THE ENHANCEMENT OF THE MANAGEMENT OF INVESTMENT PORTFOLIOS IN THE EAST AFRICAN REGION

BY

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UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

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THE ENHANCEMENT OF THE MANAGEMENT OF INVESTMENT PORTFOLIOS IN THE EAST AFRICAN REGION

BY

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A Research Project Report Submitted to the School of Business in Partial Fulfilment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SUMMER 2016
STUDENT’S DECLARATION

I, the undersigned declare that this is my original work and has not been submitted to any other university or academic institution other than United States International University-Africa for academic credit.

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Anteneh Zewdu Gebretsadik (643909)

This project proposal has been supervised for examinations with my approval as the appointed supervisor.

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

Mr. K. Oyaro

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

Dean, Chandaria School of Business
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ABSTRACT

The main purpose of this research work is to investigate how we can enhance the efficiency of the management of investment portfolios in the East African region using the case study of the African Development Bank amongst the most active DFIs (Development Finance Institutions) in the region. The case study was guided by the following research objectives: To determine efficient ways of aligning strategic/tactical asset allocation in line with the goals of the portfolio investment, to examine effective ways of tackling risk management issues in the investment portfolios and to investigate effective ways of executing investment portfolio decisions.

The population for this research work is the thirteen major development finance institutions (DFIs) in the East African region. The thirteen major DFIs used as a population for this research work are AfDB, BIO, CDC, DEG, European investment bank, Finnfund, FMO, IFC, Norfund, OPIC, Proparco, PTA Bank and Swedfund. This research employs a positivist viewpoint with a deductive analysis approach. The writer is employing a non-probability sample design with a purposive sampling approach. This is owing to the fact that cost and time do not allow to do the research in another way.

In regards to determining efficient ways of aligning strategic/tactical asset allocation in line with the goals of the portfolio investment, findings suggested that the six General Capital Increases (GCI) made so far by the Board of Governors have enabled AfDB to increase its Authorized Capital while maintaining a desirable balance of fully subscribed shares: regional member countries holding 60% and 40% by non-regional member countries. The bank’s prompt action in forfeiting shares for which payment have become due and remain unpaid to member countries within the same membership group (i.e. regional or non-regional) have enabled the bank to sustain the necessary payments on share capital subscribed by both RMCs and non RMCs.

In regards to effective ways of tackling risk management issues in the investment portfolios, the findings indicated that AfDB has notably managed to enhance its risk management framework and end-to-end credit processes by taking important well-thought measures. Some of these measures indicated by the findings include creation of the office of Group Chief Risk Officer, reporting directly to the President of the Bank;
and implementation of robust and optimized credit risk assessment models and strengthening of the credit risk infrastructure.

In regards to effective ways of executing investment portfolio decisions, the findings indicated that AfDB designs its execution of the investment decisions it makes based on the Country Strategy Paper (CSP) it has prepared for each perspective country. The findings further stipulate that the CSP for each country outlines the constraints to growth and to poverty reduction in each of the respective countries.

The study concludes that changes in the Fund’s encashment policies over the past few years have resulted in a progressive increase in the size of the Fund’s liquid assets. This has created the opportunity to move to a dual portfolio structure with an Operational Portfolio and an Investment Portfolio in order to stabilize the Fund’s investment returns while continuing to ensure adequate liquidity to support its operational activities. Further migration from moderate to high and very high risk in the portfolio is not desirable particularly in the non-sovereign window.

The study recommends that despite the fact that the Bank still has enough cushion to support credit migration in the currently young private sector portfolio, it needs to build resilience through adequate transfer of income to reserve, ensure good collateralization and strong guarantees at entry of new transactions in the portfolio, and enhanced supervision of existing private sector portfolio in the East African region.
ACKNOWLEDGEMENTS

I would also like to express my heartfelt gratitude to my lecturer, Mr. K. Oyaro, for the guidance, patience, dedication and availability for me to proceed with this research project work.
DEDICATION

I dedicate this project work to my dear wife and family who have supported me through my studies.
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<tr>
<td>ACC</td>
<td>Advance Commitment Capacity</td>
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<tr>
<td>ACCF</td>
<td>Africa Climate Change Fund</td>
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<tr>
<td>ADB</td>
<td>African Development Bank</td>
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<td>ADF</td>
<td>African Development Fund</td>
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<td>ADOA</td>
<td>Additionality and Development Outcomes Assessment</td>
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<tr>
<td>AfDB</td>
<td>African Development Bank Group</td>
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<td>AfrEA</td>
<td>African Evaluation Association</td>
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<tr>
<td>AGTF</td>
<td>Africa Growing Together Fund</td>
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<tr>
<td>ALSF</td>
<td>African Legal Support Facility</td>
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<tr>
<td>AMBD</td>
<td>Committee on Administrative Matters Affecting the Boards of Directors</td>
</tr>
<tr>
<td>AMCOW</td>
<td>African Ministers’ Council on Water</td>
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<td>ANRC</td>
<td>African Natural Resource Center</td>
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<tr>
<td>ANRE</td>
<td>Annual Report Committee</td>
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<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<td>AU</td>
<td>African Union</td>
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<td>AUC</td>
<td>African Union Commission</td>
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<td>AUFI</td>
<td>Audit and Finance Committee</td>
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<tr>
<td>AWF</td>
<td>African Water Facility</td>
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<td>CAR</td>
<td>Central African Republic</td>
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<tr>
<td>CBFF</td>
<td>Congo Basin Forest Fund</td>
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<tr>
<td>CCAP</td>
<td>Climate Change Action Plan</td>
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<tr>
<td>CCIA</td>
<td>Immeuble de Centre de Commerce International d’Abidjan</td>
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<td>CIF</td>
<td>Climate Investment Funds</td>
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<td>CILSS</td>
<td>Permanent Interstate Committee for Drought Control in the Sahel</td>
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<tr>
<td>CLSG</td>
<td>Côte d’Ivoire, Liberia, Sierra Leone, Guinea</td>
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<td>CO2</td>
<td>Carbon Dioxide</td>
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<td>COBD</td>
<td>The Business Development Department</td>
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<tr>
<td>CODE</td>
<td>Committee on Operations and Development Effectiveness</td>
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<tr>
<td>COP</td>
<td>20th session of the Conference of the Parties of the UNFCCC</td>
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<tr>
<td>CPIA</td>
<td>Country Policy and Institutional Assessment</td>
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<td>CPPR</td>
<td>Country Portfolio Performance Review</td>
</tr>
<tr>
<td>CRMU</td>
<td>Compliance Review and Mediation Unit</td>
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<td>CSP</td>
<td>Country Strategy Paper</td>
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<td>CWHOLE</td>
<td>Committee of the Whole</td>
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<td>DFID</td>
<td>Department for International Development</td>
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<tr>
<td>DIRA</td>
<td>Department Overseeing the Return to Abidjan</td>
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<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
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<td>DPMO</td>
<td>The Delivery and Performance Management Office</td>
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<td>DRS LP</td>
<td>The Drought Resilience and Sustainable Livelihoods Program</td>
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<td>DSA</td>
<td>Debt Sustainability Assessment</td>
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<td>EAC</td>
<td>East African Community</td>
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<td>EADI</td>
<td>Bank’s African Development Institute</td>
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<td>ECA</td>
<td>Economic Commission for Africa</td>
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<td>ECOWAS</td>
<td>Economic Community of West African States</td>
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<td>EGI GP</td>
<td>Economic Governance and Inclusive Growth Program</td>
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<tr>
<td>ESTA</td>
<td>Statistics Department</td>
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<td>EU</td>
<td>European Union</td>
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<td>EVD</td>
<td>Ebolavirus disease</td>
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<td>FAO</td>
<td>Food and Agricultural Organisation</td>
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<tr>
<td>FCWC</td>
<td>Fisheries Committee of West Africa</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FFL</td>
<td>Fully Flexible Loan</td>
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<td>FO</td>
<td>Field Office</td>
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<tr>
<td>FSF</td>
<td>Fragile States Facility</td>
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<td>FSDPS</td>
<td>Financial Sector Development Policy and Strategy</td>
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<tr>
<td>GAFSP</td>
<td>Global Agriculture and Food Security Program</td>
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<tr>
<td>GAP</td>
<td>Governance Strategic Framework and Action Plan</td>
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<tr>
<td>GCI</td>
<td>General Capital Increase</td>
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<tr>
<td>GCI VI</td>
<td>Sixth General Capital Increase</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

