

**PRE AND POST FINANCIAL PERFORMANCE  
OF FIRMS PRIVATIZED THROUGH THE  
NAIROBI STOCK EXCHANGE**

**BY  
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SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE DEGREE OF MASTERS  
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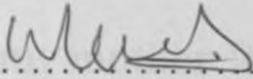


**OCTOBER 2005**

## DECLARATION

This research project is my original work and has not been Submitted for degree in any other university:

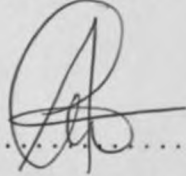
*This study has been done in my father Martin Amimo*

Signed.....  ..... Date..... 07/11/2005

Edgar Amimo Weche: *done it as well. It is well with our*

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This Research Project has been submitted for examination with my approval as the university supervisor.

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**DEDICATION**

**This study is dedicated to my father Martin Amimo Weche and my mother Rose Anyoso Amimo Weche. For all that the Lord has done it is well. It is well with our souls.....**

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The MBA programme has been a great challenge for me, as it required sacrifice and working extra hard to be able to make its successful completion a reality. It has enabled me to face the challenge of new situations with more confidence and broadened my analytical skills. The product of this project is the effort of many people who have in one way or the other supported me.

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**May Almighty God Bless You!**

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## **ABBREVIATIONS**

EBT	Earnings before taxation.
IPO	Initial public offering.
IMF	International Monetary Fund.
NSE	Nairobi Stock Exchange.
NTT	Nippon Telephone and Telegraph.
SOE	State Owned Enterprises.
$X_1$	Profitability ratios.
$X_2$	Liquidity ratios .
$X_3$	Leverage ratios.
$X_4$	Activity ratios.
LQDTY	Liquidity.
PROFITR	Profitability.
PRFMS	Performace.

## **ABSTRACT**

The study sought to find out if there is a major difference in performance of State owned enterprises firms privatized through the Nairobi Stock Exchange (NSE). In addition it had an objective of developing a predictive model for state owned enterprises that were privatized through the (NSE). The study analysed six state owned enterprises that were privatized through the Nairobi Stock Exchange. The extent of contribution of financial ratios to performance was analysed. The ratios used were profitability, liquidity leverage and activity ratios.

The data was analysed using regression analysis and correlation tests. Hypothesis testing was done using the Z tests at 95 % level of significance, to find out if there is significant difference between pre and post privatization performance.

The findings showed that generally privatization resulted to improved results in the finance and commercial sector, but not in the industrial sector. The findings also showed that profitability ratios were positively related to performance and leverage ratios were most negatively related to performance. Liquidity and leverage ratios showed mixed relation to performance. The results of hypothesis testing confirmed that pre and post privatization performance is significantly different when using the profitability and leverage ratios.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

Privatization is positively linked with hardened firm budgets and the extent of market liberalization, but is constrained by excessive debts and worker redundancy. Firm efficiency and state owned enterprises, financial liabilities imposed on local governments are not factors of influence ( Guo and Yao, 2005).

Privatization represents a potential revolution in the role of government in promoting economic growth and development. This revolution gained force in the 1980's and continues to gather momentum (Kikeri, Sunita, John Nellis and Mary Shirley, 1992). The privatization movement set in motion by the Reagan Administration in the 80's in the United States appears to have started a global trend of restoring the free enterprise spirit (Dhameja and Sastry 1998).

In Asia after 40 years of socialism (or Socialistic pattern of society), India has begun to liberalize and privatize its economy. China has opened its doors to the outside world and allowed private ownership of business by its citizens. The Association of South East Asian Nations countries, Indonesia, Philippines, Singapore, Thailand and Malaysia are no exception to this global trend, even the newly constituted states of the former Soviet Union, are now embarking on privatization programmes.

The economic benefits of privatization are now widely accepted, and can include improved enterprise efficiency and financial performance, developing, competitive industry which serves consumers well, accessing the capital know how and markets which permit growth, achieving effective corporate governance, broadening and deepening capital markets, and securing the best possible price for the sale (Kikeri, Sunita, John Nellis and Mary Shirley; 1992 ).

The results from an empirical study sponsored by the World Bank regarding 12 cases of diversitures of government owned assets in four middle income and developed countries showed that privatization can bring substantial gains. In eleven of the twelve cases, the gains were positive and large, amounting to an average 2.5 percent permanent increase in Gross Domestic Product (Kikeri, Sunita, John Nellis and Mary Shirley, 1994).

More than 8500 state owned enterprises in over 80 countries had been privatized by 1992. It is hard to find a country without privatization programme or a sector of activity not susceptible to private management, if not ownership. Privatization has thus become the single most influential concept of the later part of the 20<sup>th</sup> Century and will continue being so for the earlier part of the 21<sup>st</sup> Century.

Privatization can be defined in simple terms as the process by which governments' sale the state owned enterprises completely. Although SOEs are the most common and well known examples, governments can also privatize land, housing (which has been done in Great Britain and elsewhere) and even services, for example in the United States where a few cities have experimented with privatizing education, road construction and maintenance by contracting them out to private firms.

Until recently, the English language had not discovered the word privatization. Many of the older dictionaries did not have the word and even when it started appearing, it was described in very simple manner such as **“the process of making private”**. Currently, there is however plenty of literature describing privatization especially from organizations such as the World Bank.

Privatization could mean different things to different people. It is because though in theory, some central concepts such as ‘Ownership’, ‘Competition’, ‘Regulation’, ‘Liberation’, ‘Deregulation’, etc. can be distinguished and discussed separately, but in practice they are all inter-related.

This is the reason why prior to 1979 privatization was often referred to as 'Marketization', 'Corporation', 'De-Nationalization', etc. However Private is a middle English proverb derived from the Latin 'Privatus' which means 'not belonging to the state or not in public life'. Thus the term 'Privatization' could contextually mean 'measures taken to initiate a more commercial (private) approach into the activities undertaken by the public sector. This is the reason why, the question 'privatization of what?', Is usually answered as privatization of the Public Sector. The Public Sector is also referred to as the State Sector or State Owned Enterprises (SOEs).

Kihumba (1998) states that the subject matter in privatization is (SOEs), also called parastatals or public enterprises. SOEs are revenue generating entities owned by the state or which the state exercises some dominant control. They include firms with essentially commercial functions such as parastatal banks, or textile mills or marketing boards.

## **1.2 STATEMENT OF THE PROBLEM:**

In the late 1980s and 1990s, a change in attitude of the major international financial organisations on State Owned Enterprises, accelerated the need for their privatization, especially in developing countries like Kenya.

The International Monetary Fund introduced stabilization policies to reduce public expenditures and to adopt policies which would foster the efficient use of resources and consequent growth. The Government of Kenya therefore started the process of privatizing

State Owned Enterprises, which by then, had become a major drain on the exchequer, and were contributing to the inefficient use of resources and enhancing economic decline.

Privatization of State Owned Enterprises thus became an engine for the growth of the economy and improvement of their financial performance. Experience has shown that countries that have relied on the private sector to operate economic growth have fared much better than countries that have relied on the public sector to do so.

A number of privatizations have taken place in Kenya such as the Kenya Commercial Bank, National Bank of Kenya, Uchumi, Mumias and Kenya Airways. No study has been undertaken to establish the Pre and Post Privatization financial performance of companies privatized through the Nairobi Stock Exchange. In addition no known study has developed a model to predict the likely financial performance of privatized companies.

Otieno (1998) observes that little research has been undertaken in Kenya to compare the performance of State Owned Enterprises before and after privatization. Previous research has concentrated on comparing the relative efficiency and profitability of public and private firms. The major study to be cited here is by Grosh (1991), covering the performance of 77 manufacturing firms in public and private sectors. Public firms had the highest average rate of return at 15.2 per cent while private firms had 9.5 per cent. Her conclusion was that the data reveal little reason to expect privatization to improve performance.

In addition Otieno (1998) analysed the financial and operating performance of newly privatized enterprises in Kenya, however his study covered only four years after privatization and the findings therefore revealed only the immediate benefits. Future studies should therefore seek to identify and measure the long run benefits. Such studies will more use either regression analysis or multiple discriminant analysis, which cannot be applied in the short run because of few observations.

This study therefore analyses the Pre and Post Privatization performance of State Owned Enterprises, privatized through the Nairobi Stock Exchange and also estimates a predictive model of their financial performance following privatization. The study seeks to find out if the performance of state owned enterprises, privatized through the Nairobi Stock Exchange will better than when they were state owned enterprises. The study also seeks to find out if privatization has an effect on the performance of NSE.

### **1.3 RESEARCH OBJECTIVES:**

1. Establish the Pre-Privatization performance of State Owned Enterprises privatized through the Nairobi Stock Exchange.
2. Establish the Post-Privatization performance of State Owned Enterprises privatized through the Nairobi Stock Exchange.
3. To develop a performance predictive model for State Owned Enterprises privatized through the Nairobi Stock Exchange.



#### 1.4 IMPORTANCE OF THE STUDY:

The study will be of benefit to various people.

1. Financial Managers and Directors of State Owned Enterprises: They will be able to convince the government to divest from State Owned Enterprises so that efficiency of the work force increases and government expenditure on State Owned Enterprises is eliminated and replaced by more revenue being generated.
2. Individual investors and investment firms: They will be able to operate in a liberalized environment and strive to be competitive to ensure that the State Owned Enterprises yield profitable returns on their investments.
3. Academicians: They will be able to have more knowledge in finance, especially on the success of privatization of State Owned Enterprises in other parts of the world. This will enable them to enhance the literature on the financial benefits of privatizing State Owned Enterprises.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 STATE OWNED ENTERPRISES

Between the mid -60s and early 80s thousands of State Owned Enterprises were created throughout the developing countries. Indeed, in developed countries the same process was undertaken soon after the Second World War. State Owned Enterprises were created for various reasons and were believed to be effective means of economic growth especially in sectors requiring heavy capital investment. Others were created to meet certain political and social objectives such as job creation, reduction on dependency on foreign inputs and the creation of own infra-structure for accelerated social economic development (Cook and Kirkpatrick 1995).

Dhameja and Sastry (1998) note that State Owned Enterprises were concerned basically used as instruments of economic development. This was particularly so where Governments assumed an obligation to regulate the private entrepreneur's tendency to make monopolistic profits, eliminate social, economic and regional inequalities; invest in socially profitable ventures, speed up the rate of economic and technological development and provide visible instruments of entrepreneurial activity.

It is reported that in Iran a steel project was motivated primarily by considerations of prestige. State Owned Enterprises were created in the state of Andhra Pradesh in India during mid 80s, as the number of enterprises did not tally with the number of political aspirants.

The importance and influence of State Owned Enterprises grew rapidly in the seventies and early-80s throughout the developing countries. In Sub-Saharan Africa, State Owned Enterprises accounted for some 17% of the GDP by early 1980s. But gradually, people started questioning how they were managed because despite their proliferation, most performed below expectation. Most State Owned Enterprises started losing money and soon started being a drain on national treasuries. Many had to be propped up against outright collapse at great expense to the taxpayers (Kihumba 1999).

By mid-80s it had become increasingly clear that something had to be done about State Owned Enterprises. This led to the need to turn over these enterprises to private sector. Privatization of State Owned Enterprises acquired many objectives including the need to increase efficient use of economic resources, by allowing competition and discouraging monopolistic systems, for their tendency to be inefficient in allocation of resources or production of wealth (Cook and Kirkpatrick 1995).

The last quarter of the 20<sup>th</sup> Century has witnessed sweeping economic reforms, creating radical changes in economic structures that had been built earlier leading to drastic changes in the financial performance of firms. The privatization of state owned enterprises has featured prominently among these economic reforms, and this has been so due to the rather poor financial performance of State Owned Enterprises. Between 1980 and 1992, close to 7000 State Owned Enterprises were privatized in various countries all

over the world. More than 2000 of them were from 80 developing countries (Van de Walle; 1993).

The privatization process is likely to continue to feature prominently in Africa and other regions. Managing this privatization process and ensuring financial success is thus going to pose considerable challenges to the financial management of resources in Africa and Kenya in particular (Ikiara; 1999).

## **2.2 OBJECTIVES OF PRIVATIZATION**

Dhameja and Sastry (1998), note that State Owned Enterprises in general represent a monstrous political and economic resource for the policy makers. Unquestioned utilization of the resources at the whims and fancies of policy makers led these enterprises to disaster, State Owned Enterprises all around the world performed poorly in spite of their relative monopolistic competitive advantage. Their overall profitability was insufficient and the end result is that, State Owned Enterprises have become a drain on the exchequer and a means of patronage and source of power and wealth for the policy makers.

As a result of the poor performance the trend towards public enterprise expansion begun to be seriously questioned and a number of countries have adopted policies that seem to aim at reversing this trend. Indeed, there have been attempts to rely more heavily on deregulated free markets for the allocation of resources. In particular there has been a significant move towards privatization (Fontaine, 1993).

Further, change in the attitude of some international organizations accelerated the implementation of privatization policies, especially in the developing countries for example, The International Monetary Fund's (IMF) stabilization policies have induced many countries to reduce public expenditure and to adopt policies that would foster the efficient use of resources and consequent growth. Often, privatization becomes the most logical means of satisfying these requirements. The World Bank and other International Aid Organizations have become more open to the possibility of privatization of some of the government activities. This openness has encouraged privatization (Cook and Kirkpatrick; 1995).

Mary Shirley (1989), notes that "the efficiency of enterprises – Public or Private is highest when the enterprise strives to maximize profits in a competitive market under managers with the autonomy capacity, and motivation to respond to competition, and when enterprises that cannot compete go bankrupt."

Since public enterprises seldom face such conditions, their efficiency is expected to be less than highest always. Growth models of Japan, Korea, Singapore, Honk Kong and Taiwan have been characterized by intense competition and outward orientation emphasizing exports and international competitiveness. This has assigned a significant role to the private sector.

Privatization programs are either voluntary or forced. There are cases where privatization of State Owned Enterprises has taken place as a result of a voluntary and deliberate policy of the government. In other cases, however the process has been more as a result of the conditions set by multilateral and bilateral donor agencies that insist, only countries willing to undertake various structural adjustment measures, including privatization, are to have access to their resources (Ikiara; 1995).

In Kenya, the government was required to off load its involvement in the management of organizations such as Kenya Airways. At the moment the government is trying to divest from the telecommunication industry by attempting to privatize Telkom Kenya Limited.

Privatization is usually implemented to achieve objectives of raising the operational efficiency and performance of the enterprise, by introducing profit oriented decision making process. Privatization is also supposed to reduce government's fiscal deficit and its external and internal debt. Privatization enhances private sector culture, by introducing competition and entrepreneurship by changing and widening the structure and ownership through the sale of shares. The government is able to earn revenue through the sale of these shares.

In many cases privatization is undertaken because of the belief that the process enhances efficiency in resource allocation and utilization for the greater benefit of the people, through improved financial performance rather than being a drain on government finances.

While considerable debate continues about the comparative merits of market based and controlled economic systems, it is now generally held that private sector management of economic resources is technically more efficient and financially rewarding than the public sector management.

The relatively higher efficiency and financial performance of the private sector is derived from its in-built incentive mechanisms for higher productivity, less wastage and lower monopolistic powers which create an environment conducive to increased competition in both products and labour markets.

