives in a bid to answer the research questions, solve the research problem and offer practical and policy contributions.This research adapted an explanatory research design with the main source of data for the study being secondary panel data. A positivism research philosophy and explanatory research design was used and the data was extracted from the NSE and Capital markets authority annual reports, covering a 12-year period spanning the years 2008

To 2019. This research study analyzed data using descriptive statistics and regression analysis.

Diagnostic tests conducted indicated the absence of multicollinearity.

5.2 Summary of Findings

In this study the objectives were to establish how firm attributes influence firms listed at the NSE. The specific objectives of this research study were: to find the effect of leverage impacts firm performance, find the effect of liquidity on firm financial performance, the effect of tangibility on firm financial performance of firms listed at the NSE. This study also sought to establish how the ownership concentration moderates the effect of the relationship between the identified characteristics. The main theories underpinning this research study was the agency theory, supported by the Pecking Order theory, Liquidity Preference Theory and Resource based View theory. This research study involved 38listed firms at the NSE

as at 2019. The firm internal factors under this study were leverage, liquidity, asset tangibility and how they impact on firm performance as measured by Tobin's Q and Return on Assets.

5.2.1 Effect of Leverage on Performance of Public Companies at the NSE.

The result from the regression run on effect of leverage on firm financial performance it clearly shows that leverage positively impact company performance as measured by Return on Assets. The implication of the relationship is that a unit increase in financial leverage leads to about 10 percent increase in financial performance as measured by ROA. Similarly, a regression outcome depicted leverage had a positive influence on Tobin'Q as a measure of company performance. The relationship implies that a unit increase in financial leverage of a firm leads to a 40% increase in financial performance measured by Tobin's Q. Outcome of analysist was found that the effect of leverage on financial performance for both ROA and Tobin's is positive and significant.

5.2.2 The Effect of Liquidity on Firm Performance of Firms Trading On the NSE of Kenya.

The second objective was to find the relationship between liquidity as an independent variable on firm performance. The outcome was that liquidity negatively impacts firm performance as measured by both ROA and Tobin's Q respectively. This finding implies that on average, a unit increase in liquidity leads to a 13.0% reduction in ROA as a measure of financial performance of the firm implying that holding all factors constant, a unit increase in liquidity leads to a 13% decrease in financial performance as measured by Tobin's Q. Results generally depicted that liquidity has a negative significant effect on financial performance measured by both ROA and Tobin's Q.

5.2.3 Effect of Asset Tangibility on Financial Performance of Firms Listed at the Nairobi Securities Exchange

The findings based on the study objective three concluded that the effect of asset tangibility on financial performance is significant and negative. This implies that keeping other factors constant an increase in asset tangibility will lead to 13% decrease in firm performance measured by ROA. Similarly as measured by Tobin'Q the relationship was established to be negative. This finding implies in general that for firms listed at the NSE if management increases tangibility by a unit, this will lead decrease of 26% in firm's performance as measured by Tobin's Q.

5.2.4 Moderating Effect of Ownership Concentration

A fourth objective of the study was to find out the moderating effect of ownership concentration on companies trading at the NSE. Examination of the results depicted ownership structure of firms listed at NSE had a moderating effect on their performance when performance as measured using by ROA. The relationship on the moderated by ownership concentration was found to be significant and positive ROA, the relationship between liquidity and firm performance measured by ROA and the relationship between asset tangibility and firm performance measured by ROA.

However, it was depicted that ownership concentration is not a moderator financial leverage and firm performance relationship when Tobin's Q is used, liquidity and firm performance measured by Tobin's Q, and asset tangibility and firm performance measured by Tobin's Q.

5.3 Conclusion

First, it can be concluded that financial leverage has a positive effect on financial performance of the firms listed at the NSE. Secondly, it can be concluded that liquidity has negative and significant effect on the financial performance of the firms listed at the NSE. Thirdly, it can be concluded that asset tangibility has negative and significant effect on the financial performance of the firms listed at the NSE. Finally,

the study concluded that there exist a positive and significant moderator on the relationship between leverage and firm characteristics and their performance when measured using ROA and a performance indicator. However, it was depicted that ownership concentration does not moderate the relationship between the selected firm characteristics and firm performance measured by Tobin's Q. It is therefore concluded that ownership concentration is not a significant moderator of the selected firm characteristics and firm financial performance when measured by ROA.

5.4 Recommendations of the Study

Arising from findings and conclusions of the study. Recommendations can be made.

The finding from the first objective that leverage positively contributes to firm performance, it is recommended that the listed firms sustainably increase their financial leverage levels so that they take advantage of the tax-shields. The ensuing capital structure will enhance their financial performance.

On objective two the conclusion was that liquidity negatively impacts firm performance. A recommendation arising thereof is that the listed firms consider adjusting the amount of current assets held in their reserves so as to enhance their financial performance.

Results arising from objective three which emerged with the conclusion that on average, asset tangibility is a significant negative contributor to the financial performance of the firms listed at the NSE. Studies elsewhere attribute this relationship to the possibility that tangible assets are set as collateral meaning that they are associated with interest payment and loan redemption faster than the income generated leading to decrease in profitability of the firm.

Results arising from objective four indicate that ownership significantly moderates firm company profitability. It is recommended that the spread their ownership structure in favour of ownership concentration for effective monitoring of the managers hence improving the performance of the firms.

5.5 Suggestions for Further Research

Arising from findings of the study which focused four selected firm characteristics recommendations can be made. It is observed there are other internal firm factors, beyond the scope of this study. The implication is that other equally important firm characteristics not included in this study. It is recommended that future researchers should include other firm characteristics so that their effect on companies trading at the NSE may be investigated.

Secondly, future studies on the relationship between firm characteristics and firm perform need to be designed to include firms which are not listed but may have a lot to contribute the development of the Kenyan economy. The firms and especially the small and medium scale companies not listed at the Nairobi Securities Exchange need to be included as they play a major role in the economic growth of Kenya. Moreover, comparative studies targeting firms listed at other developing counties should be conducted in order to come up with best practices for bench marking.

Thirdly, Sector-specific studies should also be conducted to find their respective contributions to the Kenyan economy...

Fourthly, it is recommended that future researches include all firms listed at the NSE using a longer longitudinal study in order to assess the long-run effect of internal factor influencing performance of companies trading at the NSE.

Finally it is recommended a study further study to be carried since the inception of the Nairobi Securities Exchange in 1954 to the present time, this will enable us to get the trend since the inception time.

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APPENDICIES

Appendix I: Firms Listed in Kenya Per Sector

SECTOR/FIRM	LISTED BY 2008	INCLUDED IN SAMPLE
AGRICULTURAL SECTOR		
1. Eaagads Ltd.	✓	✓
2. Kakuzi Ltd	✓	✓
3. Kapchorua Tea Co. Ltd.	✓	✓
4. Rea Vipingo Plantations	✓	✓
5. Sasini Ltd.	✓	✓
The Limuru Tea Co. Ltd	✓	✓
6. Williamson Tea Kenya Ltd.	✓	✓
INDUSTRIAL		
7. Car and General (K) Ltd	✓	✓
8. CMC Holdings	✓	✓
9. Marshalls (E.A) Ltd	✓	✓
10. Sameer Africa Ltd	✓	✓

BANKING SECTOR		
11. Barclays Bank of Kenya Ltd	✓	✓
12. Diamond Trust Bank Kenya Ltd.	✓	✓
13. Equity Bank Ltd	×	×
14. Housing Finance Group Ltd	✓	✓
15. I & M Holdings Ltd	×	×
16. NIC Bank Ltd.	✓	✓
17. Standard Chartered Bank of Kenya	✓	✓
18. Co-operative Bank of Kenya	✓	✓
19. Kenya Commercial Bank	✓	✓
20. National Bank of Kenya	✓	✓
21. Stanbic of Kenya Holdings Ltd	✓	✓
COMMERCIAL SECTOR		
22. Express Kenya Ltd. Ord	✓	✓
23. Hutchings Biemer Ltd	×	×
24. Nation Media Group Ltd	✓	✓

25. Standard Group Ltd	✓	✓
26. TPS Eastern Africa Ltd	✓	✓
27. Uchumi Supermarket Ltd	✓	✓
28. Kenya Airways Ltd	×	×
29. Longhorn Kenya Ltd	×	×
30. Scangroup Ltd	×	×
31. ARM Cement Ltd.	✓	✓
32. Bamburi Cement Ltd.	✓	✓
33. Crown Paints	×	×
34. E.A. Cables Ltd	✓	✓
35. E.A. Portland Cement Co. Ltd	✓	✓
ENERGY SECTOR		
36. KenGen Co. Ltd	×	×
37. KenolKobil Ltd.	✓	✓
38. Kenya Power & Lighting Co. Ltd	✓	✓
39. Umeme Ltd	×	×

40. Total Kenya	✓	✓
41. British-American Investments Co	✓	✓
42. CIC Insurance Group Ltd	×	×
43. Jubilee Holdings Ltd.	✓	✓
44. Liberty Kenya Holdings Ltd	×	×
45. Pan Africa Insurance Holdings Ltd	✓	✓
46. Kenya Re-Insurance Corporation Ltd	×	×
INVESTMENT SECTOR		
47. Centum Investment Co. Ltd.	✓	✓
48. Olympia Capital Holdings Ltd	✓	✓
49. Trans-Century Ltd	×	×
INDUSTRIAL SECTOR		
50. A. Baumann & Co. Ltd	×	×
51. B.O.C Kenya Ltd.	✓	✓
52. British American Tobacco Ltd	✓	✓
53. Carbacid Investments Ltd	✓	✓

54. East African Breweries Ltd	✓	✓
55. Kenya Orchards Ltd	×	×
56. Mumias Sugar Co. Ltd	✓	✓
57. Unga Group Ltd.	✓	✓
58. Eveready E.A. Ltd	×	×
59. Safaricom	×	×
60. Home Africa	×	×
61. Flame Tree Group Holding Ltd.	×	×
62. Atlas Development and Support Ltd.	×	×
63. Kurwitu Ventures	×	×

(Source: NSE Hand Book 2014-2015)

Appendix II: Data Collection Sheet

NAME OF FIRM: …….

Year	2008	2009	2010	2011	2012	2013	2014	2015
Long Term Debt								
Total Equity								
FINANCIAL								
Current Assets								
Current Liabilities								
LIQUIDITY								
Non-Current Assets								
Total Assets								
ASSET TANGIBILITY								
Net Profit After Tax								
Total Assets								
ROA								
Market Value of Assets								
Book Value of Assets								
TOBIN's Q								
Top Five Shareholders								
OWNERSHIP								

Appendix III: Unit Root Test For Study Variables

a) Stationarity Test for Financial Leverage

Panel unit root test: Summary
Series: FLG
Date: 06/07/21 Time: 14:41
Sample: 2008 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.5109	0.0000	38	412
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.02417	0.0000	38	412
ADF - Fisher Chi-square	154.277	0.0000	38	412
PP - Fisher Chi-square	169.160	0.0000	38	418

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

b) Stationarity Test for Liquidity

Panel unit root test: Summary
Series: LIQ
Date: 06/07/21 Time: 14:44
Sample: 2008 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.09345	0.0000	38	408
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.55963	0.0052	38	408
ADF - Fisher Chi-square	114.671	0.0028	38	408
PP - Fisher Chi-square	125.964	0.0003	38	418

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

c) Stationarity Test for Asset Tangibility

Panel unit root test: Summary
Series: TANG
Date: 06/07/21 Time: 14:45
Sample: 2008 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.55715	0.0000	38	409
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.78780	0.0027	38	409
ADF - Fisher Chi-square	121.790	0.0007	38	409
PP - Fisher Chi-square	138.625	0.0000	38	418

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

d) Stationarity Test for ROA

Panel unit root test: Summary
Series: ROA
Date: 06/07/21 Time: 14:46
Sample: 2008 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.43974	0.0000	38	413
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.83892	0.0001	38	413
ADF - Fisher Chi-square	123.162	0.0005	38	413
PP - Fisher Chi-square	125.236	0.0003	38	418

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

e) Stationarity for Tobin's Q

Panel unit root test: Summary
Series: TOBQ
Date: 06/07/21 Time: 14:47
Sample: 2008 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.84387	0.0000	38	410
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.53392	0.0002	38	410
ADF - Fisher Chi-square	118.412	0.0013	38	410
PP - Fisher Chi-square	110.454	0.0060	38	418

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

f) Stationarity for Ownership Concentration

Panel unit root test: Summary
Series: OWN
Date: 06/07/21 Time: 14:49
Sample: 2008 2019
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.04853	0.0000	38	409
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.15941	0.0231	38	409
ADF - Fisher Chi-square	97.5875	0.0483	38	409
PP - Fisher Chi-square	122.783	0.0005	38	418

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Appendix IV: Regression Results

Dependent Variable: TOBQ
Method: Panel Least Squares
Date: 06/12/21 Time: 16:30
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.085494	0.110659	18.84615	0.0000
FLG	0.392422	0.168582	2.327778	0.0204

Root MSE	0.939446	R-squared	0.111794
Mean dependent var	2.321754	Adjusted R-squared	0.109617
S.D. dependent var	0.946073	S.E. of regression	0.941513
Akaike info criterion	2.721719	Sum squared resid	402.4468
Schwarz criterion	2.739800	Log likelihood	-618.5519
Hannan-Quinn criter.	2.728842	F-statistic	5.418550
Durbin-Watson stat	2.427162	Prob(F-statistic)	0.020362

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/12/21 Time: 16:13
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.469537	0.024349	19.28336	0.0000
FLG	0.143050	0.037095	3.85631	0.0469

Root MSE	0.206715	R-squared	0.29510
Mean dependent var	0.495425	Adjusted R-squared	0.27548
S.D. dependent var	0.207248	S.E. of regression	0.207170
Akaike info criterion	-0.306177	Sum squared resid	19.48543
Schwarz criterion	-0.288096	Log likelihood	71.80837
Hannan-Quinn criter.	-0.299055	F-statistic	1.343738
Durbin-Watson stat	2.438935	Prob(F-statistic)	0.246985

Dependent Variable: TOBQ
Method: Panel Least Squares
Date: 06/12/21 Time: 16:30
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.085494	0.110659	18.84615	0.0000
FLG	0.392422	0.168582	2.327778	0.0204

Root MSE	0.939446	R-squared	0.111794
Mean dependent var	2.321754	Adjusted R-squared	0.109617
S.D. dependent var	0.946073	S.E. of regression	0.941513
Akaike info criterion	2.721719	Sum squared resid	402.4468
Schwarz criterion	2.739800	Log likelihood	-618.5519
Hannan-Quinn criter.	2.728842	F-statistic	5.418550
Durbin-Watson stat	2.427162	Prob(F-statistic)	0.020362

	LIQ	ROA	TOBQ
LIQ	1.000000	-0.167248	-0.113640
ROA	-0.167248	1.000000	0.901320
TOBQ	-0.113640	0.901320	1.000000

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/12/21 Time: 17:50
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.510552	0.014315	35.66574	0.0000
LIQ	-0.130325	0.021116	-6.171860	0.0151

Root MSE	0.206552	R-squared	0.104521
Mean dependent var	0.495425	Adjusted R-squared	0.102329
S.D. dependent var	0.207248	S.E. of regression	0.207007
Akaike info criterion	-0.307754	Sum squared resid	19.45472
Schwarz criterion	-0.289673	Log likelihood	72.16798
Hannan-Quinn criter.	-0.300632	F-statistic	2.062501
Durbin-Watson stat	2.435945	Prob(F-statistic)	0.151651

Dependent Variable: TOBQ
Method: Panel Least Squares
Date: 06/12/21 Time: 18:08
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.384764	0.065371	36.48023	0.0000
LIQ	-0.126319	0.096429	-1.309970	0.0409

Root MSE	0.943255	R-squared	0.110372
Mean dependent var	2.321754	Adjusted R-squared	0.104157
S.D. dependent var	0.946073	S.E. of regression	0.945330
Akaike info criterion	2.729811	Sum squared resid	405.7165
Schwarz criterion	2.747892	Log likelihood	-620.3969
Hannan-Quinn criter.	2.736933	F-statistic	1.716022
Durbin-Watson stat	2.421716	Prob(F-statistic)	0.190868

	TANG	ROA	TOBQ
TANG	1.000000	-0.222795	-0.233621
ROA	-0.222795	1.000000	0.901320
TOBQ	-0.233621	0.901320	1.000000

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/12/21 Time: 18:47
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.550685	0.014781	37.25511	0.0000
TANG	-0.135521	0.027830	-4.869540	0.0000

Root MSE	0.201818	R-squared	0.149674
Mean dependent var	0.495425	Adjusted R-squared	0.147544
S.D. dependent var	0.207248	S.E. of regression	0.202262
Akaike info criterion	-0.354133	Sum squared resid	18.57303
Schwarz criterion	-0.336052	Log likelihood	82.74241
Hannan-Quinn criter.	-0.347011	F-statistic	23.71242
Durbin-Watson stat	2.4650264	Prob(F-statistic)	0.000002

Dependent Variable: TOBQ
Method: Panel Least Squares
Date: 06/12/21 Time: 18:49
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.586268	0.067301	38.42858	0.0000
TANG	-0.258704	0.126712	-2.04167	0.0000

Root MSE	0.918884	R-squared	0.154571
Mean dependent var	2.321754	Adjusted R-squared	0.152496
S.D. dependent var	0.946073	S.E. of regression	0.920906
Akaike info criterion	2.677459	Sum squared resid	385.0228
Schwarz criterion	2.695540	Log likelihood	-608.4606
Hannan-Quinn criter.	2.684581	F-statistic	26.20931
Durbin-Watson stat	2.450082	Prob(F-statistic)	0.000000

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/12/21 Time: 19:43
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.599376	0.036975	16.21022	0.0000
FLG	0.158411	0.041932	3.77780	0.0164
LIQ	-0.112777	0.021547	-5.23400	0.0553
TANG	-0.153060	0.031965	-4.78837	0.0000

Root MSE	0.201358	R-squared	0.154398
Mean dependent var	0.495425	Adjusted R-squared	0.141767
S.D. dependent var	0.207248	S.E. of regression	0.202247
Akaike info criterion	-0.349918	Sum squared resid	18.48859
Schwarz criterion	-0.313756	Log likelihood	83.78130
Hannan-Quinn criter.	-0.335673	F-statistic	8.593342
Durbin-Watson stat	3.466188	Prob(F-statistic)	0.000015

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/13/21 Time: 09:29
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.557640	0.031798	17.53703	0.0000
FLG	0.113448	0.041330	2.744891	0.0063
LIQ	-0.097479	0.030022	3.246918	0.0262
TANG	-0.140497	0.037320	-3.764657	0.0315
FLG_OWN	0.254368	0.078065	3.258412	0.0000
LIQ_OWN	0.081088	0.012249	6.619969	0.0291
TAN_OWN	-0.049395	0.009538	-5.177672	0.0484

Root MSE	0.170575	R-squared	0.321104
Mean dependent var	0.495425	Adjusted R-squared	0.312032
S.D. dependent var	0.207248	S.E. of regression	0.171900
Akaike info criterion	-0.668580	Sum squared resid	13.26772
Schwarz criterion	-0.605296	Log likelihood	159.4361
Hannan-Quinn criter.	-0.643651	F-statistic	35.39469
Durbin-Watson stat	2.743227	Prob(F-statistic)	0.000000

Dependent Variable: TOBQ
Method: Panel Least Squares
Date: 06/13/21 Time: 11:01
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.609705	0.168726	15.46711	0.0000
FLG	0.223459	0.091341	2.44643	0.0370
LIQ	-0.118412	0.098323	-1.20432	0.0084
TANG	-0.251362	0.115862	-2.16949	0.0000

Root MSE	0.918843	R-squared	0.154663
Mean dependent var	2.321754	Adjusted R-squared	0.145789
S.D. dependent var	0.946073	S.E. of regression	0.922900
Akaike info criterion	2.686141	Sum squared resid	384.9884
Schwarz criterion	2.722304	Log likelihood	-608.4402
Hannan-Quinn criter.	2.700386	F-statistic	8.712167
Durbin-Watson stat	3.449999	Prob(F-statistic)	0.000013

Dependent Variable: TOBQ
Method: Panel Least Squares
Date: 06/13/21 Time: 11:45
Sample: 2008 2019
Periods included: 12
Cross-sections included: 38
Total panel (balanced) observations: 456

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.445919	0.155815	15.69761	0.0000
FLG	0.210456	0.070251	2.99577	0.0012
LIQ	-0.091537	0.041113	-2.226473	0.0356
TANG	-0.215133	0.082875	-2.595873	0.0051
FLG_OWN	0.192329	0.382529	0.502782	0.0567
LIQ_OWN	-0.361907	0.452030	-0.800625	0.4238
TAN_OWN	-0.274290	0.438760	-0.625148	0.5322

Root MSE	0.835846	R-squared	0.217731
Mean dependent var	2.321754	Adjusted R-squared	0.207277
S.D. dependent var	0.946073	S.E. of regression	0.842336
Akaike info criterion	2.509957	Sum squared resid	318.5792
Schwarz criterion	2.573241	Log likelihood	-565.2702
Hannan-Quinn criter.	2.534886	F-statistic	20.82853
Durbin-Watson stat	3.605137	Prob(F-statistic)	0.000000