By the beginning of the twenty-first century, investment management (Bodie, 1983) had become an important part of the financial services sector of all developed economies. The process of investment management has its roots in the activities of European investment bankers in managing the fortunes created by the Industrial Revolution. The largest segment of the asset management business in the United States is made up of registered investment companies. U.S.-registered investment companies (Standard & Poor, 2014) play a major role in the U.S. economy and financial markets, and a growing role in global financial markets. These funds managed $18.2 trillion in assets at year-end 2014, largely on behalf of more than 90 million U.S. retail investors.

In the last few decades, portfolio management (BAI Foundation, 1995) has become a more science-based discipline somewhat analogous to engineering and medicine. As in these other fields, advances in basic theory, technology, and market structure constantly translate into improvements in products and professional practices. Beginning in the second half of the twentieth century, the tremendous growth of institutional investors spurred a tremendous expansion in investment management firms or investment units of other entities (such as bank trust divisions) to service their needs.

The historical roots (Markowitz, 1952) of this portfolio perspective date to the work of Nobel laureate Harry Markowitz. Markowitz and subsequent researchers, such as Treynor and Sharpe established the field of modern portfolio theory (MPT)—the analysis of rational portfolio choices (Treynor, 1965) based on the efficient use of risk. Modern portfolio theory revolutionized investment management. First, professional investment practice began to recognize the importance of the portfolio perspective in achieving investment objectives. Second, MPT (Sharpe, 1992) helped spread the knowledge and use of quantitative methods in portfolio management. Today, quantitative and qualitative concepts complement each other in investment management practice. Amin and Harry (2003) stated that the accurate comprehension of an investment management product or firm besides its size involves not only the knowledge of investment disciplines but also
the types of investors it fundamentally serves. Investors can be categorized as either institutional or individual. The sort of investment policy decisions carried out by institutional investors is typically made by investment committees or trustees, with at least some members having a professional background in finance. The trustees or committee members frequently also bear a fiduciary relationship to the funds for which they have investment responsibility. Such a relationship, if it is present, imposes some legal standards regarding processes and decisions, which is reflected in the processes of the investment managers who serve that market segment.

Furthermore, Brinson, Randolph, and Gilbert (1986) stated that a long-lasting worldwide economic expansion created a great amount of individual wealth. As a result, investment advisers oriented to serving high-net-worth individuals as well as mutual funds (which serve the individual and, to a lesser extent, the smaller institutional market) gained in relative importance. Elton, Martin, and Jeffrey (2004) stated that investment management companies employ portfolio managers, analysts, and traders, as well as marketing and support personnel. Portfolio managers may use both outside research produced by sell-side analysts (analysts employed by brokerages) and research generated by in-house analysts—so-called buy-side analysts (analysts employed by an investment manager or institutional investor).

Over the past decade Eastern Africa (AfDB, 2014) has made remarkable progress in reversing the economic declines that marked the 1980s and much of the 1990s. There is a huge and diversified investment potential in the East African region that comprises 13 countries: namely, Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Seychelles, Somalia, Sudan, Tanzania, Uganda and South Sudan. The region accounts for about 28% of Africa’s population (264 million), 21% of the continental landmass (6.3 million km2) and 16% of the combined GDP in 2009 current prices.

This rich diversity is also reflected in the region’s immense potentialities, such as arable lands, water basins, minerals, varied energy sources, exotic wildlife and beaches. This abundant diversity of resources presents numerous portfolio investment opportunities that can be translated into various categories of large scale investment projects. In turn, these large scale investments, if properly managed and implemented, can significantly change the lives of the inhabitants of this region. At the same time, the improved social welfare and economy which has resulted from the benefits of these large scale portfolio
investment projects will be able to mitigate can be used to solve some of the challenges that are apparent in some parts of this region such as fragility, governance issues, poverty, pockets of instability, as well as climate and environmental challenges.

For instance, investment banks such as the AfDB that manages a number of strategic, large scale portfolio investments have contributed not only for the economic growth of the region but also for the entire continent. Over the years since its inception, AfDB has intervened to support the region’s development efforts, with total approved national and regional operations amounting to nearly US$ 16.21 billion. To provide a strategic response to the variety of opportunities and challenges facing the countries of the region, the Bank’s interventions have consisted of a mix of investment projects, capacity-building, and technical assistance, spanning diverse areas such as infrastructure, agriculture, social sectors and private sector development. The large scale portfolio investments the bank is performing also enabled it to have a say in the economic reforms agenda of the countries aimed at improving governance, public sector management and the business climate, in order to create the conditions for sustained growth and poverty reduction.

Based on the available data, the real GDP growth (AfDB, 2014) in Eastern African countries has largely been stable during the fourth quarter of 2014, and continues to be driven by diverse factors in the region. In Kenya, growth remained robust at 5.5% in Q3 2014 compared to 5.8% in the previous quarter, mainly supported by expansion in construction, manufacturing, financial and insurance, as well as information and communication services. In Ethiopia, the economy continued to expand fast and is expected to have grown by an estimated 10.3% in the Fiscal Year 2013/14, driven mainly by agricultural, services and industrial sector activities and construction, spurred by large-scale public and foreign direct investments. In Uganda, GDP growth in Q3 2014 remained basically at the same level as in the previous quarter, i.e. at 1.2%, driven by strong performance in the agriculture and services sectors owing to good weather and food crop harvests.