Privatization helps to reduce the government's financial burden, and generates more revenue to the government because of better financial performance. Privatization has been regarded as one of the ways in which a country can create a more attractive environment for foreign investors in the developing countries. Privatization is expected to enhance the role of the private sector and lead to an economy that is broadly guided by the dictates of market forces of demand and supply, instead of government directives and regulations.

### **2.3 METHODS OF PRIVATIZATION**

A wide range of privatization techniques is available. It is thus crucial that the method not be selected hastily or casually but only after careful assessment of all pros and cons, the overall social, economic and political implications, and the overall suitability to the privatization of the proposed enterprises.

The privatization method depends largely on the nature of the enterprise, its operational status, ownership structure, existing legal agreements, and the level of development of the country's stock markets (Cook and Kirkpatrick; 1995).

## **2.4 STRATEGIC ENTERPRISES**

Ikiara (1999) observes that for strategic enterprises, in which the government ownership is deemed necessary in one way or the other, the most suitable method is likely to be partial privatization. The objective here is to raise efficiency of the enterprise by introducing private-sector management for some of the services or departments. Good examples include efforts to privatize some of the services provided by posts and telecommunications, railways, and harbours corporations in a number of African Countries.

There are several methods, which have been found suitable for privatization of strategic enterprises; they include granting of leases and management contracts.

## **2.5 Leases**

Under leases, private sector management and technology are provided under contract to state-owned enterprise for a given period of time. The private party pays the government to use the assets and assumes commercial risks. Such contracts have been successfully used in sectors which find it difficult to attract private investors or where there are difficulties raising adequate financial resources to purchase a whole public enterprise. Examples of effective use of this privatization method include water supply in Cote



d'Ivoire and Guinea, power in Cote d'Ivoire, road transport in Niger, port management in Nigeria and mining in Guinea (Kikeri, Nellis and Shirley; 1994).

This method is however not suitable for enterprises that require large volumes of new investments to be competitive because the private sector entrepreneurs may not be willing to invest heavily in leased enterprise. In 1981, Jamaica leased seven hotels instead of selling them.

## **2.6 Management Contracts**

Management contracts are more suitable in circumstances in which outright sales of enterprise may not be financially or politically feasible for instance, railways, water and power usually require large investments in modern equipment and technology that may be beyond the ability of individual entrepreneurs.

Private sector managers are thus brought in, and the enterprises are allowed to operate more or less like private firms, although the assets remain the property of the state. The contractors are paid a fee by the state for services rendered and losses borne by the state. Since the fee is normally payable irrespective of performance, managers assume no risk and have little incentive to improve efficiency and maintain the value of the assets. The concept has however worked well, in sectors such as hotels, airlines and agriculture where contract negotiation and monitoring are routine and where adequate supply of experienced managers exists (Kikeri, Nellis, and Shirley; 1994).

One of the key lessons from experience with management contracts is that public-sector officials or managers should avoid interfering with day to day management but give emphasis to establishing the necessary accountability. Contract managers can be held accountable by a variety of mechanisms, including properly staffed and empowered boards of directors, business plans, contract plans and performance bonds, performance evaluations, and other incentive systems.

In addition, contractors can be given incentives to improve their operations and enhance the long-term value of the assets by linking their fees to performance encouraging equity investments or allowing managers to purchase some or all of the assets when the contract expires. However it must be recognized that this last option should not link the market value at the end of the contract with the purchase price otherwise the contractor would have an incentive to run down the value of the enterprise (Kikeri, Nellis and Shirley; 1994).

Management contracts are likely to succeed when they are a step toward full privatization, since it is change in ownership that check government interference and brings in the required investment capital. Nicaragua provides a good example of a country that has used this method as a first step, in privatizing two fish processing plants. The country's experience shows that with careful planning, the technique could be effectively used in the African environment.

## **2.7 NON STRATEGIC-ENTERPRISES**

In the case of non-strategic enterprises, there is a much wider range of privatization methods. The choice largely depends on such factors as whether the enterprise is operational and profitable, and also the existing legal agreements (Ikiara; 1995).

## **2.8 LIQUIDATION**

Non operational or unprofitable enterprises are usually liquidated. This leads to the dissolution of the business enterprise and sale of its assets. This allows the private sector to fill the vacuum. One of the adverse effects of this method is the heavy toll it takes on the society by laying off workers, often without meaningful compensation.

Liquidation is also often the first step to privatization (Ikiara; 1995)

## **2.9 SALE OF ASSETS**

The government may at times opt to sell the assets of a firm. This involves the sale of hardware rather than the shares of a going concern. This is done especially when there are legal suits against the enterprises or when it is saddled with debts. It is also useful for breaking up large firms and monopolies into viable and nonviable units, separating competitive from non-competitive activities and identifying peripheral assets such as restaurants, real estate, and so on, that can be sold as separate concerns. This form has been used successfully in Eastern Europe, Central Asia, Argentina (railways and steel), and Mexico (steel) (Segura; 1994)

## 2.10 PUBLIC SHARE OFFERINGS

This involves offering shares of an operational state enterprise for sale to the general public through organized markets, especially stock exchange. This method is ideal for large state owned enterprise. It must however be noted that public share offerings can be used as privatization method only in countries with well-developed stock exchange markets. This is one of the problems of using this method in many African countries where stock exchanges are generally not mature (Bhouraskar; 1993).

Many state enterprises to be privatized through public share offering must first be commercialized. This requires restructuring the enterprises to make it a corporate entity and creating a joint-stock company. The process facilitates formation of a company with shares that can be traded in a country's stock market. The shares of the company are initially held by the government and other partners in case of joint ventures.

The government can sell the shares to the public, allowing participation of the people in the exercise. Public share offering is among the most popular methods of privatization because they allow more people to be shareholders of entities created by public resources. The method is thus highly attractive for its relatively stronger egalitarian aspects (Kikeri, Sunita and Shirley; 1994).

Britain was able to use this method very successfully. The method was particularly popular because of special allocations of shares to employees of the Enterprises or small investors to allow wider participation in the process.

Some countries in Africa such as Kenya have had highly successful public share offerings of privatized enterprises. The Kenyan share offerings were mostly heavily oversubscribed, indicating their potential and popularity. Most of the shareholders are small investors.

## **2.11 PRIVATE PLACEMENT**

In this method, the government shares in an enterprise are sold to a predetermined buyer or buyers. It is suitable when target ownership is an important objective. This method is also useful when selling shares to small investors or workers, who may need low-interest credit or price discounts, and for the disposal of enterprises that are too small for public auctions or that have limited appeal for investors. This method has been used in the disposal of weak-performing firms that require restructuring or expansion. Private placements lead themselves quite well to debt-swap arrangements.

They have successfully been used in Honduras (The Parcarsa Paper Mill), El Salvador (banks), Nicaragua (The Montelimar Resort Complex) and Spain (Seat Auto Company). This method is recommended to companies that want their workers to be involved in the privatization process. The involvement of workers is sometimes very important in reducing opposition to privatization and raising the morale of the workers (Segura; 1994).

## 2.12 JOINT VENTURES (PARTIAL PRIVATIZATION)

In this approach, private companies buy shares of the privatized enterprises thereby diluting control of the government. Joint ventures can be affected via new injections of capital and management or by mergers. This form is useful for enterprises that are undercapitalized. Partial privatization helps joint ventures to work more efficiently, particularly when competition has been introduced, managerial control is transferred to competent core investors, governments voting rights are limited, and when shares offered are at the beginning of the process leading to a majority share offering. (Waiguchu, Tiagha and Mwaura;( 1995)

In countries where minority shares have been successfully sold to the private sector (e.g. port operations in Malaysia, a cement company in Indonesia and Nippon Telephone and Telegraph (NTT) of Japan), managers of these enterprises have changed operational behaviour to improve financial performance and transparency (Kiker, Nellis and Shirley; 1994). The method was also used in Ghana's privatization programme, demonstrating that it is a method that has a role to play in the African context. A major disadvantage of joint ventures, however, is the possibility of continued government interference in the management of the enterprises (Waiguchu, Tiagha and Mwaura;1995).

### **2.13 PRIVATE CONTRACTING OF SERVICES.**

Private contracting of central and local government services has also been increasingly used to improve financial performance by reducing costs and overstaffing especially in the provision of such services as garbage collection, town planning, accounting etc. The costs and overstaffing were often due to lack of a competitive environment (Ikiara; 1995).

### **2.14 PRICING AND VALUATION**

A major activity in the privatization process is the pricing and valuation of the assets of the parastatal to ensure that both the seller and the new investors will get a fair deal. The effective pricing and valuation of large state owned enterprises are expensive and time consuming. The valuation approaches commonly employed, and the choice will depend on the country's enterprise's situation. The three approaches to valuation include the market approach which is based on identification of similar valuations in comparable markets; the income approach which is based on determination of the income generating capacity of a set goods within a given period of time, and the cost approach which uses the replacement value of the goods, taking into account physical, functional, and economic changes and depreciation (Segura; 1994).

The best way to determine the selling price, particularly in the case of small and medium-sized enterprises, is to allow market forces to determine it through competitive bidding. Even for large enterprises, the market-led method is preferable to technical methods such as net asset value, price earnings ratios, dividend yields, or a combination of these (Kiker, Nellis and Shirley; 1994).

However, because of the macroeconomic changes arising from poor flow of information and underdeveloped markets market-based approach of pricing can pose special difficulties in the African context. Faced with such circumstances, it may be useful for governments to create a regulatory environment that encourages competition and ensures that all bidders are carefully pre qualified.

## **2.15 FINANCING PRIVATIZATION**

Privatization assumes the existence of both the consumer and capital markets technical know-how and infrastructural facilities, a government that has in force an active competition policy and regulatory agencies with all the necessary resources or place (Wand Dhamejon; 1998).

Most developing countries find privatization to be an expensive process and is a problem to implement. This is because these countries face a situation where, consumer markets are thin, imperfect and in many cases await to be created, technical know-how and



infrastructural facilities are at an early stage of development; entrepreneurial capacities are concentrated in the hands of a few families and Stock Exchange markets either non-existent or primitive and unorganized or heavily controlled.

In situations where the stock exchange markets exist, as in Nigeria and Kenya among others, the amounts that can be raised are often a small proportion of the amounts required (World Bank; 1992). Even for a large country like India, the total amount of financial resources raised through the stock exchange markets in 1989 was a mere 1.1 percent of the estimated book value of the public enterprises assets in the country (Bhourasker; 1993).

Financing can be through commercial banks. In Africa this may not be a major role, because of the weak banking institutions, for many African countries, the banks today cater largely to urban populations, with limited reach to the majority of the population, who live in the rural areas. Due to the developed state of banking, there are substantial financial resources outside the formal banking sector, thereby limiting the extent to which banks can generate resources required for privatization.

Financing of privatization can be adversely affected by government activities that reduce the ability of incentives of the private sector to purchase assets or shares of the public enterprises being privatized. One of the needed reforms in the regard is to curtail government borrowing in the domestic market through sale of treasury bills or other government securities.

Private investors may prefer to invest in the government securities, which are much less risky than shares or assets of public enterprises (Bhourasker; 1993).

The government can also establish credit schemes for the small-scale investors who may be interested in purchasing shares of the enterprises. The credit facilities could be managed by the government itself or through commercial banks or other credit institutions. It is usually advisable for the government when involved in this type of lending scheme, to reduce its risk exposure by only partially financing the purchase, so as to enable the investors to look for part of the money for financiers. When this is done the risk is spread more widely.

The government can give incentives to commercial banks to provide loans to people wishing to purchase public enterprises. Such incentives may include tax exemptions for interest earned from loans advanced for privatization purposes.

The exemption will enable banks to lend money at lower interest rates or increase their profitability. Tax incentives can also be extended to purchases of enterprises for a given period of time. This encourages private investors to participate more in the privatization process.

The government can initiate special schemes or incentives or for institutional investors such as insurance companies, pension funds, co-operative institutions, housing societies, among others to purchase shares or assets of the public enterprises. Some of these measures may involve changes in legislation to enable the institutional investors to participate. (Ikiara; 1995).

## **2.16 CHALLENGES OF PRIVATIZATION**

Privatization programmes wherever they are, are often beset with many problems related to implementation of such programmes as:

**Pricing:** - There is no single formula, which can be applied to arrive at a price of an SOE.

A price often depends on various techniques, both quantitative and qualitative.

**Distribution:-**Who gets access to this publicly owned assets is of great interest. In some countries, geographical and ethnic considerations may be important.

**Monopolies:-** A lot of SOEs are monopolies and what to do with them after privatization is an important issue to ponder.

**Staff considerations:-** Often, privatization entails laying off personnel and what must be addressed especially in countries with high unemployment.

**Legal issues:-** The legal and regulatory framework impacts directly on privatization programmes.

**Private sector:-**The capacity and interest of the private sector would impact on the success of privatization programme.

**Political goodwill:-** Many privatization programmes have failed to succeed because they lacked political good will.

There are many other issues and problems that should be considered but the above should help in the appreciation of the magnitude of the problem. When these are eliminated, privatization of SOEs yields to improved financial benefits.

## **2.17 MEASURES OF FINANCIAL PERFORMANCE**

Kathanje (2000) states that performance is defined as the predictive value for a financial institution's performance. It is obtained by a factor of four ratios: gearing, liquidity, earnings and asset quality ratios.

In this study ratios will be used to measure the financial performance of the privatized firms. The ratios will provide analysis of the firms debt burden, operating efficiency and profitability.

The four types of financial ratios to be used in analyzing the financial position of the firms will include: liquidity ratios which indicate the firms capacity to meet short term obligations, leverage ratios which indicate the firms capacity to meet its long term and short term debt obligations, activity ratios which indicate how effective the company is in using its assets, and profitability ratios which indicate the net return on sales and assets.

Liquidity ratios measure the firm's ability to fulfil short term commitments out of its liquid assets. Assets are "liquid" if they are either cash or relatively easy to convert into cash. The current ratio and the quick ratio are the most commonly used liquidity ratios.

Leverage ratios measure the extent of the firm's total debt burden. They reflect the company's ability to meet its short and long term debt obligations. The ratios are computed either by comparing fixed charges and earnings from the income statement or by relating the debt and equity (stockholders investment) items from the balance sheet.

Profitability ratios measure the success of the firm in earning a net return on sales or on investment. Since profit is the ultimate objective of the firm, poor performance here indicates a basic failure that, if not corrected, would probably result in the firm going out of business.

Activity ratios measure the efficiency in which a company uses its assets to generate sales. It involves ratios such as the total assets turnover ratio. The larger the total assets turnover, the larger will be the income on the amount of money invested in the assets of the business.

## **2.18 PREDICTION MODELS**

This study will use multiple discriminant analysis to try and predict the performance of privatized firms quoted in the Nairobi Stock Exchange. The Multiple

Discriminant Analysis, is a statistical technique for distinguishing between two groups on the basis of the observed characteristics. It is used to classify companies on the basis of their characteristics as measured by financial ratios in two groups; those that are likely to fail and go bankrupt and those that are not likely to fail. The Multiple Discriminant Analysis can thus be applied in predicting the financial performance of privatized firms quoted at the Nairobi Stock Exchange.