Appendix V: Descriptive Statistics Firm Performance

CODE	YEAR	FLG	LIQ	TANG	ROA	TOBQ	OWN
EGAARDS	2008	0.183	0.331	0.822	0.238	1.312	0.840
1	2009	0.213	0.373	0.681	0.232	1.301	0.732
1	2010	0.250	0.461	0.615	0.197	1.245	0.872
1	2011	0.233	0.433	0.712	0.199	1.248	0.932
1	2012	0.202	0.452	0.669	0.111	1.124	0.752
1	2013	0.257	0.542	0.679	0.162	1.193	0.830
1	2014	0.232	0.439	0.620	0.039	1.041	0.646
1	2015	0.252	0.495	0.604	0.074	1.080	0.683
1	2016	0.250	0.520	0.755	0.122	1.139	0.682
1	2017	0.159	0.274	0.852	0.125	1.143	0.461
1	2018	0.195	0.136	0.905	0.255	1.342	0.558
1	2019	0.192	0.215	0.926	-0.139	0.878	0.424
KAKUZI	2008	0.391	0.510	0.819	0.610	2.561	0.293
2	2009	0.620	0.700	0.911	0.644	2.813	0.353
2	2010	0.449	0.870	0.989	0.590	2.440	0.370
2	2011	0.330	0.685	0.930	0.591	2.442	0.341
2	2012	0.388	0.617	0.865	0.579	2.374	0.300
2	2013	0.411	0.606	0.835	0.605	2.529	0.303
2	2014	0.316	0.699	0.785	0.653	2.881	0.333
2	2015	0.313	0.657	0.753	0.588	2.428	0.318

2	2016	0.278	0.623	0.692	0.699	3.321	0.366
2	2017	0.216	0.438	0.654	0.589	2.432	0.278
2	2018	0.219	0.372	0.685	0.447	1.807	0.176
2	2019	0.226	0.438	0.694	0.416	1.712	0.178
KAPCH	2008	0.520	1.001	0.752	0.122	1.139	0.119
3	2009	0.657	0.865	0.761	0.250	1.333	0.158
3	2010	0.553	0.789	0.838	0.401	1.670	0.199
3	2011	0.566	0.928	0.767	0.368	1.583	0.195
3	2012	0.481	0.620	0.705	0.383	1.620	0.174
3	2013	0.543	0.749	0.943	0.371	1.590	0.184
3	2014	0.454	0.754	0.547	0.567	2.309	0.270
3	2015	0.378	0.794	0.633	0.605	2.533	0.316
3	2016	0.422	0.717	0.617	0.414	1.707	0.178
3	2017	0.382	0.651	0.594	0.582	2.393	0.237
3	2018	0.284	0.618	0.678	0.453	1.829	0.238
3	2019	0.280	0.542	0.675	-0.018	0.982	0.114
LIMURU	2008	0.391	1.001	0.812	0.238	1.312	0.840
4	2009	0.620	0.865	0.795	0.232	1.301	0.732
4	2010	0.449	0.789	0.811	0.197	1.245	0.872
4	2011	0.330	0.928	0.848	0.400	1.680	0.490
4	2012	0.388	0.620	0.862	0.270	1.370	0.380
4	2013	0.411	0.215	1.024	0.510	2.050	0.530
4	2014	0.316	0.273	0.728	0.540	2.170	0.640

4	2015	0.313	0.254	0.864	0.383	1.620	0.174
4	2016	0.278	0.282	0.869	0.371	1.590	0.184
4	2017	0.216	0.316	0.813	0.567	2.309	0.270
4	2018	0.219	0.311	0.857	0.605	2.533	0.316
4	2019	0.226	0.185	0.917	0.414	1.707	0.178
REA	2008	0.400	1.090	0.612	0.400	1.670	0.500
5	2009	0.400	1.130	0.596	0.000	1.750	0.510
5	2010	0.410	1.000	0.597	0.440	1.800	0.530
5	2011	0.390	1.070	0.644	0.410	1.690	0.550
5	2012	0.390	1.020	0.595	0.400	1.660	0.530
5	2013	0.460	0.800	0.515	0.420	1.720	0.450
5	2014	0.310	1.030	0.645	0.400	1.680	0.490
5	2015	0.420	0.850	0.656	0.270	1.370	0.380
5	2016	0.360	0.990	0.609	0.510	2.050	0.530
5	2017	0.280	1.120	0.636	0.540	2.170	0.640
5	2018	0.220	0.870	0.560	0.470	1.890	0.450
5	2019	0.250	0.980	0.676	0.540	2.180	0.670
SASINI	2008	0.226	0.366	0.812	0.670	3.032	0.105
6	2009	0.213	0.310	0.795	0.657	2.915	0.198
6	2010	0.229	0.337	0.811	0.357	1.555	0.126
6	2011	0.233	0.331	0.848	0.491	1.966	0.218
6	2012	0.250	0.346	0.862	0.469	1.884	0.194
6	2013	0.306	0.215	1.024	0.706	1.406	0.257

6	2014	0.292	0.273	0.728	0.650	2.856	0.219
6	2015	0.284	0.254	0.864	0.678	3.105	0.269
6	2016	0.285	0.282	0.869	0.489	1.956	0.181
6	2017	0.280	0.316	0.813	0.315	1.459	0.140
6	2018	0.295	0.311	0.857	0.244	1.322	0.112
6	2019	0.170	0.185	0.917	0.561	2.276	0.031
WILLIAMSON	2008	0.566	0.542	0.862	0.491	1.966	0.218
7	2009	0.481	0.439	1.024	0.469	1.884	0.194
7	2010	0.543	0.495	0.728	0.706	3.406	0.257
7	2011	0.454	0.520	0.609	0.650	2.856	0.219
7	2012	0.378	0.789	0.636	0.540	2.170	0.640
7	2013	0.422	0.928	0.560	0.470	1.890	0.450
7	2014	0.388	0.620	0.811	0.540	2.180	0.670
7	2015	0.411	0.215	0.848	0.670	3.032	0.105
7	2016	0.316	0.273	0.862	0.657	2.915	0.198
7	2017	0.313	0.870	1.024	0.315	1.459	0.140
7	2018	0.278	0.904	0.848	0.244	1.322	0.112
7	2019	0.216	0.915	0.862	0.561	2.276	0.031
C&G	2008	0.439	1.175	0.206	0.491	1.966	0.218
8	2009	0.502	0.941	0.220	0.763	4.222	0.334
8	2010	0.480	0.915	0.232	0.778	4.512	0.335
8	2011	0.488	0.870	0.199	0.615	2.600	0.223

8	2012	0.566	0.904	0.377	0.682	3.146	0.223
8	2013	0.590	1.090	0.335	0.668	3.010	0.221
8	2014	0.593	1.353	0.318	0.644	2.811	0.223
8	2015	0.598	1.235	0.308	0.620	2.635	0.206
8	2016	0.655	1.094	0.373	0.662	2.957	0.202
8	2017	0.624	1.001	0.405	0.624	2.657	0.186
8	2018	0.637	1.022	0.393	0.631	2.712	0.180
8	2019	0.653	1.018	0.384	0.571	2.334	0.177
MARSHALLS	2008	0.881	0.070	0.037	0.720	3.510	0.140
9	2009	0.882	0.080	0.033	0.600	2.500	0.120
9	2010	0.871	0.070	0.030	0.610	2.600	0.120
9	2011	0.850	0.060	0.033	0.730	3.740	0.100
9	2012	0.861	0.879	0.621	0.744	3.911	0.233
9	2013	0.744	0.120	0.001	0.510	1.990	0.150
9	2014	0.852	0.110	0.001	0.530	2.150	0.150
9	2015	0.875	0.050	0.001	0.420	1.720	0.160
9	2016	0.896	0.060	0.000	0.560	2.260	0.180
9	2017	0.926	0.099	0.035	0.298	1.424	0.055
9	2018	0.850	0.092	0.024	0.406	1.684	0.049
9	2019	0.800	0.094	0.030	0.523	2.098	0.044
SAMEER	2008	0.415	0.944	0.294	0.231	1.301	0.157
10	2009	0.425	0.988	0.276	0.342	1.520	0.175
10	2010	0.439	0.968	0.243	0.351	1.541	0.167

10	2011	0.501	1.090	0.256	0.309	1.447	0.174
10	2012	0.386	1.115	0.224	0.421	1.727	0.222
10	2013	0.373	1.170	0.197	0.394	1.649	0.234
10	2014	0.339	1.121	0.191	0.367	1.581	0.241
10	2015	0.402	1.603	0.188	0.407	1.687	0.315
10	2016	0.308	1.304	0.145	0.405	1.679	0.288
10	2017	0.280	1.307	0.136	0.466	1.873	0.310
10	2018	0.270	1.099	0.119	0.500	2.001	0.329
10	2019	0.342	0.979	0.137	0.493	1.972	0.362
BARCLAYS	2008	0.740	0.091	0.014	0.529	2.121	0.089
11	2009	0.709	0.093	0.014	0.506	2.023	0.087
11	2010	0.693	0.104	0.017	0.539	2.170	0.089
11	2011	0.867	0.125	0.017	0.606	2.538	0.092
11	2012	0.889	0.120	0.018	0.639	2.770	0.101
11	2013	0.878	0.140	0.024	0.631	2.712	0.104
11	2014	0.853	0.142	0.036	0.625	2.669	0.116
11	2015	0.818	0.099	0.019	0.706	3.401	0.141
11	2016	0.832	0.106	0.018	0.667	3.005	0.134
11	2017	0.840	0.114	0.014	0.686	3.189	0.137
11	2018	0.843	0.103	0.013	0.645	2.814	0.112
11	2019	0.831	0.102	0.013	0.673	3.062	0.111
CFC	2008	0.736	0.109	0.035	0.539	2.170	0.089
12	2009	0.855	0.124	0.024	0.606	2.538	0.092

12	2010	0.852	0.144	0.030	0.639	2.770	0.101
12	2011	0.875	0.159	0.021	0.466	1.873	0.310
12	2012	0.896	0.167	0.019	0.500	2.001	0.329
12	2013	0.869	0.186	0.016	0.493	1.972	0.362
12	2014	0.857	0.167	0.016	0.529	2.121	0.089
12	2015	0.858	0.162	0.017	0.506	2.023	0.087
12	2016	0.867	0.128	0.017	0.621	2.642	0.039
12	2017	0.857	0.094	0.017	0.485	1.943	0.040
12	2018	0.855	0.093	0.018	0.632	2.721	0.049
12	2019	0.844	0.144	0.018	0.581	2.389	0.046
DIAMOND	2008	0.881	0.070	0.024	0.197	1.245	0.872
13	2009	0.882	0.080	0.030	0.199	1.248	0.932
13	2010	0.871	0.070	0.021	0.111	1.124	0.752
13	2011	0.850	0.060	0.017	0.162	1.193	0.830
13	2012	0.861	0.879	0.017	0.039	1.041	0.646
13	2013	0.744	0.120	0.017	0.074	1.080	0.683
13	2014	0.736	0.110	0.017	0.122	1.139	0.682
13	2015	0.855	0.050	0.021	0.125	1.143	0.461
13	2016	0.852	0.060	0.019	0.255	1.342	0.558
13	2017	0.875	0.099	0.016	0.506	2.023	0.087
13	2018	0.896	0.092	0.037	0.621	2.642	0.039
13	2019	0.926	0.094	0.035	0.485	1.943	0.040
HOUSING	2008	0.881	0.130	0.037	0.240	1.316	0.055

14	2009	0.882	0.122	0.036	0.263	1.358	0.056
14	2010	0.871	0.103	0.031	0.285	1.398	0.054
14	2011	0.850	0.107	0.037	0.372	1.592	0.061
14	2012	0.861	0.099	0.035	0.298	1.424	0.055
14	2013	0.744	0.092	0.024	0.406	1.684	0.049
14	2014	0.736	0.094	0.030	0.523	2.098	0.044
14	2015	0.855	0.085	0.021	0.621	2.642	0.039
14	2016	0.852	0.109	0.022	0.485	1.943	0.040
14	2017	0.875	0.124	0.017	0.632	2.721	0.049
14	2018	0.896	0.144	0.017	0.581	2.389	0.046
14	2019	0.926	0.159	0.017	0.592	2.452	0.047
NIC	2008	0.521	0.167	0.026	0.730	3.705	0.199
15	2009	0.715	0.186	0.024	0.718	3.540	0.183
15	2010	0.867	0.167	0.021	0.688	3.204	0.139
15	2011	0.884	0.162	0.019	0.695	3.284	0.129
15	2012	0.849	0.128	0.016	0.723	3.616	0.130
15	2013	0.869	0.094	0.016	0.691	3.241	0.124
15	2014	0.857	0.093	0.017	0.679	3.114	0.115
15	2015	0.858	0.084	0.013	0.698	3.309	0.106
15	2016	0.867	0.086	0.012	0.731	3.711	0.103
15	2017	0.857	0.106	0.009	0.779	4.522	0.104
15	2018	0.855	0.096	0.009	0.778	4.495	0.089
15	2019	0.844	0.094	0.011	0.788	4.728	0.084

STANCHAT	2008	0.845	0.100	0.006	0.750	3.998	0.064
16	2009	0.841	0.092	0.006	0.747	3.950	0.057
16	2010	0.868	0.103	0.007	0.731	3.713	0.088
16	2011	0.875	0.098	0.006	0.693	3.258	0.093
16	2012	0.880	0.105	0.006	0.715	3.510	0.101
16	2013	0.884	0.102	0.005	0.685	3.172	0.096
16	2014	0.888	0.099	0.004	0.761	4.181	0.096
16	2015	0.858	0.097	0.007	0.787	4.684	0.099
16	2016	0.874	0.097	0.015	0.739	3.835	0.101
16	2017	0.843	0.106	0.015	0.785	4.660	0.119
16	2018	0.836	0.106	0.016	0.771	4.358	0.121
16	2019	0.817	0.115	0.014	0.774	4.430	0.115
COOP	2008	0.850	0.186	0.017	0.731	3.711	0.103
17	2009	0.861	0.167	0.017	0.779	4.522	0.104
17	2010	0.744	0.162	0.021	0.731	3.711	0.103
17	2011	0.736	0.128	0.019	0.779	4.522	0.104
17	2012	0.855	0.105	0.016	0.610	2.540	0.100
17	2013	0.852	0.102	0.040	0.630	2.690	0.130
17	2014	0.875	0.099	0.042	0.550	2.220	0.090
17	2015	0.896	0.097	0.037	0.640	2.750	0.110
17	2016	0.926	0.097	0.030	0.610	2.540	0.100
17	2017	0.521	0.128	0.033	0.630	2.690	0.130
17	2018	0.715	0.105	0.016	0.550	2.220	0.090

17	2019	0.867	0.102	0.040	0.779	4.522	0.104
KCB	2008	0.857	0.183	0.019	0.787	4.684	0.099
18	2009	0.855	0.139	0.016	0.739	3.835	0.101
18	2010	0.844	1.115	0.016	0.785	4.660	0.119
18	2011	0.845	1.170	0.017	0.698	3.309	0.106
18	2012	0.841	1.121	0.040	0.731	3.711	0.103
18	2013	0.868	1.603	0.040	0.779	4.522	0.104
18	2014	0.875	0.950	0.040	0.778	4.495	0.089
18	2015	0.880	0.829	0.042	0.723	3.615	0.138
18	2016	0.884	0.921	0.037	0.755	4.082	0.135
18	2017	0.888	0.886	0.030	0.798	4.963	0.125
18	2018	0.858	1.254	0.033	0.761	4.191	0.126
18	2019	0.874	1.351	0.036	0.729	3.687	0.115
NBK	2008	0.850	0.070	0.037	0.720	3.510	0.140
19	2009	0.800	0.080	0.033	0.600	2.500	0.120
19	2010	0.860	0.070	0.030	0.610	2.600	0.120
19	2011	0.910	0.060	0.033	0.730	3.740	0.100
19	2012	0.850	0.060	0.036	0.580	2.370	0.120
19	2013	0.850	0.060	0.037	0.580	2.380	0.110
19	2014	0.850	0.050	0.040	0.670	3.030	0.100
19	2015	0.830	0.040	0.040	0.640	2.750	0.110
19	2016	0.850	0.040	0.040	0.610	2.540	0.100
19	2017	0.840	0.020	0.040	0.630	2.690	0.130

19	2018	0.870	0.020	0.042	0.550	2.220	0.090
19	2019	0.900	0.020	0.037	0.590	2.410	0.070
EXPRESS	2008	0.852	0.787	0.685	0.618	2.619	0.234
20	2009	0.875	0.809	0.663	0.588	2.429	0.210
20	2010	0.896	0.682	0.674	0.647	2.830	0.196
20	2011	0.926	0.944	0.694	0.231	1.301	0.157
20	2012	0.521	0.988	0.576	0.342	1.520	0.175
20	2013	0.715	0.968	0.543	0.351	1.541	0.167
20	2014	0.867	1.090	0.656	0.309	1.447	0.174
20	2015	0.884	1.115	0.624	0.421	1.727	0.222
20	2016	0.849	1.170	0.597	0.394	1.649	0.234
20	2017	0.869	0.360	0.744	0.723	3.615	0.138
20	2018	0.910	0.398	0.817	0.755	4.082	0.135
20	2019	0.850	1.100	0.656	0.309	1.447	0.174
NATION	2008	0.855	0.850	0.585	0.653	2.881	0.333
21	2009	0.844	0.829	0.563	0.588	2.428	0.318
21	2010	0.845	0.931	0.574	0.699	3.321	0.366
21	2011	0.841	0.896	0.594	0.589	2.432	0.278
21	2012	0.868	1.214	0.576	0.447	1.807	0.176
21	2013	0.875	1.151	0.643	0.416	1.712	0.178
21	2014	0.880	1.034	0.656	0.122	1.139	0.119
21	2015	0.884	0.943	0.674	0.250	1.333	0.158
21	2016	0.888	1.071	0.697	0.401	1.670	0.199

21	2017	0.858	0.871	0.754	0.368	1.583	0.195
21	2018	0.874	0.889	0.797	0.383	1.620	0.174
21	2019	0.850	0.879	0.856	0.371	1.590	0.184
STANDARD	2008	0.727	0.921	0.763	0.567	2.309	0.270
22	2009	0.800	0.886	0.774	0.162	1.193	0.830
22	2010	0.900	1.254	0.794	0.039	1.041	0.646
22	2011	0.800	1.351	0.676	0.074	1.080	0.683
22	2012	0.889	0.934	0.643	0.122	1.139	0.682
22	2013	0.714	0.843	0.656	0.125	1.143	0.461
22	2014	0.714	1.071	0.624	0.255	1.342	0.558
22	2015	0.778	0.871	0.697	-0.139	0.878	0.424
22	2016	0.750	0.789	0.754	0.610	2.561	0.293
22	2017	0.830	0.879	0.717	0.644	2.813	0.353
22	2018	0.833	0.165	0.756	0.590	2.440	0.370
22	2019	0.876	0.177	0.760	0.591	2.442	0.341
TPS	2008	0.326	0.175	0.494	0.540	2.170	0.640
23	2009	0.360	0.187	0.476	0.470	1.890	0.450
23	2010	0.465	0.217	0.543	0.540	2.180	0.670
23	2011	0.428	0.140	0.556	0.670	3.032	0.105
23	2012	0.434	0.230	0.524	0.657	2.915	0.198
23	2013	0.410	0.252	0.597	0.315	1.459	0.140
23	2014	0.434	0.189	0.491	0.244	1.322	0.112
23	2015	0.387	0.169	0.488	0.561	2.276	0.031

23	2016	0.343	0.213	0.545	0.491	1.966	0.218
23	2017	0.347	0.223	0.536	0.763	4.222	0.334
23	2018	0.351	0.199	0.519	0.778	4.512	0.335
23	2019	0.434	0.219	0.537	0.615	2.600	0.223
ARM	2008	0.388	0.787	0.685	0.618	2.619	0.234
24	2009	0.487	0.809	0.663	0.588	2.429	0.210
24	2010	0.626	0.682	0.674	0.647	2.830	0.196
24	2011	0.677	0.612	0.752	0.647	2.834	0.191
24	2012	0.607	0.862	0.737	0.700	3.335	0.316
24	2013	0.665	0.727	0.703	0.714	3.498	0.258
24	2014	0.660	0.424	0.723	0.684	3.162	0.150
24	2015	0.720	0.360	0.744	0.723	3.615	0.138
24	2016	0.703	0.398	0.817	0.755	4.082	0.135
24	2017	0.736	0.423	0.706	0.798	3.963	0.125
24	2018	0.723	0.477	0.971	0.761	3.191	0.126
24	2019	0.745	0.372	0.778	0.729	3.687	0.115
BAMBURI	2008	0.307	0.950	0.755	0.528	2.120	0.193
25	2009	0.292	0.829	0.759	0.701	3.344	0.316
25	2010	0.248	0.921	0.706	0.733	3.751	0.337
25	2011	0.263	0.886	0.695	0.733	3.741	0.342
25	2012	0.267	1.254	0.659	0.771	3.366	0.453
25	2013	0.329	1.351	0.618	0.722	3.595	0.390
25	2014	0.154	0.934	0.602	0.821	4.586	0.390