In Tanzania, real GDP is estimated to have grown by 7% in 2014, mainly driven by the continued strong performance in transport and communications, health, electricity, and manufacturing supported by public investment in infrastructure. In Seychelles, real GDP grew by 3.4% in Q3 2014, which is 0.5% more than the previous quarter, driven by
transportation, accommodation, real estate services (as tourist levels increased over the summer) and food manufacturing.

In Burundi, real GDP growth remained unchanged at 4.7% as in the previous two quarters, driven by a rebound in coffee production and construction activities. In Comoros, real GDP growth of 3.3% in 2014 was lower than the initially projected rate of 3.6% mainly due to severe power outages that slowed down economic activities, while Agriculture, trade and construction remained the main growth drivers. In Djibouti, real GDP grew at approximately 6% in 2014, compared with 5% registered in 2013 mainly driven by sustained growth in port activities and infrastructure investments financed by the government and foreign direct investment. In Eritrea, economic growth during Q4 2014 continued to improve, supported by increased performance in the mining sector, resulting in an annual real GDP growth of 2.5%, up from 1.1% in 2013.. In Sudan, real GDP growth rebounded to an estimated 3.6% in 2014, from 2.8% in 2013, supported by the revitalization of the agricultural sector, resumption of payments of transit fees, and gold exports. Even though the region’s economic outlook looks positive, the need to have efficient mechanisms of portfolio investment management processes and frameworks is highly crucial so that it is possible to witness the efficient usage of natural resources, improved private sector development, better as well as deeper regional integration and reduction of unemployment in the region.

Elton, Martin, and Jeffrey (2004) further argued that portfolio managers ought to be familiar with market microstructure: the market structures and processes that affect how the manager’s interest in buying or selling an asset is translated into executed trades (represented by trade prices and volumes). There ought to be clearly defined, accurate methods of successfully aligning our strategic/tactical asset allocation in line with the goals of the large scale investment. It is also imperative to investigate better ways of tackling risk management issues that go hand and glove with the large scale portfolio investment issues that can eventually benefit the population of the region. Furthermore, portfolio managers need to be equipped with the necessary skills of executing investment portfolio decisions.
1.2 Statement of the Problem

The problem statement for this work is how we can enhance the efficiency of the management of investment portfolios in the East African region. Today, Eastern Africa is on the rise as an integrated and competitive region from which several growth poles have the potential to emerge. The growth surge in Eastern Africa is mainly due to improved macroeconomic management. Consequently, some countries now have more fiscal space compared to previous decades and this is enabling them to invest more in growth-enabling physical and social infrastructure, and address critical gaps such as human capacity/skills development.

Furthermore, many countries (AfDB, 2014) have implemented structural reforms to improve their business environments, attracting investment that boosted economic activity and growth. Although growth has been robust, there is still substantial space for further improvement, with a need for much deeper structural transformation by most countries. The room for further improvement can be filled with the fruits of efficiently constructed investment portfolios across the region. Henceforth, enhancing the manner in which investment portfolios are constructed and managed becomes crucial.

In the subsequent process of enhancing the efficiency of management of investment portfolios, investment portfolio managers (Almgren & Neil, 2001) have to be efficient enough in aligning their strategic or tactical asset allocation with the specific goals of each project so as to ensure the effective utilization of resources. It is also quite evident that, even if investment managers may occasionally try to hedge their risks or engage in risk-reducing transactions, they ought not and indeed cannot restrict their activities to those that are solely risk free.

Henceforth, portfolio investment managers need to come up with an effective process or technique to identify, measure and manage the risk that is prevalent in the business environment of the East African Region. Some of the prevailing questions (Amman & Heinz, 2001) that need to be addressed are also to identify which risks are worth taking on a regular basis, which are worth taking on occasion, and which ones should be avoided altogether. This will also affect the data or information that is going to be reported to investors and other stakeholders concerning the risk of an enterprise or a portfolio.
Portfolio investment managers need also to have the necessary skills and knowledge in understanding of their dealings with markets, selecting trading strategies as well as tactics and measuring their success in the subsequent trading so that they will be able to raise the needed amount of funds to fund the various development investment projects.

1.3 Purpose of the Study

To investigate better ways in which managers can construct highly effective investment portfolios in the East African region.

1.4 Research Questions

1.4.1 How do we successfully align our strategic/tactical asset allocation in line with the goals of our investment?

1.4.2 How do we successfully tackle risk management issues in line with our investment portfolios?

1.4.3 How do we successfully execute investment portfolio decisions?

1.5. Significance of the Study

1.5.1 Enables East African nations to efficiently use their resources that result in economic diversification

Eastern Africa’s countries are at different stages of political maturity or structural transformation – some still fragile, some highly dependent on a narrow extractive resource economy and others making preparations for economic diversification. The priorities for governments in the near-, medium- or long-term depends in large measure on the category to which they belong. The better-performing Eastern African economies will need to maintain and augment the reform policies that have contributed to growth. The efficient management of investment portfolios in this regard will play a great role by directing the resources of East African nations in the right direction where investment on these resources will have a momentous impact on the economic growth.

Many governments in the East African region have turned their attention to improving their business and investment climates – a reorientation away from state-owned
enterprise. As a result, the private sector is more competitive and can exercise greater initiative than before, allowing markets to gain energy and vibrancy. In this new revolutionized business environment, the need to enhance the efficient management of investment portfolios is unquestionable so as to achieve the desired economic growth in the region.

1.5.2 Enables East African nations to become important players at the global stage

Building on their improved macroeconomic policies (AfDB, 2014) East African nations have significant space to become more important players on the global stage by opening up opportunities for trade and the private sector, improving their infrastructure, and strengthening their human capacity through efficient management of investment portfolios. Those countries that have had lower growth can learn from the experiences of the more successful reformers while developing programs that take full advantage of their unique strengths. Most African countries are now “factor-driven” and they must seek to become “efficiency-driven” to better compete in the world economy. The effective management of large scale investment portfolios in various sectors of the economy will help East African nations to be “innovative driven” and thus become among the most competitive in the world.

1.6 Scope of the Study

Owing to limitations to cover the vast sub-Saharan region, the scope of this work focuses on some selected, recent investment project portfolios that have been carried out in the major economies in the East African region. It investigates the manner in which the management of these investment portfolios has helped in ensuring the resources, policies and strategies to be aligned with the economic needs of the region. Due to the vastness of the research topic, the study will be relying on investigating reliable secondary data in determining how effectively managed investment projects have promoted the overall socio-economic development and prosperity in the region. This will also give other researchers to focus on the remaining member countries of the Sub-Saharan Africa.

