ADDIS ABABA UNIVERSITY
DEPARTMENT OF ACCOUNTING AND FINANCE

The impact of liquidity on profitability of Ethiopian Commodity Exchange (ECX) traders

A Theses submitted to the department of accounting and finance in Partial Fulfillment of the Requirement of the Degree of Master of Science in Accounting & Finance

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June, 2018

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This is to certify that the thesis prepared by Solomon Kibret, entitled: the impact of liquidity on profitability of ECX members: submitted in partial fulfillment of the requirements for the degree of Master of Science in Accounting and Finance complies with the regulations of the university and meets the accepted standards with respect to originality and quality. Signed by the examining committee:

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DECLARATION

I, the undersigned, declare that this research is my original work, prepared under the guidance of Abebe_Yitayew (PhD). All sources of materials used for this research have been duly acknowledged, the researcher further confirm that the research has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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June 2018

Acknowledgment

First and foremost, I want to express my great thanks to my advisor, Abebe_Yitayew (PhD), for his valuable guidance and support towards the successful completion of this research paper. His effort has been great in providing the necessary knowledge towards the practical aspects of research methodology.

Second, I am also greatly indebted to my lovely family for giving me such a beautiful time to finish this research paper. They also supported me is all respect and I would like to say them god bless you.

Abbreviations

ECX:- ……..Ethiopian Commodity Exchange

ECEA:- ……Ethiopian Commodity Exchange Authority

ROA:- ……..Return On Asset

CR:- …….Current Ratio

QR:- ……Quick Ratio

GPM:- …….Gross Profit Margin

NPM:- …….Net Profit Margin

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Abstract

The establishment and development of commodity exchange in an integrated manner, where key factors such as market information, grades and standards, contract enforcement, regulations, warehousing and others are also developed, is considered to be one of the institutional interventions that would enable the marketing system to function efficiently. Accordingly, the already established Ethiopia Commodity Exchange (ECX) is expected to help develop an efficient marketing system in the country. The main objective of this study was to assess the profitability and liquidity position of business organizations those trade in ECX trading platform as members through the use of different ratios. A panel data of 66 trading members with 5 years duration with a total of 330 samples was used. The data were entered, manipulated, organized and analyzed using STATAS software with version 13. A panel study was employed based on the secondary data collected through document review, with the profitability of the company as a dependent variable and current ratio, quick ratio, gross profit margin and net profit margin as explanatory parameters. The fixed effect model was used for the basic factors that can affect the traders' profitability. Moreover, the result of the study reveals that current ratio and quick ratios have no impact on profitability but gross profit margin and net profit margin are significantly affecting the profitability therefore, ROA and profitability are positively correlated with a 0.05 level of significance. Therefore both gross and net profit margins lead to increase the profitability of the sectors.

***Keywords**: liquidity, profitability, current ratio, quick ratio, gross profit margin, net profit margin.*

Chapter One

1. Introduction

1.1.Background of the study

In developing countries like Ethiopia, the agricultural sector is entrusted with the objective of ensuring food security and leading the overall economic growth of the nation. In view of this, there have been sweeping policy reforms in the developing countries since the 1980s towards enhancing the productivity and competitiveness of the agricultural sector. Agricultural market liberalization has been one of the policy reforms adopted by developing countries to promote the performance of the agricultural sector. However, the impacts of market liberalization are mixed and associated with problems of price risk and instability. In addition the participation of the private sector in marketing activities has generally been limited because of poor market infrastructure and high transaction costs (MoFED, 2009)

Although, Ethiopia has liberalized its agricultural market, there are critical problems that require addressing in order to develop a well functioning agricultural marketing system. The current agricultural marketing system is costly, risky and inefficient mainly because of lack of or limited infrastructure, market information, grading and standardization, regulation, financing, and coordination. These problems limit the capacity of the private sector to expand its participation in the marketing activities (EM Compass, 2017).

Given these market imperfections and participation risk, it is necessary to develop the marketing system towards managing risk through strategies that allow wider, fair and equitable market participation of all actors. Widely recommended intervention strategies include avoiding information asymmetry, improving regulatory frameworks and financial services, organizing and coordinating farmers, traders, and processors, and improving grading and standardization. These recommendations could potentially be delivered through the use of commodity exchange. (MoFED, 2009)

The establishment and development of commodity exchange in an integrated manner, where key factors such as market information, grades and standards, contract enforcement, regulations, warehousing and others are also developed, is considered to be one of the institutional interventions that would enable the marketing system to function efficiently. Accordingly, the already established Ethiopia Commodity Exchange (ECX) is expected to help develop an efficient marketing system in the country. The anticipated efficient market is expected to be one in which risk is pooled, transaction cost is low, price discovery is efficient and transparent, and contracts are enforced, with positive impact on incentives for private sector participation. Through serving as a hub for exchange, ECX is expected to provide market based mechanisms to manage some of the problems prevailing in the agricultural marketing system such as price risk, counterparty risk, high transaction cost, information asymmetry, and lack of transparency.

This research paper focuses how ECX operates and evaluating its overall performance in relation with the profitability of its market actors. There are around 370 market actors who have seats and trade for their own and behalf of their client. As the market transformed in to new era and the trading system is efficient and transparent, the actors or members who trade there commodity in ECX plat form must be profitable than they traded in traditional manner before the establishment of this modern market place**.**

In order to find the profitability level of firms, return on asset is used, whereby it can clearly be examined that where the firm stands in terms of profitability. Liquidity and profitability has got tremendous importance in the corporate world. Liquidity refers to the management of current assets and current liabilities of a company. It plays key role in defining, whether a firm is able to effectively manage it short term obligations. Due to its dire importance, it is used for firms to maintain a reasonable amount of their assets in the form of cash in order to meet their short term obligations. Balanced liquidity level is necessary for the effectiveness and profitability of a firm. Therefore, firms need to determine the optimum level of the liquidity in order to ensure high profitability. Liquidity should neither be too low nor too high. Rather, it should maintain a reasonable level. Whereas, profitability refers to the revenues earned by firms, against their operations and incurred expenses. Enhancement of profitability is the ultimate purpose of every firm, and each of them strives to achieve optimum profitability. Since, there is a significant relationship between liquidity and profitability of the firm, so the firm is required to maintain

optimum level of liquidity. With the growing trend, it has become a challenge for the sector to earn maximum profitability. It has become necessary for firms to take dynamic decisions to effectively manage their assets. Due to this challenge followed by the growing trend, it has become necessary, that research based study should be conducted to investigate and recommend solutions that would help firms companies improve their profitability. With the same cited objective the researcher conducted this research. We would be able to deduce much. Authentic results that would easily be applicable on other Trading members who registered in ECX. It has largest number of employees and it requires high level of analysis to maintain optimum level of liquidity, in order to ensure high profitability.

Liquidity management is very important for every organization that means to pay current obligations on business, the payment obligations include operating and financial expenses that are short term however increasing long period debt. Liquidity ratios are used within the support of liquidity management inside each organization within the form of current ratio and quick ratio with the intention of extremely influence on the profitability of organization. Thus business has adequate liquid assets (Cash, Bank) in the direction to meet the payment program by compare the cash and near-cash among the payment obligations. Liquidity ratios are working with cash and near-cash assets (together called "current" assets) of a business on one side and the immediate payment obligations (current liabilities) on the other side. The near-cash assets generally consist of receivables from customers and inventories of complete goods and unprocessed materials. Operating cash flows generate by assets will affect continuing firm liquidity (Soenen, 1993). The compensation obligations include dues to suppliers, operating and financial expenses that ought to be paid shortly and maturing installments under long-term debt.

Profitability is a measure of firm's efficiency (Khan & Jain, 1998). It is also a control measure of the earning power of a firm as well as operating efficiency. Weston & Copland (1998) described profitability as net result of a large number of policies and decisions. Ratios are used to measure profitability and these give final answers about how effectively the firm is being managed. Therefore, management, creditors and owner of the company are also interested in the profitability ratio of the firm (Pandey, 1995).

Brigham and Houston (2004) views that financial profitability lies in a firm's ability to generate revenues in excess of its costs: for either long or short term. In the long run, a firm should be able to maintain the value of invested capital and able to yield a profit, which exceeds the opportunity cost of capital meaning that the yield generated by the firm should exceed the opportunity cost of capital. In order to examine long-term profitability, especially Net present value (NPV), profitability index (PI) and internal rate of return (IRR) are used. Short-term profitability, on the other hand, refers to a firm's ability to make an operating profit for which financial ratios on a yearly basis are used (Bierman and Smidt, 1980).

Elumilade et al. (2006) described investment decision as one of the most significant decision areas that affect the future profitability either because it might result in an increase in revenue or because it can cause an increase in efficiency and a reduction in costs.

Van Horne (1996) suggested the methods of evaluation of capital budgeting that are average rate of return (ARR), pay-back period (PBP), internal rate of return (IRR), net present value (NPV), and profitability index (PI). In order to measure long-term profitability, current study uses especially net present value (NPV), profitability index (PI) and internal rate of return (IRR), the major techniques of capital budgeting. The current study has used these three techniques on the financial performance of selected commercial banks in Nepal, so that the management makes the decision either to accept or reject the proposal.

Pradhan (2007) evaluated the financial ratios, financial distress and stakeholder losses in corporate restructuring and attempted to explain the behavior of financial ratios in financially distressed firms. But, it did not address any long-term profitability position of the studied firms by using capital budgeting techniques.

Etelälahti et al. (1992) described that investments usually refer to the utilization of long-term benefits through short-term costs. It is highly common that cash-flows are skewed so that the initial cost is high and the benefits are realizing later.

Honko et al. (1982) viewed capital investments as a significant outlay of money in order to receive future benefits. They also highlight that capital investments are important not only to the enterprise in question, but to the society as a whole. In addition, the future direction and survival

of a company is mainly determined by the capability to direct its funds towards productive and profitable purposes.

If companies do not evaluate projects correctly, and steer the available financial resources to right targets which give out returns more than the cost of capital, it will result to deteriorating value of the corporation (Arnold et al., 2000; Klammer et al., 1991).

Poudel, et al. (2010) in their study of capital budgeting of organic coffee production in Gulmi District of Nepal, used Benefit-Cost ratio (B/C), Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period (PBP) to find out the project's profitability and economic viability.

Okechi (2004) presented a profitability assessment tool developed for the purposes of evaluating the feasibility of fish farming investment and operations. It applied indicators of investment returns such as net present value (NPV) and internal rate of return (IRR), payback period (PBP) and debt service coverage ratio to evaluate the profitability of the venture.

Elumilade (2006) used the interest rate as the discount rate for cash-flows. Hence, the current study has adopted the same approach to study the profitability of Nepali commercial banks.

Regmi (2005) analysed the profitability of Nepalese commercial banks by analyzing the relationships between EPS, DPS and MPS of the banks. The study, however, did not deal with the profitability forecasting through capital budgeting techniques.

Previous studies related to profitability as well as profit planning and control for manufacturing companies but the number of studies on banks is smaller. Moreover, they did not apply the capital budgeting techniques as the long-term method for assessing the profitability of Nepali organizations. The current study is an attempt towards fulfilling this lacking to some extent.

In order to pay current obligations, liquidity management is very important for every business organization. The business has enough liquid assets (i.e., Cash in hand, Cash at bank etc.) to meet the payment obligations. Liquidity ratios work with cash and near-cash assets (i.e., liquid fund) of a business on one side, and the immediate payment obligations (current liabilities) on the other side. If the coverage of the current liabilities by the cash and near-cash is insufficient, it

indicates that the business might face difficulties in meeting its immediate financial obligations. This can affect the business operations and profitability of the organizations. The Liquidity versus Profitability Principle: There is a trade-off between liquidity and profitability; gaining more of one ordinarily means giving up some of the other (Saleem & Rehman, 2011).

Liquidity management is of crucial importance in financial management decision. The optimal of liquidity management is could be achieve by company that manage the trade-off between profitability and liquidity management (Bhunia & Khan, 2011). Bordereau and Graham (2010) analyzed the impact of liquidity on bank profitability for a sample of large U.S. and Canadian banks (1997 to 2009). Results indicated that profitability has been improved for banks (in US and Canada) that hold more liquid assets, however, there is a point at which holding further liquid assets diminishes a banks' profitability, all else equal. The paper also found that that relationship varies depending on a bank's business model and the state of the economy.

As an evidence of a positive relationship between liquid assets and bank profitability for 90 banks in Europe, North America, Bourke (1989) found that the relationship varies depending on a bank's business model and the state of the economy while Molyneux and Thornton (1992) and

Goddard, et al (2004) found mixed evidence of a negative relationship between the two variables

for European banks in the late 1980s and mid-1990s, respectively. Liquidity risk threatens the solvency position of financial institutions. It also negatively affects the health of the institutions. There are two types of liquidity risks (i.e., first type and second type) arise in the financial institutions although they can raise the funds by running down their cash assets, borrowing additional funds in the money markets and selling off other assets (Shrestha, 2012)

In case of commercial banks, first type of liquidity risk arises when depositors of commercial banks seek to withdraw their money. They become insolvent if the assets are not enough to meet the liability withdrawals. Similarly, the second type of liquidity risk arises when money supply cannot meet the demand of unexpected loans due to the lack of the funds (Baral, 2005). On the other hand, maintaining the high liquidity position to minimize such risks also adversely affects the banks' profitability. Return on highly liquid assets will be almost zero. Therefore, banks should strike the tradeoff between liquidity position and profitability to keep their health sound. Commercial banks' liquidity exposure can be measured by analyzing the sources and uses of

liquidity. In this approach, total net liquidity is worked out by deducting the total of uses of liquidity from the total of sources of liquidity. Different liquidity exposure ratios such as borrowed funds to total assets, core deposit to total assets, loans to deposits, and commitments to lend to total assets are used to measure the liquidity position of a commercial bank (Saunders & Cornett, 2004).

Nepal Rastra Bank (NRB) has used NRB balance to total deposit ratio (NRBTDR), Cash vault to

total deposit (VTDR), Total liquid fund to total deposit ratio (LFTDR) to measure the liquidity position of commercial banks (NRB, Mid-July 2011). Profitability is a measure of firm's efficiency (Khan & Jain, 1998). It is also a control measure of the earning power of a firm as well as operating efficiency. Weston and Copland (1998) described profitability as net result of a large number of policies and decisions. Ratios are used to measure profitability and give final answers to how effectively the firm is being managed in terms of its financial performance. Therefore, management, creditors and owners are also interested in the profitability ratio of the firm (Pandey, 1995). Short-term profitability refers to a firm's ability to make an operating profit for which financial ratios on a yearly basis are used (Bierman & Smidt, 1980). This study also did not emphasize the liquidity management.

Shrestha (2012) analysed the association between liquidity and profitability of commercial banks in Nepal. Out of 26 listed in NEPSE, 8 private commercial banks are selected as a sample for the study. Correlation model with t test is used to measure the relationships. It is found that there is an association between liquidity and profitability of commercial banks in Nepal. Saleem and Rehman (2011) analysed impacts of liquidity ratios on profitability of 26 oil and gas companies in Pakistan with 6 years data. The study has used simple and multiple regression models. It is found that liquidity ratios affect the profitability ratios. Elumilade et al. (2006) described investment decision as one of the most significant decision areas that affect the future profitability either because it might increase revenues or because it can cause an increase in efficiency and reduction in costs. But the study did not cover the effects of liquidity on profitability.