Altman (1968) applied the Discriminant Analysis in finance to study bankruptcy. He used such as ratios like net working capital/total assets (%), retained earnings/total assets (%), EBT/total assets (%) and sales/total assets (times) that were efficient in predicting bankruptcy and developed a model from a sample of 66 firms half of which went bankrupt (Kathanje, 2000)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 POPULATION**

The Nairobi Stock Exchange had fifty four companies trading in it when this study was done .All the State Owned Enterprises privatized through the NSE are the focus of this study. The companies studied were six in number, and they were drawn from the Finance and Investment Sector, and the Industrial and Allied Sector. The Agricultural Sector and the Alternative Investment market segment, were not studied because there was no SOE that had been privatized through the NSE from these sectors.

#### **3.2 DATA COLLECTION**

The study used secondary data obtained from Nairobi Stock Exchange and also from each of the six companies under study. The data was extracted from the financial reports, of the companies 5 years prior to and 10 years after they were listed in the Nairobi Stock Exchange. The whole period addressed by the study is from 1989 to 2003. The data collected included financial statements of the six companies studied. These statements were the Profit and Loss Accounts, the Cashflow Statements, and the Balance Sheets.

#### **3.3 DATA ANALYSIS**

Financial performance data for the privatized companies quoted at the Nairobi Stock Exchange was analysed using ratios. This data includes the Pre and Post financial performance. The ratios used will help to identify and quantify the SOE strength and

weaknesses, evaluate the financial position and the risks that the SOE may be taking.

The ratios are grouped into four categories; Profitability, Liquidity, Leverage, and Activity.

The Profitability Ratios will help to Shed light upon the effectiveness of management regarding the returns generated on sales and investment. The ratio that was used was the Net Profit/Sales or Gross Profit/Sales.

The Liquidity Ratios are helpful for Short term creditors /Suppliers and bankers, they are also important to financial managers who must meet obligations to suppliers of credit and various government agencies .A complete liquidity ratio analysis can help uncover weaknesses in the financial position of companies. The ratio that was used was Total Liabilities/Total Assets.

The Leverage ratios help to calculate the proportionate contributions of owners and creditors to a business or sometimes a point of contention between the two parties. Creditors like owners to participate to secure their margin of safety, while management enjoys the greater opportunities for risk shifting and multiplying return on equity that debt offers. The ratio that was used was Total Liabilities /Total Assets.

The Activity ratios will help to measure the efficiency of asset use e.g. inventory turnover and days sales outstanding. The ratio that was used was sales/current assets.



The correlation and Z-test for two sample means were used to test the hypothesis on whether there are any significant differences in financial performance ratios: Profitability, Liquidity, Leverage, and Activity between the Pre and Post financial performance of firms privatized and quoted at the Nairobi Stock Exchange.

The correlation tests will help to analyse if performance of the SOE is related to the ratios. The Z-tests will help to determine if performance is significantly different between pre and post privatization periods . The ratios for each category were used to develop a performance predictive multivariate analysis model.

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The analysis of data relied on the Microsoft (MS) Excel statistical package. Regression analysis was undertaken by fitting an equation of financial performance ratios of privatized companies through the Nairobi stock exchange(NSE).The ratios were, Profitability-  $x_1$ , Liquidity-  $x_2$ , Leverage-  $x_3$  and Activity-  $x_4$ . Correlation tests were carried out between the dependent variable (y) and the independent variables ( $x_1, x_2, x_3, x_4$ ) done using the Microsoft Excel chart package.

The performance ratios for each group were calculated. The formula used for arriving at performance is.

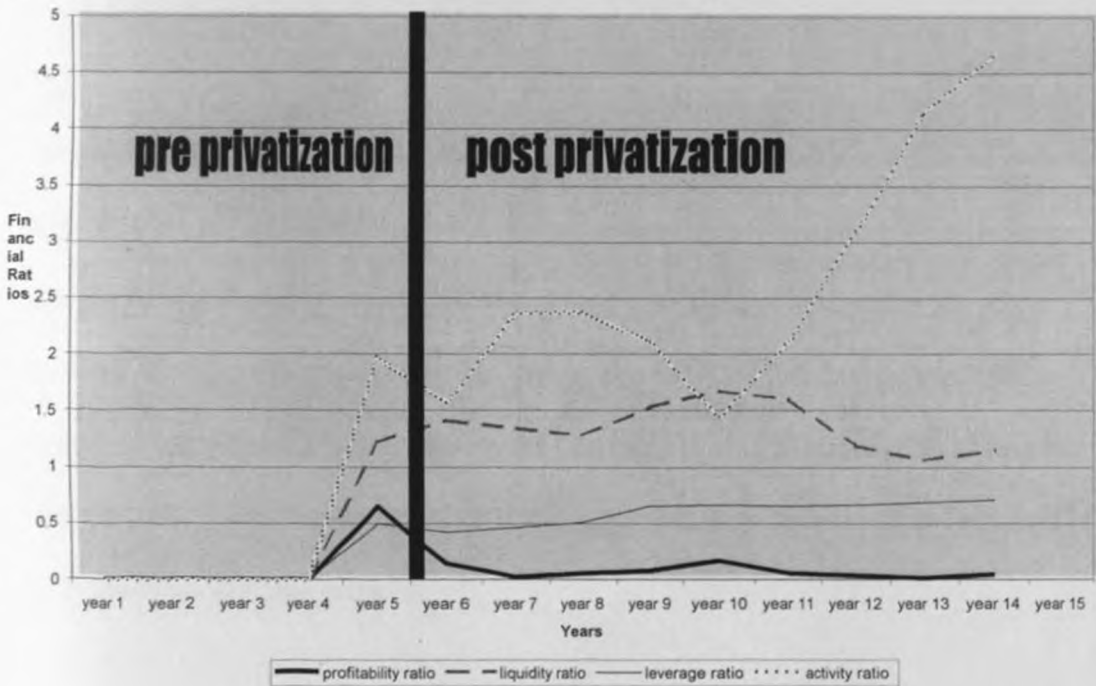
$$\text{Performance \%} = \text{Profitability ratio \%} * \text{Liquidity ratio \%} * \text{Leverage ratio \%} * \text{Activity ratio \%}$$

Table 1 to Table 6 show the annual financial performance ratios for the six companies studied. The four ratios identified in this study are Profitability, Liquidity, Leverage and Activity ratios. A factor of the four ratios yields the annual performance ratios.

## 4.2 Trends in Financial Performance Ratios

The following graphs show the trends in the overall financial performance of the six companies studied.

Graph 1: Trends in financial performance ratios:  
**Company 1**



Source: Research data: Graph 1 shows the trends of financial performance ratios for company 1 in the pre and post privatization era. Company 1 is in the commercial and services sector. The profitability ratio for the company was highest before privatization.

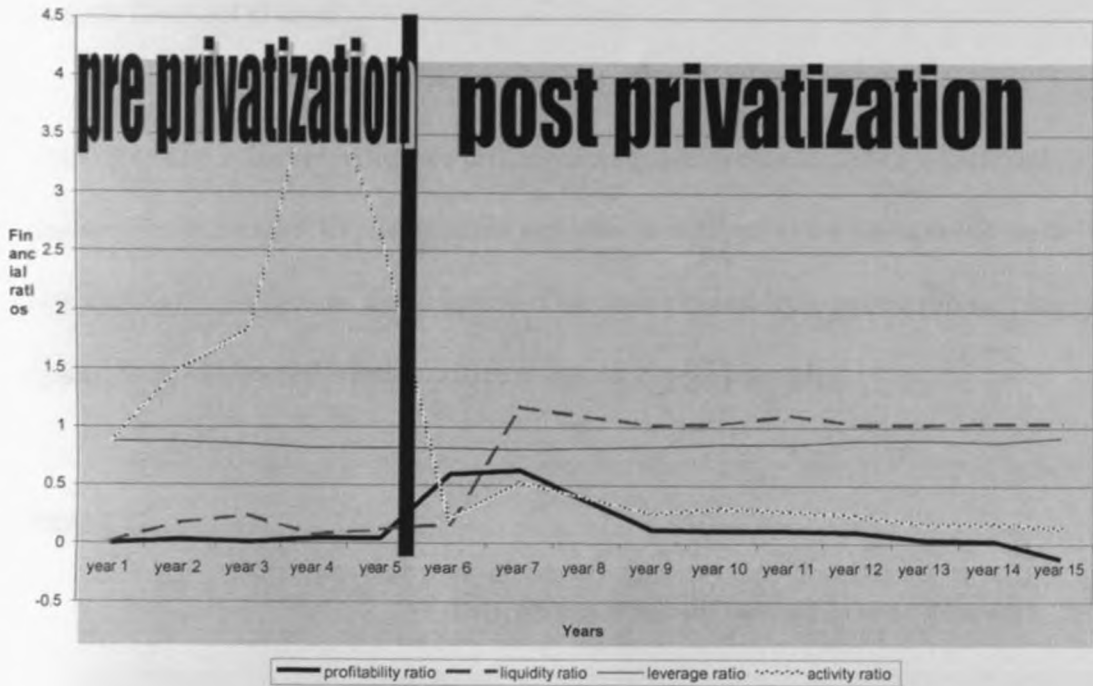
It later declined for some time in the post privatization era, however much later it increased with the exception of the last years.

The liquidity ratio declined in the first years of post privatization, however it later increases before finally declining in the last two years. The leverage ratio showed an increase in the post privatization performance and this continued throughout. The activity ratios fluctuate in the post privatization era, but show significant increase in the last five years.

The trends in financial performance ratios for Company 1 therefore show that its only the leverage ratios which show an improved performance after privatization. This indicates that the Company is able to meet its short and long term debt obligations much more easily when privatization takes place. The trends also indicate that despite profitability ratios decline in the post privatization era the Company is able to improve its ability to fulfill short term commitments out of its liquid assets and also becomes more efficient in using its assets to generate sales.

## Company 2

Graph 2: Trends in financial performance ratios: Company 2



Source: Research data: Graph 2 shows the trends in financial performance of Company 2 in the pre and post privatization era. Company 2 is in the finance and investment sector. The profitability ratios are low in the pre privatization era, but it increases in the post privatization era then reduces until it reaches negative levels. This shows that Company 2 is unable to improve its ability in earning a net return on investment after privatization.

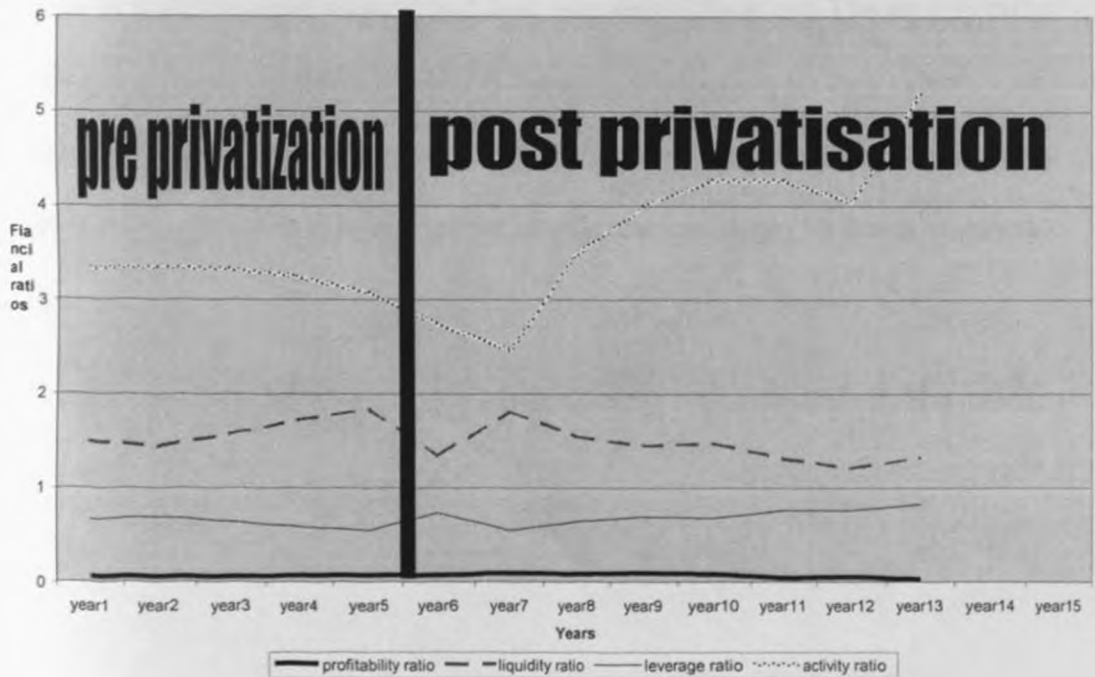
The liquidity ratios and fluctuate in the pre privatization era. The ratios improve significantly after privatization and sustain the improved performance in the subsequent years. This shows that Company 2 improves its ability to fulfill short-term commitments out of its liquid assets following privatization.

The leverage ratios do not exhibit any significant change in the pre and post privatization performance. This shows that the ability of the firm to meet its short and long term debt obligations does not change.

The activity ratio is higher in the pre privatization era, however there is a significant decline just one year prior to privatization and after privatization the ratios continue to decline with only one year as an exception. This shows that despite privatization, Company 2 is unable to efficiently utilize its assets to generate sales.

### Company 3

Graph 3: Trends in financial performance ratios: Company 3



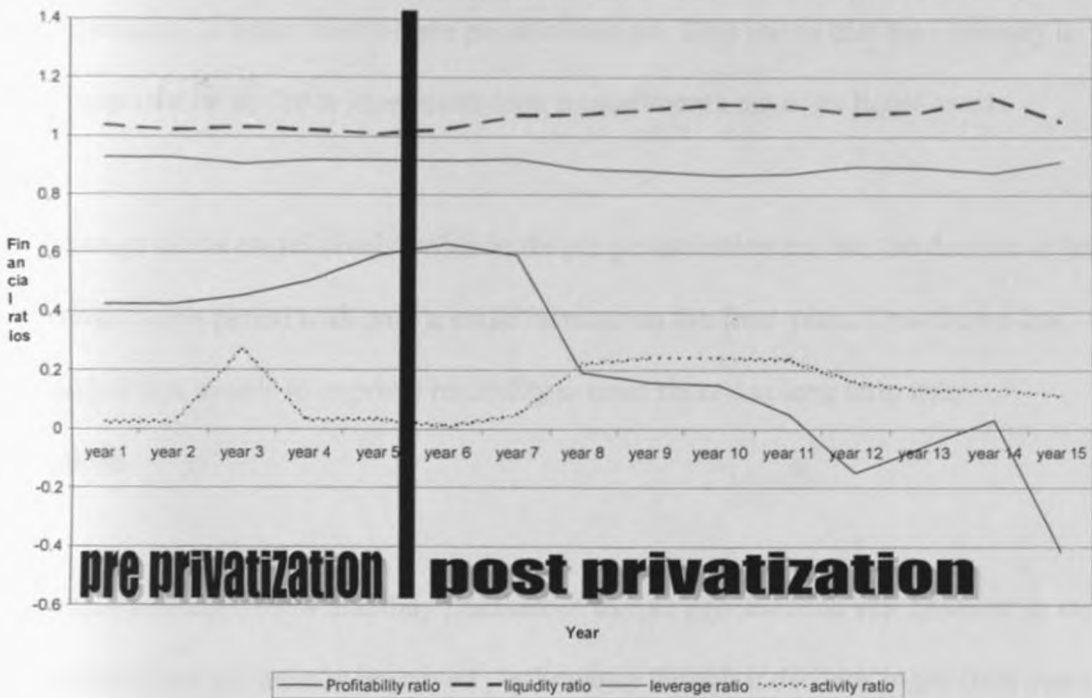
Source: Research data:

Graph 3 shows the trends in financial performance ratios for Company 3, which is in the commercial and services sector. The profitability ratios are low in the pre-privatization era and they remain so in the post-privatization era, although there small increase in some years and a decline in the last years. This shows the privatization has not resulted into the company increasing its ability to earn a net return on sales. The liquidity ratios fluctuate in the pre and post privatization era. They however show a gradual decline in the post privatization era, meaning that Company 3 is unable to improve its ability to fulfill short-term commitments out of its liquid assets.