The study will also see how these selected sample investment projects have helped in unlocking the region’s potential by expanding the economic base across age, gender and geography and thus contributing in the reduction of poverty and inequality. Furthermore,
the study also investigates to see how these investment portfolios have contributed in transitioning the mode of growth towards sustainable and renewable pillars while simultaneously easing the pressure on natural resources and building resilience to potential shocks from climate change.

1.7 Definition of Terms

1.7.1 Portfolio Management

Portfolio management (Almgren & Neil, 2001) is the art and science of making decisions about investment mix and policy, matching investments to objectives, asset allocation for individuals and institutions, and balancing risk against performance. Portfolio Management is also the centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing, and controlling projects, programs and other related work to achieve specific strategic business objectives.

1.7.2 Modern Portfolio Theory

Modern portfolio theory (MPT) is a theory on how risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward.

1.8 Chapter Summary

Chapter One has outlined the need for filling the gaps in enhancing the management of investment portfolios in the East African region to achieve the desired economic growth and efficient usage of resources. Chapter two of this study focuses on the outlined research questions in relevance to the issue of the enhancement of the management of investment portfolios. Chapter three focuses on collection useful data which includes selected investment projects in the East African region are used to signify the methods and procedures carried out in the study. Chapter four presents the analysis of the findings of the study based on the research questions and the specific objectives while Chapter five draws conclusions and outlines recommendations based on the findings of this study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
Investors, according to Black and Robert (1991) must shape all portfolio decisions around that simple but powerful truth. If we do not know the future, decision errors and surprises are inevitable. As a result, managing investment portfolios is ultimately about managing risk, or preparing for uncertainty and unexpected outcomes. Best and Robert (1991) state that the portfolio management process moves from planning, through execution, and then to feedback. In the planning step, investment objectives and policies are formulated, capital market expectations are formed, and strategic asset allocations are established. In the execution step, the portfolio manager constructs the portfolio. This chapter discusses the three important questions that need to be addressed in enhancing the management of investment portfolios, namely, the alignment of strategic or tactical asset allocation in line with the goals of investment, tackling risk management issues in line with the investment portfolios and the execution of investment portfolio decisions.

2.2 How do we align our strategic or tactical asset allocation in line with the goals of our investment?

Brinson, Randolph, & Gilbert (1986) argue that it is a major decision for investors to select the types of assets for a portfolio and allocating funds among different asset classes. A 70/30 stock/bond portfolio has a different expected return, risk, and cash flow pattern than a 30/70 stock/bond portfolio. Which asset allocation is more appropriate for a particular investor will depend on how well the allocation’s characteristics match up with the investment objectives and circumstances described in the investor’s investment policy statement (IPS).

2.2.1 What is asset allocation?
Bodie, Alex and Alan (2005) state that asset allocation is a process and a result. Strategic asset allocation is an integrative element of the planning step in portfolio management. In strategic asset allocation, an investor’s return objectives, risk tolerance, and investment constraints are integrated with long-run (five years and above) capital market
expectations to establish exposures to IPS-permissible asset classes. The aim is to satisfy the investor’s investment objectives and constraints. Thus, strategic asset allocation can be viewed as a process with certain well-defined steps. Performing those steps produces a set of portfolio weights for asset classes; we call this set of weights the strategic asset allocation. Thus, strategic asset allocation may refer to either a process or its end result. A second major type of asset allocation is tactical asset allocation (TAA), which involves making short-term adjustments to asset-class weights based on short-term expected relative performance among asset classes.

Bodie et al. (2005) further stipulate that strategic asset allocation is the first element of the portfolio management process to focus on selecting investments. It is a bridge to the execution step of portfolio management but at the broad level of asset classes. Strategic asset allocation is a starting point for portfolio construction and a step of the portfolio management process on which many investors expend considerable thought and effort. Institutional and individual investors often consider it a central element of the investment process.

2.2.2 The role of asset allocation

A continuing debate (Black, 1972) surrounds strategic asset allocation’s relative importance, compared with security selection and timing, for producing investment results in practice. Irrespective of that debate (addressed in a subsequent section), strategic asset allocation fulfills an important role as a discipline for aligning a portfolio’s risk profile with the investor’s objectives. For the investor, strategic asset allocation is pivotal in executing investment plans. This is economically pivotal since the keystone of investment analysis is that systematic risk is rewarded. Black and Robert (1992) believe, in the long run, investors expect compensation for bearing risk that they cannot diversify away. Such risk is inherent in the economic system and may relate, for example, to real business activity or to inflation. In the long run, a diversified portfolio’s mean returns are reliably related to its systematic risk exposures. Conversely, measuring portfolio risk begins with an evaluation of the portfolio’s systematic risk, because systematic risk usually accounts for most of a portfolio’s change in value in the long run.

Groups of assets of the same type (e.g., debt claims) that are relatively homogeneous (e.g., domestic intermediate-term bonds) should predictably reflect exposures to a certain
set of systematic factors. Distinct (and well-differentiated) groups of assets should have distinct exposures to factors and/or exposures to different factors. These observations suggest a key economic role of strategic asset allocation: The strategic asset allocation specifies the investor’s desired exposures to systematic risk. Adopting and implementing a strategic asset allocation is an effective way to exercise control over systematic risk exposures.

2.2.3 Selection of asset classes
Brinson, Randolph, and Gilbert (1986) state that the basic principle lies in the fact that asset-class specification should support the purposes of strategic asset allocation. For example, if a manager lumps together very different investments such as real estate property and common equities into an asset class called equities, asset allocation becomes less effective in diversifying and controlling risk. Furthermore, Ibbotson and Paul (2000) mention that the investor needs a logical framework for examining the not infrequent claims by sponsors of new investment products that their product is a new asset class rather than an investment strategy. If the product is accepted as an asset class, it will become a part of strategic asset allocations and tend to be more widely held than otherwise. Following are five criteria that will help in effectively specifying asset classes:

2.2.3.1. Assets within an asset class should be relatively homogeneous

Assets within an asset class should have similar attributes. In the example just given, defining equities to include both real estate and common stock would result in a nonhomogeneous asset class.

2.2.3.2 Asset classes should be mutually exclusive

Overlapping asset classes will reduce the effectiveness of strategic asset allocation in controlling risk and also introduce problems in developing asset-class return expectations. For example, if one asset class for a Kenyan investor is domestic common equities, then world equities ex-US is more appropriate as an asset class than world equities including U.S. equities.
2.2.3.3. Asset classes should be diversifying

Leibowitz and Roy (1988) articulate that for risk-control purposes, an included asset class should not have extremely high expected correlations with other asset classes or with a linear combination of the other asset classes. Otherwise, the included asset class will be effectively redundant in a portfolio because it will duplicate risk exposures already present. In general, a pair wise correlation above 0.95 is undesirable.