Pradhan (2007) evaluated the financial ratios, financial distress and stakeholder losses in corporate restructuring and attempted to explain the behaviour of financial ratios in financially distressed firms. Regmi (2005) analyzed the profitability of Nepalese commercial banks by analyzing the relationships between EPS, DPS and MPS of the banks. The study, however, did not deal with the profitability forecasting through liquidity ratios. Previous studies related to profitability as well as profit planning and control for manufacturing companies but the number of studies on banks is smaller. Moreover, they did not examine the effect of liquidity on profitability of the Nepali banking sector. The current study is an attempt towards fulfilling this lacking to some extent.

1.2. Statement of the Problem

Since the start of trading commodities from 2008 in ECX platform around 325 officially registered trading members tries to buy and sell their commodities on behalf of millions of farmers who can't direct access to come and trade in ECX pit. It is through these limited members that every household farmer and the union brings their product in ECX platform and sold in an open outcry format and also through this channel the money transferred back to each farmer or union. As the Ethiopian government follows Agricultural Development Led Industrialization (ADLI) policy to attain the development goal there should be surplus market oriented production as well as efficient and effective marketing system that will enable farmers or other producers to gain the actual profit from what they produce. However, most of the Ethiopian farmers do not receive the right profit due to inaccurate information about market price, middle men, low bargaining power, low product grading, and quality standards. This has resulted in loss of motivation for the farmers to produce surplus which leads to low household income and the export earnings of the country (MoFED, 2009). Ethiopia's agricultural markets are characterized by high transaction costs resulting in only one-third of the output reaching the market. Buyers and sellers tend to trade only with those they know to avoid the risk of being cheated. Trade is done on the basis of visual inspection because there is no assurance of product quantity and quality, which drives up marketing costs, leading to high consumer prices. Small scale farmers, who produce 95 percent of Ethiopia's output, come to nearest market with little information and are at the mercy of merchants they know and are unable to negotiate better prices or reduce their market risk (ECX, 2008).

Major constraints to such market performance or failure can be identified as the trust worthiness of the ECX trading system where millions of farmers hand over their product to a few trading members hopping that they will receive the reasonable price after some time through these traders without any default. In point of fact ECX from its inception designed as a middle place to facilitate receiving goods from farmers and unions and pay pack the money to them with zero default. Even though the ECX and other governing rules boldly say this trust and reliability are not something easy task that is going to internalize to all the farmers and other suppliers.

The Ethiopia Commodity Exchange Authority (ECEA) who is appointed as a regulatory body is in charge of whether the market integrated is maintained as intended; as a result ECEA engaged itself in a massive training and awareness program with huge annual budget. The feedback collected from training and awareness program shows there is still a big uncertainty as to the level of trust worthiness and the total reliability of the ECX marketing system. Members who traded for their own and for their client also said that trading in ECX plat form is not profitable enough to stay in the market, that's why most members who have seat sold their membership to other and out from the market. On the other hand some members argued the above opponents and said that trading in ECX platform is more profitable liquid than trading in traditional market, that's why people are participating in tender and proposing very high price for one member seat.

Recently, on June 2017 ECX launches a big reform on coffee exchange with the help of different government bodies. The preliminary study conducted by members of the reform shows that the transaction cost of coffee in Ethiopia is much higher than other coffee exporting countries. The study says transaction cost of Vietnam is 6%, Brazil 10%, Colombia 14% and Ethiopia 40%. (ECX coffee reform, 2017). This huge transaction cost has a great impact on profitability of market members who trade on ECX plat form.

Moreover, high commodity cost may lead to minimum profit or high loss. If the market is not efficient, which doesn't balance demand and supply and avoid many intermediary costs most of the traders if not all incur huge loss which can have a potential danger even to destroy the whole market system. Therefore, trading in ECX market place must give a reasonable assurance in line with profitable, and must be well assessed the impact of liquidity management on profitability that is because the primary goal of every trader is to ensure that profitability will go indefinitely without any interruption. Therefore, profitability and liquidity issues are a big problem which

must be addressed properly while business actors trading in Ethiopian Commodity Exchange (ECX).

This study mainly focuses on market members financial data and tries to investigate whether trading in ECX is profitable or not, at the same time tries to assess the impact of liquidity management on profitability.

Ethiopian commodity Exchange Authority (ECEA), the regulatory body has an enforcement, surveillance and judiciary directorate to monitor, investigate and give verdict while default, cheating and any other fault occurs. The authority also conducted a performance Audit in the year 2014 on the performance of enforcement division, the result and the sample assessment shows there was a significant number of cheating and abuse by trading members investigated and penalized by court and also a simple survey conducted as to the reliability of trading commodities on ECX platform by taking inquiries, the result more or less shows there is still discomfort about the reliability. The very strong pillars that the Ethiopia Commodity Exchange stands on its market are profitability and reliability, anything that affect these pillar, will bring a serious consequence to the extent the ECX existence and the damage on the farmers and other suppliers will not be compensated easily. The trade normally taken place with different limitation, Profitability can be affected by different factors; major concerns are the weak access for smallholder farmers to roads, as well as limited telecommunications and storage infrastructure. These weaknesses contribute to the high cost of transport as well as of other physical marketing costs, such as storage, handling, etc. Thus, marketing costs amount to some 40 to 60 percent of the final price, about 70 percent of which is due to transport. However, beyond the infrastructural issues, studies also point to the significance of transaction costs which are equally or more constraining to trade. These costs, distinct from physical marketing costs are related to conducting or coordinating market transactions between actors, such as the costs involved in searching for and screening a trading partner, obtaining information on prices, qualities and quantities of goods, negotiating a contract, monitoring contract performance, and enforcing contracts. In the Ethiopian context, the presence of high transaction costs evidenced by the lack of sufficient market coordination between buyers and sellers, the lack of market information, trust among market actors, contract enforcement, and grades and standards, implies that buyers and sellers operate within narrow market channels, that is, only those channels for

which they can obtain information and in which they have a few trusted trading partners. Ethiopian market behavior reveals that market actors conduct business across short distances, with few partners, in few markets, and with limited storage, implying that opportunities for expanding market activity, otherwise known as arbitrage across space (transporting significant distances to market goods) and across time (storing for significant periods), are limited (Eleni, 2003). It is pointed out that such a scenario reduces the responsiveness of the market to changes in supply and demand and leads to the collapse of market prices, significantly compromising rural incomes and leading to disincentives to further technology adoption by farmers. In recognition of this, the Government of Ethiopia has organized Ethiopian Commodity Exchange through proclamation number 550/99 in order to eliminate market related problems and to facilitate, transparent, efficient and innovative marketing system to protect the interests of both producers and consumers. ECX's model is the first of its kind in Africa with its end-to-end integrated system of central trading, warehousing, product grade certification, clearing, settlement, delivery, and market information dissemination (MoFED, 2009).

It is now almost ten years after establishment of ECX, those costs which mentioned above are still there, high commodity cost will definitely lead to minimum profit or high loss. If the market is not efficient, which doesn't balance demand and supply and avoid many intermediary costs most of the traders if not all incur huge loss which can have a potential danger even to destroy the whole market system. Therefore, Trading in ECX market place must give a reasonable assurance in line with profitable, and must be well assessed the impact of liquidity management on profitability that is because the primary goal of every trader is to ensure that profitability will go indefinitely without any interruption. Therefore, profitability and liquidity issues are a big problem which must be addressed properly while business actors trading in Ethiopian Commodity Exchange (ECX).

Business organizations should have adequate liquidity to minimize both asset side liquidity risk and liability side liquidity risk of a business. Both the liquidity deficit and more liquidity surplus indicate the problem in the financial health of the business. More liquidity surplus hurts the profitability of the business as it reduces the return on assets. Similarly, liquid deficit also costs much to the business in terms of the higher purchasing price of liquidity and affects the

reputation of the firms. Therefore, the business firms should strike the trade-off between the profitability and liquidity risk.

1.3. Research Questions

This research seeks to assess the profitability and liquidity position of business organizations those trade in ECX trading platform as members through the use of different ratios. Specifically, the study wants to addresses the following main questions:

1. How liquidity affects profitability of business actors in ECX?
2. What are the functional measures of profitability of the business organizations in ECX trading platform?
3. What are the determining factor that affect the traders profitability of ECX community?

1.4 OBJECTIVES OF THE STUDY

1.4.1. General objective

The main objective of this study was to assess the profitability and liquidity position of business organizations those trade in ECX trading platform as members through the use of different ratios.

1.4.2. Specific objectives

The specific objectives which had been driven from the main objective are:

- To evaluate the current marketing status of the selected traders in ECX trading platform as members through the use of different ratios;
- To analyze the profitability of the business organizations in ECX trading platform as members through the use of different ratios.
- To identify the basic factors that affect the traders' profitability.

1.5 Significance of the study

The outcome of this study will be used as an input for decision makers on issues related to the overall operation, the market profitability and trust worthiness and the reliability of trading commodities in ECX pit. Market profitability and reliability is the basic pillar that the whole trading system stands on it, without profitability and reliability ECX will be history, there will not be trading. If ECX doesn't maintain its pillar millions of farmers and suppliers negatively

affected and in turn the consequence will be very dangerous as a nation. Moreover, it is also an input for researchers that make deeper analysis on the subject matter under study

1.6. Scope of the Study

The overall goal of this study is to assess the profitability and liquidity position of business organizations those trade in ECX trading platform as members through the use of different ratios. Those traders provide different kinds of oil sides and coffee at large. So, to evaluate the profitability of the traders the exported product plays a significant role. However, this study is not specifying the productivity within the product. So, the scope of is the research is delimited to the traders those exchange any product through ECX trading platform.

1.7 Limitation of the Study

The study may be more important if it was seen in the dimension of both the exporter and providers points of view but given difficulty of analyzing, organizing, and interpreting the data gathered by the researcher's capacity, and the time given for the study, it confined itself to the exporter through ECX.

In other way direction, profitability can be measured with different economic measurements, but, this study use return on asset as the profitability measurement.

Moreover, in spite of the researcher's efforts to gather the necessary information as objective as possible, the analysis of this study was based on the organizations yearly financial report, so the report may not present properly as a result this will lead to interrupt the result.

1.8 Terms of definitions

Cash:- is a medium of exchange that a bank will accept for deposit ad immediate credit to the depositor' account. (Mosich A.N.pp 293)

Inventories:_ are goods held for sale to customer, patrtially completed goods, and material and supplies to be used in production. (Mosich A.N.pp 497)

Assets:- arec probable future economic benefits obtained or controlled by a particular entitiy as a result of past transactions or events. (Mosich A.N.pp 168)

Liabilities:- are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events. (Mosich A.N.pp 168)

Revenues:- is the inflow or other enhancement of assets of a business enterprise or settlement of its liabilities (or a combination of both) during an accounting period from delivering or producing goods, rendering services, or other activities that constitute the enterprise's ongoing major or central operation. (Mosich A.N.pp 104-105)

Expenses:- are outflows or other using up of assets or incurrences of liabilities during an accounting period from the sale goods or the rendering of services. (Mosich A.N.pp 122)

Return On Asset (ROA):- Return on assets (ROA) is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. It is commonly defined as net income divided by total assets. (Albrecht, W. Steve, 2005)

Gross profit margin:- is a financial metric used to assess a company's financial health and business model by revealing the proportion of money left over from revenues after accounting for the cost of goods sold (COGS). (Albrecht, W. Steve, 2005)

Net profit margin is the ratio of net profits to revenues for a company or business segment . Typically expressed as a percentage, net profit margins show how much of each dollar collected by a company as revenue translates into profit. (Albrecht, W. Steve, 2005)

Current Liabilities:- are obligations for which payment will require the use of current assets or the creation of other current liabilities in one year or during the next operating cycle, if longer (Mosich A.N.pp 497)

Liquidity describes the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price. (Albrecht, W. Steve, 2005)

Current ratio is a liquidity eatio that measures a company's ability to pay short-term and long-term obligations. (Albrecht, W. Steve, 2005)

Quick ratio is an indicator of a company's short-term liquidity, and measures a company's ability to meet its short-term obligations with its most liquid assets. (Albrecht, W. Steve, 2005)

1.9 Organization of the Research

This study organized with five chapters. The first chapter describes the background of the study, the research problem, research question, objectives, and significance of the study, scope and limitation of the study, definition of terms and organization of the study. Chapter two reviews the literature which leads to the development of conceptual framework. Chapter three is deles about the method of the study. Sources of data and variables narrated in this part. Methods of data analysis are also described in this chapter. Whereas, Chapter four discuss on the results and analysis followed by, conclusions and recommendations, and suggestions for further study in Chapter five

Chapter two

2. Literature Review

2.1. Theoretical review

Liquidity plays vital role in determining the effectiveness of firms. Thus it is necessary for firms to maintain a balanced liquidity ratio in order to meet their short term liabilities. Due to its relationship with the day to day operations it is imperative for both internal and external analysts to study liquidity (Bhunia, 2010). The purpose of liquidity management is maintaining tradeoff between liquidity and profitability (Rahemanet, 2007).

Qasim Saleem & Ramiz Ur Rehman (2011) examined the relationship between the liquidity ratio and profitability. The study is conduct between the years 2004 and 2009 and later than collecting data about the financial positions as a result of annual activities and the related ratios of 26 enterprises per year which is traded on the Pakistan.Wang (2002) investigated the relationship between liquidity and operating performance and using the sample firms for the period of 17 years it was found that liquidity management would improve the firm worth and its operating performance. They examined the association between profitability and the information system taking the sample. Performance was measured by return on assets and the author found that information system did not enhance the performance of the firm. (Zhang, 2011).A study had been done to investigate impact of working capital management on profitability and market valuation of Pakistani firms. The author found that there was a positive relationship total debt to total assets and profitability but negative relation between cash conversion cycle and profitability (ROA) (Alam, *et al.*, 2011). Nosa and Ose (2010) examined the relationship capital structure and performance. The sample period was 15 years. Statistical analytical tools had been applied. Author concluded that there is negative relationship between capital structure and performance.

2.1.1. Concept of Profit:

Profit is the main goal for establishing a business concern. Profit is the primary motivating force economic activity. Profit have to be earned and they have got to be earned on a regular or continuous basis. Business concerns that are unable to generate sufficient profit from their operations cannot remunerate the providers of their capital and this makes it difficult for them to

maintain the continuity of their existence. Profits are needed not only to remunerate capital but also to finance growth and expansion. “Profit are the record card of the past, the inventive lode star for the future. If an enterprise fails to make profit, capital invested is eroded and in this situation prolongs the enterprise ultimately ceases to exist. Profit is a measure of surplus wealth generated by a business concern from its operations. The measurement of profits in a continuing business concentrates place on periodic basis. The word profit implies a comparison of the operations of business between two specific dates, which are usually separated by an interval of one year. Profit is a single for the allocation of resources and a yardstick for judging the managerial efficiency. To the financial management, profit are the test of efficiency and a measure of control, to the owners, a measure of the worth of their investment, to the creditors, the margin of safety, to the employees a source of fringe benefits, to the government a measure of taxable capacity and the basis of legislative action, to the country profit are index of economic progress, national generated and rise in the standard living.

Profit is the main objective behind the establishment of an any business organization. It is the engine that drives the business enterprise.

Importance of profit to different parties Weston and Brigham pointed “To the financial management, profit is the test of efficiency and a measure of control, to the owners; a measure of the worth of their investment, to the creditors, the margin of safety, to the government a measure of taxable capacity and basis of legislative action; and the country profit is an index of economic progress, national income generated and rise in the standard of living. Prof. Robbins “Profit are the motivating force for economic activity.” Profit is defined in a number of ways by economist, accountant and others according to its use and purpose. The survival of any business depends upon its earning capacity. Thus if an enterprise fails to make profit capital invested is eroded and if this situation prolongs, the enterprise ultimately ceases to exist. In fact profit is the soul of business without which it is lifeless. Indeed the efficiency of a business concern is measured by the amount of profits earned. The larger the profits the more efficient and profitable the business is demand to be. According to R.R.Gilchrist, the profit is the ultimate measure of effectiveness a profitable company is likely to after not only security of employment but also promotion prospects, job opportunities and the intense personnel motivation the comes from being associated with success.