25	2015	0.224	0.843	0.614	0.802	4.061	0.324
25	2016	0.152	1.071	0.601	0.816	5.425	0.370
25	2017	0.163	0.871	0.618	0.777	4.488	0.246
25	2018	0.139	0.789	0.627	0.777	4.481	0.245
25	2019	0.165	0.879	0.621	0.744	3.911	0.233
EA CABLES	2008	0.434	0.461	0.848	0.263	1.358	0.056
26	2009	0.410	0.433	0.862	0.285	1.398	0.054
26	2010	0.434	0.452	1.024	0.372	1.592	0.061
26	2011	0.387	0.542	0.728	0.298	1.424	0.055
26	2012	0.343	0.439	0.864	0.406	1.684	0.049
26	2013	0.347	0.495	0.869	0.074	1.080	0.683
26	2014	0.351	0.520	0.813	0.122	1.139	0.682
26	2015	0.300	0.542	0.857	0.125	1.143	0.461
26	2016	0.361	0.439	0.917	0.255	1.342	0.558
26	2017	0.426	0.495	0.862	0.197	1.245	0.872
26	2018	0.448	0.520	1.024	0.199	1.248	0.932
26	2019	0.426	0.789	0.728	0.111	1.124	0.752
EA PORTLAND	2008	0.736	0.120	0.747	0.485	1.943	0.040
27	2009	0.855	0.110	0.713	0.632	2.721	0.049
27	2010	0.852	0.050	0.753	0.581	2.389	0.046
27	2011	0.875	0.060	0.744	0.197	1.245	0.872
27	2012	0.896	0.100	0.817	0.199	1.248	0.932

27	2013	0.869	0.060	0.706	0.074	1.080	0.683
27	2014	0.857	0.130	0.971	0.122	1.139	0.682
27	2015	0.858	0.180	0.778	0.125	1.143	0.461
27	2016	0.867	0.110	0.755	0.122	1.139	0.119
27	2017	0.857	0.210	0.759	0.250	1.333	0.158
27	2018	0.855	0.160	0.706	0.320	1.470	0.160
27	2019	0.844	0.290	0.695	0.263	1.358	0.056
KENOLKOBIL	2008	0.388	0.097	0.574	0.510	1.990	0.150
28	2009	0.411	0.106	0.594	0.530	2.150	0.150
28	2010	0.316	0.106	0.576	0.420	1.720	0.160
28	2011	0.313	0.115	0.643	0.560	2.260	0.180
28	2012	0.278	0.186	0.656	0.670	2.000	0.200
28	2013	0.216	0.167	0.674	0.074	1.080	0.683
28	2014	0.439	0.162	0.614	0.122	1.139	0.682
28	2015	0.502	0.130	0.601	0.125	1.143	0.461
28	2016	0.480	0.180	0.618	0.122	1.139	0.119
28	2017	0.488	0.110	0.627	0.263	1.358	0.056
28	2018	0.566	0.210	0.621	0.285	1.398	0.054
28	2019	0.590	0.162	0.848	0.372	1.592	0.061
TOTAL	2008	0.521	0.418	0.656	0.591	2.442	0.341
29	2009	0.715	0.425	0.609	0.540	2.170	0.640
29	2010	0.867	0.243	0.636	0.470	1.890	0.450

29	2011	0.884	0.173	0.560	0.540	2.180	0.670
29	2012	0.849	0.234	0.676	0.383	1.620	0.174
29	2013	0.824	0.186	0.728	0.371	1.590	0.184
29	2014	0.824	0.167	0.747	0.567	2.309	0.270
29	2015	0.817	0.162	0.713	0.162	1.193	0.830
29	2016	0.782	0.130	0.753	0.039	1.041	0.646
29	2017	0.736	0.180	0.744	0.074	1.080	0.683
29	2018	0.867	0.243	0.636	0.470	1.890	0.450
29	2019	0.855	0.140	0.813	0.263	1.358	0.056
BRITAM	2008	0.896	1.254	0.004	0.199	1.248	0.932
30	2009	0.926	1.351	0.007	0.111	1.124	0.752
30	2010	0.521	0.934	0.015	0.162	1.193	0.830
30	2011	0.715	0.843	0.015	0.039	1.041	0.646
30	2012	0.867	1.071	0.016	0.074	1.080	0.683
30	2013	0.884	0.871	0.014	0.122	1.139	0.682
30	2014	0.849	0.789	0.017	0.125	1.143	0.461
30	2015	0.869	0.879	0.017	0.400	1.660	0.530
30	2016	0.910	0.461	0.021	0.420	1.720	0.450
30	2017	0.850	0.433	0.019	0.400	1.680	0.490
30	2018	0.855	0.452	0.016	0.270	1.370	0.380
30	2019	0.844	0.542	0.040	0.510	2.050	0.530
JUBIEE	2008	0.733	0.165	0.005	0.525	2.106	0.077
31	2009	0.759	0.177	0.007	0.534	2.147	0.075

31	2010	0.773	0.217	0.006	0.555	2.245	0.078
31	2011	0.765	0.140	0.005	0.628	2.690	0.072
31	2012	0.785	0.230	0.003	0.663	2.966	0.075
31	2013	0.841	0.152	0.002	0.647	2.831	0.075
31	2014	0.847	0.199	0.002	0.664	2.976	0.072
31	2015	0.824	0.169	0.002	0.751	4.014	0.090
31	2016	0.824	0.193	0.002	0.739	3.836	0.092
31	2017	0.817	0.198	0.003	0.720	2.567	0.083
31	2018	0.782	0.176	0.003	0.679	3.115	0.079
31	2019	0.779	0.219	0.002	0.760	3.169	0.072
PAN AFRICAN	2008	0.861	0.186	0.040	0.039	1.041	0.646
32	2009	0.744	0.167	0.040	0.074	1.080	0.683
32	2010	0.736	0.162	0.040	0.122	1.139	0.682
32	2011	0.855	0.130	0.042	0.125	1.143	0.461
32	2012	0.852	0.180	0.037	0.255	1.342	0.558
32	2013	0.875	0.162	0.030	0.372	1.592	0.061
32	2014	0.896	0.418	0.033	0.591	2.442	0.341
32	2015	0.926	0.425	0.036	0.540	2.170	0.640
32	2016	0.881	0.243	0.037	0.470	1.890	0.450
32	2017	0.882	0.173	0.033	0.540	2.180	0.670
32	2018	0.871	0.234	0.030	0.383	1.620	0.174
32	2019	0.850	0.130	0.033	0.470	1.880	0.300

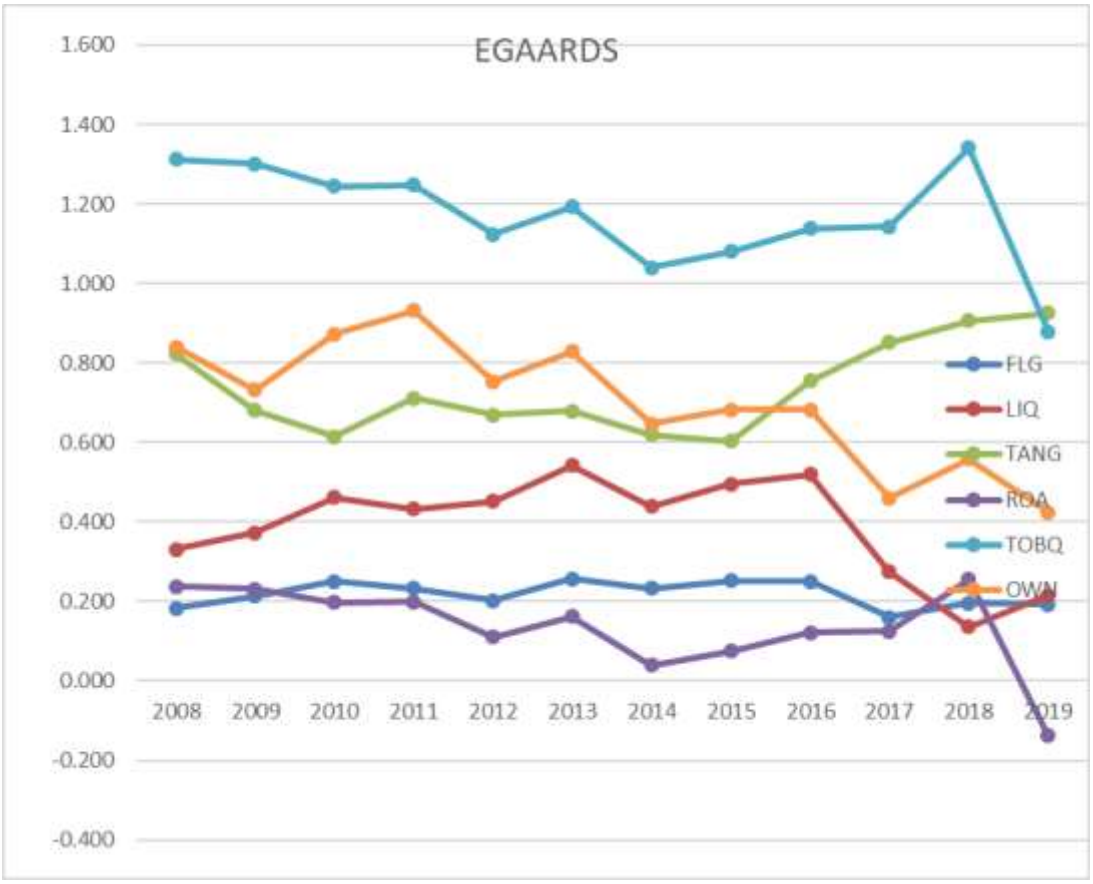
CENTUM	2008	0.080	0.120	0.001	0.510	1.990	0.150
33	2009	0.080	0.110	0.001	0.530	2.150	0.150
33	2010	0.070	0.050	0.001	0.420	1.720	0.160
33	2011	0.040	0.060	0.000	0.560	2.260	0.180
33	2012	0.010	0.100	0.000	0.670	2.000	0.200
33	2013	0.040	0.060	0.001	0.320	1.470	0.160
33	2014	0.050	0.130	0.001	0.470	1.880	0.300
33	2015	0.220	0.180	0.002	0.420	1.730	0.260
33	2016	0.130	0.110	0.002	0.700	3.290	0.340
33	2017	0.280	0.210	0.002	0.540	2.180	0.390
33	2018	0.320	0.160	0.002	0.740	3.780	0.340
33	2019	0.230	0.290	0.002	0.360	1.560	0.610
OLYMPIA	2008	0.519	0.418	0.209	0.552	2.232	0.069
34	2009	0.259	0.425	0.176	0.548	2.211	0.061
34	2010	0.327	0.243	0.228	0.515	2.060	0.063
34	2011	0.344	0.173	0.214	0.537	2.160	0.060
34	2012	0.382	0.234	0.212	0.674	3.069	0.086
34	2013	0.326	0.300	0.287	0.606	2.541	0.084
34	2014	0.360	0.323	0.330	0.577	2.361	0.081
34	2015	0.465	0.380	0.307	0.600	2.502	0.103
34	2016	0.428	0.415	0.320	0.529	2.124	0.104
34	2017	0.434	0.435	0.305	0.477	1.912	0.112
34	2018	0.410	0.464	0.339	0.087	1.095	0.843

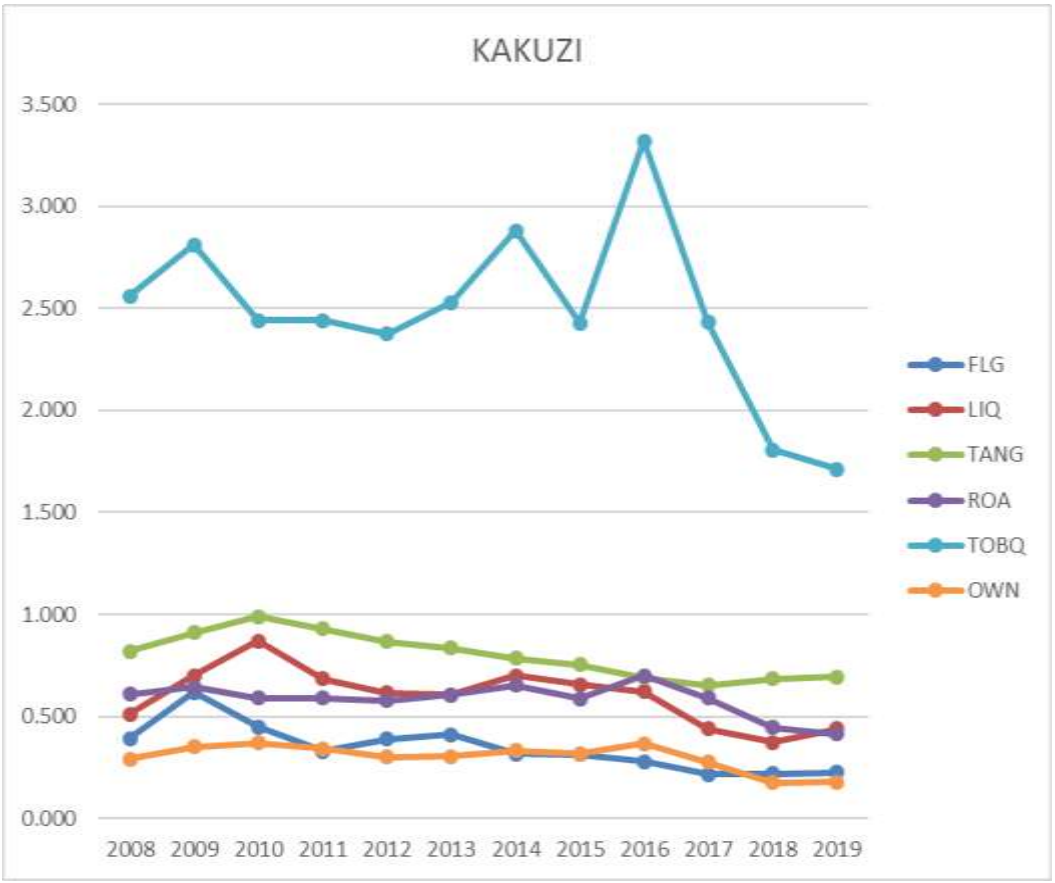
34	2019	0.434	0.396	0.266	0.568	2.315	0.138
BAT	2008	0.226	0.452	1.024	0.632	2.721	0.049
35	2009	0.213	0.542	0.728	0.581	2.389	0.046
35	2010	0.229	0.439	0.864	0.592	2.452	0.047
35	2011	0.233	0.495	0.869	0.730	3.705	0.199
35	2012	0.250	0.520	0.813	0.718	3.540	0.183
35	2013	0.306	0.542	0.857	0.688	3.204	0.139
35	2014	0.292	0.439	0.917	0.695	3.284	0.129
35	2015	0.284	0.495	0.862	0.723	3.616	0.130
35	2016	0.285	0.520	1.024	0.691	3.241	0.124
35	2017	0.280	0.120	0.747	0.679	3.114	0.115
35	2018	0.295	0.110	0.713	0.698	3.309	0.106
35	2019	0.170	0.050	0.753	0.731	3.711	0.103
EABL	2008	0.926	0.080	0.334	0.600	2.500	0.120
36	2009	0.881	0.070	0.416	0.610	2.600	0.120
36	2010	0.882	0.060	0.311	0.730	3.740	0.100
36	2011	0.871	0.879	0.325	0.744	3.911	0.233
36	2012	0.850	0.120	0.284	0.510	1.990	0.150
36	2013	0.867	0.110	0.275	0.530	2.150	0.150
36	2014	0.884	0.050	0.273	0.420	1.720	0.160
36	2015	0.849	0.060	0.363	0.560	2.260	0.180
36	2016	0.869	0.099	0.368	0.298	1.424	0.055
36	2017	0.910	0.092	0.308	0.406	1.684	0.049

36	2018	0.850	0.094	0.334	0.523	2.098	0.044
36	2019	0.855	0.944	0.416	0.231	1.301	0.157
MUMIAS	2008	0.387	0.988	0.420	0.342	1.520	0.175
37	2009	0.343	0.842	0.409	0.539	2.169	0.296
37	2010	0.347	0.860	0.363	0.582	2.392	0.265
37	2011	0.351	0.982	0.368	0.605	2.533	0.313
37	2012	0.300	0.871	0.308	0.606	2.539	0.310
37	2013	0.361	0.833	0.676	0.555	2.249	0.228
37	2014	0.426	0.894	0.707	0.487	1.950	0.174
37	2015	0.448	0.681	0.654	0.583	2.400	0.200
37	2016	0.426	0.567	0.736	0.496	1.982	0.146
37	2017	0.511	0.440	0.740	0.469	1.884	0.150
37	2018	0.528	0.434	0.707	0.428	1.747	0.124
37	2019	0.606	0.503	0.825	0.366	1.578	0.157
UNGA	2008	0.282	1.933	0.282	0.528	2.117	0.146
38	2009	0.416	1.955	0.312	0.436	1.773	0.178
38	2010	0.351	1.965	0.471	0.489	1.957	0.195
38	2011	0.281	1.600	0.334	0.438	1.779	0.141
38	2012	0.349	2.148	0.416	0.571	2.333	0.207
38	2013	0.375	2.092	0.311	0.516	2.065	0.146
38	2014	0.265	2.276	0.325	0.499	1.995	0.182
38	2015	0.344	2.315	0.284	0.584	2.401	0.195
38	2016	0.378	2.488	0.275	0.588	2.427	0.196

38	2017	0.458	1.895	0.273	0.587	2.421	0.162
38	2018	0.416	2.214	0.317	0.541	2.179	0.201
38	2019	0.382	2.159	0.371	0.617	2.609	0.232