The leverage ratios decline in the pre privatization era, and however increase marginally in the post privatization era. This shows that privatization has enabled Company 3 to improve its ability to meet its short and long term debt obligations .The activity ratios decline in the pre privatization era, but in the post privatization era they exhibit a marked increase with only one year as an exception. The marked increase in the activity ratio shows that Company 3 is able to improve its efficiency in using its assets to generate sales.

## Company 4

Graph 4: Trends in financial performance ratios: Company 4



Source Research data;

Graph 4 shows trends in financial performance ratios for Company 4 which is in the finance and investment sector. The profitability ratios in the pre privatization era increase throughout however in the post privatization era they show a significant reduction which results to negative levels. This shows that Company 4 despite privatization is unable to increase its net return on investment and is therefore an indicator of failure.



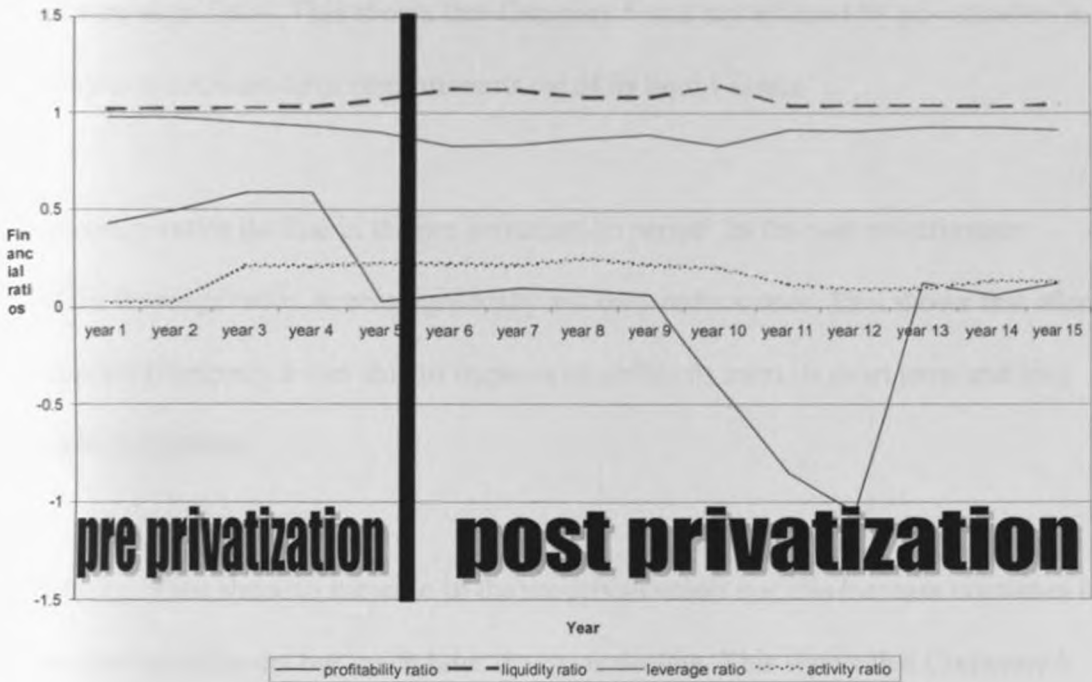
The liquidity ratios fluctuate in the pre privatization era, however in the post privatization era, there is a gradual increase and even though there some years of decline the performance is better than the pre privatization era. This shows that the company is able to improve its ability to meet short-term commitments out of its liquid assets.

The leverage ratios are relatively stable in the pre privatization era, but the decline in the post privatization period with only a small increase on the final years. This shows that Company 4 was unable to improve its ability to meet short and long term debt obligations.

The activity ratios are low and they fluctuate in the pre privatization era, however in the post privatization era there is improved performance though it declines in the final years, nevertheless the performance is still much better than in the pre privatization era. This shows that Company 4 is able to improve its efficiency in utilizing its assets to generate sales.

## Company 5

Graph 5: Trends in financial performance ratios: Company 5



Source: Research data:

Graph 5 shows trends in financial performance ratios for Company 5, which is in the finance and investment sector. The profitability ratios are higher in the pre privatization era, however in the past privatization era, there is only a very small increase in the initial years and a drastic decline in the following years, whereby negative levels are recorded. This shows that Company 5 despite privatization was unable to earn a net return on investment.

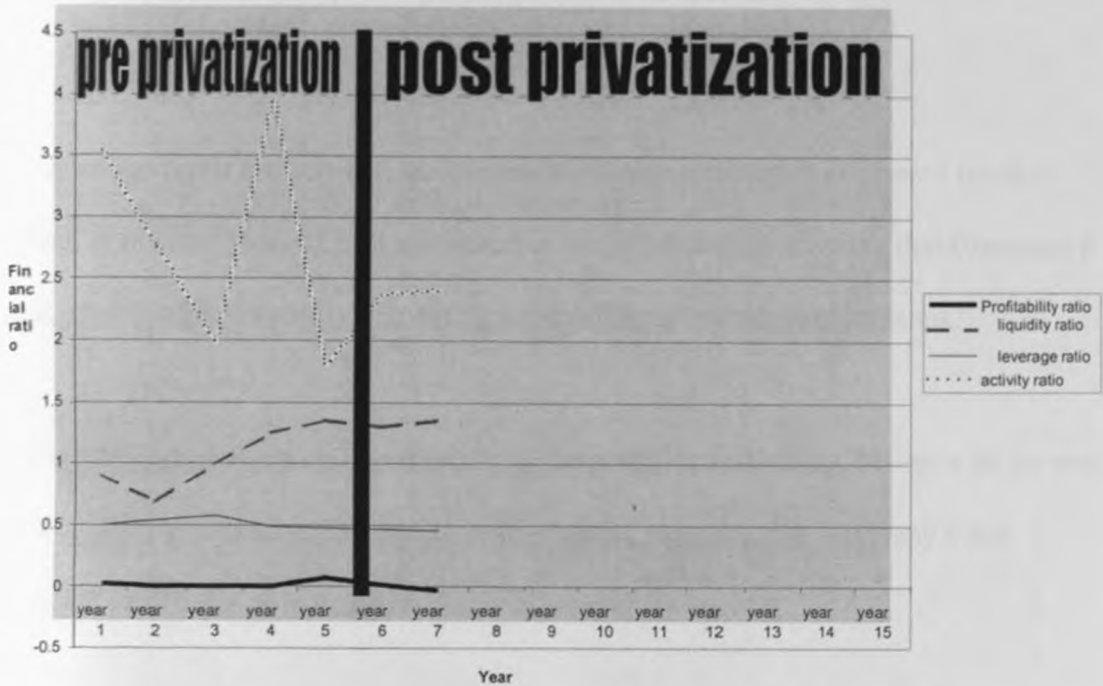
The liquidity ratios increase gradually in the pre privatization period, but in the post privatization period there is some fluctuation in performance but generally the changes are not very significant. This shows that Company 5 was not affected by privatization in its ability to meet short-term commitments out of its liquid assets.

The leverage ratios decline in the pre privatization period. In the post privatization period the leverage ratios increase gradually and only reduce once. This shows that after privatization Company 5 was able to improve its ability to meet its short term and long term debt obligations.

The activity ratios show an increase in the pre privatization era, this increase continues in the post privatization era but much later the ratios decline. This shows that Company 5 was able to increase its efficiency in utilizing its assets to generate sales, but in the later years of post privatization its efficiency in utilizing its assets declined

## Company 6

Graph 6: Trends in financial performance ratios: Company 6



Source: Research data:

Graph 6 shows trends in financial performance ratios for Company 6, which is in the industrial and allied sector. Company 6 happens to be the newest company privatized through the Nairobi Stock Exchange and the data collected was only for six years unlike the other five companies. The profitability ratios were low in the pre privatization era with only one small increase in the last year before privatization. Post privatization performance for the two years showed a decline in performance. This shows that the company was not able to improve its capacity of earning a net return on investment.

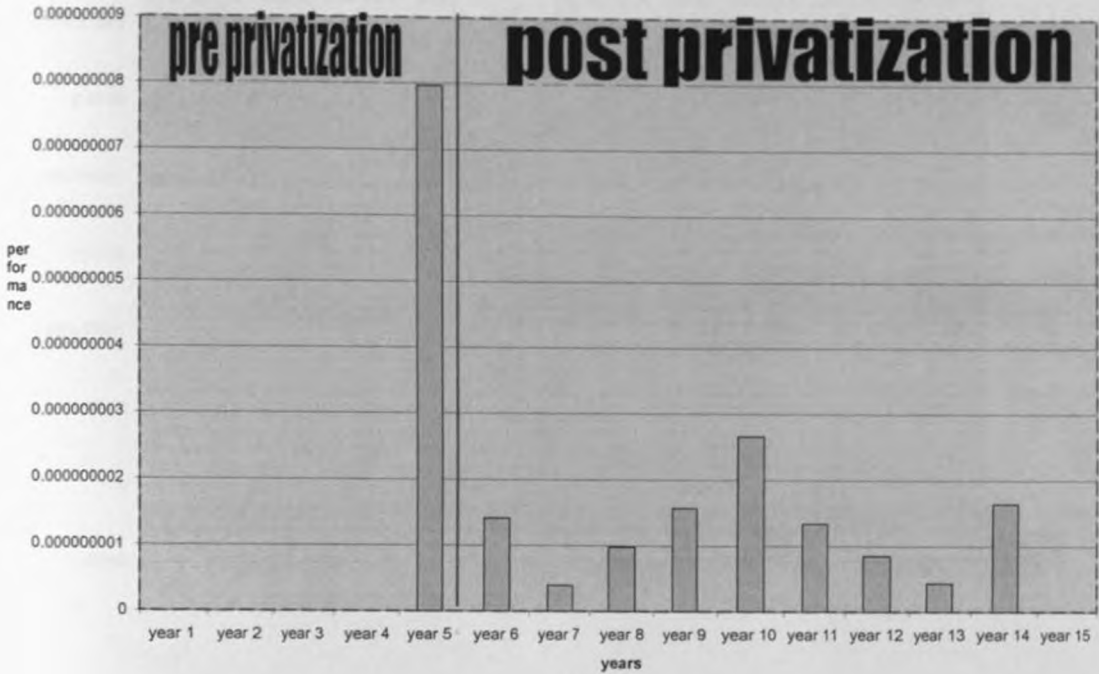
The liquidity ratios improved in the pre privatization era and also in the post privatization era there is an improvement. This shows that Company 6 is improving its ability to fulfill short-term commitments out of its liquid assets.

The leverage ratios are better in the pre privatization era though they show a trend of decline. In the two years of post privatization the ratios decline showing that Company 6 is not improving in its ability to meet its short and long-term debt obligations.

The activity ratios fluctuate significantly in the pre privatization era, however in the two years of post privatization, there is an improvement, meaning that Company 6 has improved its efficiency in using its assets to generate sales.

### 4.3 Trends in overall financial performance

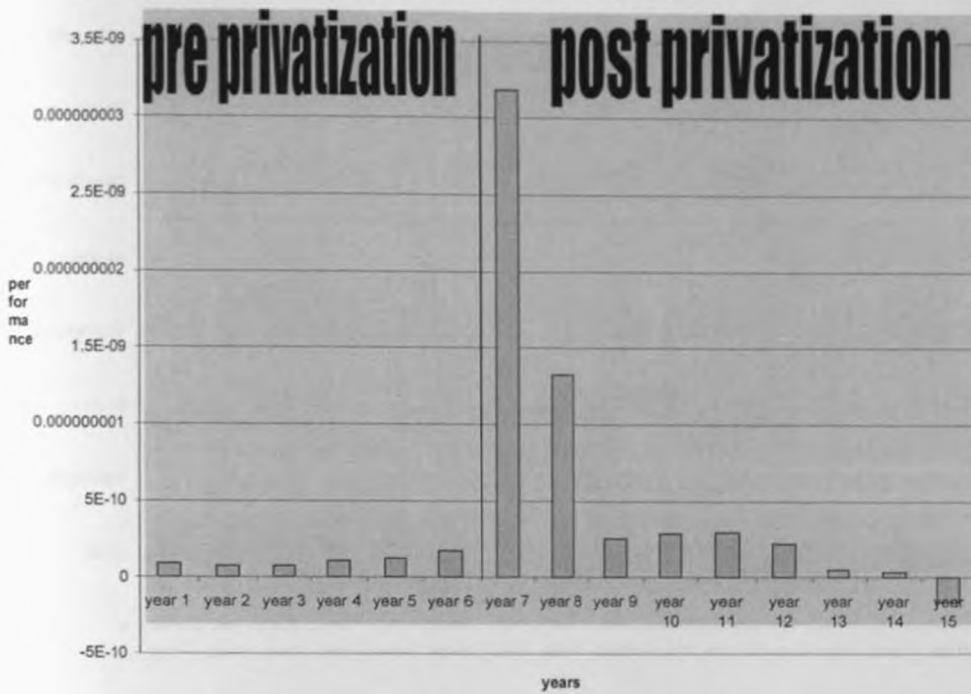
Graph 7:Trends in overall financial performance: Company 1



Source: Research data:

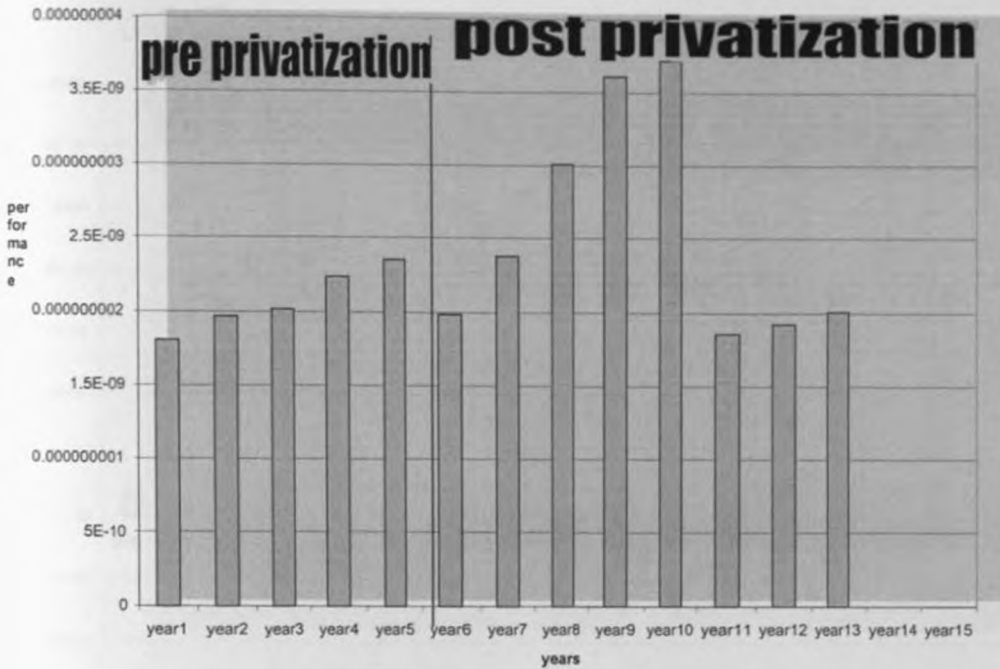
Graph 7 shows the overall financial performance of Company 1 in the pre and post privatization era. Performance in the pre privatization era is higher than the post privatization era. Post privatization performance is lower and does fluctuate with the final year showing improved performance. This shows that privatization did not result into immediate improved results.