Accounting Profit

The excess of revenue over related costs applicable to a transaction, a group of transactions or the transactions of an operating period is profit. In accounting terminology "The profit of a business during given period is the excess of income over expenditure for the period" (M.C. Gupta profitability Analysis, 1989:1)

The general meaning of the profit is difference between the sale price and the cost of producing and selling that production is its profit.

Accounting profit is classified into three categories:

Gross Profit: The excess of total gross revenue over the revenue expenditure is the gross profit.

Operating Profit: The excess of the total operating revenue over the total cost of operation is the operating profit.

Net Profit: The excess of the total gross revenue over the total cost of operation is the net

Profit.

Profitability is the net result of a large number of policies and decisions. The ratios examined thus provide some information about the way the firm operating, but, the profitability ratios show the combined effect of liquidity, assets management and debt management on operating results. In this fieldwork ROA is used as the profitability ratio. It tells about the ability of the company to use its assets to create profit. A company should be able to create value for the resources that it holds. Like, ROE, ROA can be compared to returns of risk-free investments. If ROA is higher than the risk-free return, the company has managed to add value (Balance Consulting, 2015).

Profitability is a measure of firm's efficiency (Khan and Jain, 1998). It is also a control measure of the earning power of a firm as well as operating efficiency. Weston and Copland (1998) described profitability as net result of a large number of policies and decisions. Ratios are used to measure profitability and these give final answers about how effectively the firm is being managed. Therefore, management, creditors and owner of the company are also interested in the profitability ratio of the firm (Pandey, 1995).

Brigham and Houston (2004) views that financial profitability lies in a firm's ability to generate revenues in excess of its costs: for either long or short term. In the long run, a firm should be able to maintain the value of invested capital and able to yield a profit, which exceeds the opportunity cost of capital meaning that the yield generated by the firm should exceed the opportunity cost of capital. In order to examine long-term profitability, especially Net Present Value (NPV), Profitability Index (PI) and Internal Rate of Return (IRR) are used. Short-term profitability, on the other hand, refers to a firm's ability to make an operating profit for which financial ratios on a yearly basis are used (Bierman and Smidt, 1980).

2.1.2. Ratio Analysis

Ratio Analysis is the principal technique used to measure the profitability of a business enterprise. The growth development and the present position of a business in terms of profit can be analyzed through the calculation of various ratios. The term accounting ratio is used to describe significant relationship which exist between figures shown in financial statement Profit and Loss Account and Balance Sheet. In financial analysis a ratio is used as an index or yardstick for evaluation of the financial position and performance of a firm. The technique involves four steps determining the accounting ratio to be used computation of the ratio comparison of ratio with the standard set and interpretation. The interpretation of ratio required careful and detailed study and sound judgment on the part of the analyst.

2.1.3. Factors affecting to profitability

The following two factors which affected the profitability of any organization

1. The Operating Profit Margin
2. The Rapidity of Turnover of Capital Employed.

Profitability is the product of two factors and therefore maximum or operating profit can be earned only by maximizing them. In technical terms the combination of these two factors is known as the Triangular Relationship. Its significance exits not only in its use as an analytical tool but also because the profitability ratio can be calculated directly from the specific earnings and investment data.

2.1.4. Stochastic Profit Frontier Model Application

The popular approach for measuring efficiency component is the use of stochastic production frontier. Kakhobwe *et al*. (2010) used a stochastic production frontier to measure the technical efficiency of mixed cropping and relay cropping technologies in Zomba District, Malawi. Tchale (2009) also applied a stochastic production frontier in estimating the efficiency of smallholder agriculture in Malawi. However, use of a production function approach to measure efficiency may not be appropriate when farmers face different prices and have different factor endowments (Ali and Flinn, 1989). Similarly, Adesina and Djato (1997) reported that use of production function to analyze efficiency suffers from simultaneous equation bias because the input levels are endogenous. The profit function methods avoid these problems. A stochastic profit frontier model is therefore appropriate for direct estimation of farm-specific efficiency. Furthermore, the profit function approach combines technical and allocative efficiency in a profit relationship and any errors in the production decisions are assumed to be translated into lower profits or revenue for the producer (Rhaman, 2003).

A number of studies have used the profit stochastic frontier to estimate efficiency and identified factors influencing it. Delgado *et al.* (2003) applied a stochastic profit frontier to study profitability and efficiency of dairy farms in India. The study revealed that profit efficiency varied across farm sizes. It was concluded that if efficiency varies across farms, relatively more efficient farms would be more profitable. Furthermore, price of concentrate feed and milk yield were the major factors affecting profit efficiency. The study validated the application of the profit frontier on farms of different dairy farm types and sizes.

2.1.5. Gross margin analysis

Gross margin is defined as the difference between the value of an enterprise's gross output and variable costs (Ergano and Nurfeta, 2006). Gross margins were calculated for dairy farms practicing improved dairy production and those farms using local dairy production practices. At test was used to test differences in gross margins.

2.1.6. Econometric analysis

The study employed the stochastic profit frontier model to evaluate economic efficiency of smallholder dairy production and identify determinants of economic efficiency of the dairy farmers. This followed Battese and Coelli (1995) who extended the stochastic production frontier model by suggesting that inefficiency effects can be expressed as a linear function of explanatory variables, reflecting farm-specific characteristics. The advantage of the model is that it allows the estimation of farm specific efficiency scores and the factors explaining the efficiency differentials among farmers in a single stage estimation procedure.

2.1.7. Trading in Commodity Exchange

In Cash or Spot trading the seller delivers the commodity to the buyer immediately after transaction however sometimes at a specified later date. Sellers are usually the producers and dealers, where as the buyers are usually processors and exporters. There are two types of futures contract those which provide physical delivery of a particular commodity and those which require cash settlement. This kind of trading is called futures because it requires delivery of standard quantity of a commodity during a stated month in the future. Buyer of the futures contract is obligated to accept delivery at the agreed-upon price at a specified place during the stated month. However, settlement of a contract by actual delivery is rare because most contracts are liquidated before the maturity date or before the contract expires.

In futures contract a buyer will make a profit when the price goes up and will be able to sell the contract for more than what he/she paid for it. The buyer will incur a loss if the price has fallen. On the other hand the seller of the futures contract is obligated to accept delivery at the agreed-upon price at a specified place during the stated month. However, settlement of a contract by actual delivery is also rare that most contracts are liquidated before the maturity date.

A derivative is thus essentially an agreement to trade between a future buyer and a future seller in contrast to a spot transaction, which is an agreement to trade on the spot or during an immediate period. Most derivatives however simple or complex, can be classified into four types: Forward Contract, which is an agreement to buy or sell a good at a specified price on a specified future date; Futures Contract which is a standardized forward contract executed through an organized exchange; Swap Contract which is an agreement to exchange future cash

flows; Option Contract which grants its holder the right, but not the obligation to buy or sell something at a specified price on or before a specified date. Whatever the form, derivatives are variations of a price guarantee.

2.1.8. Benefits of Commodity Exchange

A well organized and managed commodity exchange market has the following benefits. An exchange reduces transaction costs by facilitating contact between buyers and sellers and enables centralized grading of products ensuring that contracts are enforceable. It provides mechanism for price discovery which simplifies transactions with standard contracts and transmits information about prices and volumes. An exchange provides a mechanism for increasing market liquidity enabling transfer of price risk and creates trust, order, and integrity in the market, (Eleni, Ian Goggin, 2005).

A Commodity Exchange is fundamentally designed to provide service and add value to all market actors. A Commodity Exchange adds value to the market by addressing two types of risk namely contract performance risk and the risk of contract default on physical delivery or payment. Market risk is the risk of adverse unforeseen price movements or changes in supply and demand in the future.

2.2. Empirical Evidence

Many researchers have been done all over the world related to profitability associated with liquidity on the profitability of various sectors. Some of the evidential empirical findings associated with this study reviewed as follow:

This research is submitted to Everest College Tribhuan University, Kathmondu, Nepal at May 2007. The study attempts to examine the financial performance of Nepal Arab Bank limited with special references to solvency and profitability ratio with available data and information.

Nepal is a country which is made up of villages and rural areas mostly and where there is predominance of agriculture sector. It is difficult to solve the credit problems of the country through commercial bank and which are relevant to intramural and agriculture is to overcome these change.

The Nepal Rastra Bank has mandated commercial Bank to open the branches in urban areas, however, the challenges for country is to direct these commercial bank to provide service to small and middle entrepreneur. These rural branches of commercial banks opened in the rural areas of Nepal don't seem to be effective in their role of effective deposit mobilization and loan distribution. The competition is burning issues of the time in the country due to emergency of number of finance companies and about a dozen of rural banks and cooperatives societies in a short span of time. It has threatened the entire banking system. It has warned the banking authority to improve and manage their productivity, so, it is crucial time to concentrate land think better productivity management of the securities and growth of the bank in environment of tough competition.

The researcher set the above ideas as the problem statement and tries to solve by setting main objectives, which says "the study is to analyze financial performance and solvency position of this bank through the use of different ratios". Finally the result was revealed that the leverage ratio directly associated with the solvency position of the bank , the profitability ratio was helpful to measure the profitability position of the bank and the bank is more efficient in mobilizing the resource of owners and its operational efficiency.

The study focuses on dairy development projects have provided technologies to boost milk output and household incomes for smallholder dairy farmers in Malawi. This study was initiated to analyze the profitability and economic efficiency of improved and local dairying in Lilongwe Milk Shed Area (MSA). Data was collected from 161 smallholder dairy farmers, 118 improved and 43 local dairy farmers in the MSA. Gross margin and cost benefit analyses were used to evaluate farm-level profitability while a stochastic profit frontier model was used to estimate level of efficiency and factors influencing inefficiency.

In the study area, smallholder dairying offers an alternative important source of income as farmers continue to face dwindling prices of tobacco which was the major source of income for food insecurity and wealth creation. Considerable development efforts have been made to generate and disseminate dairy technologies among farmers through various projects by Land O Lakes, SSLP, ARDEP and Malawi Government, among others. However, access to utilization of recommended technologies and practices among dairy farmers has not been widespread as anticipated in Lilongwe MSA. This has resulted in low milk production at about 50% below the

potential in Lilongwe MSA. Noteworthy, little or no attention has been given to the relationships between efficiency of smallholder dairying attributes, market indicators and household characteristics in Lilongwe MSA. It is therefore recommended to examine factors affecting overall economic efficiency rather than only technical efficiency. This study builds on previous studies by directly determining smallholder dairy farm-specific efficiency and socioeconomic factors influencing inefficiency using stochastic profit frontier model (SPFM).

As the result illustrated that, on average, farmers had positive gross margins which imply smallholder dairying brings income to dairy farmers in the study area. Profit efficiency ranged from 0% to 67.5% with a mean of 28.1% among improved dairy farmers while among local farmers it ranged from 0.5% to 56.2% with a mean of 24.7%. Level of education, years of dairying experience and access to credit were reduced profit inefficiency.

Moreover, the farm level profitability results showed that although some farms registered negative gross margins, on average, revenues exceeded costs implying that both improved and local dairy are profitable enterprises. The gross margins were higher in IDFs than LDFs implying high returns in the former category. The estimated Trans log stochastic profit frontier model showed a strong linkage between profit efficiency, feed and health costs in improved dairying. The elasticity showed that a unit increase in feed and health cost would reduce profit by 4.6% and 1.1 %, respectively. This finding underscores the importance of improved dairy feed and health services in smallholder dairying (Ted Nyekanyeka University of Malawi Bunda College, 2011).

Carrow W. (2012) study was focusing on the impact of liquid asset holdings on Commercial Banks in Liberia Profitability. Using the regression analysis, this study analyzes the profitability of commercial banks using balanced data over the period of 2006-2011. The study used to estimate the liquid asset and profitability relationship.

The management of a firm's liquidity is necessary for all businesses, small, medium or large. When a business does not manage its liquidity well, it will have cash shortages and as a result experience problems paying its obligations when they fall due. In Liberia Commercial Banks differ in size and ownership structure, some banks report huge losses while others report huge benefits. Holding more liquid assets diminishes a commercial bank's profit and hinders the

investment prospect of the bank, which could lead to growth and expansion. However, if it wishes to maximize profit, the commercial bank will have to reduce the level of liquid assets it holds on the balance sheet. Holding too much illiquid asset will expose the commercial bank to liquidity risk and huge interest charges in an even of fire sales.

This study is all about to give an answer for the problem that is to identify the level of liquid assets the banks needs to hold on its balance sheet to maximize profit. As the result found out the estimated relationship between liquid assets and bank profitability was as expected. Coefficients for the liquid assets ratio, its square, business cycle, and its product of interactive business cycle and regulation were positive and also statistically significant. The regulation coefficient was though negative. Furthermore, the study had got a result of non-linear relationship between profitability and liquid asset holdings. An important finding of this study is that the business cycle of a commercial bank significantly affects it profit. The coefficient of regulation is negative and significant. Therefore if regulators reduce the constraints imposed on banks, banks obtain profit (Carrow W., 2012).

Moreover, the coefficient of the deposit ratio is positive and highly significant. A bank with a more deposit is able to be more profitable. Likewise, the coefficient of loan asset ratio is positive and significant and this positive effect implies that banks with a high proportion of loan asset ratio have a higher profitability. In addition, an important finding of this study is that the business cycle significantly affects bank profits. Business cycle is estimated to have a positive and statistically significant impact on bank profitability. The coefficient of regulation is negative and significant and this implies that if regulators reduce the constraints imposed on banks, banks obtain profit. The empirical results show that concentration affects bank profitability negatively, but this affect is relatively insignificant. Management of liquidity position means the management of current assets and current liabilities. If these firms properly manage their cash, accounts receivables and inventories in a proper way, this will ultimately increase profitability of these companies. Thus, the findings show that efficient management of liquidity in a bank will influence its level of profitability and the variables used in the survey are positively related with profitability except the banks regulation by the Central Bank that was found to be negatively related with the bank's profitability (Carrow W., 2012).

Some studies were done in public companies without the geographical boundary consideration and check whether the working capital management and capital profitability have an association or not. Therefore, most of them had got the correlation between efficient working capital management and profitability. For instance, the studies conducted by Deloof (2003) and Soenen (1998) take into account all firms within a geographical area such as Belgium or the United States. This study would have a cross-national view with both Swedish and Finnish companies and the study is also limited to public companies. So, the studies found out that the correlation between profitability and working capital management, but they lack depth as in which industries the effect is most prevalent.

Working capital management has lately been a hot topic since the financial turmoil of the late 2000's. Companies search for liquidity and operational efficiency through minimizing their investment in working capital. However, can working capital management add to corporate profitability and share holder value? This had been the core idea. The efficiency of working capital management can be determined by the cash conversion cycle and the net trade cycle. The research tries to test the two variables with corporate profitability, and whether able to see Finnish and Swedish corporations can increase their gross operating profitability by reducing the cash conversion cycle and net trade cycle. Basically, this study would address the industry-specific nature of working capital by splitting the sample into thirteen industries. The main reason of this study was to study how efficient working capital management can improve company profitability and add shareholder value (Erick and Helsinki, 2012).

The tests performed gave a statistically significant conclusion that working capital management does in fact affect corporate profitability. The correlation between the net trade cycle and profitability is clearly negative, as it was with the cash conversion cycle and profitability. The independent t-tests shows that the data was statistically valid and the correlation between variables are along the lines of the hypotheses laid out in the first part of the chapter (Erick and Helsinki, 2012).