Appendix VI: Graphical Summary of Firm Performance

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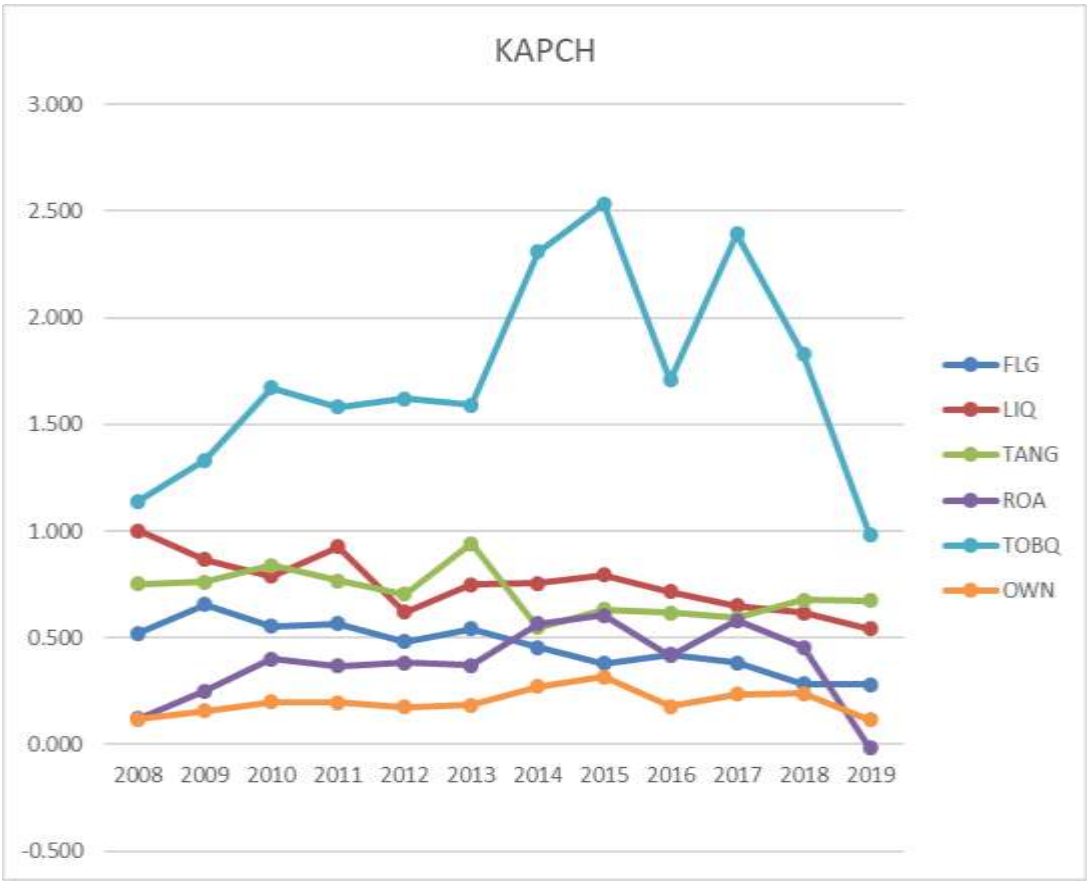
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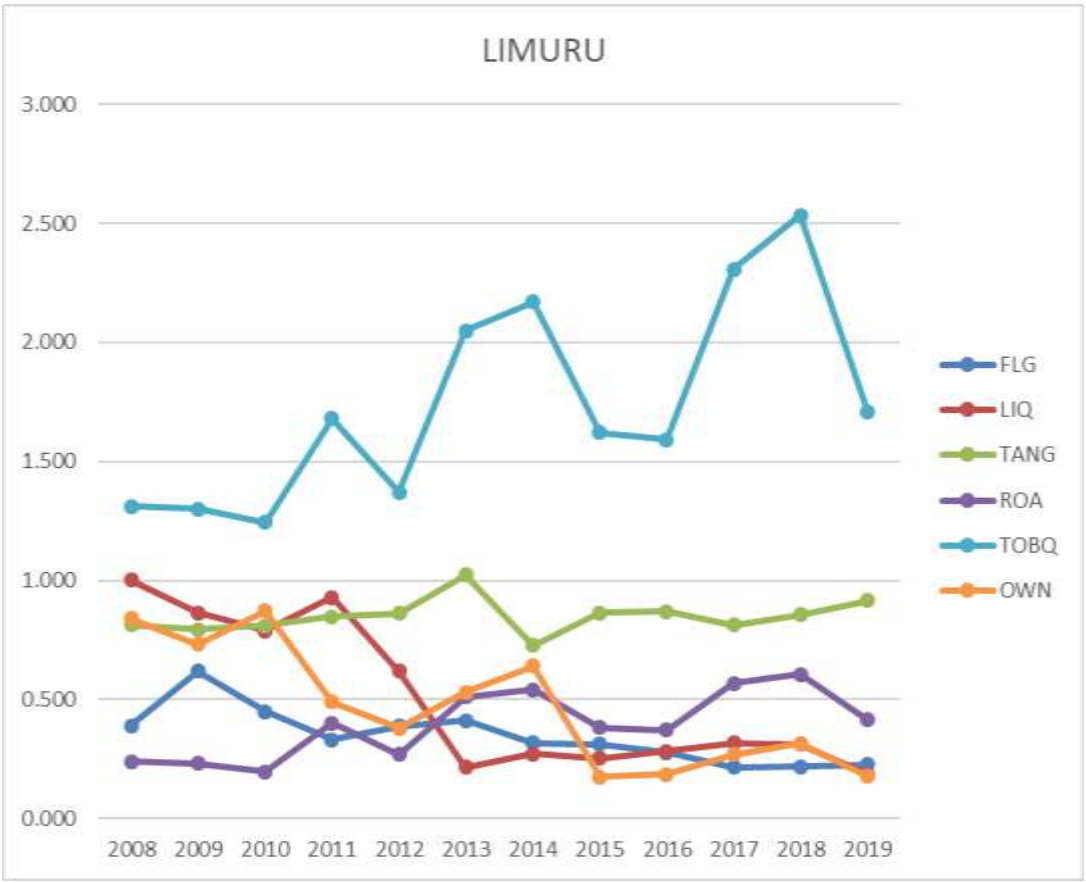
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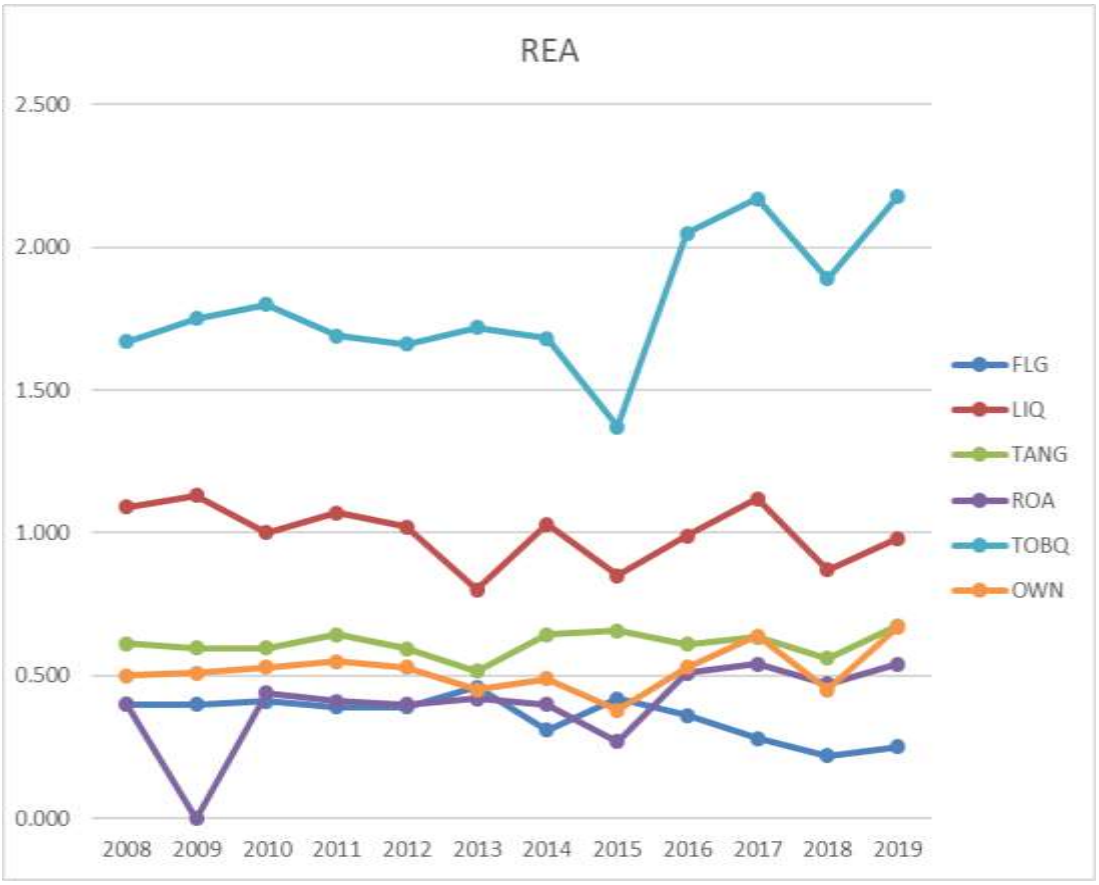
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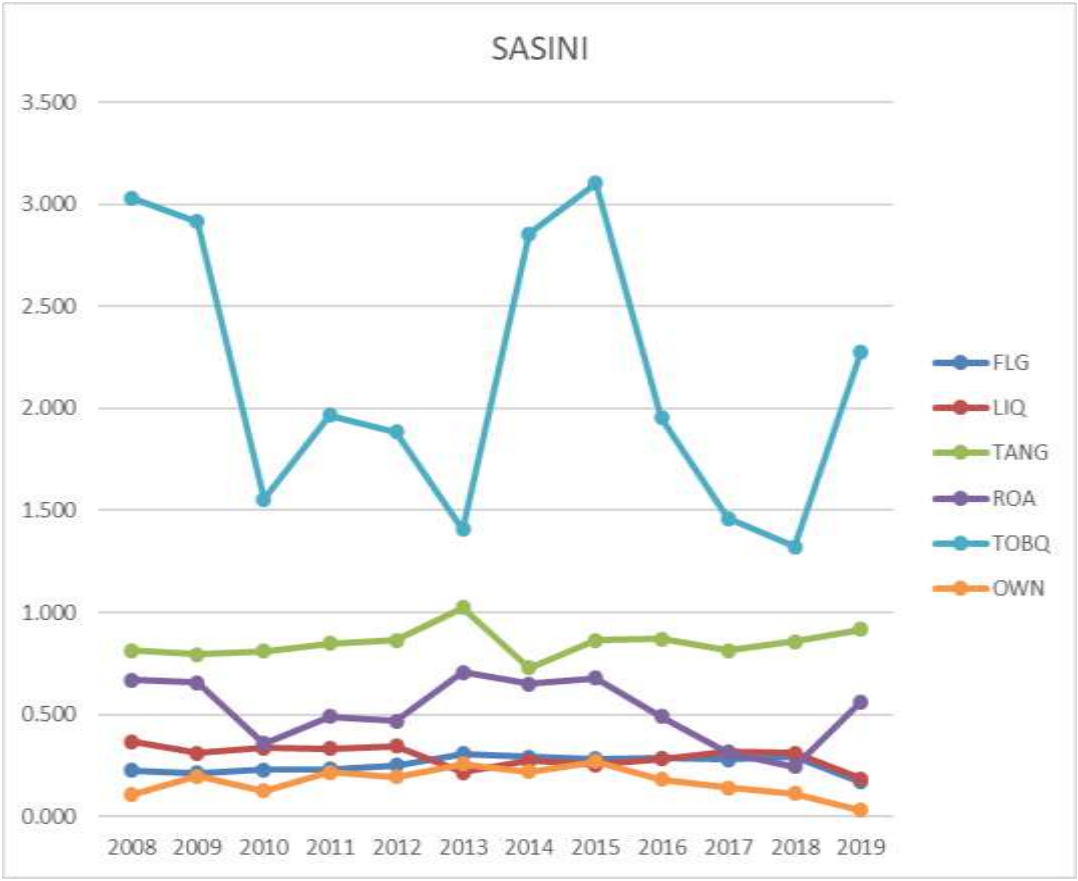
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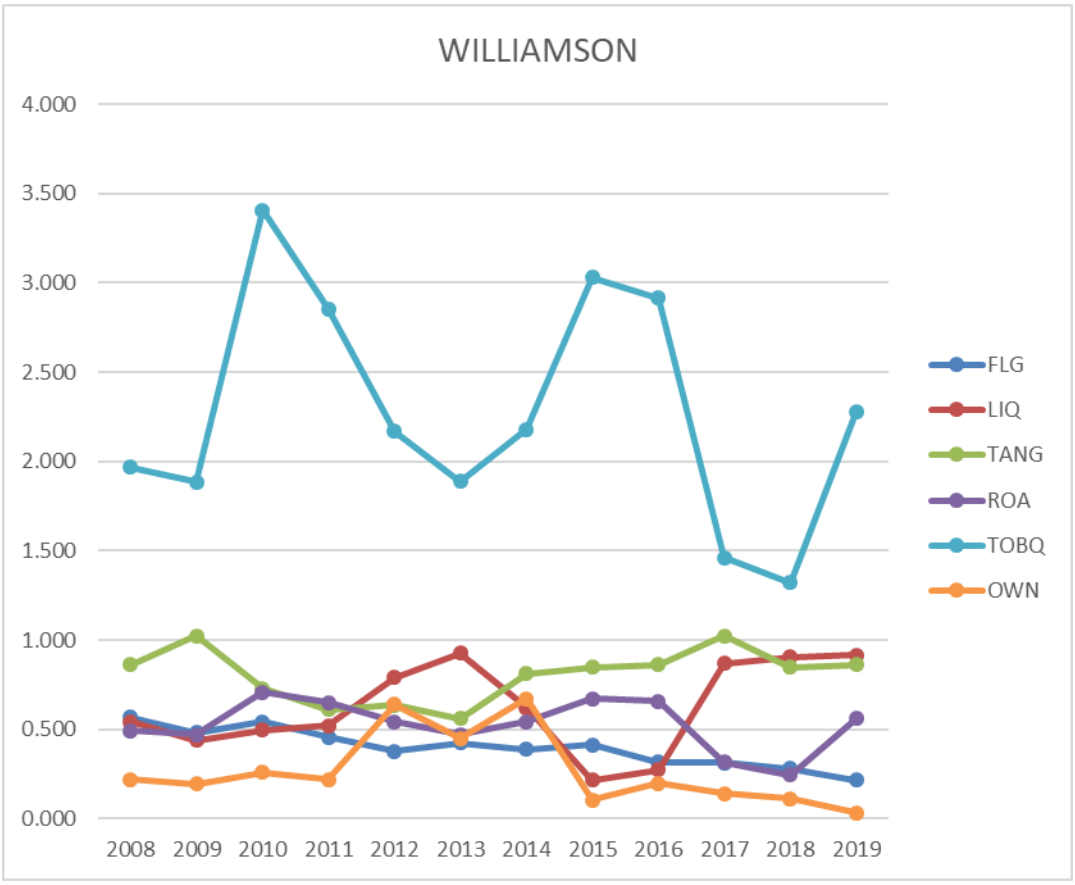
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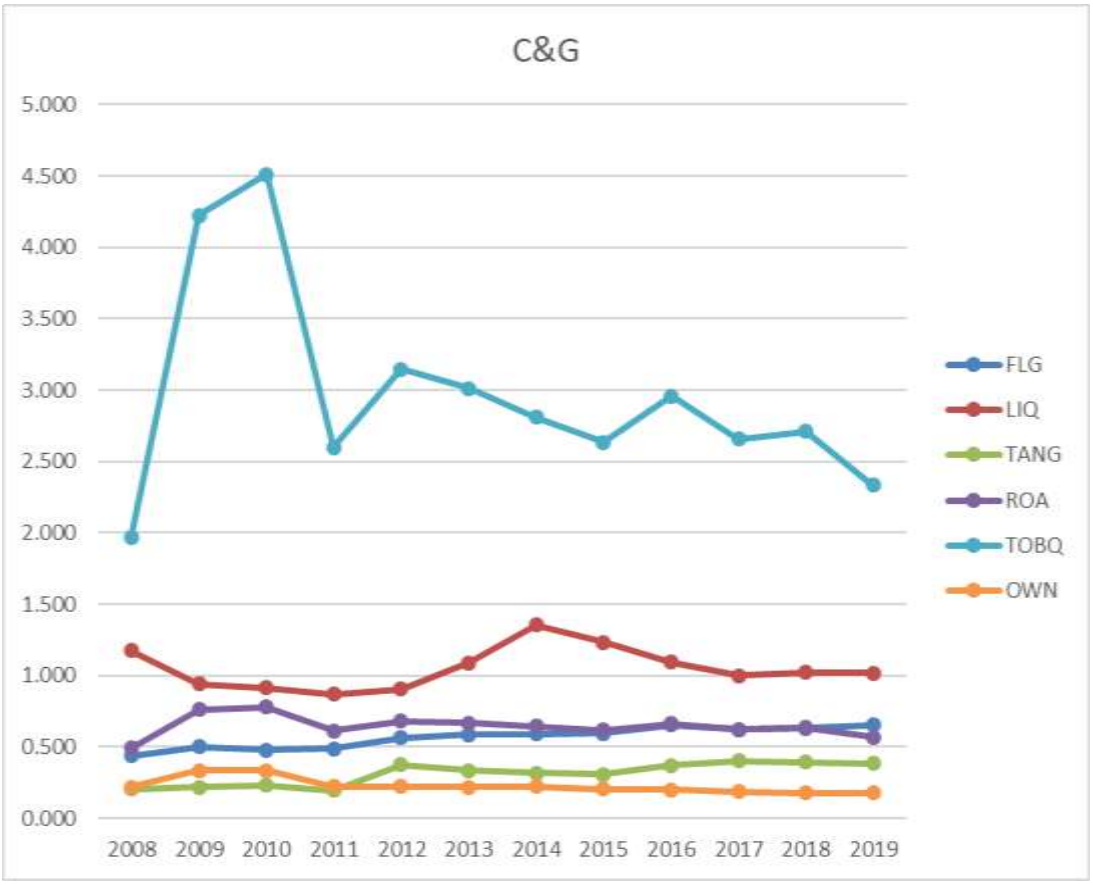
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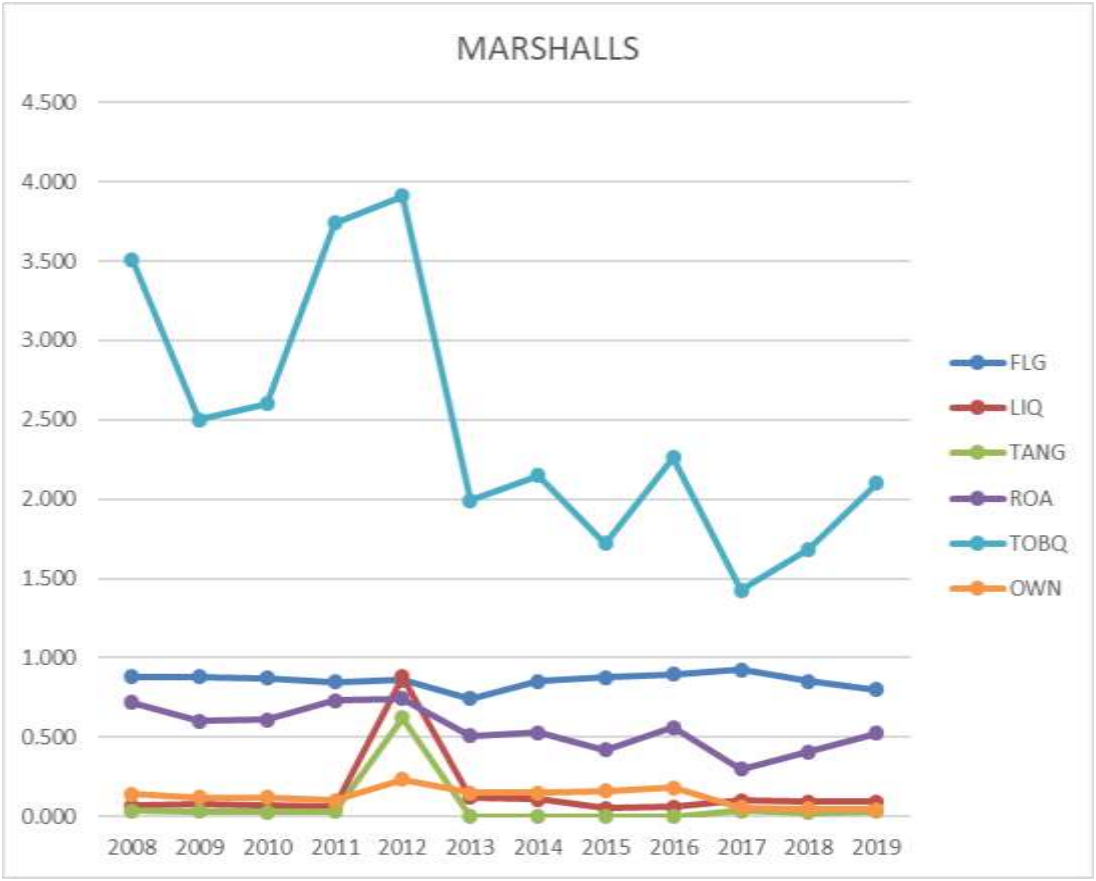