2.2.3.4. The asset classes as a group should make up a preponderance of world investable wealth

From the perspective of portfolio theory (Kritzman, 1999) selecting an asset allocation from a group of asset classes satisfying this criterion should tend to increase expected return for a given level of risk. Furthermore, including more markets expands the opportunities for applying active investment strategies, assuming the decision to invest actively has been made.

2.2.3.5. The asset class should have the capacity to absorb a significant fraction of the investor’s portfolio without seriously affecting the portfolio’s liquidity.

Practically, most investors will want to be able to reset or rebalance to a strategic asset allocation without moving asset-class prices or incurring high transaction costs. The traditional asset classes include the following: namely, domestic common equity, domestic fixed income, non-domestic (international) common equity, non-domestic fixed income, real estate, as well as cash and cash equivalents.

2.2.4 Steps in asset allocation

Kritzman and S´ebastien (2003) state that, in establishing a strategic asset allocation, an investment manager must specify a set of asset-class weights to produce a portfolio that satisfy the return and risk objectives and constraints as stated in the investment policy statement. With the specification and listing of the IPS-permissible asset classes in hand, our focus is on understanding the process for establishing and maintaining an appropriate asset allocation. Most organizations undertake this process regularly in asset allocation reviews.
Figure one shows the major steps. Boxes on the left, labeled C1, C2, and C3, are concerned primarily with the capital markets. Those on the right are investor specific (I1, I2, and I3). Those in the middle (M1, M2, and M3) bring together aspects of the capital markets and the investor’s circumstances to determine the investor’s asset mix and its performance. The asset allocation review process begins at the top of the diagram and proceeds downward. Then the

![Figure 2.1: Major Steps in Asset Allocation](source)

outcomes (M3) provide feedback to both the capital market–and investor-related steps at the next asset allocation review. Box I1 shows factors that determine risk tolerance—the current values of assets and, if applicable, liabilities (or quasi-liabilities); net worth (assets minus liabilities); and the investor’s innate attitude to risk (conservatism). Net worth generally influences an investor’s current tolerance for risk, shown in box I3. We can portray the relationship between the investor’s circumstances (box I1) and risk tolerance (box I3) with a risk tolerance function. It is shown in box I2 and can be thought of as the nature of the investor’s tolerance to risk over various levels of portfolio outcomes.

Box C1 shows the current state of the capital markets. Information such as current and historical asset prices, past and projected asset cash flows, and the yield curve provide major inputs for predicting the expected returns and risks of various asset classes and the correlations among their returns (shown in box C3). If liabilities are relevant, their risks, expected future values, and correlations with various asset classes must also be predicted. Some prediction procedure must be used to translate capital market conditions (box C1) into these estimates of asset and liability returns (box C3); it is shown in box C2.

Given an investor’s risk tolerance (box I3) and predictions concerning expected returns, risks, and correlations (box C3), we can use an optimizer to determine the most appropriate asset allocation or asset mix (box M2). Depending on such factors as the number of assets and the investor’s approach, the optimizer (shown in box M1) could be a simple rule of thumb, a mathematical function, or a full-scale optimization program. Box M3 shows actual returns. Given the investor’s asset mix at the beginning of a period (box M2), the asset returns during the period (box M3) plus any cash contributions and minus any cash withdrawals determine the values of the investor’s assets at the beginning of the next period. New accruals of liabilities and pay-downs of old liabilities must also be considered.

Changes in capital markets (including returns on fixed-income obligations) are likely to affect the values of the liabilities as well. Returns in one period thus influence the investor’s assets, liabilities, and net worth at the beginning of the next period, as shown by the feedback loop from box M3 to box I1. Returns during a period also constitute part of the overall capital market conditions at the beginning of the next period. This relationship is shown by the feedback loop from box M3 to box C1. These loops illustrate
that the process is continuous, with decisions and outcomes in one review period affecting
the decisions in the next one.
From period to period, any (or all) of the items in boxes C1, C3, I1, I3, M2, and M3 may
change. However, the items in boxes C2, I2, and M1 should remain fixed, because they
contain decision rules (procedures). Thus the investor’s risk tolerance (box I3) may
change, but the risk tolerance function (box I2) should not. Predictions concerning returns
(box C3) may change, but not the procedure (box C2) for making such predictions. The
optimal asset mix (box M2) may change, but not the optimizer (box M1) that determines
it. To emphasize the relative permanence of the contents of these boxes, they have been
drawn with double lines. The process illustrated in figure one pertains to both strategic
asset allocation reviews and tactical asset allocation if the investor chooses to actively
manage asset allocation. For tactical asset allocation, the focus is on the impact of capital
market conditions on short-term capital market expectations (box C3), possibly resulting
in short-term asset allocation adjustments.

The main attention is on the prediction procedure (C1) in a competitive marketplace. By
contrast, a strategic asset allocation considers only the effects, if any, of capital market
conditions on long-term capital market expectations. When all the steps discussed in the
previous section are performed with careful analysis (formal or informal), the process
may be called integrated asset allocation. This term is intended to indicate that all major
aspects have been included in a consistent manner. If liabilities are relevant, they are
integrated into the analysis. If they are not, the procedure still integrates aspects of capital
markets, the investor’s circumstances and preferences, and the like. Moreover, each
review is based on conditions at the time—those in the capital markets and those of the
investor. Thus the process is dynamic as well as integrated.

2.2.5 Optimization of asset classes
Leibowitz and Roy (1989) mention that a critical step in strategic asset allocation is the
procedure we use for converting the inputs to a specific recommended strategic asset
allocation. Much of the research by practitioners and academics alike has focused on
developing and refining a variety of procedures. Many of the most important established
procedures have a quantitative flavor, reflecting not only the advances of modern
portfolio theory but also the need for many institutional investors to document relatively
objective procedures. Some investment advisers, particularly those serving an individual
investor clientele, may use a qualitative approach based on experience. In fact, nearly all professional investors apply judgment in making recommendations. Following are the major procedures in use.

2.2.5.1 The Mean–Variance Approach

Mean–variance analysis (Ziemba, 2003) provided the first, and still important, quantitative approach to strategic asset allocation. A strategic asset allocation suggested by mean–variance analysis should be subjected to professional judgment before adoption. The Efficient Frontier according to mean–variance theory, in determining a strategic asset allocation, an investor should choose from among the efficient portfolios consistent with that investor’s risk tolerance. Efficient portfolios make efficient use of risk; they offer the maximum expected return for their level of variance or standard deviation of return. Efficient portfolios plot graphically on the efficient frontier, which is part of the minimum-variance frontier (MVF). Each portfolio on the minimum-variance frontier represents the portfolio with the smallest variance of return for its level of expected return.