The Industry-wise correlation was also interesting, somewhat because the correlation was positively some industries. This would mean that by prolonging the net trade cycle and the cash conversion cycle, companies in the selected industries could actually improve profitability. This, however, would need further studies to actually conclude that the working capital is increasing

profitability in those industries. Otherwise, the industries which are very intensive working capital seem to have a negative correlation between the working capital management efficiency variables and profitability. This in turn leads to the conclusion that many companies can substantially increase profitability by effectively managing their working capital (Erick and Helsinki, 2012).

After a decade of reforming policy, building and developing the multi-sector market economy, Small and Medium Enterprises (SMEs) in Vietnam have developed strongly and contributed to creating employment, increasing GDP, and raising the nation's volume of exports. However, SMEs have found difficulties on the way to development due to lack of management experience and financial resources, and due to uncertainty within the business environment. As a result, SMEs often faced obstacles during their operations.

Taking the above consideration into account Nguyen (2001) tries to examine the relationship between financial management and profitability of SMEs to determine whether financial management practices and financial characteristics impact on SME profitability.

The study provided descriptive findings of financial management practices and financial characteristics and demonstrates the simultaneous impact of financial management practices and financial characteristics on SME profitability. In addition, the research study provides a model of SME profitability, in which profitability was found to be related to financial management practices and financial characteristics. With the exception of debt ratios, all other variables including current ratio, total asset turnover, working capital management and short-term planning practices, fixed asset management and long-term planning practices, and financial and accounting information systems were found to be significantly related to SME profitability.

Lack of knowledge of financial management combined with the uncertainty of the business environment often leads SMEs to serious problems regarding financial performances. Regardless of whether owner-manager or hired-manager, the financial decisions are wrong, profitability of the company will be adversely affected. Consequently, SME profitability could be damaged because of inefficient financial management. SMEs have often failed due to lack of knowledge of efficient financial management. Moreover, undercapitalization and uncertainty of the business environment cause SMEs to rely excessively on equity and maintain high liquidity and these

financial characteristics probably affect SME profitability. Therefore, the problem that SMEs in Vietnam face appears to be that inefficient financial management practices have adversely affected their profitability.

A study done by South Africa (2002), cited in Radipere and Van Scheer (2005:402), indicated a high business failure rate amongst start-up businesses in South Africa. These small businesses cannot be the platform for growth and development if they are not profitable and sustainable. One possible reason for this prevalence is that small business owners are not equipped to identify the problem areas within their businesses, due to the lack of necessary skills and tools to increase profitability and sustainability.

Small businesses are vital for employment and job creation in South Africa. Taking this consideration into account Avika (2014) launched a study to identify the current cash management practices of small retail businesses in the Tongaat area and identify the impact of such practices on their profitability and sustainability. This descriptive, cross sectional study, using a quantitative research paradigm and a non-probability sampling method targeted a sample of 69 businesses in the chosen area. The sample structure consisted of small retail businesses in the Tongaat area of Kwa Zulu-Natal. As the result illustrated, there was a significant relationship between drawing budgets and sustainability. This finding suggests that the more often the business draws up cash budgets, the more viable and sustainable the business is. About 78.3% of the respondents acknowledged the importance of keeping records in the business, however, only 29.9% drew up cash budgets (Avika, 2014).

Management of liquid funds is considered to be an important factor of company's growth. In the study done byZoriana (2013) the effect of the company's liquidity on profitability is tested by using fixed effects regression to the panel dataset consisting of Ukrainian enterprises financial information in 2001-2010. The database covers state, closed and open joint stock companies and limited liabilities companies that operate in agriculture, production, construction, retail and finance industries. The methodology implies a regression of independent liquidity measures on Return on Assets.

So according to the result reviled the quadratic relationship between static and dynamic liquidity indicators is supported. Current Ratio and Quick Ratio have significant positive diminishing effect on profitability. It is profitable for the companies to increase liquid assets up to the turnover point, after which a further increase will have negative impact on profitability. Furthermore, static liquidity is a significant determinant of profitability in Ukraine. Therefore, careful consideration and planning of liquidity management is one of the ways to improve efficiency of Ukrainian enterprises (Zoriana, 2013)

The study also found that at industry level, however, cash gap is important to measure the liquidity than current ratio that affects profitability. A research study conducted by Bardia (2004)

and Sur and Ganguly (2001) on steel giants SAIL and aluminum producing industry reveal that liquidity and profitability are positively related with each other. Qasim Saleem and Ramiz Ur Rehman (2011) by taking five years data of twenty six enterprises examined the relationship between liquidity of firm and profitability, found that there is positive relationship between firm's liquidity and profitability. A research conducted by Wang (2002) reveals that there is a positive relationship between liquidity and operating performance. Seventeen years data of sample firms was taken. They examined the association between profitability and the information system taking the sample. Mean while the research also reveals that there is positive relationship between liquidity and profitability. A research undertaken by (Zhang, 2011) suggests that there is significant positive relationship between firm's liquidity and profitability.

A study had been done to find out the determinants of capital structure of listed companies. The results of the study show that no significant relationship between short-term and long-term debt. (Mouamer, 2011).The author examined the effect of risk on the financial policy of emerging market firms. The result shows that proper risk management and how that affects financial policy of emerging market firms (Abor *et al.*, 2009). A study was carried out to find risk exposure and corporate financial policy on the Ghana stock exchange. The results of the study showed negative significant relationship between business risk and capital structure and significant positive relationship between bankruptcy risk and capital structure (Aboagye *et al*, 2010). Rocca, (2007) found the influence of corporate governess on the relationship between capital structure and value. The author concluded that to clarifying the relationship between capital structure, corporate governess and firm value. Taking the sample of five companies for the period of 12

years the author concluded that return on assets had negative association with debts ratio (Balcilar *et al*, 2009). Firm some time hire the external organization to do their project or specific task on the behalf of paying firm. This some time lead to low operating cost and increase the profitability of the firm (Frazier *et al*, 2006). Tian and Zeitun (2007) investigated the effect of ownership on firm performance of sample companies for the period of 13 years. Author found a significant relationship with the performance. Ebaid (2009) investigated the impact of capital structure choice on firm performance. Multiple regression analysis was used to estimate the relationship between the firm leverage level and performance. The author found that capital structure decision had a week relationship with the firm performance.

2.3 Research gap

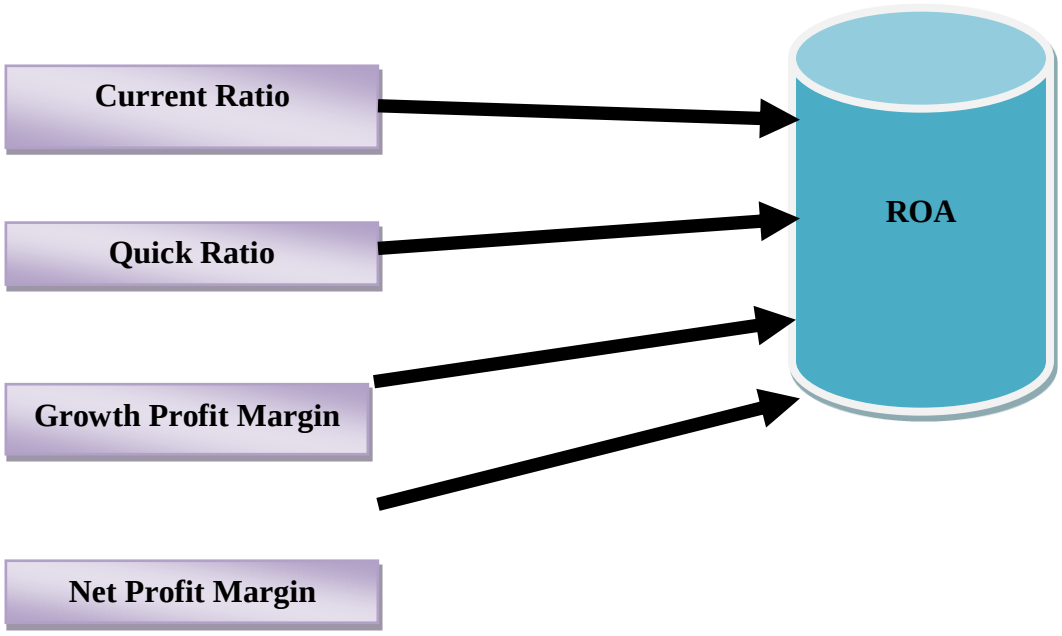
To establish commodity market in Ethiopia a number of studies have been conducted by different scholars. All the study was focused about how commodity market came in to existence in replacing the existing trading system, what types and amount of commodities the country have, how long was the existing trade chain, was the existing market efficient and effective and so on. Those studies played a great role in establish modern trading system in Ethiopia.

After the establishment of ECX (2008) also there are different studies which mainly focused on the opportunity and challenge of trading in ECX and an assessment of legal frame work of the ECX rules and regulations and other factors. Since the start of this commodity market ECX the trader's financial position has never been studied. As much as the researcher points of view there is no research has been conducted about the profitability of the members who trade their commodity In ECX. There is no evidence whether the marketers liquidity position have been studied or not.

After examining all the research conducted so far, the researcher wants to file the research gap. The gap was there is no single study which answers about the marketer's profitability and their liquidity positions. Therefore, this research tries to fill the gap by analyzing the impact of liquidity on the profitability of market actors who trade their commodity in ECX which had never been under study. This research tries to answer the question like:-

- Are the members who traded their commodities in ECX market profitable enough to recover their cost and staying in the business?
- What impacts have their liquidity position on their profitability?
- Are they profitable all the year under investigation?
- The degree or the magnitude of profit is promising to stay in the ECX market?

2.4. Conceptual Framework



(Independent variables) (Dependent variable)

Figure 2.1: Conceptual framework developed by Waqas Bin Khdimat (2014)reamended by the researcher

Chapter Three

3. Tools and Methods

This chapter presents a detail discussion of the research method that had been applied in the study. Hence, topics related to research design, data type and source, target population, sampling technique and sample size, data collection procedure and method of data analysis to be used is discussed.

3.1 Study areas

This study mainly focuses on the impact of liquidity on profitability of some selected trading members who directly participate on Ethiopian Commodity Exchange (ECX) trading plat form. From the start of ECX 2008 around 325 members registered and trade with different membership title. Currently there are two major broad membership category, intermediary and trading members. Intermediary members are members who can trade or buy and sell commodities both for their own and for their client. Trading members on the other hand are members who trade only for their own, trading members have no client.

Majority of members are Intermediary members who have one or more clients under them, the clients give buying or selling order to the Intermediary member, the member make a trade accordingly in behalf of the client. Most traders who buy and sell their commodities in ECX platform have sister company, this means they are not only engaged in ECX business but also engaged in other business out of ECX platform. The financial report of such business entities are not separated by business category, rather it is consolidated two or more business category and reported as one. This consolidated financial report does not give a true and fair view of financial position and financial performance in relation to trading activities on ECX.

There are around 66 business organizations that have no sister companies, these companies are only trade in ECX no other business activities attached for them. The financial position and financial performance of these companies will give a true and fair view of liquidity and profitability. All the profit these business organizations registered accounted to ECX trading platform. This research mainly tries to answer whether trading in ECX give a reasonable profit or

not and answer what liquidity impact on their profitability. Therefore, these business organizations who only trade in ECX are the study area.

3.2 Research Design

With the intention of the research objective and to complete its plane for the data collection in an empirical research the design had been applied accordingly. The study is used quantitative type of research which is explanatory by nature. In order to describe the impact of liquidity on the profitability of Ethiopian Commodity Exchange, longitudinal and cross sectional designs are suitable. Thus, the survey method gathers data from a relatively large number of cases at a particular time; it is essentially cross-sectional over time series.

Furthermore, research strategies help researchers to provide data that can answer the research questions or achieve the research objectives. In fact, there are many types of research strategies, depending on the types of data that the researcher want to collect and analyze, such as experiment, survey, case study, action research and grounded theory. However, this study employed case study because there is a wide scope of competencies over a given time taken to be evaluated in this research, so case study strategy would enable to indicate the change over a given period of time. This would then evaluate a case in longer interaction time.

3.3 Research approach

There are three common approaches to conduct a research project in the area of natural and social sciences namely: quantitative, qualitative and mixed research approaches. Therefore, in order to achieve the objectives of this study and thereby to give answer for its problems, quantitative research approach was used by the researcher. There are compelling reasons why the researcher opted to use quantitative approach. The adoption of positivist paradigm entails that measurement remains an essential element since its basic assumption is social and economic phenomenon can be measured. So, to gain deeper insights on the issue, to significantly strengthen the analyses and thus enhance confidence in the conclusions this approach is valuable.

3.4 Sampling Design

3.4.1 Target Population and Sampling Methods

The target populations were all commodity suppliers those supplied commodity to ECX within the years of 2013-2017 G.C. According to the information earned from ECX there are 66 commodity suppliers in the years from 2013 to 2017 that only trade in ECX without having sister company out of ECX. Therefore, the target unit of this study had been the selected suppliers those full file the inclusion criteria of this study. The inclusion criterion tells about suppliers those trades only in ECX.

3.4.2 Sampling Technique and Sample Size

Due to the entire population are finite, census survey technique had been used. Primarily, select the commodity suppliers who supply commodity for ECX within the past 5 consecutive years. To get a better trained which helps to show the profitability of the customers, more experienced study participants are preferred. In that regard the providers those have five years and more experience included in this study.

Population is the total group of people or entities from which information is required The total population of the study consists of 325 ECX members, which were categorized as full members and limited members of the Ethiopian commodity exchange, engaged in selling, processor, and wholesaler and exporting of commodities in Addis Ababa with in ECX. Out of the total members sellers are 149, exporter 148, processor 7 and wholesaler 25.

According to the information earned from ECX, currently 325 suppliers are supplying commodity for the exchange. Out of them only 66 firms are found valid for this research within the past five years. All of those experienced service providers had included in this study the rest of them did not include, because they trade both in ECX and out of ECX, this will hinder the profitability of trading only in ECX. They have different business other than commodity which consolidated their financial statements at the end of the year. Therefore, these organizations which are not included under this study did not give the true and fair view of financial position as well as profitability of trading in ECX platform.

3.5 Methods and Tools of Data Collection

Secondary source of panel data had been used. The data has quantitative in nature and encompasses five years commodity suppliers audited financial report, i.e., balance sheet and income statement. It is collected from Ethiopian Commodity Exchange Authority (ECEA) who is appointed as a regulatory body.

The data is collected directly from the listed balance sheet and Income Statements of the traders. As per the conceptual framework, appropriate variables listed in the hard copy spade sheet and converted in to Excel.

3.6 Validity test

In order to reduce the possibility of getting higher errors attention was given. Hence, validity tests, which help to detect the presence or absence of those errors, have taken place to reduce the problems. Validity is the extent to which collection methods accurately measure what they were intended to measure and concerned whether the findings are really about what they appear to be about. Therefore, the variables were carefully selected as per the theoretical review of other literatures. It was also reviewed, commented upon, modified, and finally approved by the advisor and experts those have experience with in the research area.

2.6.1 Method of Data Analysis and Presentation

After data were collected, data processing was carried out. The raw data was converted into suitable form for analysis and interpretation. This was achieved through sequences of activities including coding, entry, and tabulation. The objectives were to check the completeness, internal consistency and appropriateness of the answers to each of the hypostases. Statistical analysis was carried out using STATA V13(64-bit).

Both descriptive and inferential statistics such as frequency distribution, measures of central tendency and measures of dispersions (mean, standard deviation, percentage, frequency etc.) and regression model were used as a method of data analysis.