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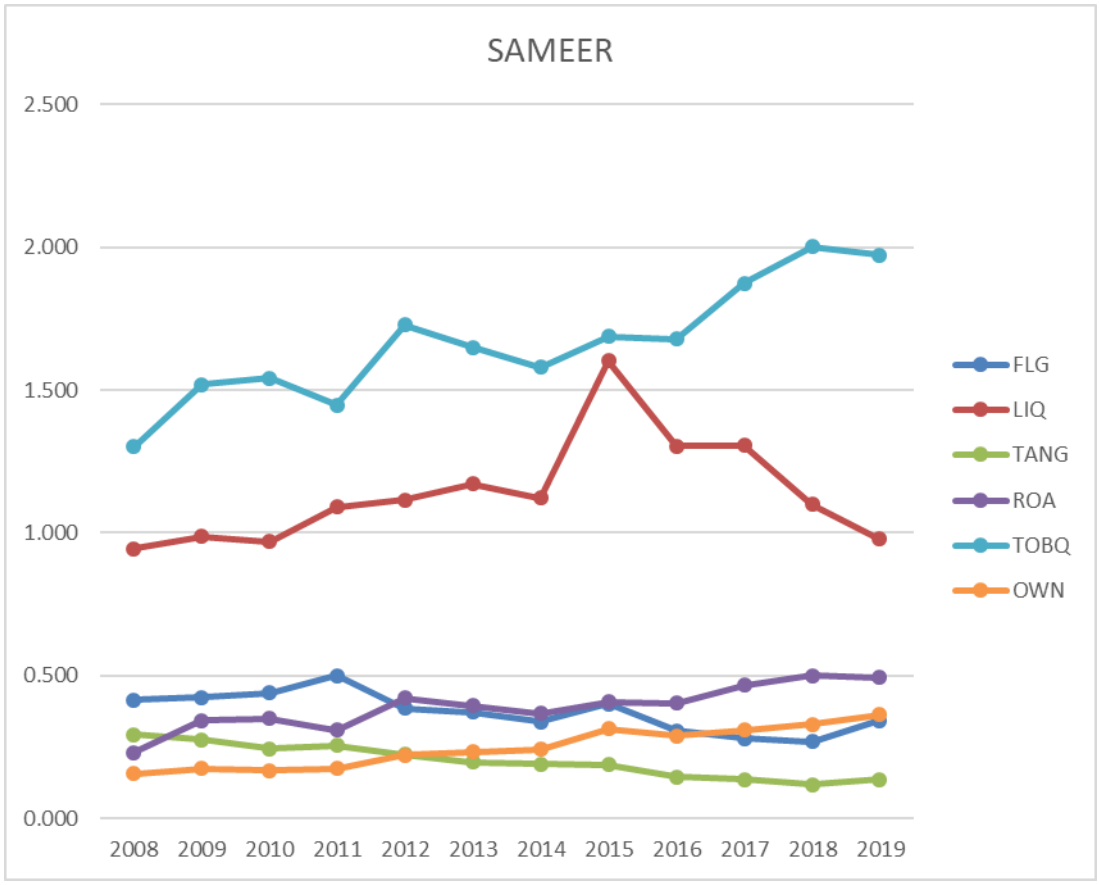
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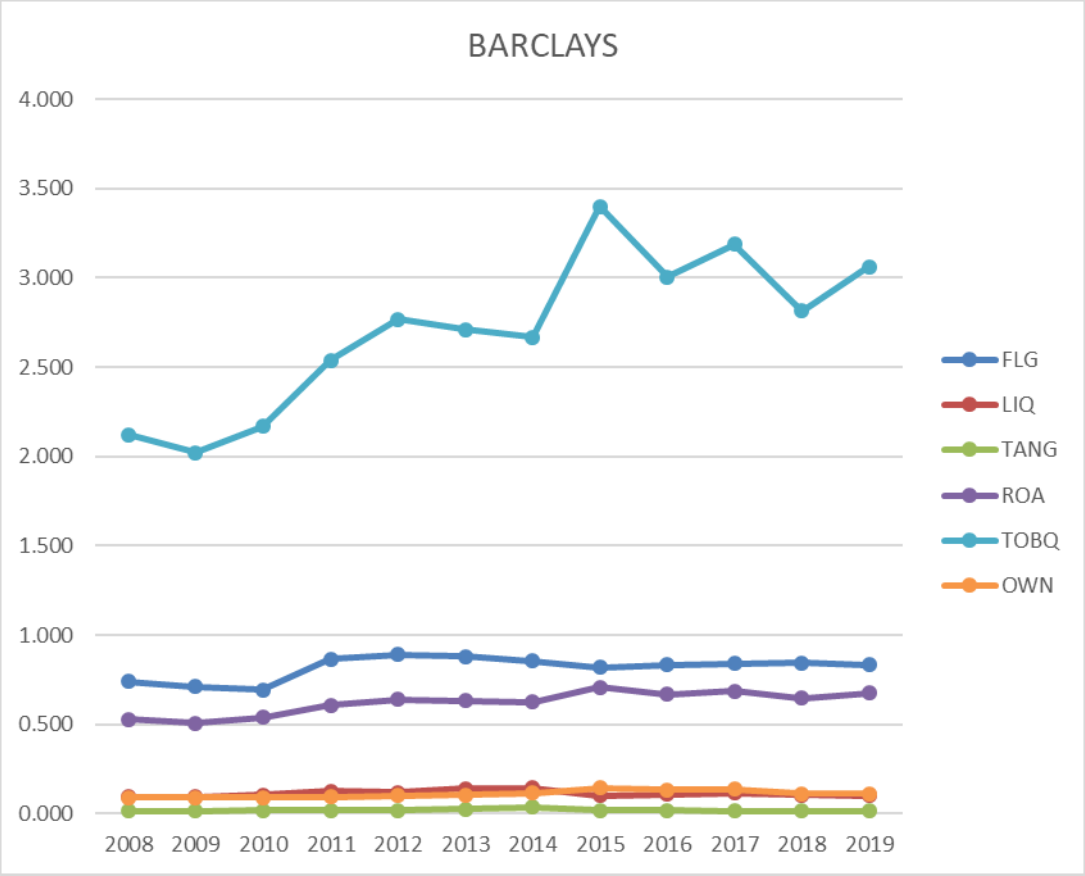
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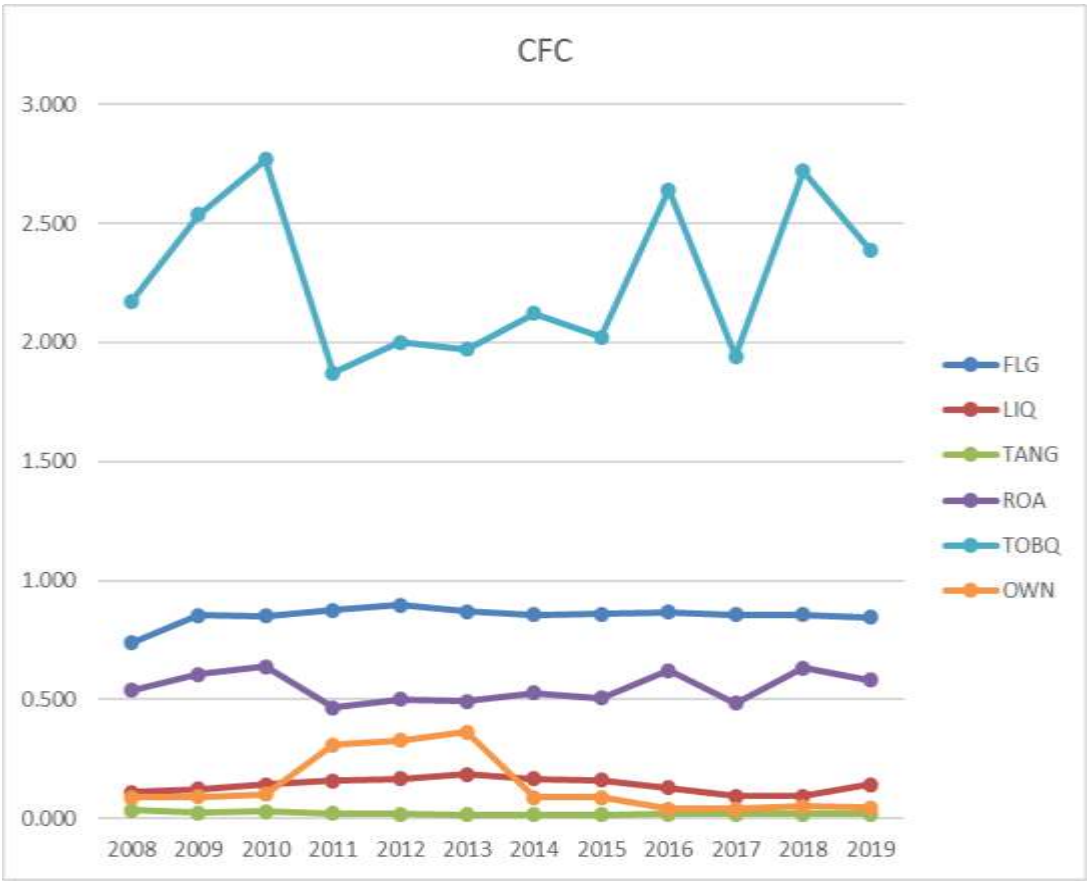
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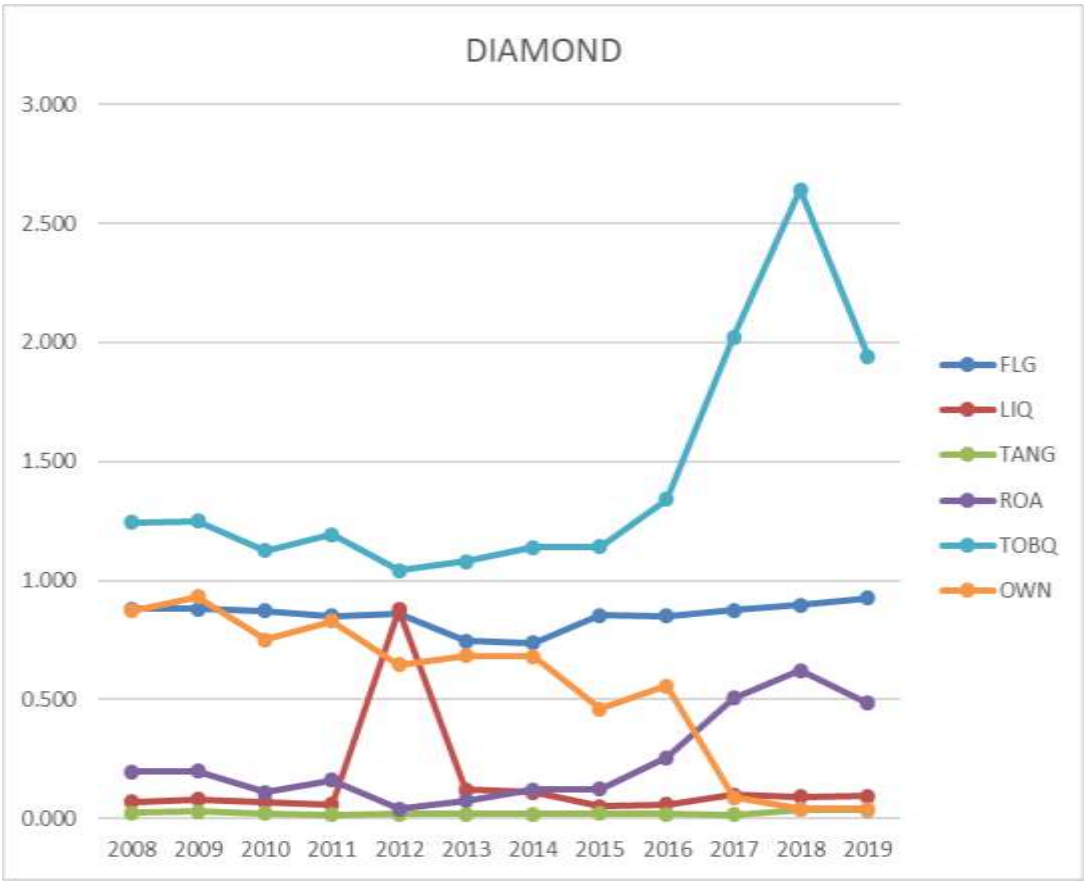
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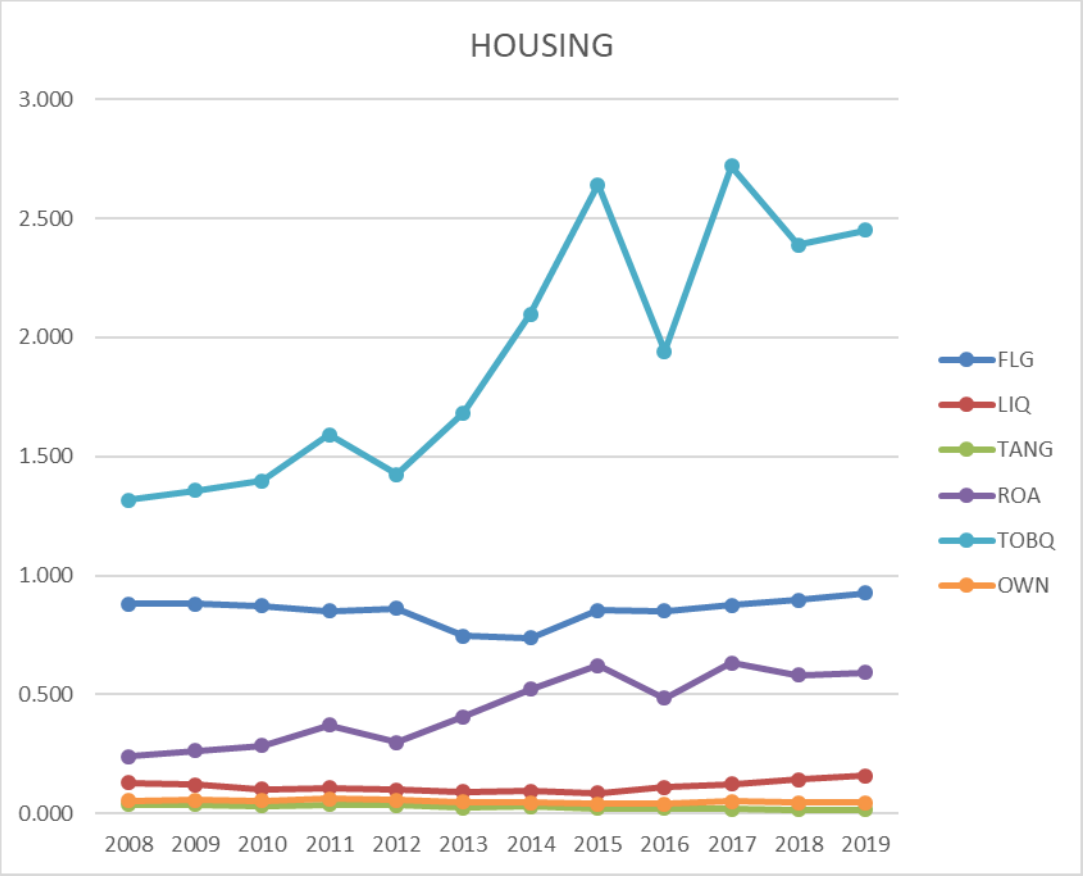
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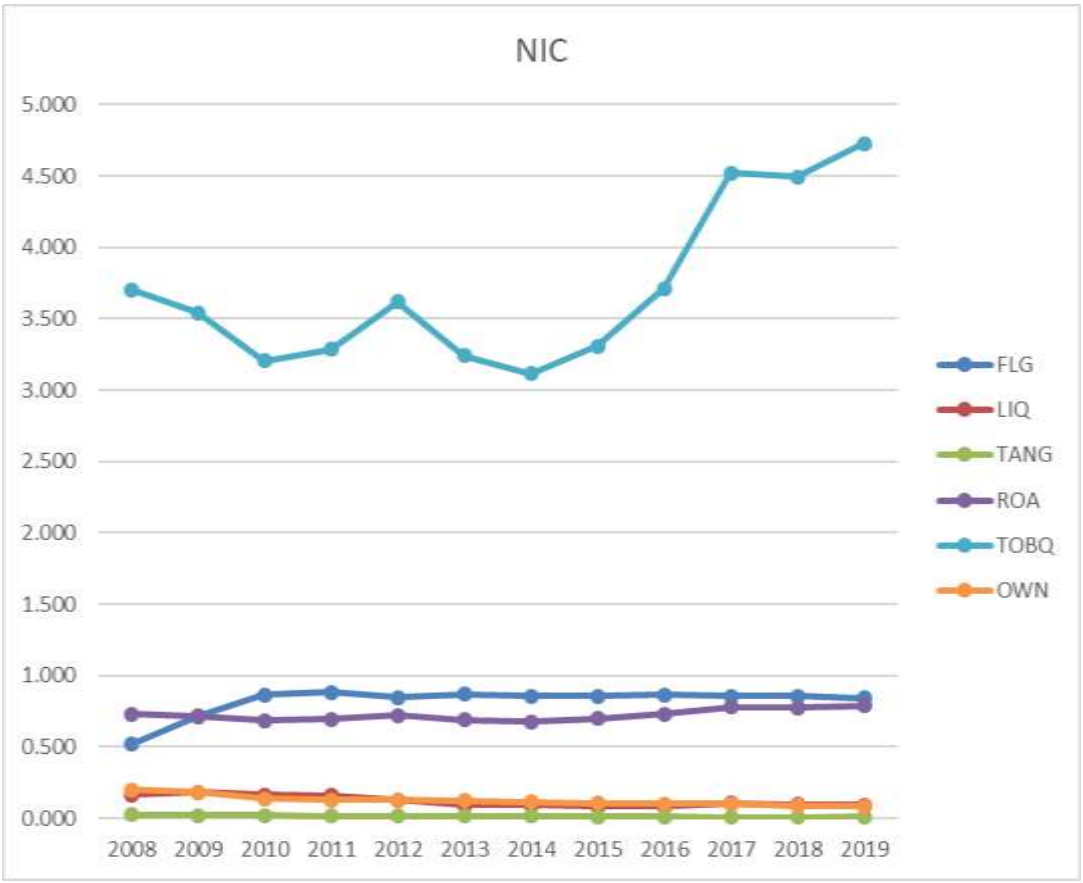
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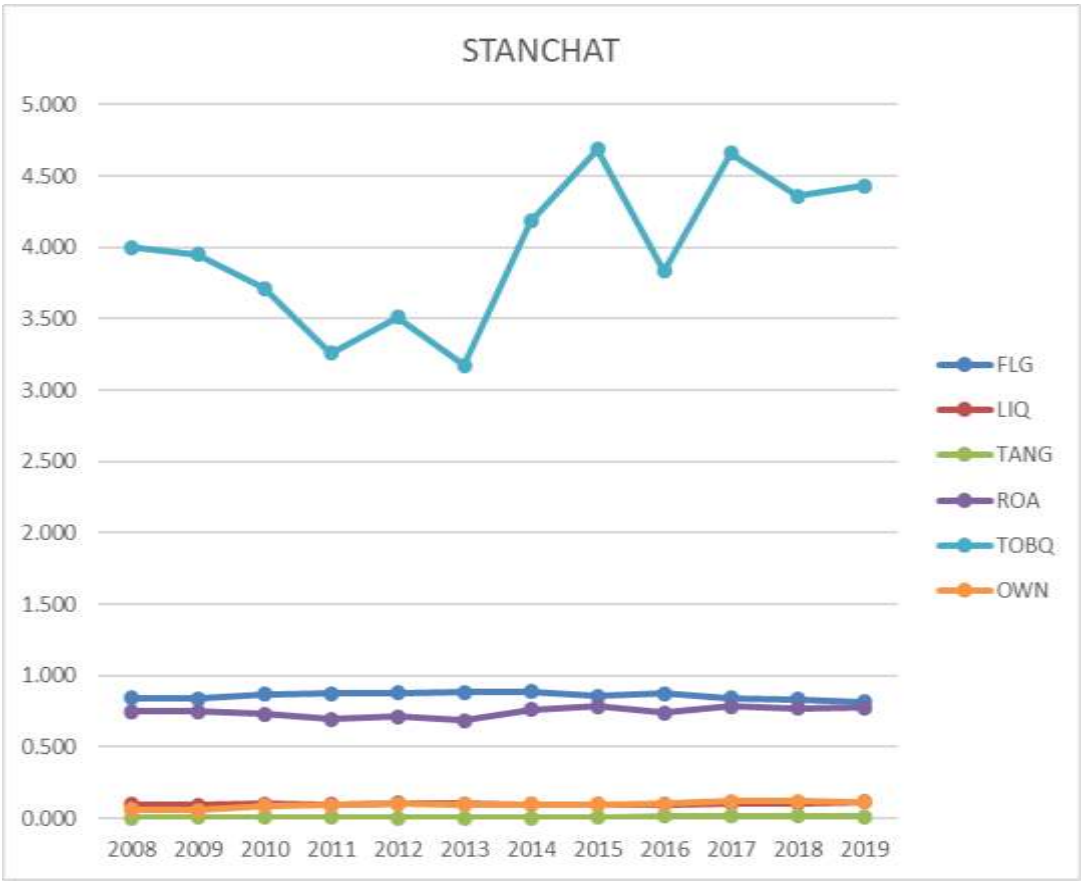