Graph 8: trends in overall financial performance: company 2



Graph 8 shows the overall financial performance of Company 2 in the pre and post privatization era. Overall performance in the pre privatization era is low but in the post privatization era there is remarkable improvement in performance though this reduces in the final years with the last year resulting to negative performance. Generally the graph shows that Company 2 performed better in the post privatization era.

Graph 9: Trends in overall financial performance: company3



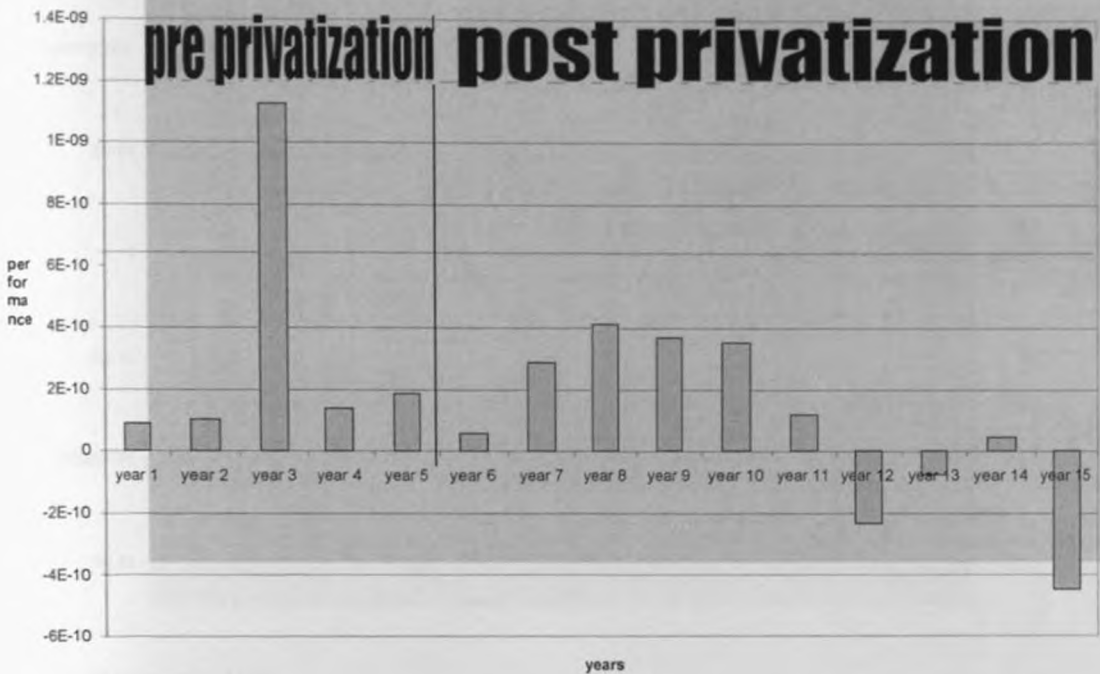
Source: Research data:

Graph 9 shows the overall financial performance of Company 9 in the pre and post privatization era. Overall performance in the pre privatization era was on the increase.

Post privatization era also witnessed an increase in performance and its only the last three years where performance reduced. Generally the graph shows that post privatization performance was better than pre privatization era.



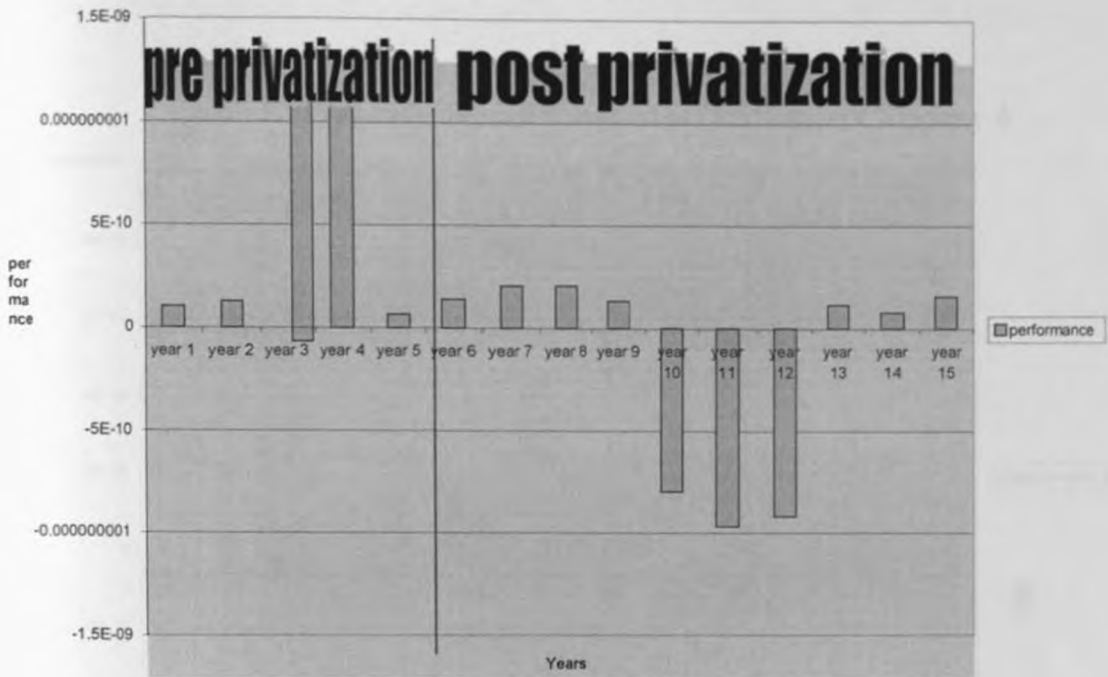
Graph 10: Trends in overall financial performance: Company 4



Source: Research data:

Graph 10 shows the overall financial performance of Company 4 in the pre and post privatization era. Overall performance in pre privatization era is low though this periods has the highest performance. In the post privatization era performance is better in four years but the remaining six years show lower performance than the pre privatization era. Generally the graph shows that privatization did not result to better overall performance.

Graph 11:Trends in overall financial performance:Company 5



Source: Research data:

Graph 11 shows the overall financial performance of Company 5 in the pre and post privatization era. Overall performance in the pre privatization era is much better than in the post privatization era. This clearly shows that privatization did not result into improved performance, though some years in post privatization era had better performance than pre privatization.

Graph 12: Trends in overall financial performance: Company 6



Source: Research data:

Graph 12 shows the overall financial performance for Company 6 in the pre and post privatization era. Company 6 unlike the other five companies had data for only seven years since it was one of the newest companies to have been privatized via the Nairobi Stock Exchange. Post privatization data was therefore only for two years. Pre privatization era showed that performance was better than post privatization era. This shows that in the short term privatization did not result to improved performance.

Overall financial performance has shown the post privatization performance was better in Company 3 which is in the commercial and service sector and Company 2 which is in the finance and investment sector 'Overall financial performance was better in the pre privatization era in Company 1 which is in the commercial and service sector, Company 4 and Company 5 which are in the finance and investment sector, and Company 6 which is in the industrial sector. This shows that privatization should be viewed as a long-term solution and short-term results may not give a true picture of the performance of a company.

#### **4.4 Regression and correlation results for firms privatized through the Nairobi Nairobi Stock Exchange**

The financial ratios: profitability ( $x_1$ ), liquidity ( $x_2$ ), leverage ( $x_3$ ), and activity ( $x_4$ ) for the six companies studied were regressed against (performance –  $y$ ) using the MS-Excel Statistical Package. Correlation and Hypothesis testing was done using the SSP Package.

##### **Company 1**

The regression results for Company 1 yielded the following outcome

$$y = 4.7722E - 17 + 1.666E - 8x_1 - 1.088E - 09x_2 - 5.228E - 09x_3 - 5.611E - 10x_4 .$$

The coefficients for the model are; 4.722E – 17 for intercept, 1.166E – 8 for profitability, -1.088E – 09 for liquidity, - 5.228E –09 for leverage, - 5.611E –10 for activity. The t-statistics for profitability are greater than the level of significance implying that it is significant in the model. The t- statistics for liquidity, leverage and activity are below the level of significance and hence implying that they are not significant to the model.

Correlation tests for each of the ratios indicate that the profitability ratio is strongly related to performance while liquidity, leverage and activity are negatively related to performance. The ratios are used to establish a model:

Where  $y$  = overall financial performance ratio  $y = 4.7722E - 17 + 1.666E - 8x_1 - 1.088E - 09x_2 - 5.228E - 09x_3 - 5.611E - 10x_4$

$x_1$  = profitability ratio                       $x_3$  = leverage ratio

$x_2$  = liquidity ratio                               $x_4$  = activity ratio

### Company 2

The regression results for Company 2 yielded the following outcome .

$y = 9.728E - 18 + 2.873E - 09x_1 + 6.548E - 10x_2 - 1.386E - 08x_3 - 1.077E - 10x_4$ .

The coefficients for the model are; 9.728E -18 for the intercept; 2.873E -09 for profitability, 6.548E -10 for liquidity - 1.386E -08 for leverage, -1.077E -10 for activity. The t- statistics for profitability and liquidity are more than the level of significance showing that they are important in the model. The t- statistics for leverage and activity are lower than the level of significance showing that they are not significant in the model. Correlation tests for each of the ratios show that profitability and liquidity ratios are positively related to performance while leverage and activity ratios are negatively related to performance.

The ratios are used to establish a model,

$y = 9.728E - 18 + 2.873E - 09x_1 + 6.548E - 10x_2 - 1.386E - 08x_3 - 1.077E - 10x_4$ .

### Company 3

The regression results for Company 3 yielded the following outcome;

The coefficients for the model are  $5.145E-18$  for the intercept,  $2.493E-08$  for profitability,  $5.469E-10$  for liquidity,  $-1.493E-09$  for leverage,  $1.324E-10$  for activity. The t-statistics for profitability, liquidity and activity are more than the level of significance implying that they are important in the model.

The t-statistics for leverage is lower than the level of significance implying that it is not important in the model. Correlations tests for each of the ratios show that profitability, liquidity and activity ratios are positively related to performance while leverage ratio is negatively related to performance.

The ratios are used to establish a model

$$y = 5.145E-18 + 2.493E-08x_1 + 5.469E-10x_2 - 1.493E-09x_3 + 1.324E-10x_4.$$

### Company 4

The regression results for Company 4 yielded the following outcome.

$$y = 1.698E-18 + 5.867E-10x_1 - 7.812E-10x_2 - 1.867E-09x_3 + 1.620E-09x_4.$$

$1.698E-18$  for the intercept,  $5.867E-10$  for profitability  $-7.812E-10$  for liquidity,  $-1.867E-09$  for leverage,  $1.620E-09$  for activity. The t-statistics for profitability and activity are above the level of significance implying that they are important in the model while that of liquidity and leverage are below the level of significance implying that they are not significant in the model. Correlation tests for each of the ratios indicate that

profitability and activity ratios are positively related to performance while leverage and liquidity ratios are negatively related to performance.

The ratios are used to establish a model.

$$y = 1.698E-18 + 5.867E-10x_1 - 7.812E-10x_2 - 1.867E-09x_3 + 1.620E-09x_4.$$

### **Company 5**

The regression results for Company 5 yielded the following outcome.

$$y = 9.192E-18 + 1.206E-09x_1 - 2.024E-09x_2 + 1.705E-09x_3 + 4.752E-09x_4.$$

9.192E-18 for the intercept, 1.206E-09 for profitability, -2.024E-09 for liquidity, 1.705E-09 for leverage, and 4.752E-09 for activity. The t-statistics for profitability, leverage and activity ratios are above the level of significance implying that they are important in the model. The liquidity ratio has a t-statistic, which is below the level of significance indicating that it is not important in the model. Correlation tests for each of the ratios indicate that profitability, leverage and activity ratios are positively related to performance, while liquidity ratio is negatively related to performance.

The ratios are used to establish a model.

$$y = 9.192E-18 + 1.206E-09x_1 - 2.024E-09x_2 + 1.705E-09x_3 + 4.752E-09x_4$$

## Company 6

The regression results for Company 6 yielded the following outcome;

$$y = 8.944E-19 + 1.239E-08x_1 + 8.100E-11x_2 - 1.022E-09x_3 - 2.888E-11x_4$$

8.944E-19 for the intercept, 1.239E-08 for profitability, 8.100E-11 for liquidity, -1.022E-09 for leverage, -2.888E-11 for activity. The t-statistics for profitability and liquidity ratios are above the level of significance implying that they are important in the model. The t-statistics for leverage and activity ratios are below the level of significance implying that they are not important in the model. Correlation tests for each of the ratios indicate that profitability and liquidity ratios are positively related to performance while leverage and activity ratios are negatively related to performance. The ratios are used to establish a model.

$$y = 8.944E-19 + 1.239E-08x_1 + 8.100E-11x_2 - 1.022E-09x_3 - 2.888E-11x_4$$

### **4.5 Tests of significance for firms privatized the Nairobi Stock exchange.**

Hypothesis testing on whether pre privatization performance, is significantly different from post privatization performance was done, using MS Excel Z test for two sample means, with known variances for each category and yielded the following results.

The tests were done at 95% level of significance using the two tail test



### **Company 1**

The profitability ratio and overall performance realized a Z computed test that fell in the acceptance region, implying that we reject the null hypothesis that pre privatization performance is not significantly different from post privatization performance, and accept the alternative hypothesis that performance in the pre as well as the post privatization era was significantly different. The liquidity, leverage and activity ratio however yielded a Z computed that fell in the rejection region. This implies that we accept the null hypothesis and reject the alternative hypothesis. These results are confirmed by the probability value (sig.2 tailed) where profitability and performance are less than 0.025 and Liquidity, Leverage and Activity ratios are more than 0.025 meaning that they are not significant.