In fact, the study would use panel/longitudinal regression specification model which involve the pooling of observations on the cross sectional over several time periods random effect observation. Brooks (2008) stated the advantages of using panel data set; first and perhaps most importantly, it can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time series or pure cross sectional data alone. Second, it is often of interest to examine how variables, or the relationships between them, change dynamically over time. Third, by structuring the model in an appropriate way, the researcher can remove the impact of certain forms of omitted variables bias in regression results.

3.7 Description and Measurement of variable

To achieve the research objectives developed and to answer research questions, the researcher selected the following core variables as dependent and independent.

3.7.1 Dependent variable

Return on Asset (ROA) (Y_{it}):- It is measured as the ratio of profits generated to the total assets under the responsibility of management. Thus, return on asset reflects the net impact of management decisions and actions along with the businesses environment of the company during a period of time. Since, it reflects the efficiency of all the assets under the control of management, return on asset is an intuitively understanding measure of profitability (Rivard and Thomas, 1997).

The ratio is calculated as follows:

$$\text{Return on Asset (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

3.7.2 Independent variables (x_{it})

The independent variables under considered in this study's are:

Current Ratio (x_{1it}): It is a gross measure of liquidity in that simply compares all liquid assets with all current liabilities. The current ratio is calculated by dividing current assets by current liabilities.

$$\text{Current Ratio } (x_{1it}) = \frac{\text{Current Assets}}{\text{Current Liabilitie}}$$

Quick Ratio (x_{2it}): The important weakness in the current ratio is the inclusion of inventory as an asset that will be converted to cash within the next twelve months at book value.

$$\text{Quick Ratio } (x_{2it}) = \frac{\text{Current Assets - Inventory}}{\text{Current Liabilitie}}$$

Gross Profit Margin (x_{3it}): is utilized two figures easily found on any profit and loss statement or balance sheet: revenue and gross profit. In other term it is the ratio of gross profit to seals

This ratio can be calculated as:

$$\text{Gross Profit Margin } (x_{3it}) = \frac{\text{Gross Profit}}{\text{Sales}}$$

Net Profit Margin (x_{4it}): it is equals to the net income divided by revenue or income. It is more accurate measure of a company's profitability, as it reveals the percentage of revenue that actually reflects a company's profit per Birr of sales. And also it is an important distinction, since increases in revenue do not necessarily translate into actual increased profitability.

$$\text{Net Profit Margin } (x_{4it}) = \frac{\text{Net Profit}}{\text{Income/sales}}$$

3.8 Model Specification

The following model is formulated for this research in order to give right answer for the issued hypothesis. The independent variables included in the model are current ratio (x_{1it}), quick ratio (

x_{2it}), gross profit margin (x_{3it}), and net profit margin (x_{4it}). However, the dependent variable is return on asset (Y_{it}).

The following regression model was used to indicate how the outcome variable predicted by the independent variables:

A general panel regression model is driven from both fixed and random effect model. If the model is fixed, its general model would be written as like

$$Y_{it} = \beta_{1i} x_{1it} + \beta_{2i} x_{2it} + \beta_{3i} x_{3it} + \beta_{4i} x_{4it} + v_i + \varepsilon_{it} \ldots\ldots\ldots (1)$$

Likewise if the model is random the general regression model would be written as like

$$Y_{it} = \alpha_o + \beta_{1i} x_{1it} + \beta_{2i} x_{2it} + \beta_{3i} x_{3it} + \beta_{4i} x_{4it} + \varepsilon_{it} \ldots\ldots\ldots (2)$$

To draw the general panel regression model use both equation (1) and (2) together, so the model would be as bellow

$$Y_{it} = \alpha_o + \beta_{1i} x_{1it} + \beta_{2i} x_{2it} + \beta_{3i} x_{3it} + \beta_{4i} x_{4it} + v_i + \varepsilon_{it}$$

Where

α_o = Constant term the whole entity within the entire time

Y_{it} = the dependent variable, i.e. Return on Asset of the supplier i at the time t;

x_{1it} = the current ratio of the i supplier at the time t;

x_{2it} = the gross profit ratio of the i supplier at the time t;

x_{3it} = the gross profit margin of the i supplier at the time t

x_{4it} = the net profit margin of the i supplier at the time t

v_i = intercept/constant term for i's entity,

β_i = parameters estimated/coefficients of the explanatory variables,

ε_{it} = the error term of the i supplier at the time t

3.9 Ethical Consideration

As like other social science field of study, marketing research is also required a serious ethical consideration. Cognizant of this fact the researcher had taken all precautions while securing the necessary information for the accomplishment of the project objective. The researcher exerted effort to get the consent of the suppliers under study prior to the collection of the data. Besides, the study participant suppliers those were participated in the study had been informed in advance about the objective of the study so as to insure their wiliness. Finally, the data were collected with strict adherence to the aforementioned research ethics and code of conduct of the organization. The researcher was taken maximum care to avoid the conflict of interest that may arise as a result of different pertinent bodies those are working for the organization under consideration and made a report of the information collected from all the participants in the study objectively and honestly.

Chapter Four

4 Results And Discussions

4.1 Descriptive Analysis

In this specific study return on assets (ROA) is considered as an indicator of how profitable a company is relative to its total assets. It gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings.

Sometimes, the ROA is referred to as "return on investment". In basic terms, it tells about what earnings were generated from invested capital (assets). This asset for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or against a similar company's ROA.

The ROA figure gives investors an idea of how effective the company is in converting the money it invests into net income. The higher the ROA number, the better, because the company is earning more money on less investment. Let's evaluate the ROA for 66 companies under investigation who traded their commodities in ECX. The data in the table is for the five fiscal years from 2013 to 2017 G.C.

According to the result reviled in table 4.1 the average percentage change of ROA were ranges from -0.004 to 0.958. A return on asset of 0.958 simply means every dollar that a company invested in assets in a given year generated around 96 cents of net income, whereas, a return on asset of a company -0.004 means, every dollar used to purchase assets translated into a 0.004 cent loss for the company. Company’s negative ROA coupled with different factors, i.e., its high total debt means that the company is receiving little income, even though it’s investing a high amount of capital into its operations. Given that the company is not generating any positive income per invested capital, this investment might not be a good option for investors.

A company with higher ROA appears that better at converting its investment into profits, and other companies may need to re-evaluate its business strategy as its ROA is very low. Management's most important job is to make wise choices in allocating its resources. Anybody

can make a profit by throwing a ton of money at a problem, but very few managers excel at making large profits with little investment.

The average return on assets of most of the companies involved in this study for five consecutive years under investigation shows a positive return on asset except one company which shows very little negative return on asset. The average return on assets of all the companies summarizes as follow:-

- 1 company has got a negative ROA
- 1 company has got below 0.1 average ROA
- 12 companies have got from 0.1 to 0.2 average ROA

Moreover, as the result indicated those lower ROA earner companies had a great disparity on their average within the indicated fiscal years. That means one year if they beneficial the other year may not.

The current ratio is mainly used to give an idea of a company's ability to pay back its liabilities (debt and account payable) with its assets (cash, marketable securities, inventory, and accounts receivable). As such, current ratio can be used to make a rough estimate of a company's financial health. The current ratio can give a sense of the efficiency of a company's operating cycle or its ability to turn its product into cash. Companies that have trouble getting paid on their receivables or that have high inventory turnover can run into liquidity problems if they are unable to alleviate their obligations.

In the case of current ratio, if the value is below one indicates that a company's liabilities are greater than its assets and suggests that the company in question would be unable to pay off its obligations if they came due at that point. Therefore, all the 14 coffee suppliers' current ratio is above one. For instance, AWI Semen International Business PLC has got the average current ratio of 1.42 with a standard deviation of 0.139. This means for every one dollar of current debt, has 1.42 dollar available to pay for the debt, whilst, Awol Nuri Ibrahim Coffee Trading PLC has got 145.580 (SD±167.809) average current ratio which means for a one dollar every current debt, has 146 dollar available to pay for the debts or in other words current ratio of 146 means the company's currents assets are 146 times more than its current liabilities.

The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations. To gauge this ability, the current ratio considers the current total assets of a company (both liquid and illiquid) relative to that company's current total liabilities. The current ratio is called "current" because, unlike some other liquidity ratios, it incorporates *all current* assets and liabilities. The current ratio is also known as the working capital ratio. The formula for calculating a company's current ratio is:

Moreover, the average quick ratio of the 14 companies indicated in table 4.1 for five consecutive years ranges from 1.420 to 129.868. These quick ratio measures the dollar amount of liquid asset available for each dollar of current liabilities. Thus, a quick ratio interpretation is exactly the same as current ratio, for example AWI Semen International Business plc has got 1.420 average quick ratio means that a company has $1.420 of liquid assets available to cover each $1 of current liabilities. Likewise Fistum Tafere G/Medhen plc has got 129.868 average quick ratio implies that a company has 130 dollar of liquid asset available to cover each $1 of current liabilities.

The gross profit margin number represents the portion of each dollar of revenue that the company retains as gross profit. For example, the average gross profit margin of Awol Nuri Ibrahim Coffee Trading PLC for five years is 0.060, that is it retains $0.06 from each dollar of revenue generated. However, Ayetyef Busness plc, AWI Semen International Business plc, 4P Business Private Limited Company and ABCD Trading plc have got the average growth profit margin of 1.00, i.e., those companies retains $1 for each dollar of revenue. It spends the remainder on COGS. As COGS have already been taken into account, the remaining funds can be put toward paying off debts, general and administrative expenses, Interest expenses and distributions to shareholders and to shareholders.

Finally, the average net profit margin ratios of those 14 companies ranged from -70127.833 to 0.371 with the five consecutive years as shows in the table below. The companies those have achieved positive profit margin implies that they have been trading in ECX market place are profitable. According to the reviled result 4P Business Private Limited Company recorded 0.371 average margins within the study periods. This indicated that this company has $0.371 of net income for every dollar of sales. In contrast F.S.S General Trading PLC record a higher negative

average nonprofit margin which means the company loss as a result their net profit margin shows negative.

Table 4.1 Factors and average of ROA below 0 and lower than 0.2 as per the companies

	Variables				
Organizations	**ROA**	**CR**	**QR**	**GPM**	**NPM**
	Mean (Std. Dev.)	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**
Ayetyef Busness plc	-0.004 (0.860)	2.183 (0.720)	2.183 (0.720)	1.000 (0.000)	-0.004 (0.860)
Awol Nuri Ibrahim Coffee Trading plc	0.098 (0.134)	145.580 (167.806)	99.407 (93.607)	0.060 (0.021)	0.035 (0.020)
Fistum Tafere G/Medhen	0.110 (0.057)	138.837 (240.558)	129.868 (235.035)	0.244 (0.289)	0.034 (0.049)
Abdulmejed Ahmed	0.111 (0.115)	75.073 (63.794)	70.714 (59.762)	0.127 (0.108)	0.070 (0.041)
Berhe Gebremedhin Embaye	0.114 (0.097)	13.734 (20.463)	5.726 (7.250)	0.258 (0.415)	0.059 (0.029)
Jemo General Business Share Compa	0.129 (0.047)	6.983 (3.813)	3.363 (1.262)	0.303 (0.392)	-0.011 (0.189)
Abdurahman Muhammed Coffee Suppli	0.130 (0.096)	87.332 (55.543)	71.187 (30.925)	0.136 (0.077)	0.087 (0.046)
AWI Semen International Business plc	0.151 (0.268)	1.420 (0.139)	1.420 (0.139)	1.000 (0.000)	0.151 (0.268)
Morgan General Business plc	0.166 (0.104)	17.690 (17.144)	10.429 (7.445)	0.302 (0.394)	0.107 (0.120)
F.S.S General Trading plc	0.167 (0.199)	14.734 (15.597)	14.657 (15.679)	0.532 (0.472)	-70127.833 (156811.30
Mekuria Mergia Fresh Coffee Suppl	0.167 (0.078)	4.969 (2.306)	4.078 (2.931)	0.135 (0.050)	0.101 (0.044)
4p Business Private Limited Company	0.169 (0.211)	2.323 (1.080)	2.323 (1.080)	1.000 (0.000)	0.371 (0.295)
Asgrat Trading plc	0.172 (0.042)	4.897 (3.070)	2.975 (2.173)	0.262 (0.095)	0.129 (0.049)
ABCD Trading plc	0.194 (0.194)	3.210 (1.258)	3.210 (1.258)	1.000 (0.000)	0.194 (0.194)

*ROA=Return on Asset *CR=Current Ratio *QR=Quack Ratio

*GPM=Gross Profit Margin *NPM=Net Profit Margin

The average return on assets of Ayinage General Trading was 0.210 with a standard deviation of 0.250. This indicated that the company generated 25 cents of net income for one dollar invested assets in the given study years. The variation is still higher than the average this indicates among the year profitability there is a great disparity.

In general, as the table 4.2 illustrated 12 companies have got from 0.20 to 0.30 average ROA Mohammed. Beshier Seid Business PLC registers the maximum average. Its capital benefit is also more stabilize because the individual yearly ROA deviation from the average doesn't show that much discrepancy.

From the below listed 12 trading companies, Jawi Manbuk Commission Agent PLC recorded a large, 55.713, average current ratio. This implied that for a one dollar current debt, the company has got 55.713 dollar available to pay for the debts, whereas, Ayinage General Trading PLC has got less, 1.363, average credit ratio than the rest 12 companies. But, still the ratio is above one which mean still this company has a good capacity to pay its debt (Table 4.2).

Moreover, most of, the companies those are listed in the table below have got a quick ratio higher than one except Ayinage General Trading PLC. The latter scored a QR of 0.579. This indicates this company has 0.579 of liquid assets available to cover each $1 of current liabilities. So, this company may not be able to pay off their current debts using only quick assets since it has a quick ratio below 1. However, the remaining companies capable to cover their short-term debt in a quick manor, thus, the company is in a good liquidity position.

In fact, gross profit margin is a key financial indicator used to assess the profitability of a company's core activity, so, the study includes this variable as one of the profitability indicator. According to the result shown in table 4.2 below indicated that the average gross profit margin of the 12 trade companies for five years ranges from 0.045 to 1. This implied that the companies' retain from 0.045 to 1 dollar from each dollar of revenue generated.

Likewise, the net profit margining of the listed companies ranged from -2.110 to 0.402. The company called Ftuma Jemal Coffee Trading PLC recorded a list margin, -2.110. This indicates that this company incurred a loss of $2.11 of net income for every dollar of sales, whilst, BMMS Coffee Buyer and Sales PLC benefited $0.402 net income for every dollar of sales.