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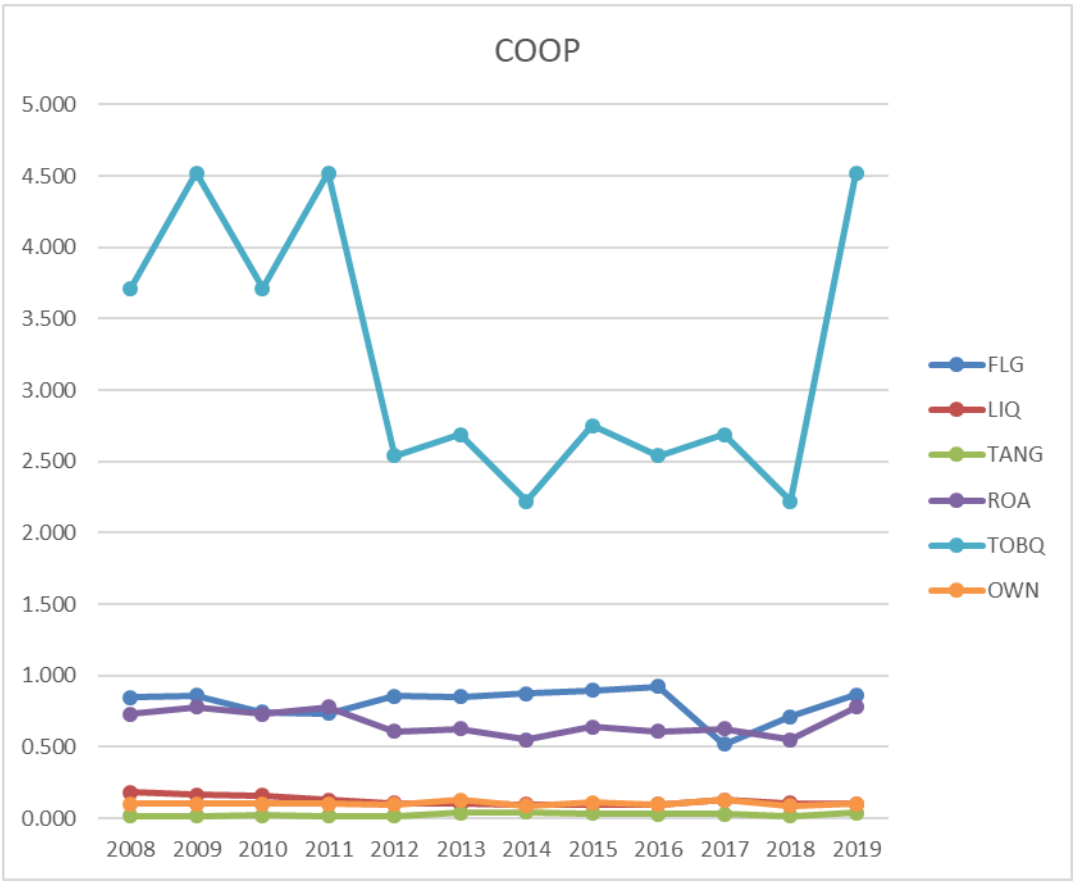
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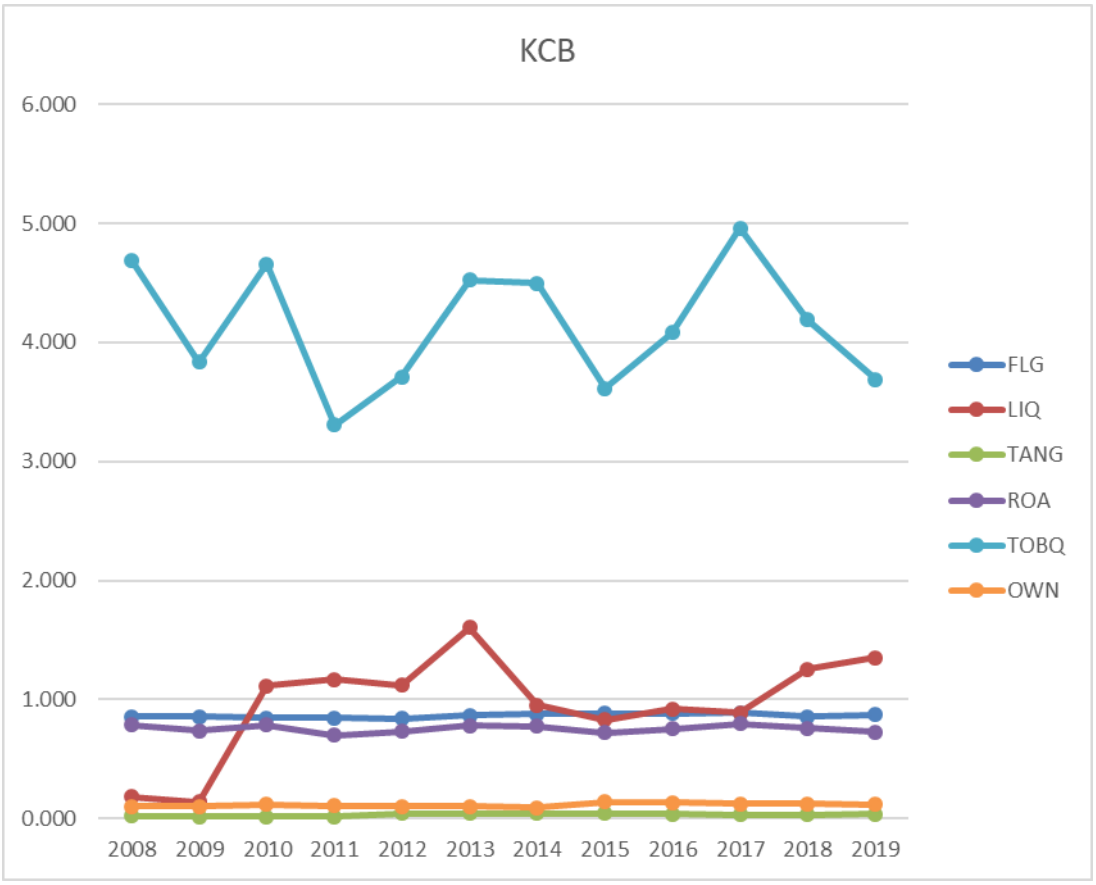
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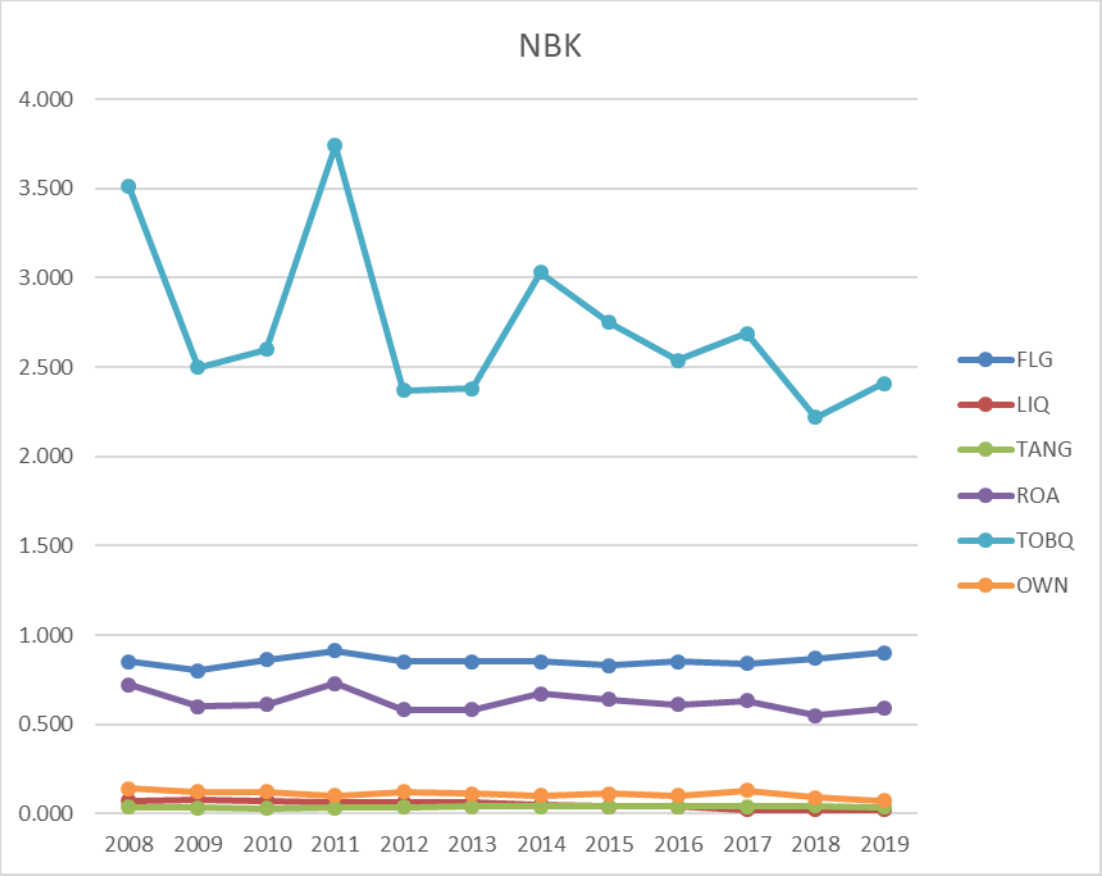
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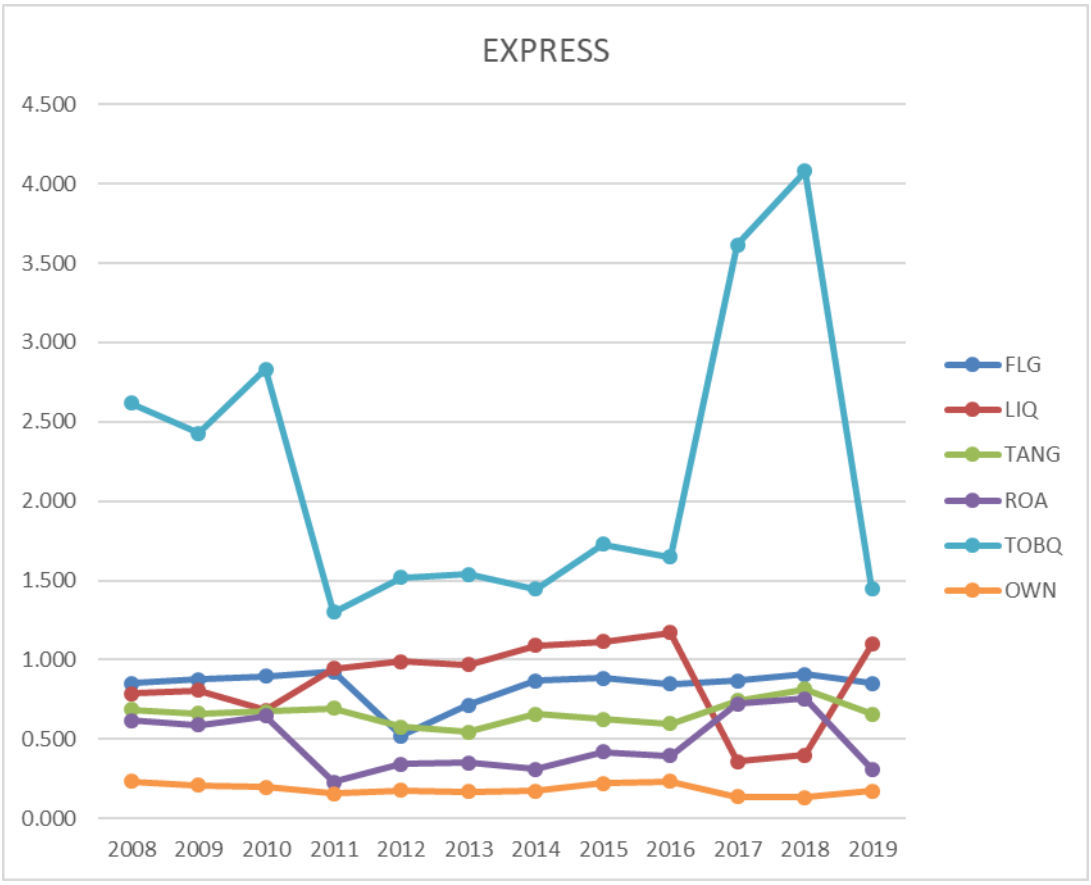
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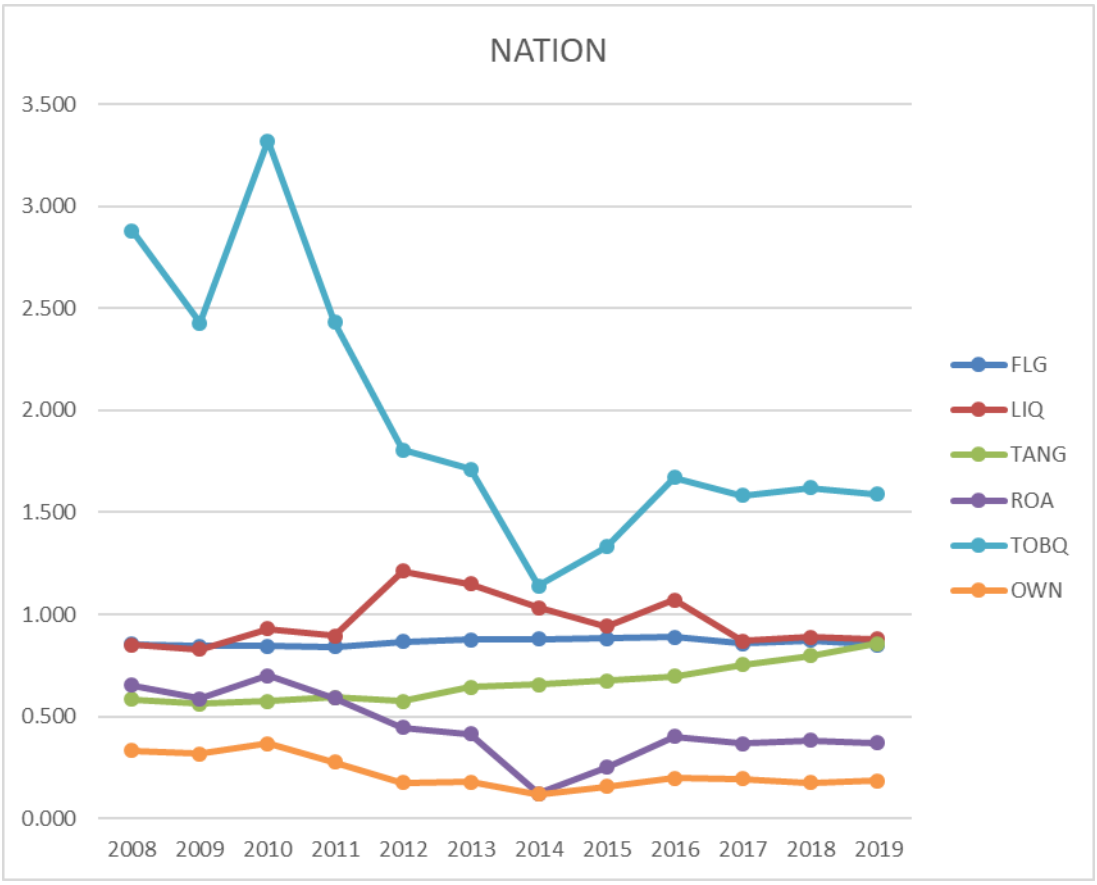
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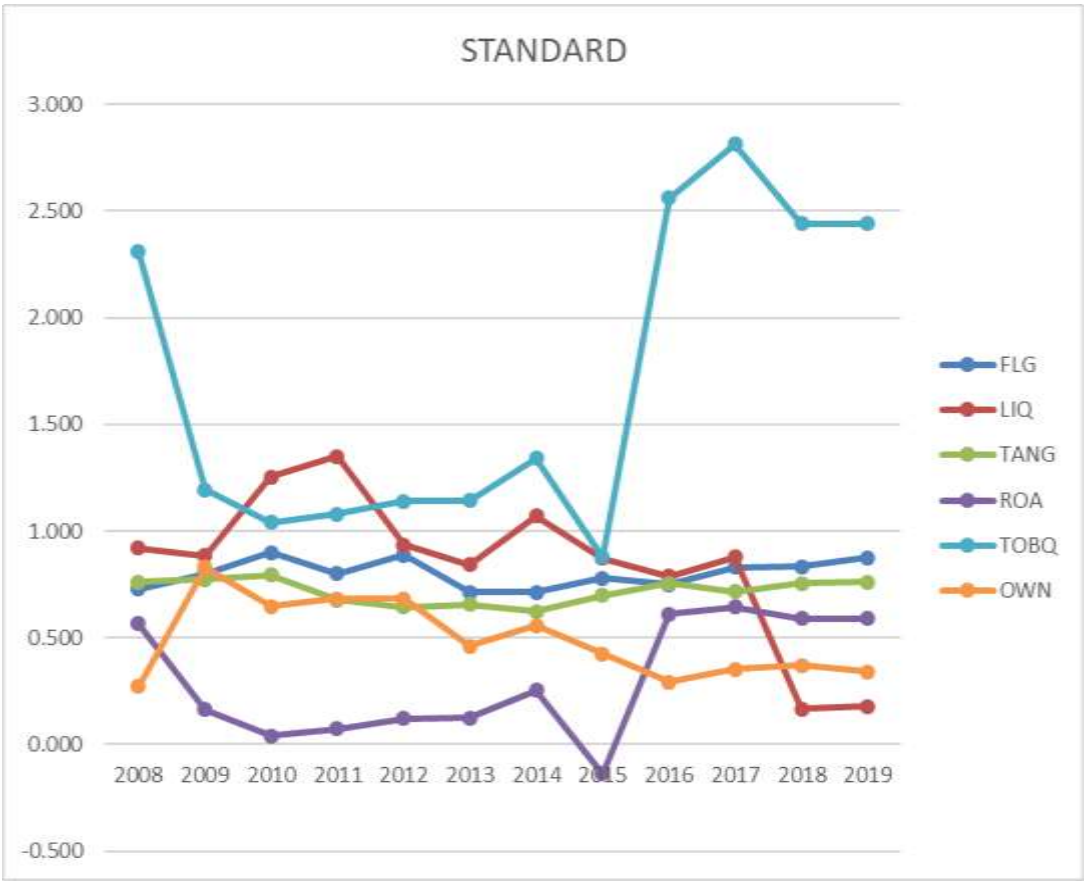
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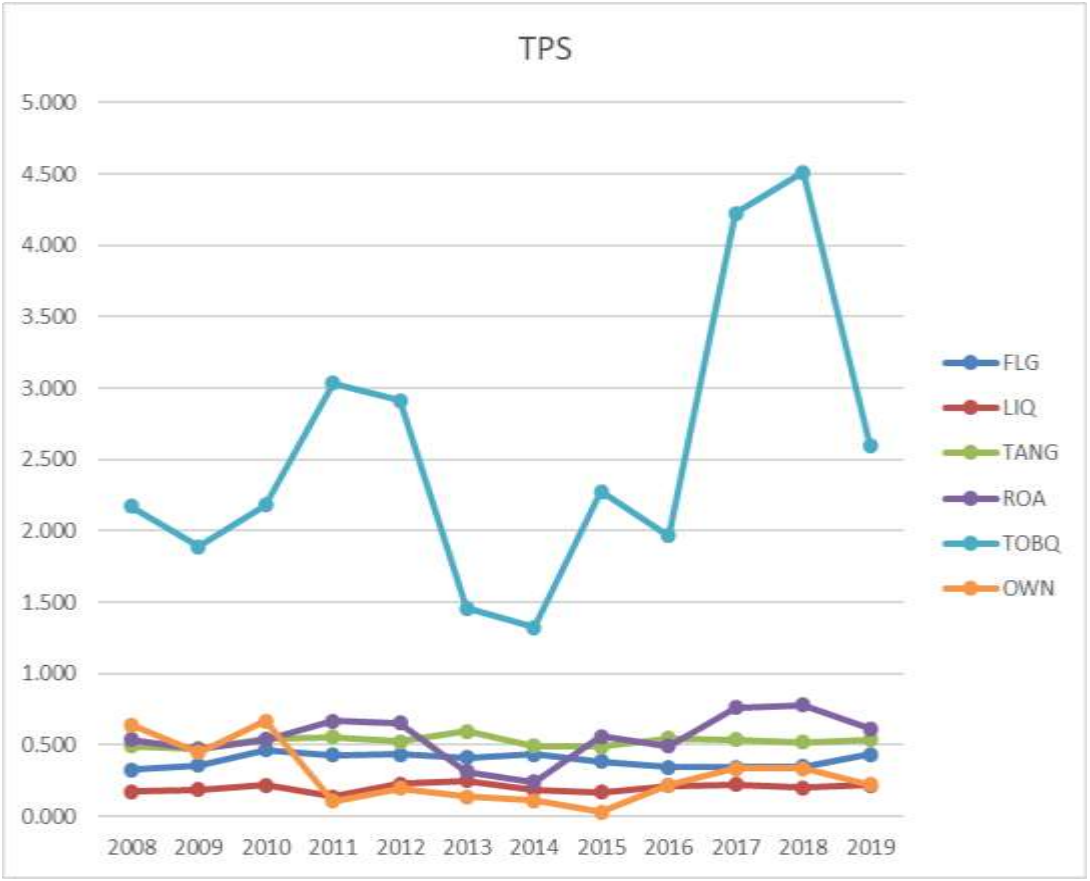
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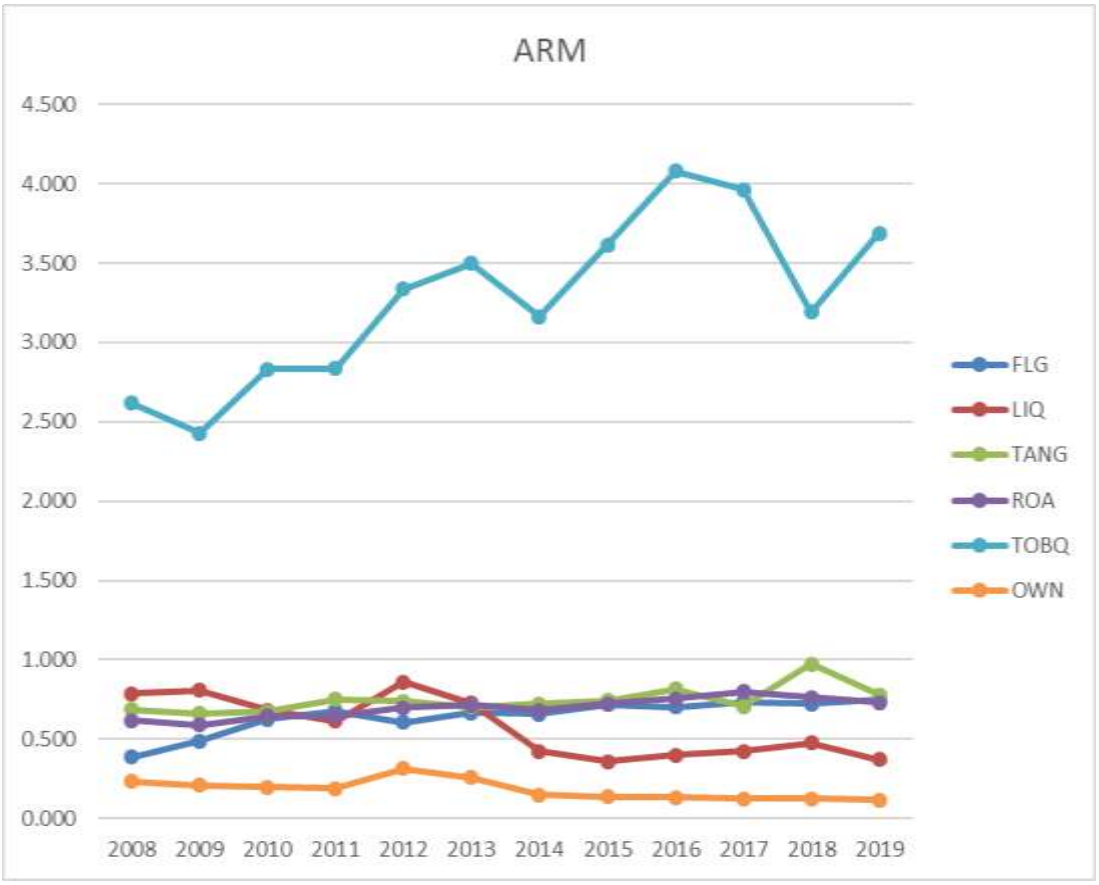