The graph of a minimum-variance frontier has a turning point (its leftmost point) that represents the global minimum-variance (GMV) portfolio. The GMV portfolio has the smallest variance of all minimum-variance portfolios. The portion of the minimum-variance frontier beginning with and continuing above the GMV portfolio is the efficient frontier. Figure two illustrates these concepts using standard deviation (the positive square root of variance) for the x-axis because the units of standard deviation are easy to interpret.
Once we have identified an efficient portfolio with the desired combination of expected return and variance, we must determine that portfolio’s asset-class weights. To do so, we use mean–variance optimization (MVO). There is a structure to minimum-variance frontiers and consequently to the solutions given by optimizers. Understanding that structure not only makes us more-informed users of optimizers but can also be helpful in practice.

Best and Grauer (1991) demonstrate that a small increase in the expected return of one of the portfolio’s assets can force half of the assets from the portfolio. A limitation of the mean–variance approach is that its recommended asset allocations are highly sensitive to small changes in inputs and, therefore, to estimation error. In its impact on the results of a mean–variance approach to asset allocation, estimation error in expected returns has been estimated to be roughly 10 times as important as estimation error in variances and 20 times as important as estimation error in covariances. Thus the most important inputs in mean–variance optimization are the expected returns. Unfortunately, mean returns are also the most difficult input to estimate.
2.2.5.2 The Resampled Efficient Frontier

Experience with MVO has often shown that the composition of efficient portfolios is very sensitive to small changes in inputs. Because forecasting returns, volatilities, and correlations is so difficult and subject to substantial estimation error, what confidence can we have that MVO will suggest the best asset allocations for investors? Generally, we have little confidence in the results of a single MVO. In practice, professional investors often rerun an optimization many times using a range of inputs around their point estimates to gauge the results’ sensitivity to variation in the inputs. The focus, as mentioned earlier, should be on mean return inputs. Although sensitivity analysis is certainly useful, it is ad hoc. Some researchers have sought to address the problem of MVO’s input sensitivity by taking a statistical view of efficiency. Jobson and Korkie (1981) first suggested a statistical perspective, and Michaud (1989, 1998) and Jorion (1992) developed it further.

The Michaud approach to asset allocation is based on a simulation exercise using MVO and a data set of historical returns. Using the sample values of asset classes’ means, variances, and covariances as the assumed true population parameters, the simulation generates sets of simulated returns and, for each such set (simulation trial), MVO produces the portfolio weights of a specified number of mean–variance efficient portfolios (which may be called simulated efficient portfolios). Information in the simulated efficient portfolios resulting from the simulation trials is integrated into one frontier called the resampled efficient frontier. Michaud defines a resampled efficient portfolio for a given return rank as the portfolio defined by the average weights on each asset class for simulated efficient portfolios with that return rank. For example, the fifth-ranked resampled efficient portfolio is defined by the average weight on each of the asset classes for the fifth-ranked simulated efficient portfolios in the individual simulation trials. Averaging weights in this fashion preserves the property that portfolio weights sum to 1.
2.2.5.3 The Black–Litterman Approach

Black and Litterman (1992) developed another quantitative approach to dealing with the problem of estimation error, which we recall is most serious when it concerns expected returns. Two versions of the Black–Litterman approach exist. The first one is unconstrained Black–Litterman (UBL) model. Taking the weights of asset classes in a global benchmark such as MSCI World as a neutral starting point, the asset weights are adjusted to reflect the investor’s views on the expected returns of asset classes according to Bayesian procedure that considers the strength of the investor’s beliefs. We call this unconstrained Black–Litterman model, or UBL model, because the procedure does not allow non-negativity constraints on the asset-class weights.

The other one is Black–Litterman (BL) model. This approach reverse engineers the expected returns implicit in a diversified market portfolio (a process known as reverse optimization) and combines them with the investor’s own views on expected returns in a systematic way that takes into account the investor’s confidence in his or her views. These view-adjusted expected return forecasts are then used in a MVO with a constraint against short sales and possibly other constraints. The UBL model is a direct method for selecting an asset allocation. It usually results in small or moderate deviations from the asset-class weights in the benchmark in intuitive ways reflecting the investor’s different-from-benchmark expectations. Because the UBL model is anchored to a well-diversified global portfolio, it ensures that the strategic asset allocation recommendation is well diversified. In practice, the UBL model is an improvement on simple MVO because the absence of constraints against short sales in the UBL model usually does not result in unintuitive portfolios (e.g., portfolio with large short positions in asset classes), a common result in unconstrained MVO.

Nevertheless, investors often formally want to recognize such constraints in optimization. As a result, the second version of the Black–Litterman approach, the BL model, is probably more important in practice, and will be the chief focus of this section. Although the BL model could be considered a tool for developing capital market expectations for the range of asset classes in a global index such as MSCI World, employed with MVO with short sale constraints, it also may be viewed as an asset allocation process with two
desirable qualities i.e. either the resulting asset allocation is well diversified or the resulting asset allocation incorporates the investor’s views on asset-class returns.

2.2.5.4 Asset/Liability Management

It has so far been discussed optimization in the context of an asset-only approach to asset allocation. In many cases, however, an asset portfolio is meant to fund a specified liability schedule (funding a liability means being able to pay the liability when it comes due). Such cases call for an ALM approach. Using an ALM approach (Sharpe, 1990) asset allocation must consider the risk characteristics of the liabilities in addition to those of the assets, because the focus is on funding the liabilities. For many years, mean–variance analysis in its various developments has been a tool of choice for developing asset allocation policy. The efficient frontier discussed earlier is more precisely the “asset-only” efficient frontier, because it fails to consider liabilities. Net worth (the difference between the market value of assets and liabilities), also called surplus, summarizes the interaction of assets and liabilities in a single variable. The ALM perspective focuses on the surplus efficient frontier. Mean–variance surplus optimization extends traditional MVO to incorporate the investor’s liabilities.

Figure three shows a surplus efficient frontier. The x-axis represents the standard deviation and the y-axis gives expected values. The leftmost point on the surplus efficient frontier is the minimum surplus variance (MSV) portfolio, the efficient portfolio with the least risk from an LM perspective. The MSV portfolio might correspond to a cash flow matching strategy or an immunization strategy. The rightmost point on the surplus efficient frontier represents the highest-expected-surplus portfolio. Similar to traditional MVO, the highest-expected-surplus portfolio typically consists of 100 percent in the highest-expected-return asset class. In fact, at high levels of risk, the asset allocations on the surplus efficient frontier often resemble high-risk asset-only efficient portfolios.
Figure 2.3: Sufficient Efficient Frontier


Figure three plots the investor’s liability as a point with positive standard deviation but negative expected value (because the investor owes the liability and so effectively has a short position). The investor must choose a policy portfolio on the surplus efficient frontier. Investors with low risk tolerance may choose to bear minimal expected surplus risk and thus select the MSV portfolio. Sharpe and Lawrence (1990) state that other investors might choose to bear some greater amount of surplus risk with the expectation of greater ending surplus. Understanding “‘beta’” to loosely mean compensated risk, we can call this choice the surplus beta decision. If we evaluate surplus risk relative to the risk of the MSV portfolio, we can measure the surplus beta decision in terms of the increment of risk accepted above the risk of the MSV portfolio. The estimation error problems of traditional MVO also apply to surplus optimization. The techniques that help mitigate these problems in traditional MVO, such as resampling and the Black–Litterman model, can be used in this context as well.