Table 4.2 Factors and average of ROA above 0.2 and lower than 0.3 as per the companies

Organizations	Variables				
	ROA	**CR**	**QR**	**GPM**	**NPM**
	Mean (Std. Dev.)	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**
Ayinage general trading	0.210 (0.250)	1.363 (0.194)	0.579 (0.253)	0.055 (0.025)	0.021 (0.018)
Hand to Hand Business plc	0.221 (0.180)	6.190 (5.038)	5.262 (4.190)	0.363 (0.367)	0.311 (0.394)
Ftuma Jemal Coffee Trading	0.222 (0.281)	6.795 (12.630)	2.436 (4.893)	0.274 (0.413)	-2.110 (4.607)
Hagos Wolde Cereals and Oil Seeds	0.232 (0.142)	4.853 (5.687)	2.198 (2.514)	0.129 (0.046)	0.042 (0.029)
Southern Green Foffee Supplier pl	0.241 (0.166)	5.294 (1.619)	3.534 (1.625)	0.528 (0.447)	0.219 (0.181)
Jawi Manbuk Commission Agent plc	0.243 (0.556)	55.713 (114.125)	55.713 (114.125)	1.000 (0.000)	0.146 (0.473)
ADY ABO Sesam Sales plc	0.249 (0.236)	33.927 (29.328)	33.927 (29.328)	1.000 (0.000)	0.403 (0.188)
Zege Private Limited Company	0.267 (0.376)	3.767 (2.288)	1.781 (1.355)	0.045 (0.043)	-0.011 (0.041)
Baminif Trading	0.274 (0.292)	2.922 (1.734)	1.833 (1.358)	0.092 (0.024)	0.037 (0.032)
Buno General Trading plc	0.282 (0.212)	3.028 (2.280)	2.169 (0.634)	0.466 (0.348)	0.178 (0.091)
BMMS Coffee Buyer and Sales plc	0.296 (0.116)	2.399 (0.985)	2.399 (0.985)	1.000 (0.000)	0.420 (0.190)
Mohammed Beshier Seid	0.300 (0.060)	4.861 (3.587)	4.713 (3.458)	1.000 (0.000)	0.300 (0.060)

*ROA=Return on Asset *CR=Current Ratio *QR=Quack Ratio

*GPM=Gross Profit Margin *NPM=Net Profit Margin

Around 12 companies have got average return on assets between 0.3 and 0.4. The minimum earner is Mohammed Kassa Mohammed Coffee Supply. This company benefited 30 cents per every one dollar invested asset. Likewise, Abdulkadir Welay and Muluset Partners plc earned around 40 cents for every one dollar invested assets. Even the devotion of those companies is not far apart with the average.

Or in other words current ratio of 146 means the company's currents assets are 146 times more than its current liabilities. A current ratio below 1 show that the company is not in good financial health, it does not necessarily mean that it will go bankrupt. There are many ways for a company

to access financing, and this is particularly so if a company has realistic expectations of future earnings against which it might borrow.

As the below table indicated highest average current ratio, 22.565, is recorded by Abdulkadir Welay and Muluset Partner PLC. This indicates for every one dollar of current debt, has 23 dollar available to pay for the debt. Likewise, Seffa Abay Commodity Exchange Company recorded 1.485 average current ratio, i.e., this company have got also a current ratio higher than one, so this company also capable to pay 1.485 dollar for each dollar of the current debit. In general all the companies listed in the below table have got average current ratio higher than one which means these companies are in a better position to pay their current liabilities.

The average quick ratio of the 12 companies listed under the below table for five consecutive years ranges from 1.341 to 22.202. The highest average of quick ratio recorded in Abdulkadir Welay and Muluset Partner, whereas, the list average was recorded in Tadesse Edema Basaye Sole Proprietor. Thus, a 22.202 quick ratio means that a company has $22.202 of liquid assets available to cover each one dollar of current liabilities. Similarly, Tadesse Edema Basaye Sole Proprietor has 1.341 dollar of liquid asset available to cover each $1 of current liabilities. This implies that the liquid assets available to cover each dollar of short-term debt, thus, those companies are in a good liquidity position.

The other factors the researcher wants to highlight in the study were gross and net profit margin. In fact gross profit margin indicates that the company can make a reasonable profit, as long as it keeps the overhead cost in control. Therefore, three companies recorded the average profit margin of 1. This implies those companies enable to control their product cost, whilst, Workneh Tsegaye Coffee Industry listed a low average gross profit margin, 0.030, which imply it retains $0.03 from each dollar of revenue generated.

Under the consideration of net profit margin, all of the listed companies found in the table below, were higher than zero. Mikenay General Business PLC recorded the highest average 0.420, net profit margin. This indicated that this company has earned $0.420 net income for every dollar of sales. Comparably, Workneh Tsegaye Coffee Industry has got a least average net profit margin, $0.003.

Table 4.3 Factors and average of ROA above 0.3 and lower than 0.4 as per the companies

Organizations	Variables				
	ROA	**CR**	**QR**	**GPM**	**NPM**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**
Mohammed Kassa Mohammed Coffee Su	0.303 (0.185)	7.750 (3.918)	3.788 (0.447)	0.310 (0.174)	0.228 (0.140)
Tadesse Edema Basaye Sole Proprietor	0.308 (0.394)	2.389 (2.025)	1.341 (1.270)	0.084 (0.018)	0.024 (0.004)
Orocoffee General Trading plc	0.313 (0.294)	11.870 (13.517)	11.870 (13.517)	1.000 (0.000)	0.350 (0.242)
Workneh Tsegaye Coffee Industry	0.320 (0.402)	3.078 (1.912)	1.727 (1.463)	0.030 (0.056)	0.003 (0.056)
Mekonin Gemech Hirpa	0.321 (0.322)	2.777 (2.097)	1.663 (1.597)	0.108 (0.100)	0.016 (0.049)
Mikenay General Business plc	0.328 (0.301)	3.610 (1.832)	3.610 (1.832)	1.000 (0.000)	0.420 (0.285)
Tsegede Armacheho General Trading	0.338 (0.184)	10.230 (6.364)	7.353 (3.777)	0.566 (0.397)	0.340 (0.294)
Seffa Abay Commodity Exchange Company	0.353 (0.436)	1.485 (0.453)	1.485 (0.453)	1.000 (0.000)	0.265 (0.196)
BOFA International plc	0.358 (0.204)	2.151 (0.656)	2.151 (0.656)	1.000 (0.000)	0.395 (0.157)
Ethio Agri-Ceft plc	0.386 (0.181)	4.142 (1.192)	2.281 (0.845)	0.541 (0.049)	0.229 (0.071)
Chefa Dera General Business plc	0.394 (0.268)	4.357 (1.564)	4.357 (1.564)	1.000 (0.000)	0.394 (0.268)
Abdulkadir Welay and Muluset Partner	0.400 (0.329)	22.565 (15.483)	22.202 (14.997)	0.706 (0.174)	0.225 (0.115)

*ROA=Return on Asset *CR=Current Ratio *QR=Quack Ratio

*GPM=Gross Profit Margin *NPM=Net Profit Margin

Berihun Tadese's Trading Private Limited Company return on assets indicates 41 cents earned on each dollar of assets. Thus higher values of return on assets show that business is more profitable. So, Yerowar General Business PLC has got 49 cents for each dollar assets increment. Comparably the latter company earned more than the previous. Therefore, large ROA indicates that the profitability of the company is improving, while, the lowest earners profitability is deteriorating. In fact, the below table illustrated that all the 13 companies have got from 0.40 to 0.50 average ROA.

The average current ratio of the entire 13 companies listed in the below table were above one. Anekaa General Trading PLC recorded the largest average, 25.277, while, Chandlier Trading Private Limited Company recorded the lowest, 1.725. In sum up every of the companies average current ratio is above 1, so, those companies liabilities are greater than its assets and implies that the companies would be enabled to pay off its obligations if they came due at that point. In other term the companies are in good financial health.

Similarly, the average quick ratios of the indicated companies were larger than the median threshold one. Anekaa General Trading PLC registered the largest average, i.e., this company have better liquid assets available to cover each dollar of short-term debt compared to Sisay Tetemke Bitewelgn Import Export which has a lowest average quick ratio. Thus, all the indicated companies are found in a good liquidity position.

Regarding to the gross profit margin concern, three companies have recorded the average margin of 1. That is, those companies retain $1 from each dollar of revenue generated. Thus, those companies gross margin is increasing; so, they may look for processes that allow escalating labor costs or for suppliers who offer higher costs on materials.

The summarized data presented in the table below illustrated that Senait Temelso Import and Export and Dukale Wakayo Dakola Coffee Export average net profit margin ratios for five consecutive years were below zero. This indicated that those companies incur a loss and unable to recover their costs and expenses. But the remaining 11 firms had achieved positive profit margin which ranges from 0.058 to 0.555. This implies that the companies had got from $0.058 to $0.55 net income for every dollar of sales. Therefore, they are profitable.

Table 4.4 Factors and average of ROA above 0.4 and lower than 0.5 as per the companies

	Variables				
Organizations	**ROA**	**CR**	**QR**	**GPM**	**NPM**
	Mean (Std. Dev.)	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**
Berihun Tadese Trading plc	0.416 (0.140)	19.586 (16.840)	18.820 (16.920)	0.520 (0.300)	0.304 (0.126)
Jemal Anwar Adem (Wholesale Trade)	0.417 (0.494)	15.603 (14.568)	14.726 (14.922)	0.539 (0.510)	0.278 (0.427)
Anekaa General Trading plc	0.418 (0.309)	25.277 (24.759)	25.277 (24.759)	1.000 (0.000)	0.555 (0.270)
Senait Temelso Import and Export	0.430 (0.326)	5.572 (8.884)	5.397 (8.977)	0.349 (0.367)	-0.928 (2.157)
Bekelcha International Business plc	0.436 (0.203)	9.033 (5.321)	9.033 (5.321)	0.566 (0.087)	0.155 (0.082)
Skamm General Trading plc	0.445 (0.167)	1.716 (0.209)	1.716 (0.209)	1.000 (0.000)	0.445 (0.167)
Sisay Tetemke Bitewelgn Import Export	0.448 (0.319)	5.154 (4.069)	1.304 (1.268)	0.128 (0.028)	0.058 (0.019)
Dukale Wakayo Dakola Coffee Export	0.452 (0.347)	2.450 (1.769)	1.637 (1.035)	0.126 (0.129)	-0.049 (0.088)
Chandlier Trading Private Limited	0.460 (0.138)	1.725 (0.179)	1.725 (0.179)	1.000 (0.000)	0.460 (0.138)
Embaradom Buisiness Private Limit	0.464 (0.267)	7.796 (7.024)	7.796 (7.024)	1.000 (0.000)	0.607 (0.116)
Asay General Trading plc	0.469 (0.225)	14.071 (10.457)	14.071 (10.457)	1.000 (0.000)	0.518 (0.120)
Dejena Tadesse Whole Trade	0.475 (0.322)	2.351 (1.098)	2.218 (1.203)	0.741 (0.306)	0.484 (0.168)
Yerowar General Business plc	0.488 (0.226)	4.007 (2.436)	3.460 (1.628)	0.699 (0.276)	0.461 (0.237)

*ROA=Return on Asset *CR=Current Ratio *QR=Quack Ratio

*GPM=Gross Profit Margin *NPM=Net Profit Margin

As elaborated in this section again and again return on assets is a measure of how effectively a company uses its assets. Higher is this figure, better is the utilization of the company's assets. For example, in the below table 9 companies earn profits worth 1 dollar with an investment giving ROA of 0.5 to 0.6 cents. Similarly, 3 another companies can give same profit with an investment of just 1 dollar, giving a ROA of 70 to 80 cents. The other 1 company has got from 80 to 90 cents net average income a one dollar invested asset. Finally, 2 companies have got 0.90

to 1.00 ROA. All those companies certainly utilized their resources better because all of them are generating more than 50 cents with a one dollar invested asset (Table 4.5).

The average current ratio of the listed companies indicates except the three coffee exporters, all of the companies recorded above 1. For instance, Mohammed Awel Omer PLC recorded a least average current ratio of 0.558. This indicates this company for every 1 dollar of its current debt, has approximately 56 cents available to pay for the debt. This implies its capacity to pay the current debt is very pathetic. However, Bore Buna Private Limited Company registered the largest average current ratio, 23.609. This indicates this company has a better capacity to pay its current debit compared with the other indicated companies.

Moreover, the average quick ratios of the majority of the companies those are indicated in the below table are higher that one except Mohammed Awel Omer PLC, Acos Ethiopia Private Limited Company and Dahyabho II Patel Company. These companies recorded poor liquidity assets. But, the remaining companies recorded a largest average, so, they have a better liquid asset available to cover each dollar of short-term debt compared to the lower average quick ratio recorded companies. Thus, all the latter companies are investing too many resources in the working capital of the business which may more profitably be used elsewhere.

Regarding the gross profit margin, all the listed 15 companies' average gross profit margin with the five consecutive years ranges from 0.07 to 1. A company's gross margin is 0.07 means it retains around 10 cents from each dollar of revenue generated. This implies the business is unable to control its production cost. In other way direction a company gross margin is 1.00 indicates, it retains around $1 from each dollar of revenue generated. So, the company can make a reasonable profit, as long as it keeps the overhead cost in control.

The below table is also illustrated about the average net profit income of 15 companies within five consecutive years. As the result shows all of the companies have achieved positive profit margin which ranges from 0.002 to 0.792. Enarial General Trading PLC recorded the highest average score, 0.792, i.e., this company has $0.792 of net income for every dollar of sales. Even if Dahyabho II Patel Company recorded the lowest average, 0.002, it has got $0.002 of net income for each dollar. In general, this result implied that all of the companies are profitable.

Table 4.5 Factors and average of ROA above 0.5 and lower than 1.0 as per the companies

Organizations	Variables				
	ROA	**CR**	**QR**	**GPM**	**NPM**
	Mean (Std. Dev.)	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std. Dev.)**	**Mean (Std.**
Bore Buna Private Limited Company	0.509 (0.330)	23.609 (51.885)	23.592 (51.895)	0.297 (0.401)	0.123 (0.521)
Bure Wollega plc	0.510 (0.278)	6.943 (4.796)	6.355 (5.415)	0.834 (0.222)	0.359 (0.188)
Suletane Selamo Ahmed	0.512 (0.290)	3.325 (1.742)	2.876 (1.693)	0.566 (0.112)	0.369 (0.154)
YOMIF Trading	0.515 (0.249)	4.824 (1.996)	4.824 (1.996)	0.551 (0.187)	0.274 (0.096)
Abba Asmare Mesfin	0.528 (0.173)	12.357 (8.260)	12.357 (8.260)	1.000 (0.000)	0.528 (0.173)
M.BT.S Genral Treading plc	0.549 (0.201)	4.854 (1.743)	4.854 (1.743)	0.734 (0.254)	0.480 (0.205)
Mohammed Awel Omer	0.558 (0.215)	0.558 (0.215)	0.215 (0.128)	0.352 (0.061)	0.074 (0.044)
Omer Hassen Yimer Coffee Whole Se	0.563 (0.175)	8.546 (6.049)	8.546 (6.049)	1.000 (0.000)	0.563 (0.175)
TOMOCA coffee plc	0.580 (0.243)	1.571 (0.425)	1.090 (0.410)	0.553 (0.121)	0.224 (0.084)
A.Z.K. Z General Trading plc	0.722 (0.187)	19.185 (8.478)	18.636 (8.741)	1.000 (0.000)	0.826 (0.077)
Acos Ethiopia Privare Limited Com	0.788 (0.110)	0.788 (0.110)	0.201 (0.099)	0.161 (0.075)	0.004 (0.048)
D.E.T.T General Business plc	0.793 (0.074)	2.404 (3.913)	2.404 (3.913)	1.000 (0.000)	0.793 (0.074)
Amentofa Coffee Trade Private Limited Company	0.832 (0.116)	4.345 (0.712)	4.345 (0.712)	0.949 (0.048)	0.740 (0.044)
Dahyabho II Patel Company	0.935 (0.027)	0.935 (0.027)	0.539 (0.153)	0.070 (0.028)	0.002 (0.004)
Enarial General Trading plc	0.958 (0.576)	14.362 (10.555)	14.362 (10.555)	1.000 (0.000)	0.792 (0.093)

*ROA=Return on Asset *CR=Current Ratio *QR=Quack Ratio

*GPM=Gross Profit Margin *NPM=Net Profit Margin

Table 4.6 depicted that the average return on asset during 5 consecutive years time by 66 export companies working in ECX. The overall average return on asset of the companies over the given period was 0.37427350 (SD $\pm$ 0.31879368). The largest return was earned in 2014 followed in 2017, whereas, in the year 2015 recoded a less amount of minimum average. So, the trained shows a great fluctuation, in addition high variation was recorded in most of the years. That is,

some of the companies had beneficial but the others vies versa. In general the study result implied that the companies' performance profitability is progressive well.