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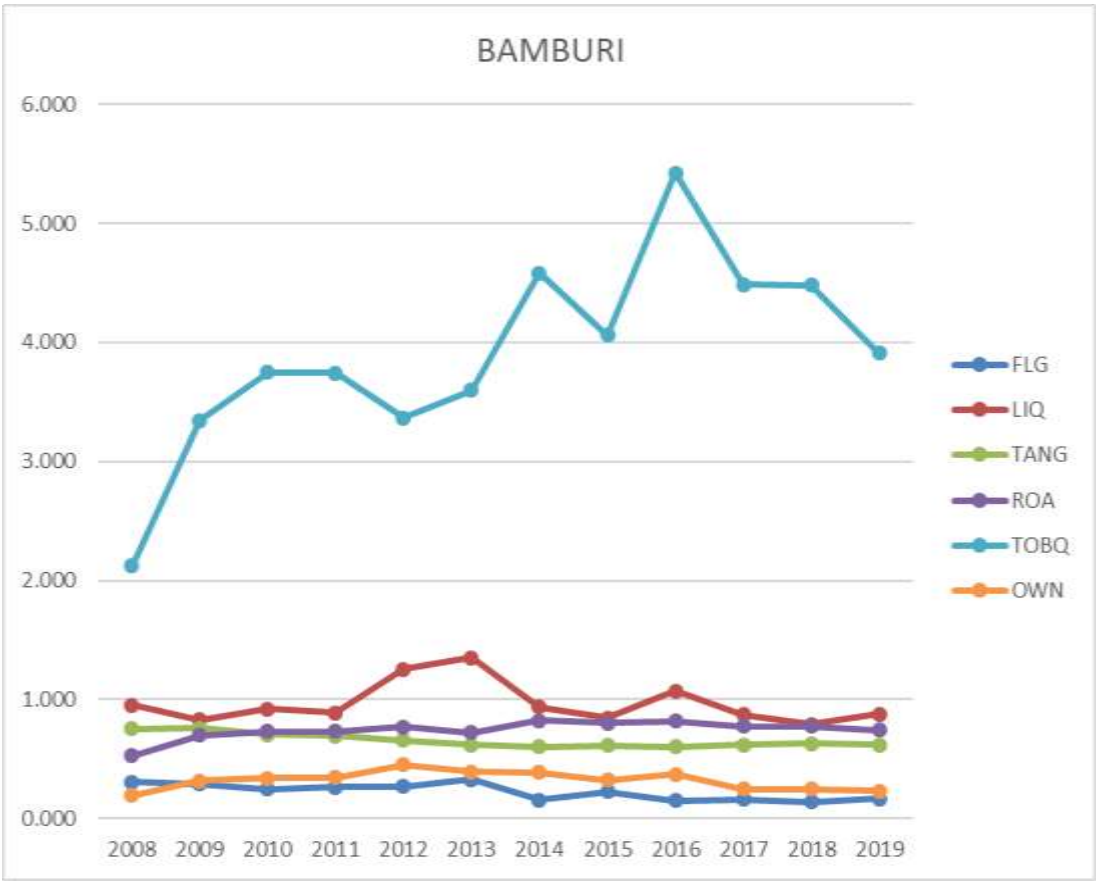
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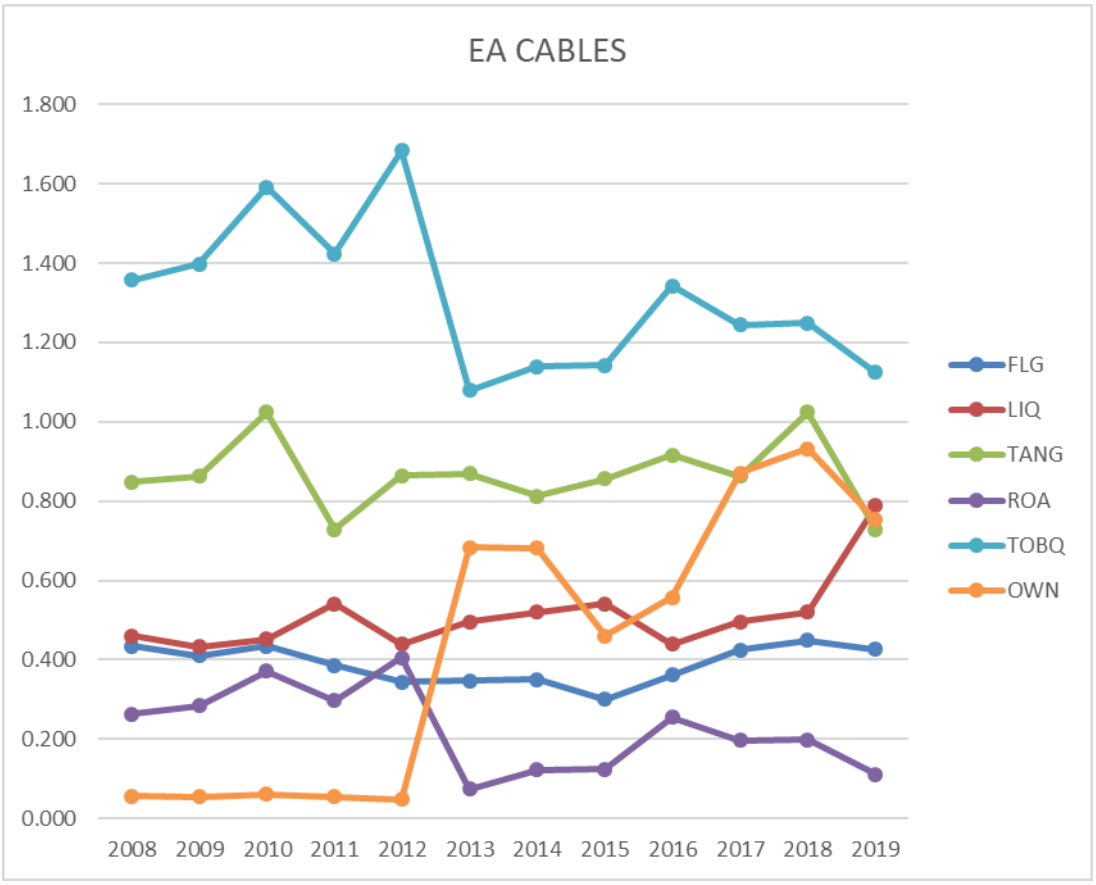
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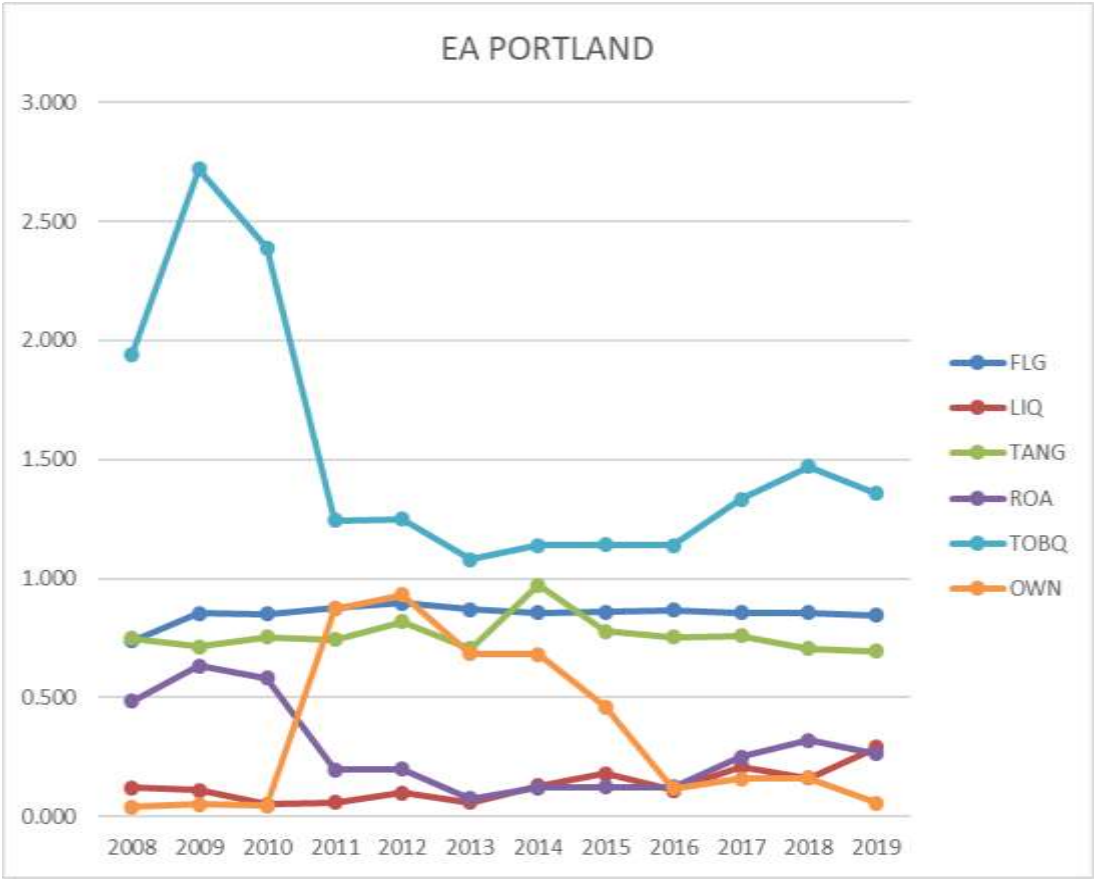
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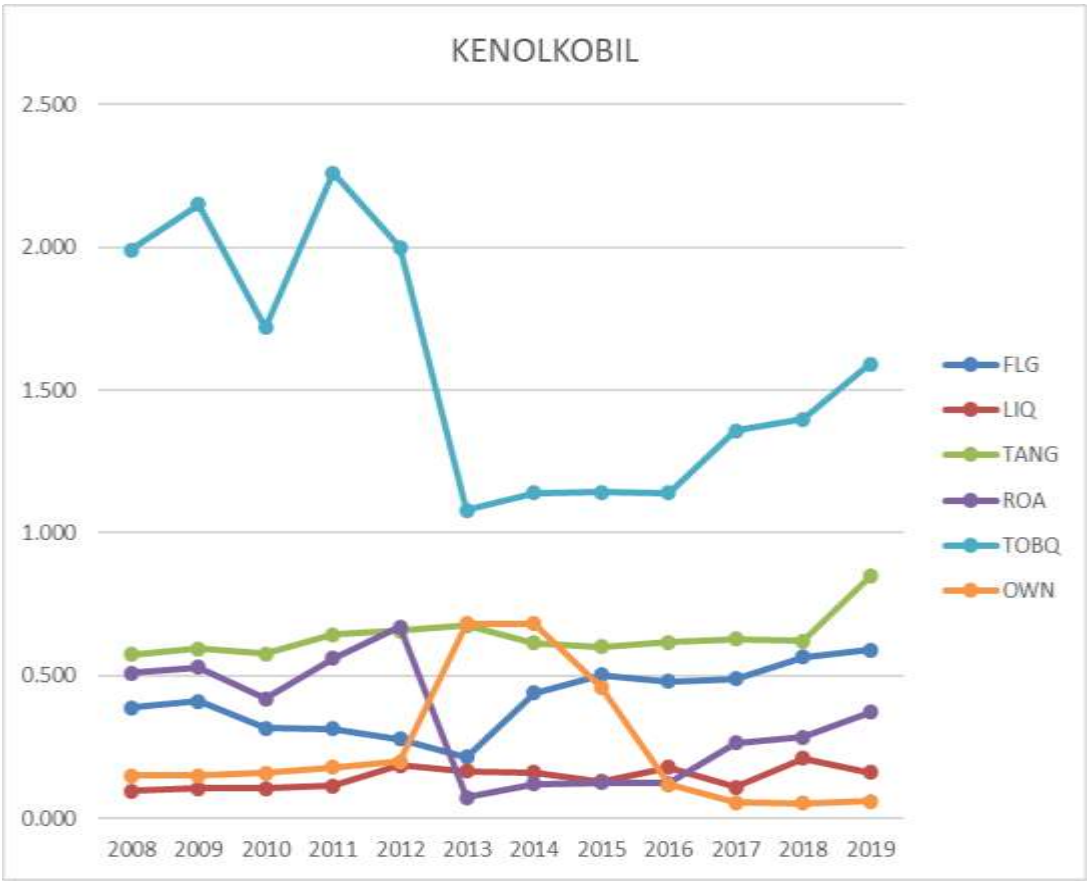
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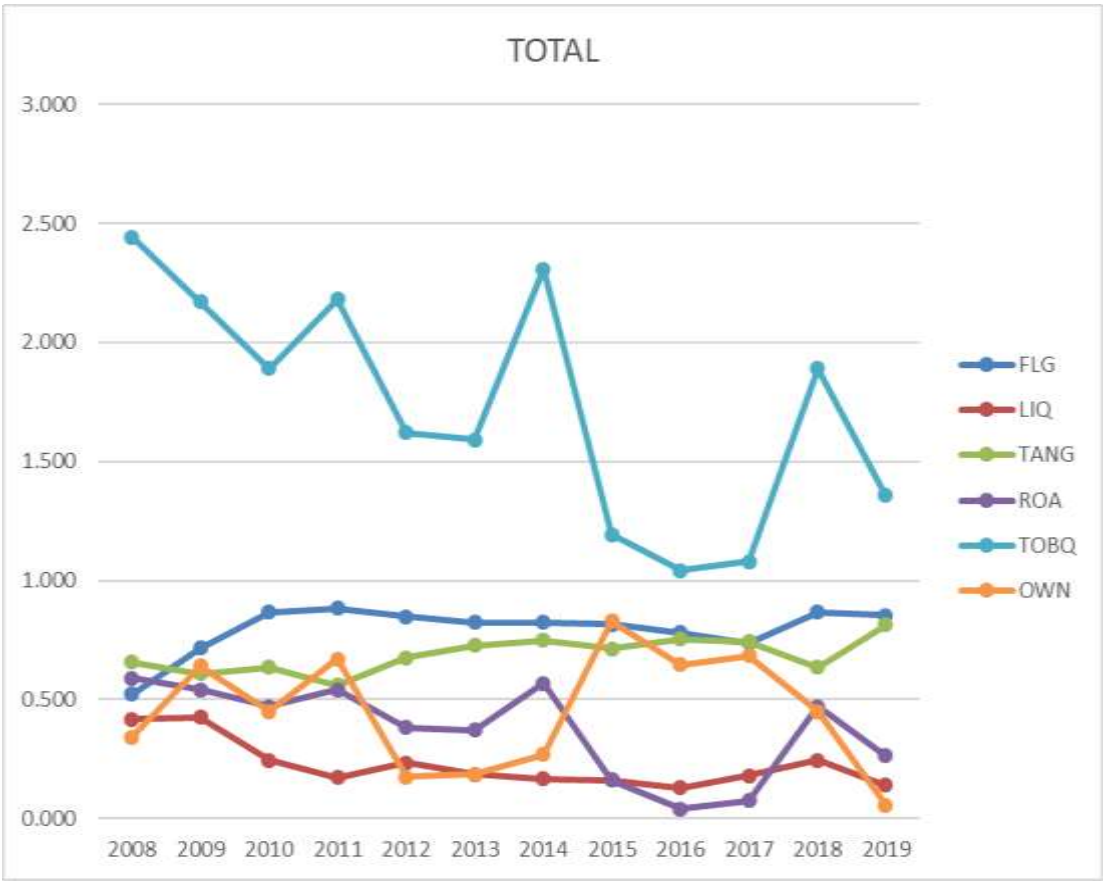
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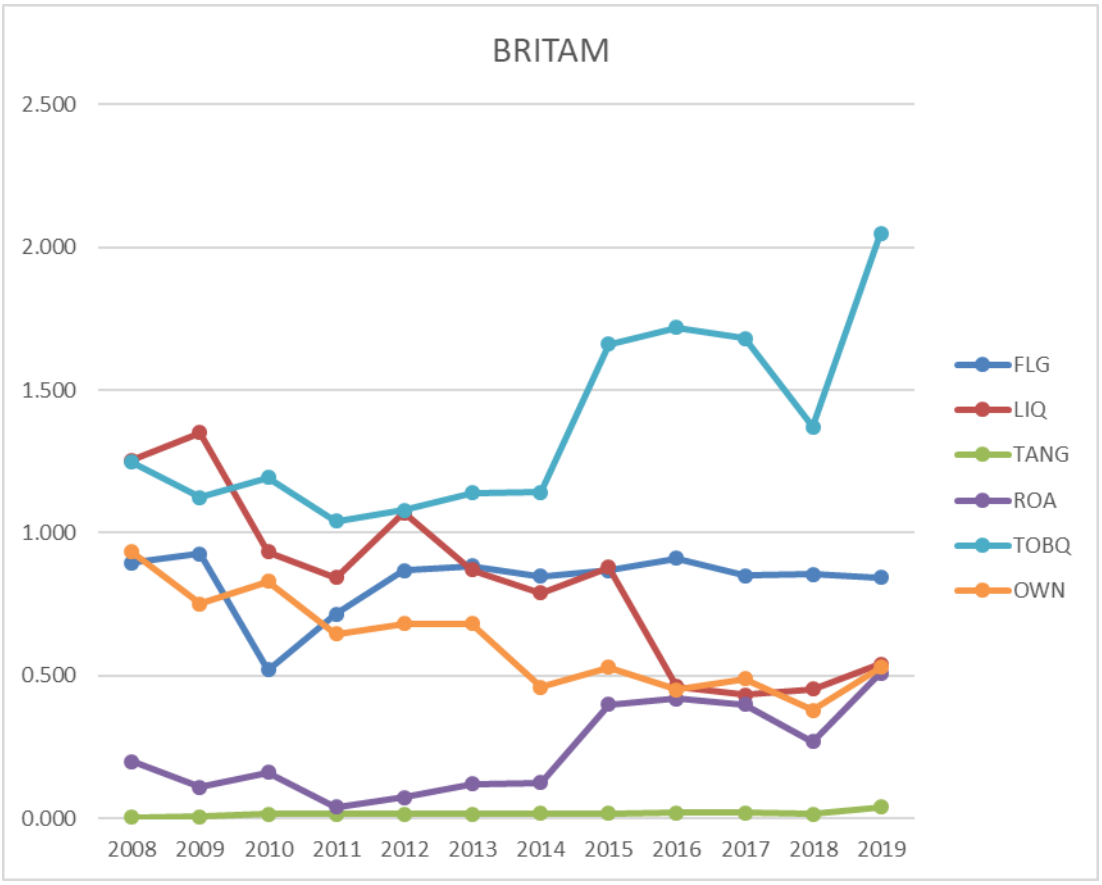
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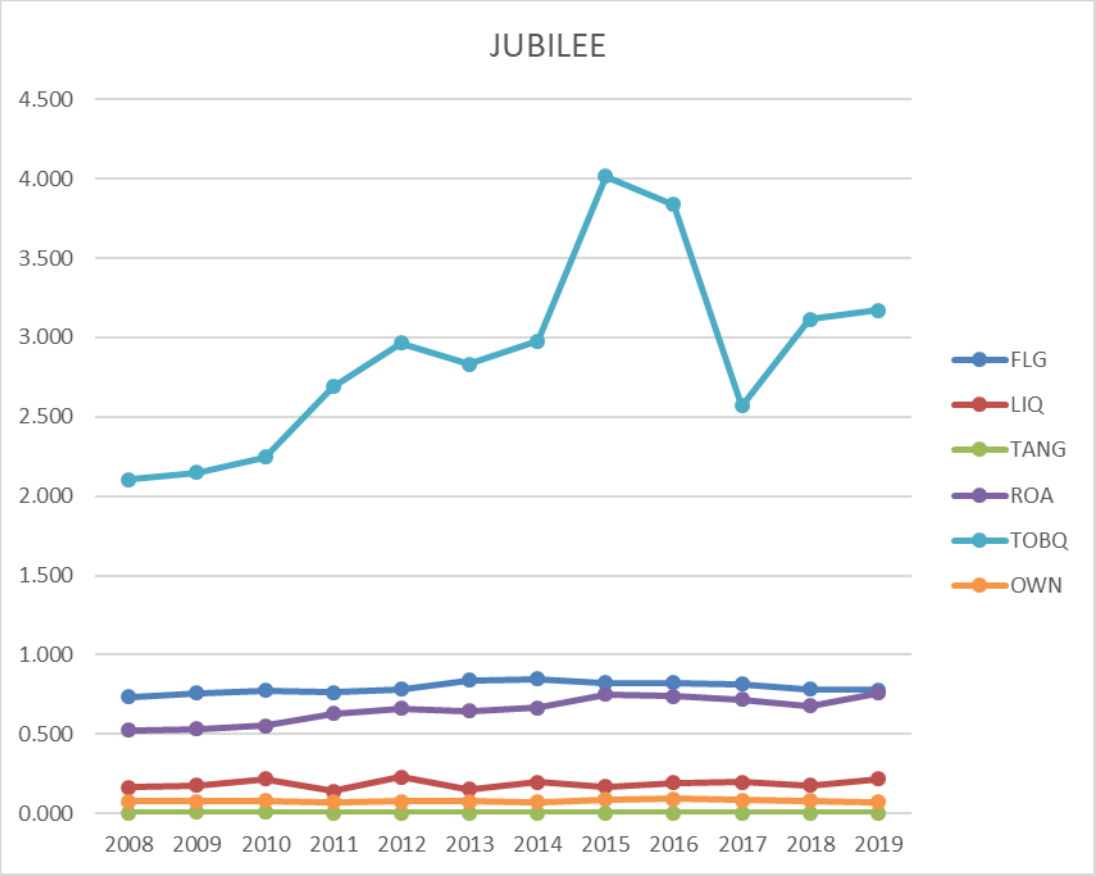