### **Company 2**

The profitability, liquidity, leverage and overall performance ratios all fell in the rejection area meaning that we accept the null hypothesis that pre and post privatization performance is not significantly different, and reject the alternative hypothesis that pre and post privatization performance are significantly different. The activity ratio however fell in the acceptance area meaning that we reject the null hypothesis and accept the alternative hypothesis. This is confirmed by the Z test yielding 5.081 which is more than 1.96 and probability value being 0.000 which is less than 0.025.

### **Company 3**

The profitability, activity and performance ratios fell in the rejection area meaning that we accept the null hypothesis and reject the alternative hypothesis. The liquidity and leverage however fell in the acceptance region meaning that we accept the alternative hypothesis. This is confirmed by the Z test yielding less than 1.96 for the profitability, activity and performance ratios and the probability values being more than 0.025 for the profitability activity and performance ratios.

### **Company 4**

The profitability, liquidity and leverage ratio fell in the acceptance region meaning that we reject the null hypothesis and accept the alternative hypothesis. The activity ratio however fell in the rejection area meaning that we accept the null hypothesis and reject the alternative hypothesis. The results are confirmed by the Z test yielding more than 1.96 for profitability liquidity and leverage and the probability values yielding less than 0.025 for the liquidity and leverage ratios.

### **Company 5**

The profitability, leverage and performance ratios fell in the acceptance area meaning that we reject the null hypothesis and accept the alternative hypothesis.

The liquidity and activity ratios however fell in the rejection area meaning that we accept the null hypothesis and reject the alternative hypothesis. The results are confirmed by the Z test yielding more than 1.96 for profitability leverage and performance ratios and the probability values being less than 0.025 for profitability and leverage ratio.

**Company 6**

The profitability, liquidity, leverage and activity ratio fell in the acceptance region showing that we reject the null hypothesis and accept the alternative hypothesis. The performance however fell in the rejection area showing that we accept the null hypothesis and reject the alternative hypothesis. The results are confirmed by the Z test yielding more than 1.96 for profitability liquidity, leverage and activity ratios and the probability values being less than 0.025 for liquidity, leverage and activity ratio.

## CHAPTER FIVE

### SUMMARY OF FINDINGS AND CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH:

#### 5.1.1 SUMMARY OF FINDINGS

This study had three main objectives of establishing the pre-privatization performance of state owned enterprises, privatized through the Nairobi Stock Exchange; establishing the post-privatization performance of state owned enterprises, privatized through the Nairobi Stock Exchange and developing a performance predictive model for State owned enterprises privatized through the Nairobi Stock Exchange.

The objectives were achieved by analyzing financial ratios, and the ratios that were used were profitability, liquidity, leverage and activity ratios. The annual financial performance was calculated using the formula.

***Performance % = profitability ratio % \* Liquidity ratio% \*Leverage ratio% \*Activity ratio%.***

Regression analysis between performance (y) as the dependant variable and each of the financial ratios was done. Correlation tests were carried out between the dependant variables (each of the financial ratios).

Tests of significance of performance for both pre as well as post financial performance were done using MS Excel Z test statistic on two sample means for each of the periods. The analysis of the profitability ratios for the six companies studied shows that privatization did not result into the companies increasing their net return on investment.

The liquidity ratios showed improved performance in the post privatization era, with the only exception being company 3 which showed a decline, and company 5 where the results were almost the same. Company 5 is in the finance sector.

The leverage ratios showed mixed performance, with three companies showing better post privatization performance and company 2 showing minimal significant changes. Company 2 is in the finance sector.

The activity ratios indicated that post privatization performance was much better with the only exception being company 1 and company 2. These companies are in the commercial and finance sector respectively. The other four companies had better performance in pre privatization era.

The test for significance on whether pre privatization performance is significantly different from post privatization era, was done using the Z test for two sample means showed that overall financial performance was not significantly different in the pre and post privatization era in company 2, company 3, company 4, and company 6 while it was significantly different in company 1 and company 5 which are in the commercial and finance sector respectively.

The Profitability ratios for company 1 , company 4, company 5 and company 6 indicated that there was significant difference between the pre and post privatization era, however in company 2 and company 3 which are in the finance and commercial sector respectively had no significant difference .

The Liquidity ratios for Company 1, Company 2, Company 5, was not significantly different in pre and post privatization era while for Company 3, Company 4 and Company 6 they were significantly different. Leverage ratios for Company 1 and Company 2 which are in the commercial and finance sector respectively were not significantly different in the pre and post privatization era however for the other remaining four Companies there was significant difference.

The activity ratios for Company 1, Company 3, Company 4 and Company 5 were not significantly different in the pre and post privatization era, however for Company 2 and Company 6 which are in the finance and industrial sector there was significant difference.

### **5.1.2: SUMMARY OF CONCLUSIONS**

An analysis of the financial performance ratios indicates that profitability ratios did not increase in post privatization era, meaning that privatization should be viewed as a long term strategy. This applied to all the sectors of commercial, finance and industrial.

The liquidity ratio results showed that privatization enables some companies to be able to improve their ability to fulfill their short term commitments out of their liquid assets. This was noted in companies in the in the commercial ,finance and industrial sectors.

The leverage ratio results indicated that some Companies were able to improve their ability to meet their short and long term debt commitments, while for one Company there was no significant change. This was in all the sectors apart from the industrial sector.

The activity ratios for four Companies indicated that privatization resulted to the Companies being able to improve their efficiency in using their assets to generate sales .The activity ratios therefore showed that privatization results to improved efficiency for the Company .Generally all the sectors showed that privatization can result to improved results and the only exception being the industrial sector.

An analysis of the overall financial performance shows that only two of the six companies studied had better overall financial performance. These companies were in the finance and commercial sector.

This means that performance is relative and needs to be viewed in a broader perspective. A decline in overall financial performance is possible even when the Company is improving its ability to meet utilize it's assets to generate sales. Managers of privatized Companies should therefore not be judged only by looking at overall financial performance but also at other indicators of performance.

In addition profitability should not be the only criteria to judge performance of the managers of privatized SOEs , as other criteria can also be used e.g. liquidity and activity ratio analysis The sector of the firm can also determine the success of privatization, because the factors affecting the finance and commercial sector are very different from those that affect the industrial sector.

Correlation tests that were done showed that profitability ratios are positively related to performance for all the six Companies, leverage ratios were mostly negatively related to performance, with only one Company being an exception. Liquidity and activity ratios were both positively and negatively related to performance for some companies. The positive relation of profit to performance for all the six companies studied, confirms the results of the overall trends in financial performance, whereby profit declined, with two companies being an exception.

The negative relation of leverage to performance for five of the six companies studied, confirmed the results of the overall trends of financial performances whereby, where leverage improved in two companies, overall performance declined, and in one company where leverage was almost the same overall performance still improved. The only exception was one company where improved leverage ratio was related to improved financial performance.

Hypothesis testing results show that the pre and post privatization performance, is significantly different when using the profitability and leverage ratios in four of the six



companies studied. The null hypothesis is therefore rejected and the alternative hypothesis is accepted.

The results further show that when using overall financial performance and activity ratios, pre and post privatization performance is not significantly different, and thus the null hypothesis that pre and post financial performance is not significantly different is accepted, and the alternative hypothesis that pre and post financial performances is significantly different, is rejected.

## **5.2: RECOMMENDATIONS TO POLICY MAKERS:**

The study has shown that overall financial performance in the pre and post privatization era is not significantly different. This should however not put a halt to the privatization process. There is need to look at the valuation of enterprises that are up for privatization. Future earning flows and the firm's gearing ratios are factors that are known to influence the value of initial public offers (IPOs).

Privatization is seen to have failed in Kenya mainly because it was done in a legal vacuum leaving it to the whims of those in power. The privatization Bill limits the participation of privatization to Kenyans or reserves a specific fraction of total value of assets being privatized to Kenyans. This provision has been an avenue whimsical management of the process. Restriction or participation of privatization to Kenyans is a move that undermines the realization of the objectives of divestiture.

For a developing country like Kenya, Privatization provides an opportunity to attract foreign direct investment into key sectors of the economy with the hope of making capital gains. The methods of privatization will also determine the success.

The most favoured method of privatization is public offering at the Nairobi Stock Exchange. This method is preferred as it reduces the differences that arise over the net value of state enterprises.

### **5.3: LIMITATIONS OF THE STUDY:**

This study used financial data derived from financial statements of the six companies studied and so one must be prudent of the limitations that are associated with such data.

The data may also have been manipulated by the by the companies and in some cases data for some years in pre and post privatization era was not possible to obtain.

Among companies listed at the Nairobi Stock exchange only six were state owned enterprises that were privatized through the exchange. As more SOEs are privatized through the Nairobi Stock Exchange, more comprehensive results will provide additional accurate information.

#### 54 : SUGGESTIONS FOR FURTHER RESEARCH:

Further studies can therefore be done to determine whether privatization that does not limit foreign participation will result to improved performance, or which methods of privatization yield better performance. This study was only able to show that privatization results to companies improving their efficiency in utilizing their assets to generate sales, yet the companies were not able to increase their ability to earn a net return on investment.

More research also needs to be done on privatization of SOEs in particular sectors ,e.g. finance, commercial and industrial .This will be able to show if there are any major differences in the post privatization period between various sectors .This study only examined the SOEs regardless of their different sectors .Exclusive analysis of sectors therefore need to be done, The study only had one company in the industrial sector and none from the agricultural sector .There is therefore need to do more research on agricultural and industrial SOEs.

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## Appendix 1: Financial Performance Ratios

### Company 1:

	Profitability ratio	Liquidity ratio	Leverage ratio	Activity ratio	Performance
Year 1	-	-	-	-	-
Year 2	-	-	-	-	-
Year 3	-	-	-	-	-
Year 4	-	-	-	-	-
Year 5	0.65352	1.220121	0.50419	1.97892	7.95589E -09
Year 6	0.14957	1.42779	0.42437	1.576606	1.4183E -09
Year 7	0.26108	1.344353	0.47091	2.36676	3.91167E -10
Year 8	0.06244	1.283971	0.514112	2.37520	9.78985E -10
Year 9	0.074169	1.53397	0.650166	2.105314	1.55731E -09
Year 10	0.1637	1.6729903	0.66826	1.45537	2.66357E -09
Year 11	0.0602	1.600928	0.65938	2.1069	1.33889E -09
Year 12	0.0344	1.18954	0.66088	3.0892	8.35422E -10
Year 13	0.0145	1.06248	0.6856	4.1413	4.37148E -10
Year 14	0.0427	1.1489	0.71368	4.68015	4.37148E -10
Year 15	-	-	-	-	-

Profitability Ratio = Net Profit/Sales or Gross Profit/Sales

Liquidity Ratio = Current Assets/Current liabilities

Leverage Ratio = Total liabilities/Total Assets

Activity Ratio = Sales/Current assets

Pre privatization performance – Years 1-5

Post privatization performance – Years 6-15

## Financial performance ratios

### Company 2

	Profitability ratio	Liquidity ratio	Leverage ratio	Activity ratio	Performance
Year 1	0.0221	0.01186	0.8705	0.87959	2.988 <sup>-11</sup>
Year 2	0.03122	0.176645	0.8752528	1.486229	4.818 <sup>-11</sup>
Year 3	0.02010	0.240183	0.8482384	1.834777	7.504 <sup>-11</sup>
Year 4	0.04080	0.07938	0.819844	4.0367800	1.0705 <sup>-11</sup>
Year 5	0.04849	0.1189	0.824459	2.60544	1.2358 <sup>-10</sup>
Year 6	0.592653	0.169037	0.820369	0.209512	1.7229 <sup>-10</sup>
Year 7	0.63061	1.17188	0.811904	0.529696	3.17816 <sup>-9</sup>
Year 8	0.37337	1.09433	0.82255	0.393673	1.32308 <sup>-9</sup>
Year 9	0.116149	1.016785	0.83320	0.257650	2.522 <sup>-10</sup>
Year 10	0.10757	1.030693	0.8508	0.305600	2.88271 <sup>-10</sup>
Year 11	0.11122	1.10638	0.8552	0.28077	2.953 <sup>-10</sup>
Year 12	0.10095	1.027367	0.8796	0.24407	2.225 <sup>-11</sup>
Year 13	0.03426	1.027718	0.8784	0.17493	5.416 <sup>-11</sup>
Year 14	0.02415	1.038209	0.8985	0.178525	4.029 <sup>-11</sup>
Year 15	-0.11972	1.03645	0.9098	0.13944	1.573 <sup>-10</sup>

Profitability Ratio = Net Profit/Sales or Gross Profit/Sales

Liquidity Ratio = Current Assets/Current liabilities

Leverage Ratio = Total liabilities/Total Assets

Activity Ratio = Sales/Current assets

Pre privatization performance – Years 1-5

Post privatization performance – Years 6-15

## Financial performance ratios

### Company 3

	Profitability ratio	Liquidity ratio	Leverage ratio	Activity ratio	Performance
Year 1	0.05398	1.49019	0.671055	3.33468	1.8006E -09
Year 2	0.05856	1.43906	0.694896	3.34831	1.96076E -09
Year 3	0.06056	1.57521	0.63483	3.33008	2.01668E -09
Year 4	0.06888	1.72252	0.580544	3.247073	2.23658E -09
Year 5	0.07644	1.84035	0.543374	3.077851	2.35271E -09
Year 6	0.07377	1.366283	0.7319123	2.7433008	1.9798E -09
Year 7	0.09623	1.815626	0.550774	2.469438	2.37634E -09
Year 8	0.08689	1.549473	0.645380	3.4639800	3.00985E -09
Year 9	0.09024	1.44544	0.691830	3.996448	3.6064E -09
Year 10	0.08718	1.470476	0.680051	4.266749	3.71974E -09
Year 11	0.043453	1.30881	0.764076	4.038452	1.85408E -09
Year 12	0.052381	1.20498	0.754580	4.414949	1.92342E -09
Year 13	0.035229	1.32523	0.82988	5.1779829	2.00617E -09
Year 14	-	-	-	-	-
Year 15	-	-	-	-	-

Profitability Ratio = Net Profit/Sales or Gross Profit/Sales

Liquidity Ratio = Current Assets/Current liabilities

Leverage Ratio = Total liabilities/Total Assets

Activity Ratio = Sales/Current assets

Pre privatization performance – Years 1-5

Post privatization performance – Years 6-15



## Financial performance ratios

### Company 4

	Profitability ratio	Liquidity ratio	Leverage ratio	Activity ratio	Performance
Year1	0.42504	1.035309	0.92467	0.02219	5.403 <sup>-11</sup>
Year 2	0.42296	1.020719	0.928154	0.02509	1.105 <sup>-10</sup>
Year 3	0.452607	1.029967	0.905461	0.26620	1.12363 <sup>-9</sup>
Year 4	0.505750	1.0203225	0.916166	0.028829	1.361 <sup>-10</sup>
Year 5	0.5994435	1.007192	0.915597	0.033735	1.847 <sup>-10</sup>
Year 6	0.630875	1.025510	0.9169878	0.00941	5.5826 <sup>-11</sup>
Year 7	0.594235	1.0718324	0.922498	0.04863	2.8 <sup>-10</sup>
Year 8	0.19259	1.0740119	0.889032	0.22289	4.097 <sup>-10</sup>
Year 9	0.15714	1.0904301	0.880723	0.242842	3.6630 <sup>-10</sup>
Year 10	0.1503517	1.110039	0.865808	0.242886	3.508 <sup>-10</sup>
Year 11	0.051098	1.104147	0.87076	0.237211	1.165 <sup>-10</sup>
Year 12	- 0.148732	1.075504	0.897905	0.16094	- 2.30 <sup>-10</sup>
Year 13	- 0.05911	1.082967	0.89147	0.130778	- 6.775 <sup>-11</sup>
Year 14	0.03171	1.12947	0.87408	0.138411	4.331 <sup>-11</sup>
Year 15	- 0.4169	1.048638	0.913454	0.112055	- 4.47 <sup>-10</sup>