Table 4.6 ROA within the indicated period over the 66 organizations

Year	**Mean**	**Std. Dev.**	**Freq.**
2013	0.36714694	0.37757008	66
2014	0.40531662	0.31679651	66
2015	0.33542256	0.26134537	66
2016	0.36034423	0.30344815	66
2017	0.40313716	0.32786305	66
Total	0.37427350	0.31879368	330

Regarding the average current ratio, the overall 66 commodity exporters under the study with the given 5 sequential period is 14.385268 (SD±46.132392). The year 2009 register highest average and followed with the year 2013. The lowest average is recorded in 2014. However, through the given periods greater devotions were recorded, i.e., the average current ratios within the given companies have had a far disparity. But, as the overall average current ratio illustrated, each companies had 14 dollar available to pay every one dollar of current debt. This simply means the companies have more than enough to cover its current liabilities if they come due.

Table 4.7 The Current Ratio (CR) of the 66 organizations within the indicated period

Year	**Mean**	**Std. Dev.**	**Freq.**
2013	16.686254	71.152135	66
2014	10.168168	24.198463	66
2015	14.411949	54.433295	66
2016	11.941971	16.856859	66
2017	18.717997	42.755905	66
Total	14.385268	46.132392	330

Looking at the quick average (current asset – inventory) /current liabilities ratios in table 4.8 it can be seen that the barometer of the 66 companies capability and inability to pay its current obligations profitability. Their quick ratio average has gone up from 15.443088 to 15.771617 over the five year period. Although the average has gone down in 2014. and up in the maximum pick in 2017. Even though high variation were recorded in all the indicated years, the overall average showed $12 of liquid assets were available to cover each dollar of short-term debt, thus, the companies are in a good liquidity position.

Table 4.8 The Quick Ratio (QR) of the 66 organizations within the allocated period

Year	**Mean**	**Std. Dev.**	**Freq.**
2013	15.443088	68.634375	66
2014	9.1734631	23.287957	66
2015	10.759077	33.636249	66
2016	10.54111	16.069603	66
2017	15.771617	37.913121	66
Total	12.337671	40.04768	330

As seen from table 4.9 the average gross profit margin of the 66 companies within the given five years never indicates a great change, i.e., the average change ranged from 0.55606504 to 0.64570296. In the year 2007 E.C. the companies recorded a lowest average gross profit margin, whereas, in the year 2017 the highest. In general the growth trained is not linearly escalating trough the given years rather it is monotonic. The overall average gross profit margin of the entire companies for five years had been 0.58170708 which means it retains around 60 cents from each dollar of revenue generated. The individual company gross profit disparity from the average is not deviated mach more. Therefore, those companies did well in managing their cost of sales; moreover, they have more to cover for operating, financing, and other costs.

Table 4.9 The summery result of Growth Profit Margin (GPM) of the 66 organizations within the allocated period

Year	**Mean**	**Std. Dev.**	**Freq.**
2013	0.57004683	0.41492406	66
2014	0.57384511	0.41808042	66
2015	0.55606504	0.41054501	66
2016	0.56287543	0.40243193	66
2017	0.64570296	0.39391506	66
Total	0.58170708	0.40689542	330

As seen in table 4.10 the average net profit margin income of the 66 companies peaked in 2014 and declined down in 2017. Because of the great declination trained the overall average of the entire companies within the given five years went below the level of zero. This indicated that within those periods the companies were not successful achieved their business of making a profit on each dollar sales.

The average net profit margin registered in the year 2014 by those exporters working in ECX was 0.29824271. This indicates those companies has expect to get around 30 cents of net income for every dollar of their sales. Therefore, the companies on that specific period who have been trading in ECX market made them profitable. However, in the year 2017 those companies average net profit had fallen quite dramatically, as seen from table 4.10. So, in this duration, 2017, the companies losses $5,313 of the net income for every dollar of their sales. This simply impels that the firms incur a loss and unable to recover their costs and expenses.

Table 4.10 The summary result of Net Profit Margin (NPM) of the 66 organizations within the allocated period

Year	**Mean**	**Std. Dev.**	**Freq.**
2013	0.25312552	0.37286171	66
2014	0.29824271	0.26933877	66
2015	0.26625967	0.26034368	66
2016	0.20940239	0.24824116	66
2017	-5312.7062	43160.854	66
Total	-1062.3358	19302.131	330

The table depicted below indicated that the average return on asset and factors which expected to affect the return on asset of the 66 exporter companies those are working in ECX. The result cared out the summery result of the study variables in the dimension of the given duration (within effect), according to the order of the given organizations (between effects) and the overall integration of the panel data analysis.

The overall average return on asset of the 66 companies with the given 5 sequential period was 0.3742735 (SD±0.3187937). The maximum availed return on assets was, 1.978774 whereas, the minimum had been -1.528111. In other word, some of companies within the given duration at the higher level invested with a one dollar assets generated 2 dollar, while, some others loses around one dollar with 50 cents. This result decreased within the five year duration and between the 66 companies.

The overall average current ratio of the companies within the given five years duration was 14.355 (SD±46.1323). This indicates the variation is larger among companies within the given times. For instance the maximum average was 567.5529, whereas, the minimum ones was -10.91077. Therefore, the disparity between the maximum to minimum is obviously larger. Even if the variation is higher, as the overall result reviled within the given time and between the companies for every one dollar of current debt, on the average they have 14 dollar available to

pay for the debts. Moreover, as the result indicates even if the variation is larger, loses is not recorded in between the companies; but, a great losses was registered within the given periods.

Regarding the quick ratio concern, as like the current ratio this result doesn't show any lose between companies, while, within the given duration loses and benefits were recorded. In sum up, the overall average quick ratio of the 66 companies within the five indicated years illustrated the range from -10.91077 to 549.4502, i.e., the companies has a loss of 11 dollar and lower in one hand and 549 dollar and lower of liquid asset available to cover each dollar of current liabilities of net income. In general as the overall average indicated the companies within the five year period have got around 12 dollar liquid assets available to cover each dollar of short-term debt. This indicated that the companies are in a good liquidity position to pay their debts.

The overall average of the gross profit margin is 0. 5817071 (SD±0. 4068954), whilst, the maximum margin of the 66 companies with the five year interval had been 1. That is, the average gross profit margin retains about 60 cents and can go through one dollar from each dollar of revenue generated. But, some of the companies recorded a loss because the minimum overall average is found below the expected threshold. Furthermore, the result indicated that the variation is not that much beiger, i.e., even losses are registered in the minimum level of the within group, it is not beiger than one cents. In general the as overall result shown those companies within the given duration kept the overhead cost.

The overall average net profit margin is -1062.336 (SD±19302.13); its maximum value is 0.983801, whereas, the minimum ones is -350640.4. The result in depth shows, among the 66 companies, the minimum and maximum non profit margin recorded -70127.83 and 0.8261045 respectively. This result is a bit higher compared with the five year period interval. As all the result elaborated, the net profit margin either in between companies or within the given duration had shown a great loses and gain. This negative result occurs because of huge loss incurs in 2017 by some companies. The researcher is unable to investigate the reason of the loss. However the overall result indicates loses, therefore, some of the companies within the given period of time did not have a better capability to survive in the product line or the marketing exchange processes

Table 4.11 The overall result of the study variables

Variable		Mean	Std. Dev.	Min	Max	Observations
ROA	overall	.3742735	.3187937	-1.528111	1.978774	N = 330
	between		.2038847	-.0036982	.9583689	n = 66
	within		.2461013	-1.150139	1.394679	T = 5
CR	overall	14.38527	46.13239	-10.91077	567.5529	N = 330
	between		27.58222	.5580926	145.5802	n = 66
	within		37.10348	-113.2226	443.1015	T = 5
QR	overall	12.33767	40.04768	-10.91077	549.4502	N = 330
	between		23.31995	.2013961	129.8682	n = 66
	within		32.65897	-108.8363	431.9197	T = 5
GPM	overall	.5817071	.4068954	-.0800819	1	N = 330
	between		.3663852	.0299646	1	n = 66
	within		.1815429	-.0301914	1.323534	T = 5
NPM	overall	-1062.336	19302.13	-350640.4	.983801	N = 330
	between		8632.165	-70127.83	.8261045	n = 66
	within		17290.57	-281574.9	69066.2	T = 5

4.2 Regression Model Analysis

This study uses a panel data in order to examine the impact of liquidity on the profitability of 66 companies traded on Ethiopian Commodity Exchange. Panel data, also called longitudinal data or cross-sectional time series data, are data where multiple cases such as suppliers were observed at two or more time periods. The return on asset (ROA) considered as dependent variables, in other way direction, current ratio, quick ratio, gross profit margin, and net profit margin are independent variables. In fact as such kinds of studies have two types of information: the cross-sectional information reflected in the differences between subjects, and the time-series or within-subject information reflected in the changes within subjects over time. So, panel data regression techniques allow the users to take advantage of these different types of information.

Moreover, panel study is more advantageous than ordinary list square (OLS) design. The main reason is if anyone using multiple regression analysis, there is a possibility of endogeneity occurring whereby when certain variables are omitted, it leads to measurement errors. The endogeneity problem is one of the serious problems which can be occurred in OLS due to the exclusion of important variable which may affect the dependent variable but not include the formulated model. However, panel study primarily controls as such kinds of problem in the model. In that regard rather than simple OLS method, either random or fixed effect model capability to avoid the expected endogeneity problem.

4.3 Diagnosis checking

4.3.1. Model Choice

Statistically, the generally accepted way of choosing between fixed and random effects is done by running a Hausman test. The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results.

The Hausman test tests the null hypothesis that the coefficients estimated by the efficient random effects estimator are the same as the ones estimated by the consistent fixed effects estimator. If they are mean insignificant P-value, i.e., Prob>chi2 larger than 0.05, then it is safe to use random effects. Otherwise, fixed effect model is more advantageous. Therefore, according to the finding of this study result, fixed effect is more preferable than random effect because the *p* value of the calculated chi^2 0.0289 is $p < 0.05$. So, the researcher use fixed effect model for further analysis (Table 4.12).

Table 4.12 Hausman test statistics

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
Current ratio (CR)	0.0002192	-0.0003311	0.0005504	0.0004805
Quick Ratio (QR)	-0.0009604	-0.0005581	-0.0004023	0.0005137
Gross Profit Margin (GPM)	0.3738002	0.220797	0.1530033	0.0627921
Net Profit Margin (NPM)	1.57e-06	1.43e-06	1.40e-07	2.50e-07

b = consistent under Ho and Ha; obtained from xtreg

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

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 9.03

Prob> chi2=0.0289 model fitted on these

data fails to meet the asymptotic

assumptions of the Hausman test;

see suest for a generalized test

Source: Own data

4.3.2 . Heterogeneity across the years

According to the above study finding, the study has to use fixed effect multiple regressions model as a model. This helps to identify and determine the important factors which capable to affect Return on Asset (ROA). In other word it is used to investigate the impact of liquidity on profitability of those members trade on Ethiopian Commodity Exchange within the given individual independent variables.

The rationale behind fixed effects model is that the assumption which stated something within the individual may impact or bias the predictor or outcome variables and anyone needs to control for this. This is the assumption of the correlation between entity's error term and predictor variables. In fact this model removes the effect of those time-invariant characteristics, so the users can assess the net effect of the predictors on the outcome variable.

Moreover, the time-invariant characteristics of fixed effect model are unique to the individual and should not be correlated with other individual characteristics. That is, each entity, the coffee exporter sectors, is different, therefore the entities error term and the constant, which captures individual characteristics, should not be correlated with to each others. If the error terms are correlated, then the fixed effect (FE) model is no suitable since inferences may not be correct and the user should expect to use random effect (RE) model. Hausman test statistics approve this fact in the above test and conclude that the time-invariant problem is not a real problem of the study. In other words, it supports fixed effect is advantageous than random effects.

Furthermore, as the data is panel individual heterogeneity is expected over time and across entity. For instance, if to illustrate the presence or absence of heterogeneity across the years in the existed data set, it is possible to run a dependent variable (ROA) over the its average. According to the graph indicated below the distribution of the ROA is heterogeneous over time; whereas, the unobserved variables that do not change over time (Fig 4.1).

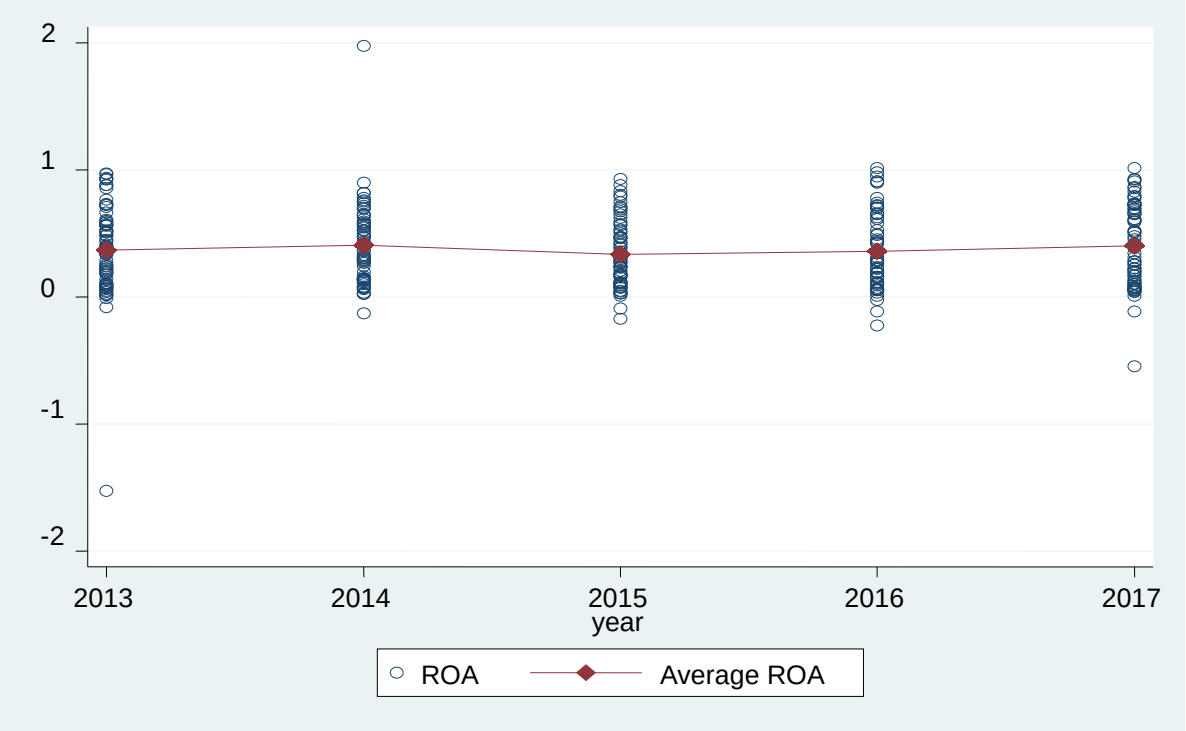


Figure 4.1 Heterogeneity across the year

4.3.3 Testing for time-fixed effects

If the model is fixed effect the users should to check whether the time fixed effects are needed or not**.** When the time fixed effect is obvious, the time variation across the entity should be the same. Therefore, parameter test statistics is helps to decide whether time fixed effects are needed when running a FE model or not. It is a joint test to see if the dummies for all years are equal to 0, if they are then no time fixed effects are needed otherwise treat the model including the fixed time. In that regard the study result reviled the P-value, 0.70888, is greater than the significant value, 0.05, so, not failed to reject the null hypothesis that the coefficients for all years are jointly equal to zero, therefore time fixed effects are not needed in this case (Table 4.13).