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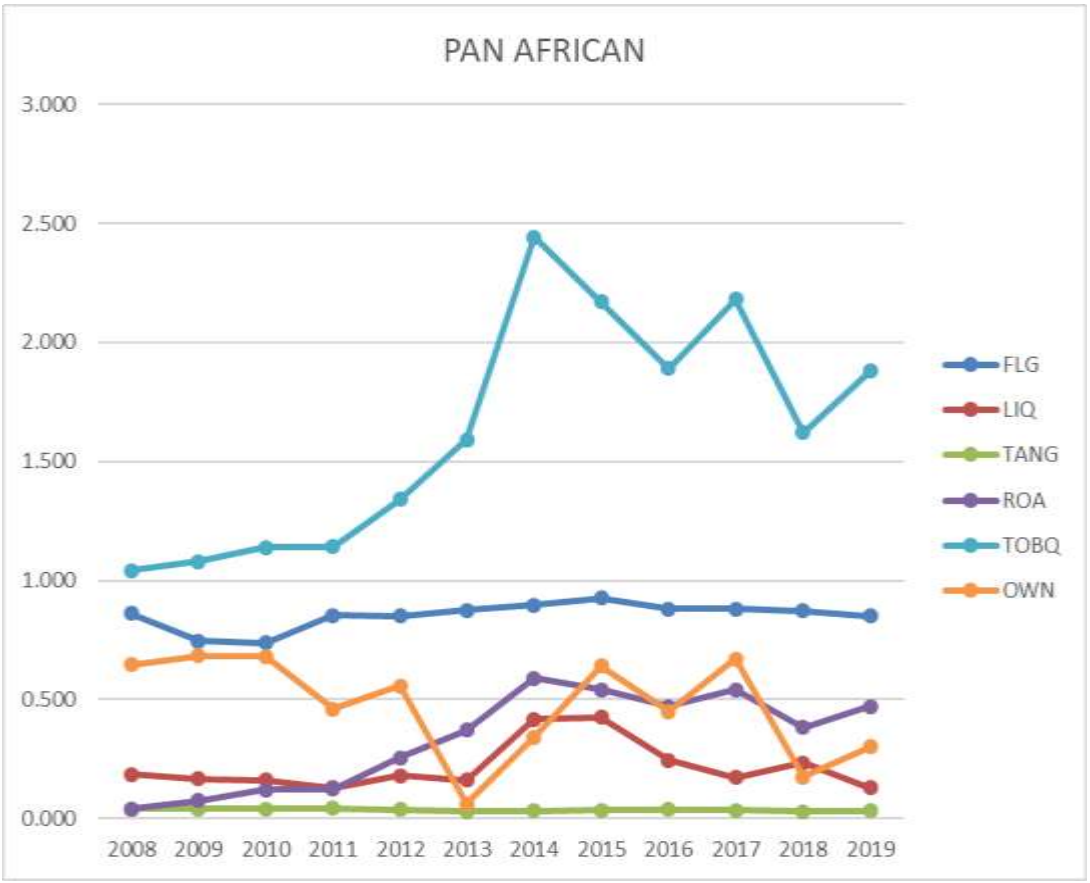
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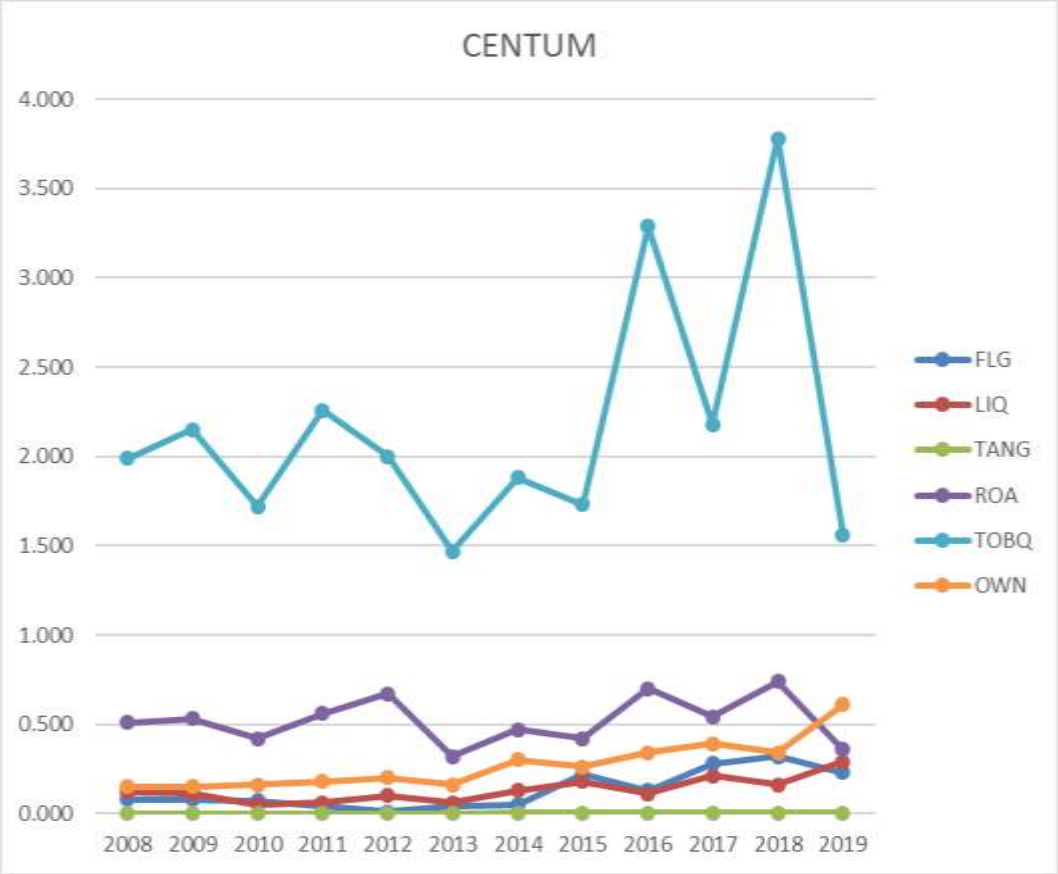
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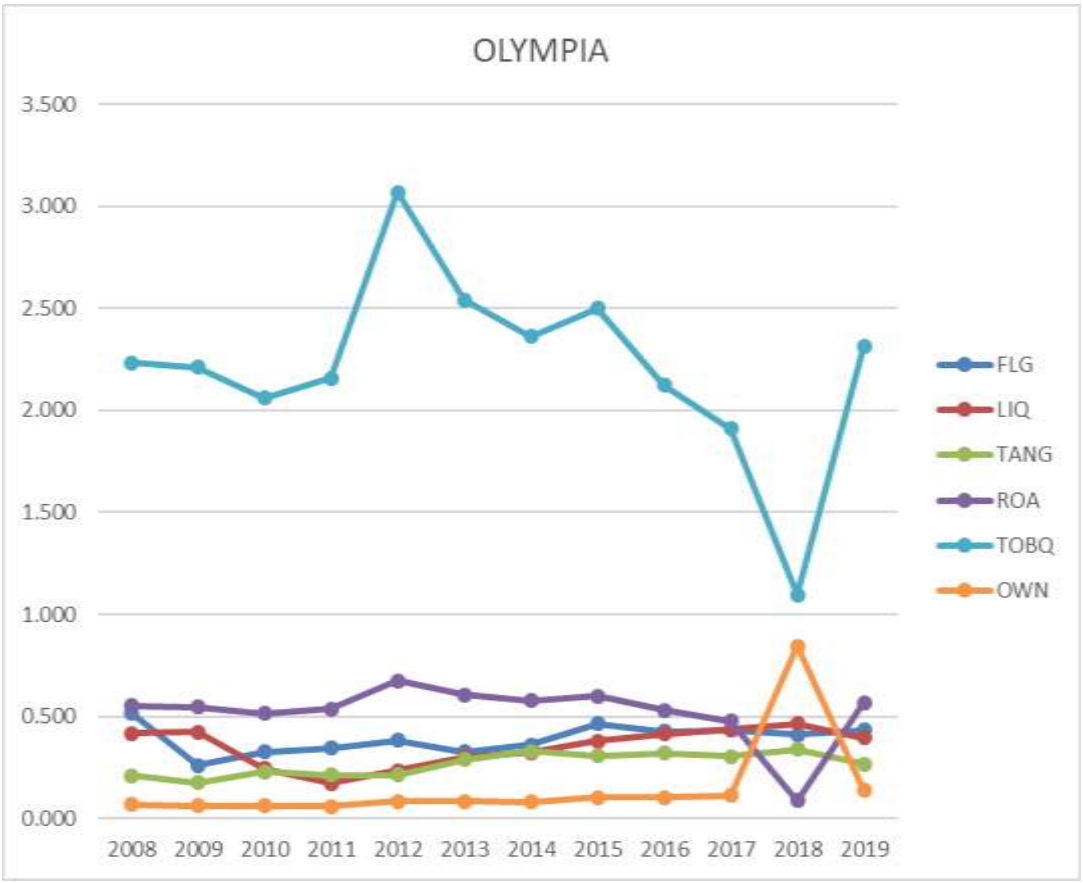
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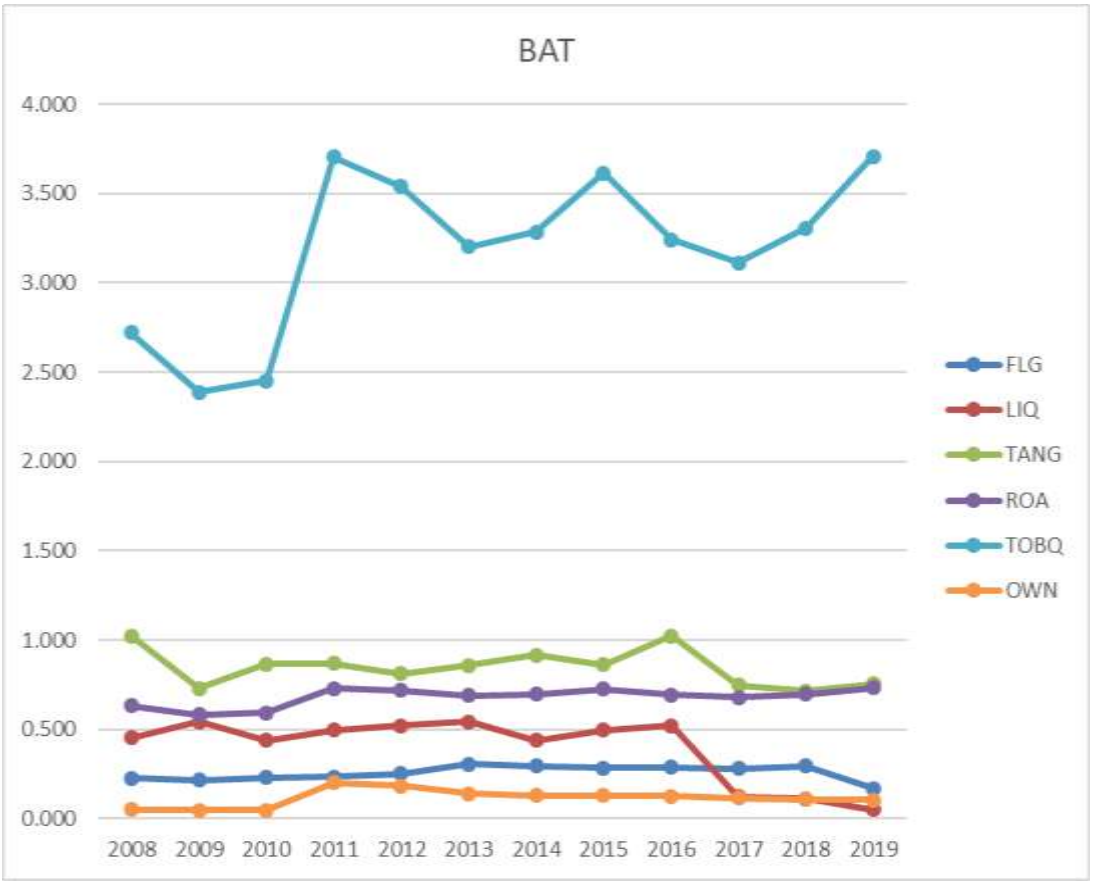
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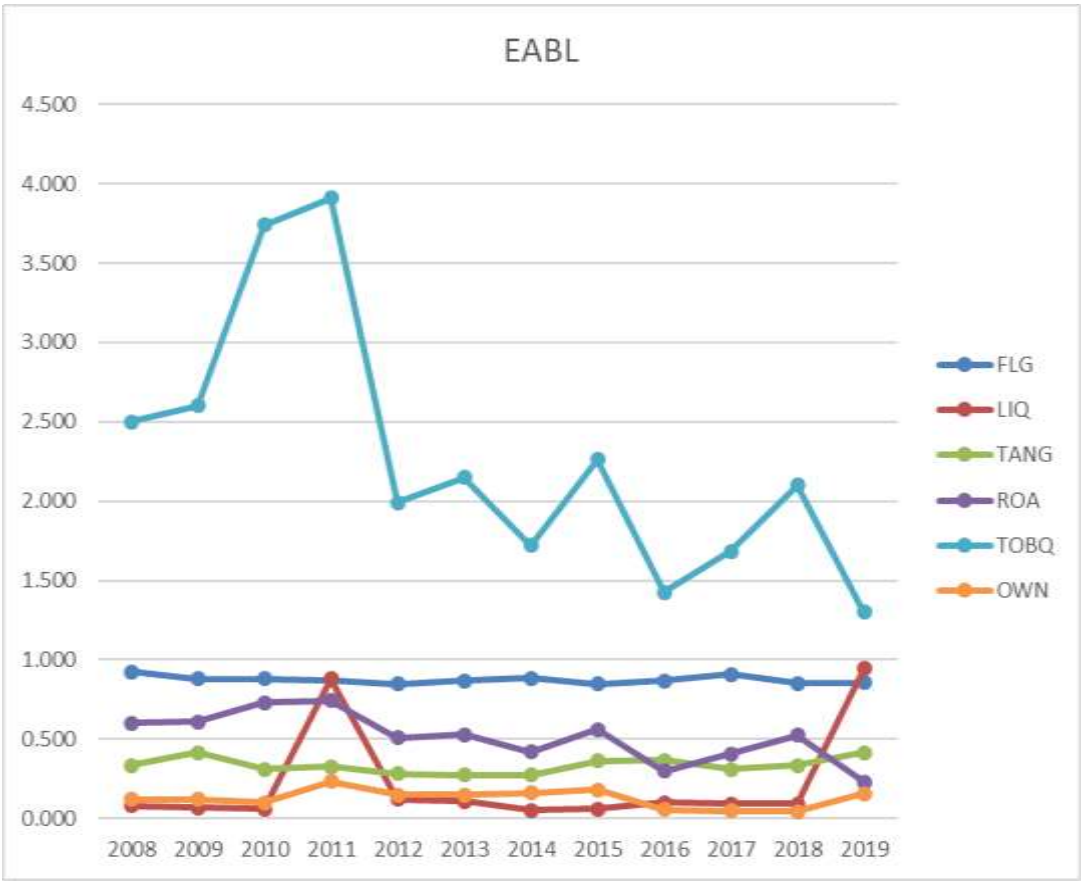
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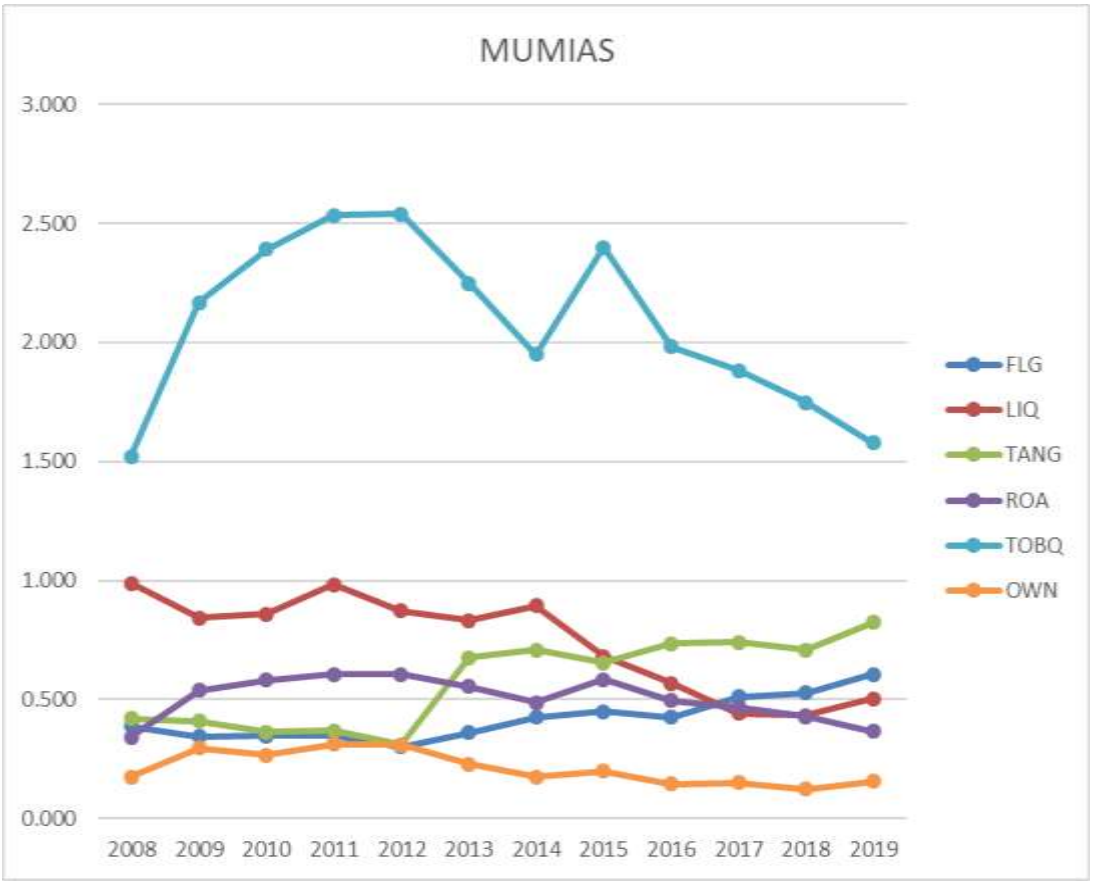
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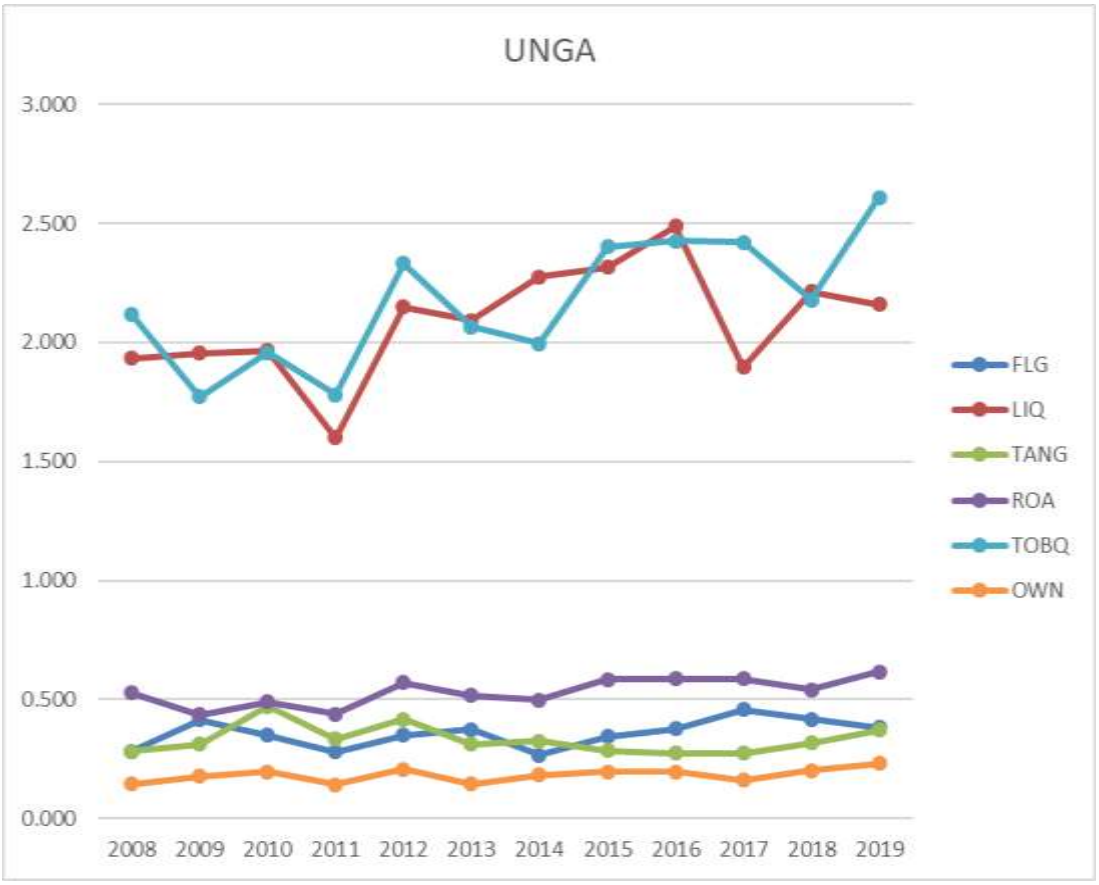
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