2.2.6 Implementation of asset classes

For each asset class specified in the investor’s strategic asset allocation, the investor will need to select an investment approach. At the broadest level, the investor’s choice can
range amongst passive investing, active investing, semi-active investing or enhanced indexing or a combination of the mentioned.

2.2.6.1 Currency Risk Management Decisions

Elton, Martin and Jeffrey (2004) argue that, in either of using passive or active investing, if any money is allocated to a non-domestic asset class, the investor’s portfolio will be exposed to currency risk—the volatility of the home-currency value of non-domestic assets that is related to fluctuations in exchange rates. Therefore, the investor must decide what part of the net exposures to currencies to hedge (eliminate). The hedging decision affects the expected return and volatility characteristics of the portfolio. Hedging can be managed passively, i.e., not incorporating views on currency returns, or managed actively, when the investor has definite forecasts about currency returns and the desire to exploit them tactically.

The asset allocation and hedging decisions can be optimized jointly, but in practice the currency risk hedging decision is frequently subordinated to the asset allocation decision—that is, currency exposures are optimized or selected subsequent to determination of the asset allocation. Often, this type of subordination (Markowitz, 1959) accompanies delegation of the currency management function to a currency overlay manager—a specialist in currency risk management operating in currency forward and other derivatives markets to establish desired currency exposures. If asset returns and currency returns are correlated, however, there will be efficiency losses relative to joint optimization. In many cases, the IPS will give instructions on policy with respect to currency hedging.

2.2.6.2 Rebalancing to the Strategic Asset Allocation

It is important to distinguish between changes (Masters, 2003) to the policy portfolio itself because of changes in the investor’s investment objectives and constraints, or because of changes in his or her long-term capital market expectations. Adjusting the actual portfolio to the strategic asset allocation might be necessary because asset price changes have moved portfolio weights away from the target weights beyond tolerance limits. Rebalancing may be done on a calendar basis (such as quarterly) or on a
percentage of portfolio basis. Percentage-of-portfolio rebalancing occurs when an asset-class weight first passes through a rebalancing threshold (also called a trigger point). A variety of approaches exist for setting the thresholds. Although some investors set them in an ad-hoc fashion, disciplined approaches exist that consider the investor’s risk tolerance, the asset’s volatility correlations with other asset classes, and transaction costs. The percentage-of-portfolio approach done in a disciplined fashion provides a tighter control over risk than calendar-basis rebalancing.

2.3 How do we successfully tackle risk management issues in investment portfolios?

It is no doubt investment (Roll, 1992) is an intrinsically risky activity. Indeed, risk taking is an innate characteristic of human activity and as old as the human race itself. Without risk, we have little possibility of reward. We thus need to treat risk management as a critical component of the investment process (Roy, 1952). Specifically, with regard to both individual investments and entire portfolios, we should examine and compare the full spectrum of risks and expected returns. The greatest extent possible to the exposures we assume are at all times justified by the rewards we can reasonably expect to reap. Proper identification, measurement, and control of risk are key to the process of investing. Thus, we put our investment objectives at risk unless we commit appropriate resources to these tasks.

2.3.1 Risk Management

Risk management (Grant, 2004) is a process involving the identification of exposures to risk, the establishment of appropriate ranges for exposures (given a clear understanding of an entity’s objectives and constraints), the continuous measurement of these exposures (either present or contemplated), and the execution of appropriate adjustments whenever exposure levels fall outside of target ranges. According to Gastineau, Donald and Rebecca (2001), the process is continuous and may require alterations in any of these activities to reflect new policies, preferences, and information. This very definition highlights that risk management should be a process, not just an activity. A process is continuous and subject to evaluation and revision. Effective risk management requires the
constant and consistent monitoring of exposures, with an eye toward making adjustments, whenever and wherever the situation calls for them.

Figure four illustrates the practical application of the process of risk management as it applies to a hypothetical business enterprise. We see at the top that the company faces a range of financial and non financial risks; moving down the exhibit, we find that the company has responded to this challenge by establishing a series of risk management policies and procedures.

Figure 2.4: Risk management process: the practice of risk management


Figure four identifies the risks, drawing on all sources of information, and attempts to measure these risks using information or data related to all of its identified exposures. The process of risk measurement can be as simple as Figure four illustrates, but more often it
involves expertise in the practice of modelling and sometimes requires complex analysis. Once the portfolio has built effective risk identification and measurement mechanisms, it is in a position to adjust its risk exposures, wherever and whenever exposures diverge from previously identified target ranges. These adjustments take the form of risk-modifying transactions (broadly understood to include the possible complete transfer of risk). The execution of risk management transactions is itself a distinct process; for portfolios, this step consists of trade identification, pricing, and execution. The process then loops around to the measurement of risk and continues in that manner, and to the constant monitoring and adjustment of the risk, to bring it into or maintain it within the desired range. In applying the risk management process to portfolio management, managers must devote a considerable amount of attention to measuring and pricing the risks of financial transactions or positions, particularly those involving derivatives. Figure five illustrates this process of pricing and measuring risk, expanding on the detail given in figure four.

![Risk management process: pricing and measuring risk](image)

**Figure 2.5: Risk management process: pricing and measuring risk**

From figure five, we see at the top that in pricing the transaction, we first identify the source(s) of uncertainty. Then we select the appropriate pricing model and enter our desired inputs to derive our most accurate estimate of the instrument’s model value (which we hope reflects its true economic value). Next, we look to the marketplace for an indication of where we can actually execute the transaction. If the execution price is “attractive” (i.e., the market will buy the instrument from us at a price at or above, or sell it to us at a price at or below, the value indicated by our model), it fits our criteria for acceptance; if not, we should seek an alternative transaction.

After executing the transaction, we would then return to the process of measuring risk. Our discussion of figure four highlighted that risk management involves adjusting levels of risk to appropriate levels, not necessarily eliminating risk altogether. It is nearly impossible (Marshall, 2001) to operate a successful business or investment program without taking risks. Indeed, a company that accepted no risk would not be an operating business. Corporations take risks for the purpose of generating returns that increase their owners’ wealth. Corporation owners, the shareholders, risk their capital with the same objective in mind. Companies that succeed in doing the activities they should be able to do well, however, cannot afford to fail overall because of activities in which they have no expertise.