Table 4.13 Test of time fixed effect

(1) _Iyear_2006=0
(2) _Iyear_2007=0
(3) _Iyear_2008=0
(4) _Iyear_2009=0
F (4, 256) = 0.54
Prob > F= 0.7088

4.3.4. Testing for cross-sectional dependence/contemporaneous correlation

The other important test which should be applied in the FE model is testing for cross sectional dependency. Cross-sectional dependence test is used to test whether the residuals are correlated across entities or not. Cross-sectional dependence can lead to bias in tests results also called contemporaneous correlation. The null hypothesis is that residuals are not correlated.

According to the result of analysis, the p-value of the cross sectional independence test value, 0.4911, is larger than the significant threshold 0.05. So, accept the hypothesis which stated that the residuals are not correlated across the entity coffee distributer sectors.

Table 4.14 contemporaneous correlation between the residual and entity

Pesaran's test of cross sectional independence = -0.689, Pr = 0.4911
Average absolute value of the off-diagonal elements = 0.426

4.3.5. Tests of Heteroskedasticity

Test of Heteroskedasticiy is also one of the important tests for the fixed-effects model which helps to check whether constant variance assumption is achieved across the entity. Anyone has to remain in here that the null hypothesis is the variances are Homoskedasticity or constant variance. So, as the study result reviled in the table below, reject the null hypothesis because the p-value (0.000) is smaller than that of the significant threshold (0.05). Therefore, the distribution is Heteroskedastic (Table 4.15).

Table 4.15 Modified Wald test for Group Wise Heteroskedasticity In fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i
chi^2 (66) = 1.8e+05
Prob>chi^2 = 0.0000

4.4 Other diagnosis

The model specification test helps to identify whether the model is fitted or not. It is chicken by using Fisher's exact test. According to a result reviled in the table below, the P-value of the F-test statistics (0.0001) is lesser that the significant level (0.05), so, rejects the hypothesis which is stated that the model is not good. So, the model is fitted to explain the target objectives.

Thus, the level of goodness of fit test is also handled by R^2. In fact, panel study analysis revealed three R^2 outputs. They are the within group, the between group and the over all. As the model is fixed effect the within group goodness of fit test is highly expected but not the between group. Therefore, the R^2 of the within effect had been 0.0884, i.e., 8.84% of the variation of the dependent variable ROA covered by the within group effect of the given independent variables, Current Ratio, Quick Ratio, Net Profit Margin, and Gross Profit Margin.

One of the fixed effect model assumptions is stated that the error term should correlate with the regressors. That is, the errors, $u_{i,}$ of each entity are linearly associated with the independent variables. According to this result finding, the error term of the entities negatively associated with the regressors; because, the correlation coefficient of the finding is negative and its magnitude is weak (-0.3513).

The Rho-coefficient is also indicated that 39.47% of the variance is due to differences across panels (the coffee export sectors). It is the indicator of intra-class correlation. Especially, this correlation is larger for fixed effect. For more information please look at the table below (Table 4.16).

4.5 Return on Asset

In this section the practical results of the regression analysis is presented. According to the analytical output reviled except current and quick ratios all other factors such as gross profit margin, net profit margin and the constant term are statistically significant association with ROA. Because, their p-value lesser that the significant correspondence 0.05. Jointly, all the significant effects have a positive effect on ROA.

Moreover, the output illustrated that when the gross profit margin increased by one unit or one Birr the corresponding return on asset escalating by 0.3738 times under the consideration of all the remaining effect taking as a constant. This is, the higher the gross profit is the greater performance of the sectors growth will be. Moreover, this result implied that for the sectors ROA increment, gross profit margin plays a significant role.

The effect of net profit margin is the second important factor which capable to affect the coffee exports sectors of ROA. In line with the net profit margin, for a one Birr increment would lead 0.00000157 times escalation of ROA, taking the other effect as a constant. In other way round when the effect of net profit margin is increased by unit price the return on asset of the sectors slightly goes up. This is also implies that gross profit margin is also enforced to increase the profitability of the coffee exporters sector. In here any one can understand that this factor is the second lading factor which can affect the ROA next to gross profit margin.

In general, both gross and net profit margins lead to increase the profitability of the sectors. However, even other empirical findings convinced that current and quick ratios are significant to determine the return on asset, according to this study finding those factors are not statistically important to determine the dependent variable. The below table elaborated more about the regression model of the given data seat (Table 4.16).

Table 4.16 The summary report of fixed effect regression model of ROA

Fixed-effects (within) regression	Number of obs = 330
Group variable: index	Number of groups = 66
R-sq: within = 0.0884	Obs per group: min = 5
between = 0.0763	avg = 5.0
overall = 0.0686	max = 5
	F(5,47) = 6.30
Corr (u_i, Xb) = -0.3513	Prob > F = 0.0001

ROA	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf. Interval]**	
Current Ratio (CR)	0.0002192	0.001689	0.13	0.897	-0.003107	0.0035451
Quick Ratio (QR)	-0.000960	0.001919	-0.50	0.617	-0.004739	0.0028183
Gross Profit Margin (GPM)	0.373800	0.081434	4.59	0.000	0.213446	0.5341543
Net Profit Margin (NPM)	0.00000157	8.55e-07	1.84	0.037	-1.10e-07	3.26e-06
_cons	0.167198	0.049845	3.35	0.001	0.0690453	0.2653508
sigma_u	0.21343592					
sigma_e	0.26431846					
rho	0.39469098 (fraction of variance due to u_i)					

F test that all u_i=0: **F (65, 260) = 2.75** **Prob>F=0.00**

Chapter Five

5 Summary, Conclusions And Recommendations

5.1. Summary

The secondary data in this analysis covered a period of five years from 2013 to 2017. The population of survey was the market actors who traded in Ethiopian Commodity Exchange (ECX). After the screening process firms who trade both in ECX and outside ECX market and have sister companies in all the years of study were not considered in the analysis and at the end 66 firms who fulfils the criteria were considered in the study.

In this specific study return on assets (ROA) is considered as an indicator of how profitable a company is relative to its total assets. The average return on asset of most of the companies involved in this study for five consecutive years of the 66 firms shows a positive return on assets except one company which shows very little negative return on assets. ROA is a measure of how effectively a company uses its assets. The higher in this figure the better is the utilization the company's assets. The average ROA during five consecutive years time by 66 companies trading with ECX was 0.37427350 and the standard deviation ±0.31879368 which means that profitability can deviate from the mean to both side. In general the study result implied that the company's performance profitability is progressive well.

The other variable that the researcher is about to study is current ratio. The result of the regression about current ratio shows that the overall average current ratio of the 66 companies within the given five years duration was 14.355 with the standard deviation of ±46.1323. This implies the variation is larger among companies within the given times. The average shows for every one dollar or current debt on the average they have 14 dollar available to pay for the debts.

The other variable studied in this research was quick ratio. The regression result shows the overall average quick ratio of the 66 companies within the five years illustrated the range from -10.91077 to 549.4502, this means the companies has a loss of 11 dollars and lower in one hand and 547 dollars and lower of liquid asset available to cover each dollar of current liabilities. The

result indicates that the overall average showed 12 dollar with 40.04 standard deviation, thus the companies are in a good liquidity position,

The other variable under investigation was gross profit margin. The overall gross profit margin of the 66 companies within the given five years never indicates a great change. The overall average gross profit margin of the entire companies for five consecutive years had been 0.58170708 with ±0.40689542 standard deviation. The individual company gross profit margin disparity from the average is not deviated much more.

The last variable under investigation was net profit margin. The regression result showed that the overall average net profit margin is -1062.336 with standard deviation of ±19302.13. Its maximum value is 0.983801 whereas, the minimum ones is -350640.4. The result in depth shows, among the 66 companies is a bit higher compared with the five years period, The net profit margin either in between companies or within the given duration had shown a great losses and gain.

In this section the practical results of the regression analysis is presented. According to the analytical output reviled except current and quick ratios all other factors such as gross profit margin, net profit margin and the constant term are statistically significant association with ROA. Because, their p-value lesser that the significant correspondence 0.05. Jointly, all the significant effects have a positive effect on ROA

Several studies have been done on liquid asset and profitability of financial institutions including commercial banks. According to Deloof (2003) management of liquidity is important from the point of view of both working capital and profitability. Poor management of liquidity level means that funds are unnecessarily tied up in idle assets hence reducing liquidity and also reducing the ability to invest in productive assets. The study by Deloof has the same conclusion as this study as the two studies established that proper management of commercial bank's liquid asset contributes to its profitability.

Another study by Myers and Majluf (1984) argue that because of information asymmetry-induced financing constraints, firms should stock up on liquid assets to finance future investment opportunities with internal funds. Since there are no offsetting costs to liquid assets in their model, the optimal amount of liquidity is a corner solution. This is similar to this study but the

major difference being that the previous researcher declared information asymmetry as a factor while this study solely focused on how liquidity impacts profitability.

Almeida (2001) also conducted another study on cash holdings and stated that they are valuable because they increase the likelihood that the firm will be able to fund new investments. However, increasing cash may be costly to a firm if it decreases the quantity of current investments that the firm can make. Cash yields a lower return than that associated with the firm's physical investments whenever the firm foregoes positive NPV projects in order to hold cash. In contrast to a firm facing constraints in accessing capital markets, an unconstrained firm has no use for cash and faces no cost of holding cash. This study findings is similar to the one conducted by Almeida (2001) but the previous study only looked at cash while this study looks at liquid cash in general will influence its level of profitability and the variables used in the study are positively related with profitability.

Carrow w. Botole (2011) conducted a research about the impact of liquidity on profitability of commercial banks in Liberia. Using the regression analysis, the study analyzes the profitability of commercial banks using balanced data over the period of 2006-2011. The study used the liquidity asset and liquidity assets for estimating liquid asset and profitability relationship.

The estimated relationship between liquid assets and bank profitability was as expected. Coefficients for the liquid assets ratio, its square, business cycle, and its product of interactive business cycle and regulation were positive and also statistically significant. The regulation coefficient was though negative. As expected, find evidence of a non-linear relationship between profitability and liquid asset holdings. An important finding of this study is that the business cycle of a commercial bank significantly affects it profit. The coefficient of regulation is negative and significant. Therefore if regulators reduce the constraints imposed on banks, banks obtain profit. Thus the findings show that efficient management of liquidity in a bank will influence its level of profitability and the variables used in the study are positively related with profitability except the banks regulation by the Central Bank that was found to be negatively related with the bank’s profitability. This is similar with the study regarding liquidity and profitability except some bank loans and bank regulation.

Ted Nyekanyeka (2011) also conducted a research analysis of profitability and efficiency of improved and local small holder dairy production Dairy development projects have provided technologies to boost milk output and household incomes for smallholder dairy farmers in Malawi. This study was initiated to analyze the profitability and economic efficiency of improved and local dairying in Lilongwe Milk Shed Area (MSA). Gross margin and cost benefit analyses were used to evaluate farm-level profitability while a stochastic profit frontier model was used to estimate level of efficiency and factors influencing inefficiency. Results showed that, on average, farmers had positive gross margins which implies that smallholder dairying brings income to dairy farmers in the study area. Level of education, years of dairying experience and access to credit reduced profit inefficiency. This is similar as to gross profit margin that positively contributes to farmers profitability except other factors that has been studied like the impact of level of education, years of dairying, capacity building of farmers and better price and tax policies that had a significant impact on profitability.

Erik Rehn (2012) conducted a study about effects of working capital management on company profitability. The researcher believes that working capital management has lately been a hot to[pic since the financial turmoil of the late 2000's. Companies search for liquidity and operational efficiency through minimizing their investment in working capital. But, the researches want to know the answer can working capital management adds to corporate profitability and share holder value? This had been studied by this thesis. By testing the two variables with corporate profitability, the selected companies under investigation able to increase their gross operating profitability by reducing the cash conversion cycle and net trade cycle. There is significant evidence that by effectively managing each part of working capital, a company can increase the profitability. This is similar to the research except analyzing cash conversion cycle, otherwise working capital is all about current asset or more specifically quick asset that has been tested by this research

5.2 Conclusion

According to the analytical output reviled in this study except current and quick ratios all other factors such as gross profit margin, net profit margin and the constant term are statistically significant association with ROA. Because, their p-value lesser that the significant correspondence 0.05. Jointly, all the significant effects have a positive effect on ROA.

Moreover, the output illustrated that when the gross profit margin increased by one unit or one Birr the corresponding return on asset escalating by 0.3738 times under the consideration of all the remaining effect taking as a constant. This is, the higher the gross profit is the greater performance of the sectors growth will be. Moreover, this result implied that for the sectors ROA increment, gross profit margin plays a significant role.

The effect of net profit margin is the second important factor which capable to affect the coffee exports sectors of under studied ROA. In line with the net profit margin, for a one Birr increment would lead 0.00000157 times escalation of ROA, taking the other effect as a constant. In other way round when the effect of net profit margin is increased by unit price the return on asset of the sectors slightly goes up. This is also implies that gross profit margin is also enforced to increase the profitability of the coffee exporters sector. In here any one can understand that this factor is the second lading factor which can affect the ROA next to gross profit margin.

In general, in this study liquidity has no impact on profitability but both gross and net profit margins lead to increase the profitability of the sectors. Return on assets and profitability are found positively correlated. However, even other empirical findings convinced that current and quick ratios (liquidity) are significant to determine the return on asset, according to this study finding those factors are not statistically important to determine the dependent variable.

5.3 Recommendations

The study on the impact of liquidity on profitability established a positive relationship between the independent variables (GPM & NPM) and the dependent variable but the study specifically looked at the 66 firms who only traded in ECX. Based on the impact of the variables on profitability of companies, this study recommends the following:

- Ethiopian commodity exchange Authority, the regulatory body of ECX should put in place a policy that regularly monitors the liquidity position of the firm and ensure that it is maintain at a level that does not affect negatively the profitability of the firms. Liquid assets can be both positive and negative to the firms based on how they managed as excess liquid assets negatively affect the profitability of the firms as the liquidity can be used to some other business operations and generates returns. On the other hand when firms lack liquid assets they become unable to cater for liability and totally become insolvent.

- The firms should make a balance between not to have excess current assets or very little current asset. Some of the companies under study showed very big current and quick ratios, which means the firms have very big ratios have excess idle cash which was not inject to the business to make profit, It is just have very big money to repay very little current loan. On the other hand some companies showed very little current and quick ratios, which means they have no enough money to repay current loan, it simply means the companies were un able to repay their current debts and exposed to extra interest charge and finally hard to become profitable.

- In both cases having too much current assets and very little current assets is a sign of poor liquidity management, which in turn affects negatively firm's profitability. The regulatory body ECEA should have a policy as to managing members working capital or liquidity position. These firms are not only there for their own they are also trade for millions others. If these firms are not properly supervised and monitored the effect is devastating, market integrity will be in a great danger and finally the whole marketing system will face a great problem. Therefore, the regulatory body should put in place a

clear policy to make a regular control about business financial position before bad thing happen.

- As the result showed clearly increasing gross profit will automatically lead firms to profitability. Therefore, firms should work hard to increase their gross profit. Increasing gross profit has a dual purpose, one increasing sales the other decreasing costs. As study indicates high cost will make firms non profitable, eventually, didn't give a chance to stay in business. To stay in business profitability is vital, to be profitable managing costs also an important task, then it is very easy to make high their gross profit which has a positive impact on their profitability.

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- The impact of current ratio and quick ratio (liquidity) which has a significant effect to determine ROA and profitability in different studies, but not significant in this studies should be researched further and tries to investigate why liquidity doesn't have an impact on profitability.

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