Profitability Ratio = Net Profit/Sales or Gross Profit/Sales

Liquidity Ratio = Current Assets/Current liabilities

Leverage Ratio = Total liabilities/Total Assets

Activity Ratio = Sales/Current assets

Pre privatization performance – Years 1-5

Post privatization performance – Years 6-15

## Financial performance ratios

### Company 5

	Profitability ratio	Liquidity ratio	Leverage ratio	Activity ratio	Performance
Year 1	0.4285108	1.021085	0.97934	0.024399	$1.038^{-10}$
Year 2	0.502321	1.0247032	0.975892	0.025285	$1.268^{-10}$
Year 3	0.590542	1.029026	0.95330	0.213953	$1.23944^{-9}$
Year 4	0.59265	1.033354	0.93145	0.209512	$1.11514^{-9}$
Year 5	0.03138	1.074209	0.89947	0.225942	$6.831^{-11}$
Year 6	0.06712	1.125742	0.83362	0.22370	$1.408^{-10}$
Year 7	0.0998	1.121625	0.8360	0.216467	$2.195^{-10}$
Year 8	0.086129	1.082690	0.86948	0.253421	$2.053^{-10}$
Year 9	0.063860	1.0820527	0.88533	0.218320	$1.334^{-10}$
Year 10	-0.415075	1.143117	0.83324	0.20243	$-8.00^{-10}$
Year 11	-0.854223	1.037295	0.91577	0.119123	$-9.662^{-10}$
Year 12	-1.0497	1.041877	0.91001	0.092521	$-9.205^{-10}$
Year 13	0.12322	1.027815	0.92625	0.095926	$1.124^{-10}$
Year 14	0.05975	1.035749	0.92400	0.13774	$7.832^{-11}$
Year 15	0.12322	1.04681	0.91689	0.13174	$1.55^{-10}$

Profitability Ratio = Net Profit/Sales or Gross Profit/Sales

Liquidity Ratio = Current Assets/Current liabilities

Leverage Ratio = Total liabilities/Total Assets

Activity Ratio = Sales/Current assets

Pre privatization performance – Years 1-5

Post privatization performance – Years 6-15

## Financial performance ratios

### Company 6

	Profitability ratio	Liquidity ratio	Leverage ratio	Activity ratio	Performance
Year 1	0.02779	0.9022	0.4952	3.5294	4.36 <sup>-10</sup>
Year 2	0.00374	0.6866	0.5324	2.7534	3.724 <sup>-11</sup>
Year 3	- 0.00163	0.9916	0.5800	1.9826	-1.824
Year 4	0.005792	1.2451	0.4872	3.9878	1.4011 <sup>-10</sup>
Year 5	0.07249	1.3482	0.4872	3.9878	8.384033 <sup>-10</sup>
Year 6	0.00829	1.29845	0.468	2.3747	1.1962 <sup>-10</sup>
Year 7	- 0.02642	1.3503	0.4582	2.4170	-3.95089 <sup>-10</sup>
Year 8	-	-	-	-	-
Year 9	-	-	-	-	-
Year 10	-	-	-	-	-
Year 11	-	-	-	-	-
Year 12	-	-	-	-	-
Year 13	-	-	-	-	-
Year 14	-	-	-	-	-
Year 15	-	-	-	-	-

Profitability Ratio = Net Profit/Sales or Gross Profit/Sales

Liquidity Ratio = Current Assets/Current liabilities

Leverage Ratio = Total liabilities/Total Assets

Activity Ratio = Sales/Current assets

Pre privatization performance – Years 1-5

Post privatization performance – Years 6-15

## Appendix 2

### Regression and Correlation Results, Table 1.

#### Company 1 Profitability

#### Variables Entered/Removed<sup>b</sup>

Model	Variables	Variables	Method
	Entered	Removed	
1	PR <sup>a</sup>		Enter

- a. All requested variables entered.
- b. Dependent Variable. Performance

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.973 <sup>a</sup>	.947	.940	5.6052E -10

#### Anova<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1.	Regression	4.471E -17	1	4.471E -17	142.299	.000 <sup>a</sup>
2.	Residual	2.513E -18	8	3.142E -19		
3.	Total	4.722E -17	9			

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients	Standardized Coefficients		t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.872E -10	.000		1.323	.222
PR	1.166E -08	.000	.973	11.929	.000

a. Dependent Variable: PRFMS

### Correlations

	PR	PRFMS
PR Pearson Correlation	1.000	.973*
Sig. (2-tailed)	.	.000
N	10	10
PRFMS Pearson Correlation	.973**	1.000
Sig. (2-tailed)	.000	.
N	10	10

### Company 1 Liquidity

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	LQDTY <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.094 <sup>a</sup>	.009	-.115	2.4188E-09

a. Predictors: (Constant), LQDTY

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.166E-19	1	4.166E-19	.071	.796 <sup>a</sup>
2	Residual	4.681E-17	8	5.851E-18		
3	Total	4.722E-17	9			

a. Predictors: (Constant) LQDTY.

b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	3.251E-09	.000	-0.94	.584	.575
	LQDTY	-1.088E-09	.000		-.267	.796

a. Dependent Variable: PRFMS

### Correlations

		LQDTY	PRFMS
LQDTY	Pearson Correlation	1.000	-.094
	Sig. (2-tailed)	.	.796
	N	10	10
PRFMS	Pearson Correlation	-.094	1.000
	Sig. (2-tailed)	.796	.
	N	10	10

### Company 1 Leverage

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE <sup>a</sup>	.	Enter

- a. All requested variables entered.
- b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.239 <sup>a</sup>	.057	-.061	2.3593E-09

- a. Predictors: (Constant), LEVERAGE

### ANOVA<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.692E -18	1	2.692E -18	.484	.506 <sup>a</sup>
2 Residual	4.453E -17	8	5.566E -18		
Total	4.722E -17	9			

a. Predictors: (Constant), LEVERAGE

b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>

Model	Understandardized Coefficients	Std Error	Standardized Coefficients	t	Sig.
	B		Beta		
1 (Constant)	4.892E -09	.000		1.079	.312
LEVERAGE	-5.228E -09	.000	-.239	-.695	.506

a. Dependent Variable: PRFMS

### Correlations:

		Activity	PRFMS
Activity	Pearson Correlation	1.000	-.262
	Sig. (2-tailed)	-	.465
	N	10	10
PRFMS	Pearsons Correlation	-.262	1.000
	Sig. (2-tailed)	.465	-
	N	10	10

Variables Entered/Removed<sup>b</sup>



Model	Variables	Variables	Method
	Entered	Removed	
1	ACTIVITY <sup>a</sup>		Enter

- a. All requested variables entered.  
b. Dependent Variable: PRFMS

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.262 <sup>a</sup>	-.069	-0.48	2.3449E -09

- a. Predictors: (Constant), ACTIVITY

#### ANOVA<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1. Regression	3.235E -18	1	3.235E -18	.588	.465 <sup>a</sup>
Residual	4.399E -17	8	5.498E -18		
Total	4.722E -17	9			

- a. Predictors: (Constant), Activity  
b. Dependent Variable: PRFMS

#### Coefficients<sup>a</sup>

Model	Understandardized		Standardized		

	Coefficients			Coefficients	t	Sig.
	B	Std. Error		Beta		
1 (Constant)	3.233E-09	.000			1.590	.150
ACTIVITY	-5.611E-10	.000		-2.62	-.767	.465

### Correlations

		Activity	PRFMS
Activity.	Pearson Correlation	1.000	-.262
	Sig. (2-tailed)	-	.465
	N	10	10
PRFMS:	Pearson Correlation	-.262	1.000
	Sig. (2-tailed)	.465	
	N	10	10

### Company 2 Profitability; Table 2.

Model	Variables Entered	Variables Removed	Method
1	PROFITR <sup>a</sup>		Enter

- All requested variables entered.
- Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.745 <sup>a</sup>	.556	.521	*****

a. Predictors: (Constant), PROFITR

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.405E-18	1	5.405E-18	16.255	.001 <sup>a</sup>
	Residual	4.323E-18	13	3.325E-19		
	Total	9.728E-18	14			

a. Predictors: (Constant), Profitability

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients	Standardized Coefficient	t	Sig.
		B	Beta		
		Std. Error			
1	(Constant)	9.407E-13	.745	.005	.996
	PROFITR	2.873E-09		4.032	.001

a. Dependent Variable: PRFMS

**Regression**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	LQDTY <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.373 <sup>a</sup>	.139	.073	*****

Predictors: (Constant), LQDTY

### ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.354E-18	1	1.354E-18	2.102	.171 <sup>a</sup>
	Residual	8.374E-18	13	6.442E-19		
	Total	9.728E-18	14			

a. Predictors: (Constant) LQDTY

b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>

Model	Understandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std Error	Beta		
1. (Constant)	-4.230E-11	.000		-.113	.912
LQDTY	6.548E-10	.000	3.73	1.450	.171

a. Dependent Variable: PRFMS

**Correlations**

		PRFMS	LQDTY
PRFMS	Pearson Correlation	1.000	.373
	Sig. (2-tailed)	.	.171
	N	15	15
LQDTY	Pearson Correlation	.373	1000
	Sig. (2-tailed)	.171	.
	N	15	15

**Regression**

**Company 2 Leverage**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE <sup>a</sup>	.	Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516 <sup>a</sup>	.266	.210	*****

a. Predictors: (Constant), LEVERAGE

**ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.590E-18	1	2.590E-18	4.717	.049 <sup>a</sup>
Residual	7.138E-18	13	5.491E-19		
Total	9.728E-18	14			

a. Predictors: (Constant), LEVERAGE

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
1 (Constant)	1.223E-0		2.246	.043
LEVERAGE	-1.386E-08	-.516	-2.172	.049

a. Dependent Variable: PRFMS

**Regression****Company 2 Activity****Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	ACTIVITY		Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.147 <sup>a</sup>	.022	-.054	*****

a. Predictors: (Constant), ACTIVITY

### ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.049E-19	1	2.094E-19	.286	.602 <sup>a</sup>
	Residual	9.519E-18	13	7.322E-19		
	Total	9.728E-18	14			

a. Predictors: (Constant), ACTIVITY

b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	5.067E-10	.000	-1.47	1.770	.100
	ACTIVITY	-1.077E-10	.000		-.535	.602

a. Dependent Variable: PRFMS

### Correlations

		PRFMS	Activity
PRFMS	Pearson Correlation	1.000	-.147
	Sig. (2-tailed)	.	.602
	N	15	15
ACTIVITY	Pearson Correlation	-.147	1.000
	Sig. (2-tailed)	.602	.
	N	15	15

### Regression

Table 9

#### Company 3 Profitability

##### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	PROFITR <sup>a</sup>		Enter

##### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727 <sup>a</sup>	.529	.486	*****

a. Predictors: (Constant) PROFITR



ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.721E -18	1	2.721E -18	12.349	.005 <sup>a</sup>
	Residual	2.424E -18	11	2.204E -19		
	Total	5.145E -18	12			

a. Predictors: (Constant), PROFITR

b. Dependent Variable: PRFMS

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
	B					
1	(Constant)	6.775E -10	.000	.727	1.356	.202
	PROFITR	2.493E -08	.000		3.514	.005

a. Dependent Variable: PRFMS

## Correlations

		PROFITR	PRFMS
PROFITR	Pearson Correlation	1.000	.727**
	Sig. (2-tailed)	.	.005
	N	13	13
PRFMS	Pearson Correlation	.727**	1.000
	Sig. (2-tailed)	.005	.
	N	13	13

\*\* . Correlation is significant at the 0.01 level (2-tailed)

## Regression

### Company 3 Liquidity

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	LQDTY <sup>a</sup>		Enter

a. All requested variables entered

b. Dependent Variable: PRFMS

#### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.164 <sup>a</sup>	.027	-.062	*****

a. Predictors: (Constant), LQDTY

#### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.380E -19	1	1.380E -19	.303	.593 <sup>a</sup>
	Residual	5.007E -18	11	4.552E -19		
	Total	5.145E -18	12			

a. Predictors: (Constant), LQDTY

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model	Understandardized Coefficients		Standaedized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.551E -09	.000		1.032	.324
LQDTY	5.469E -10	.000	.164	.551	.593

a. Dependent Variable: PRFMS

**Correlations**

		LQDTY	PRFMS
LQDTY	Pearson Correlation	1.000	.164
	Sig. (2-tailed)	.	.593
	N	13	13
PRFMS	Pearson Correlation	.164	1.000
	Sig. (2-tailed)	.593	.
	N	13	13

**Regression****Company 3 Leverage****Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE	.	Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.193a	.037	-.050	*****

a. Predictors: (Constant), LEVERAGE

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.926E -19	1	1.926E -19	.428	.527 <sup>a</sup>
	Residual	4.953E -18	11	4.502E -19		
	Total	5.145E -18	12			

a. Predictors: (Constant), LEVERAGE

b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients	Standard Error	Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.380E -09	.000	-.193	2.178	.052
	LEVERAGE	-1.493E -09	.000		-.654	.527

a. Dependent Variable: PRFMS

**Correlations**

		LQDTY	PRFMS
LEVERAGE	Pearson Correlation	1.000	-.193
	Sig. (2-tailed)	.	.527
	N	13	13
PRFMS	Pearson Correlation	-.193	1.000
	Sig. (2-tailed)	.527	.
	N	13	13

**Regression**

**Company 3 Activity**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	ACTIVITY <sup>a</sup>	.	Enter

c. All requested variables entered.

d. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.150 <sup>a</sup>	.022	-.066	*****

b. Predictors: (Constant), ACTIVITY

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	1.154E-19	1	1.154E-19	.262	.625 <sup>a</sup>
	Residual	5.030E-18	11	4.5573E-19		
	Total	5.145E-18	12			

a. Predictors: (Constant), ACTIVITY

b. Dependent Variable: PRFMS

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients	Standard Error	Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	1.895E-09	.000		1.955	.077
	ACTIVITY	1.324E-10	.000	.150	.502	.625

a. Dependent Variable: PRFMS

## Correlations

		ACTIVITY	PRFMS
ACTIVITY	Pearson Correlation	1.000	.150
	Sig. (2-tailed)	.	.625
	N	13	13
PRFMS	Pearson Correlation	.150	1.000
	Sig. (2-tailed)	.625	.

N	13	13
---	----	----

**Regression**

**Table 4**

**Company 4 Profitability**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	PROFITR <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.524 <sup>a</sup>	.275	.219	*****

a. Predictors: (Constant), PROFITR

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	4.667E -19	1	4.667E -19	4.927	.045 <sup>a</sup>
	Residual	1.231E -18	13	9.473E -20		
	Total	1.698E -18	14			

a. Predictors: (Constant), PROFITR

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients	Standard Error	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
3 (Constant)	2.725E-11	.000		.268	.793
PROFITR	5.867E-10	.000	.524	2.220	.045

a. Dependent Variable: PRFMS

**Correlations**

		LQDTY	PRFMS
PROFITR	Pearson Correlation	1.000	.524*
	Sig. (2-tailed)	.	.045
	N	15	15
PRFMS	Pearson Correlation	.524*	1.000
	Sig. (2-tailed)	.045	.
	N	15	15

\* Correlation is significant at the 0.05 level (2-tailed)

**Regression**

**Table 10 Company 4 Liquidity**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	LQDTY <sup>a</sup>	.	Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS



**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.085 <sup>a</sup>	.007	-.069	*****

a. Predictors: (Constant), LQDTY

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.221E-20	1	1.221E-20	.094	.764 <sup>a</sup>
	Residual	1.686E-18	13	1.297E-19		
	Total	1.698E-18	14			

a. Predictors: (Constant), LQDTY

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.
		B	Beta		
		Std. Error			
1	(Constant)	9.969E-10		.369	.718
	LQDTY	-7.812E-10	-.085	-.307	.764

a. Dependent Variable: PRFMS

### Correlations

		LQDTY	PRFMS
PRFMS	Pearson Correlation	1.000	-.085
	Sig. (2-tailed)	.	.764
	N	15	15
LQDTY	Pearson Correlation	-.085	1.000
	Sig. (2-tailed)	.764	.
	N	15	15

### Regression

#### Company 4 Leverage

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE	.	Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.112 <sup>a</sup>	.013	-.063	*****

a. Predictors: (Constant), LEVERAGE

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	2.147E -20	1	2.147E -20	.166	.690 <sup>a</sup>
	Residual	1.6773E -18	13	1.290E -19		
	Total	1.698E -18	14			

a. Predictors: (Constant), LEVERAGE

b. Dependent Variable: PRFMS

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	1.849E -09	.000		2.449	.661
	LEVERAGE	-1.493E -09	.000	-.112	-.408	.690

a. Dependent Variable: PRFMS

## Correlations

		PRFMS	LEVERAGE
LEVERAGE	Pearson Correlation	1.000	-.112
	Sig. (2-tailed)	.	.690
	N	15	15
PRFMS	Pearson Correlation	-.112	1.000
	Sig. (2-tailed)	.690	.

N	15	15
---	----	----

**Regression**

**Table 5**

**Company 5 Profitability**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	PROFITR <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710 <sup>a</sup>	.504	.465	*****

a. Predictors: (Constant), PROFITR

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.629E - 18	1	4.629E - 18	13.189	.003 <sup>a</sup>
	Residual	4.563E - 18	13	3.510E - 19		
	Total	9.192E - 18	14			

a. Predictors: (Constant), PROFITR

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model	Understandardized	Std. Error	Standardized	t	Sig.
	Coefficients		Coefficients		
	B		Beta		
1 (Constant)	1. 588E -10	. 000		1. 036	. 319
PROFITR	1. 620E -09	. 000	. 710	3. 632	. 003

a. Dependent Variable: PRFMS

**Correlations**

		PRFMS	LEVERAGE
PROFITR	Pearson Correlation	1. 000	. 710**
	Sig. (2 -tailed)	.	. 003
	N	15	15
PRFMS	Pearson Correlation	. 710**	1. 000
	Sig. (2 -tailed)	. 003	.
	N	15	15

**Regression**

**Company 4 Liquidity**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	LQDTY <sup>a</sup>	.	Enter

- a. All requested variables entered.
- b. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.102 <sup>a</sup>	.010	-.066	*****

- a. Predictors: (Constant), LQDTY

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.502E -20	1	9.502E -20	.136	.718 <sup>a</sup>
	Residual	9.097E -18	13	6.998E -19		
	Total	9.192EE -18	14			

- a. Predictors: (Constant), LQDTY
- b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	2.344E -09	.000		.402	.694
	LQDTY	-2.024E -09	.000	-.102	-.368	.718

- a. Dependent Variable: PRFMS

**Correlations**

		LQDTY	PRFMS
LQDTY	Pearson Correlation	1.000	-.102
	Sig. (2-tailed)	.	.718
	N	15	15
PRFMS	Pearson Correlation	-.102	1.000
	Sig. (2-tailed)	.718	.
	N	15	15

**Regression**

**Company 5 Leverage**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE <sup>a</sup>	.	Enter

- a. All requested variables entered.
- b. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.100 <sup>a</sup>	.010	-.066	*****

- a. Predictors: (Constant), LEVERAGE

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	9.115E -20	1	9.115E -20	.130	.724 <sup>a</sup>
	Residual	9.101E -18	13	7.001E -19		
	Total	9.192E -18	14			

a. Predictors: (Constant), LEVERAGE

b. Dependent Variable: PRFMS

Coefficients<sup>a</sup>

Model		Understandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.350E -09	.000		-.315	.758
	LEVERAGE	1.705E -09	.000	.100	.361	.724

a. Dependent Variable: PRFMS

## Correlations

		PRFMS	LEVERAGE
PRFMS	Pearson Correlation	1.000	100
	Sig. (2-tailed)	.	.724
	N	15	15



LEVERAGE	Pearson Correlation	.100	1.000
	Sig. (2-tailed)	.724	.
	N	15	15

### Regression

#### Company 5 Activity

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	ACTIVITY <sup>a</sup>	.	Enter

- a. All requested variables entered.
- b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441 <sup>a</sup>	.194	.132	*****

- a. Predictors: (Constant), ACTIVITY

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.784E -18	1	1.784E -18	3.132	.100 <sup>a</sup>
	Residual	7.408E -18	13	5.698E -19		
	Total	9.192E -18	14			

- a. Predictors: (Constant), ACTIVITY

b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model	Understandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-5.621E -10	.000		-1.196	.253
ACTIVITY	4.752E -09	.000	.441	1.770	.100

a. Dependent Variable: PRFMS

**Correlations**

		PRFMS	LEVERAGE
LEVERAGE	Pearson Correlation	1.000	.441
	Sig. (2-tailed)	.	.100
	N	15	15
PRFMS	Pearson Correlation	.441	1.000
	Sig. (2-tailed)	.100	.
	N	15	15

**Regression**

Table 6.

**Company 6 Profitability**

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
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1	PROFITR <sup>a</sup>	.	Enter
---	----------------------	---	-------

- a. All requested variables entered.
- b. Dependent Variable: PRFMS

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.998 <sup>a</sup>	.976	.971	*****

- a. Predictors: (Constant), PROFITR

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
4	Regression	8.727E - 19	1	8.727E - 19	200.845	.000 <sup>a</sup>
	Residual	2.173E - 20	5	4.345E - 19		
	Total	8.944E - 19	6			

- a. Predictors: (Constant), PROFITR
- b. Dependent Variable: PRFMS

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1 (Constant)	6.377E - 12	.000		.233	.825
PROFITR	1.239E -08	.000	998	14.172	.000

a. Dependent Variable: PRFMS

### Correlations

		PROFITR	PRFMS
PROFITR	Pearson Correlation	1.000	.988**
	Sig. (2-tailed)	.	.000
	N	7	7
PRFMS	Pearson Correlation	.988**	1.000
	Sig. (2-tailed)	.000	.
	N	7	7

### Regression

#### Company 6 Liquidity

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	LQDTY <sup>a</sup>	.	Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the
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				Estimate
1	.054 <sup>a</sup>	.003	-.196	*****

a. Predictors: (Constant), LQDTY

#### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.653E -21	1	2.653E -21	.015	.908 <sup>a</sup>
	Residual	8.918E -19	5	1.784E -19		
	Total	8.944E -18	6			

a. Predictors: (Constant), LQDTY

b. Dependent Variable: PRFMS

#### Coefficients<sup>a</sup>

Model		Understandardized	Std. Error	Standardized	t	Sig.
		Coefficients		Coefficients		
		B		Beta		
1	(Constant)	7.524E -11	.000		.099	.925
	LQDTY	8.100E -11	.000	.054	.122	.908

a. Dependent Variable: PRFMS

#### Correlations

	PRFMS	LQDTY
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PRFMS	Pearson Correlation	1.000	-.054
	Sig. (2-tailed)	.	.908
	N	7	7
PRFMS	Pearson Correlation	.054	1.000
	Sig. (2-tailed)	.908	.
	N	7	7

### Regression

#### Company 6 Leverage

#### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE <sup>a</sup>	.	Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.113 <sup>a</sup>	.013	-.185	*****

a. Predictors: (Constant), LEVERAGE

#### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.149E - 20	1	1.149E - 20	.065	.809 <sup>a</sup>

Residual	8. 829E -19	5	1. 766E -19		
Total	8. 944E -18	6			

- a. Predictors: (Constant), LEVERAGE  
b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>

Model	Understandardized Coefficients	Std. Error	Standardized Coefficients Beta	t	Sig.
3 (Constant)	6. 764E -09	. 000		. 337	. 750
LEVERAGE	- 1. 022E -09	. 000	- . 113	- . 255	. 809

- a. Dependent Variable: PRFMS

### Correlations

		PRFMS	LEVERAGE
PRFMS	Pearson Correlation	1. 000	- . 113
	Sig. (2 -tailed)	.	. 809
	N	7	7
LEVERAGE	Pearson Correlation	- . 113	1. 000
	Sig. (2 -tailed)	. 809	.
	N	7	15

### Regression

## Company 6 Activity

### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	ACTIVITY <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: PRFMS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.060 <sup>a</sup>	.004	-.196	*****

a. Predictors: (Constant), ACTIVITY

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.214E - 21	1	3.214E -21	.018	.898 <sup>a</sup>
	Residual	8.912E -19	5	1.782E -19		
	Total	8.912EE -18	6			

a. Predictors: (Constant), ACTIVITY

b. Dependent Variable: PRFMS

### Coefficients<sup>a</sup>



Model	Understandardized		Standardized		
	Coefficients		Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.435E -10	.000		.405	.702
ACTIVITY	-2.888E -11	.000	-.060	-.134	.898

a. Dependent Variable: PRFMS

### Correlations

		PRFMS	ACTIVITY
PRFMS	Pearson Correlation	1.000	-.060
	Sig. (2-tailed)	.	.898
	N	7	7
ACTIVITY	Pearson Correlation	-.060	1.000
	Sig. (2-tailed)	.898	.
	N	7	7

## Appendix 3

### Z TESTS

#### Company 1 Profitability ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.65	.000	.000
Post privatization performance	10	.09	.077	.024

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	16.036	.000	.56	.035	.487	.639

#### Liquidity ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	1.22	.000	.000
Post privatization performance	10	1.34	.211	.067

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-1.262	.229	-.12	.096	-.329	.086

**Leverage ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.50	.000	.000
Post privatization performance	10	.62	.105	.033

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-2.331	.036	-.11	.048	-.216	-.008

**Activity ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	1.98	.000	.000
Post privatization performance	10	2.86	1.227	.388

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-1.571	.140	-.88	.559	-2.087	.330

**Performance**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.00	.000	.000
Post privatization performance	10	.00	.000	.000

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	20.989	.000	.00	.000	.000	.000

**Company 2****Profitability ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.03	.012	.005
Post privatization performance	10	.20	.250	.079

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	1.443	.173	-.16	.114	-.411	.082

**Liquidity Ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.13	.088	.039
Post privatization performance	10	.97	.286	.091

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-6.355	.000	-.85	.133	-1.134	-.559

**Leverage Ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.85	.025	.011
Post privatization performance	10	.86	.034	.011

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	.479	.640	-.01	.017	-.046	.029

**Activity Ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	2.17	1.217	.544

Post privatization performance	10	.27	.117	.037
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	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	5.081	.000	1.90	.373	1.090	2.704

### Performance

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.00	.000	.000
Post privatization performance	10	.00	.000	.000

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	1.155	.269	.00	.000	.000	.000

### Company 3

#### Profitability ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.06	.009	.004
Post privatization performance	10	.06	.026	.008

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	.008	.993	.00	.012	-.026	.026

### Liquidity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	1.61	.166	.074

Post privatization performance	9	1.41	.181	.060
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	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	2.100	.058	.21	.098	-.008	.420

### Leverage Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.62	.063	.028
Post privatization performance	10	.73	.091	.029

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	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-2.315	.038	-.11	.046	-.205	-.007

### Activity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	3.27	.113	.051
Post privatization performance	10	4.09	.974	.308

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-1.854	.087	-.83	.445	-1.787	.136

### Performance

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.00	.000	.000
Post privatization performance	10	.00	.000	.000

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances	-	.285	.00	.000	.000	.000

assumed	1.115				
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#### Company 4

##### Profitability Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.48	.074	.033
Post privatization performance	10	.12	.316	.100

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	2.489	.027	.36	.146	.048	.678

##### Liquidity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	1.02	.011	.005
Post privatization performance	10	1.08	.030	.009

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	4.163	.001	-.06	.014	-.089	-.028

##### Leverage Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.92	.009	.004
Post privatization performance	10	.89	.020	.006

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	2.693	.018	.03	.010	.005	.046

##### Activity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.08	.107	.048
Post privatization performance	10	.15	.083	.026

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	1.592	.135	-.08	.050	-.187	.028

### Performance

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.00	.000	.000
Post privatization performance	10	.00	.000	.000

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	1.252	.233	.00	.000	.000	.000

### Company 5

#### Profitability ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.43	.233	.104
Post privatization performance	10	-.17	.444	.140

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	2.792	.015	.60	.214	.135	1.062

#### Liquidity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	1.04	.022	.010
Post privatization performance	10	1.07	.043	.014



	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	1.842	.088	-.04	.021	-.083	.007

### Leverage Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.95	.033	.015
Post privatization performance	10	.89	.039	.012

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	3.067	.009	.06	.020	.019	.107

### Activity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.14	.105	.047
Post privatization performance	10	.17	.060	.019

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	.699	.497	-.03	.042	-.120	.061

### Performance

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.00	.000	.000
Post privatization performance	10	.00	.000	.000

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper

Equal variances assumed	2.370	.034	.00	.000	.000	.000
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### Company 6

#### Profitability ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.02	.031	.014
Post privatization performance	10	-.01	.018	.006

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	2.460	.029	.03	.012	.004	.058

#### Liquidity Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	1.03	.266	.119
Post privatization performance	10	1.32	.027	.009

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	3.541	.004	-.29	.082	-.466	-.113

#### Leverage Ratio

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	.52	.040	.018
Post privatization performance	10	.46	.005	.002

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	4.288	.001	.05	.012	.026	.080

**Activity Ratio**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	3.25	.869	.389
Post privatization performance	10	2.40	.022	.007

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	3.226	.007	.85	.264	.282	1.423

**Performance**

Year	N	Mean	Std. Deviation	Std. Error Mean
Pre privatization performance	5	-.36	.816	.365
Post privatization performance	10	.00	.000	.000

	Z	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equal variances assumed	-1.472	.165	-.36	.248	-.900	.171