Amihud and Haim (1986) state that many companies hedge risks that arise from areas in which they have no expertise or comparative advantage. In areas in which they do have an edge (i.e., their primary line of business), they tend to hedge only tactically. They hedge when they think they have sufficient information to suggest that a lower risk position is appropriate. They manage risk, increasing it when they perceive a competitive advantage and decreasing it when they perceive a competitive disadvantage. In essence, they attempt to efficiently allocate risk. Similarly, portfolio managers attempt to efficiently use risk to achieve their return objectives.

As indicated in the figures, risk management involves far more than risk reduction or hedging (one particular risk-reduction method). Risk management (Fabozzi, 2004) is a general practice that involves risk modification (e.g., risk reduction or risk expansion) as deemed necessary and appropriate by the custodians of capital and its beneficial owners.
For the risk management process to work, managers need to specify thoughtfully the business processes they use to put risk management into practice. These processes are collectively referred as risk governance.

### 2.3.2 Risk Governance

Ross, Randolph and Bradford (1993) stipulate that senior management is ultimately responsible for every activity within an organization. Their involvement is thus essential for risk management to succeed. The process of setting overall policies and standards in risk management is called risk governance. Risk governance involves choices of governance structure, infrastructure, reporting, and methodology. The quality of risk governance can be judged by its transparency, accountability, effectiveness (achieving objectives), and efficiency (economy in the use of resources to achieve objectives). Risk governance begins with choices concerning governance structure. Organizations must determine whether they wish their risk management efforts to be centralized or decentralized.

Under a centralized risk management system, a company has a single risk management group that monitors and ultimately controls all of the organization's risk-taking activities. By contrast, a decentralized system (Ross, 1999) places risk management responsibility on individual business unit managers. Centralized risk management puts the responsibility on a level closer to senior management, where we have argued it belongs. It gives an overall picture of the company’s risk position, and ultimately, the overall picture is what counts. This centralized type of risk management is now called enterprise risk management (ERM) or sometimes firm wide risk management because its distinguishing feature is a firm wide or across-enterprise perspective.

According to Solnik and Dennis (2004), an organization, employing ERM, must consider each risk factor to which it is exposed—both in isolation and in terms of any interplay among them. Risk governance is an element of corporate governance (the system of internal controls and procedures used to manage individual companies). As risk management’s role in corporate governance has become better appreciated, the importance of ERM has risen proportionately. Indeed, for risk-taking entities (this means nearly the entire economic universe), it is contradictory to suggest that an organization
has sound corporate governance without maintaining a clear and continuously updated understanding of its exposures at the enterprise level.

At the enterprise level, companies (Chow, 1995) should control not only the sensitivity of their earnings to fluctuations in the stock market, interest rates, foreign exchange rates, and commodity prices, but also their exposures to credit spreads and default risk, to gaps in the timing match of their assets and liabilities, and to operational/systems failures, financial fraud, and other factors that can affect corporate profitability and even survival.

Elton et al. (2004) state that an effective ERM system typically incorporates the following steps: identification of each risk factor to which the company is exposed, quantifying each exposure’s size in money terms, mapping these inputs into a risk estimation calculation, identifying overall risk exposures as well as the contribution to overall risk deriving from each risk factor, setting up a process to report on these risks periodically to senior management, who will set up a committee of division heads and executives to determine capital allocations, risk limits, and risk management policies and setting up a process to report on these risks accompanied with monitoring compliance with policies and risk limits.

It is worth noticing effective ERM systems always feature centralized data warehouses, where a company stores all pertinent risk information, including position and market data, in a technologically efficient manner. Perold and Sharpe (1988) Depending on the organization’s size and complexity, developing and maintaining a high-quality data warehouse can require a significant and continuing investment. In particular, the process of identifying and correcting errors in a technologically efficient manner can be enormously resource intensive—especially when the effort requires storing historical information on complex financial instruments. It is equally clear, however, that the return on such an investment can be significant.

2.3.3 Identifying risk

Chow, Eric, Mark and Kenneth (1999) stipulate that economic agents of all types assume different types of exposures on a near-continuous basis. Moreover, these risk exposures take very different forms, each of which, to varying extents, may call for customized
treatment. Effective risk management demands the separation of risk exposures into specific categories that reflect their distinguishing characteristics.

Once a classification framework is in place, we can move on to the next steps in the risk management process: identification, classification, and measurement. Although the list is far from exhaustive, many company (or portfolio) exposures fall into one of the following categories: market risk (including interest rate risk, exchange rate risk, equity price risk, commodity price risk); credit risk; liquidity risk; operational risk; model risk; settlement risk; regulatory risk; legal/contract risk; tax risk; accounting risk; and sovereign/political risk. These risks may be grouped into financial risks and nonfinancial risks as shown in figure 6. Financial risk refers to all risks derived from events in the external financial markets; nonfinancial risk refers to all other forms of risk.

2.3.4 Measuring Risk

Market risk (Kiev, 2002) refers to the exposure associated with actively traded financial instruments, typically those whose prices are exposed to the changes in interest rates, exchange rates, equity prices, commodity prices, or some combination thereof. Over the years, financial theorists have created a simple and finite set of statistical tools to describe market risk. The most widely used and arguably the most important of these is the standard deviation of price outcomes associated with an underlying asset. We usually refer to this measure as the asset’s volatility, typically represented by the Greek letter sigma (σ).

![Figure 2.6: The sources of risk](image)

Volatility is often an adequate description of portfolio risk, particularly for those portfolios composed of instruments with linear payoffs. In some applications, such as indexing, volatility relative to a benchmark is paramount. In those cases, our focus should be on the volatility of the deviation of a portfolio’s returns in excess of a stated benchmark portfolio’s returns, known as active risk, tracking risk, tracking error volatility, or by some simply as tracking error.

A portfolio’s exposure (Wagner, 2004) to losses because of market risk typically takes one of two forms: sensitivity to adverse movements in the value of a key variable in valuation (primary or first order measures of risk) and risk measures associated with changes in sensitivities (secondary or second-order measures of risk). Primary measures of risk often reflect linear elements in valuation relationships; secondary measures often take account of curvature in valuation relationships. Each asset class (e.g., bonds, foreign exchange, equities) has specific first- and second-order measures.

2.3.4.1 The Analytical or Variance–Covariance Method

According to Defusco, Dennis, Jerald, and David (2004), the analytical or variance–covariance method begins with the assumption that portfolio returns are normally distributed. The analytical or variance–covariance method’s primary advantage is its simplicity. Its primary disadvantage is its reliance on several simplifying assumptions, including the normality of return distributions. In principle, there is no reason why the calculation demands a normal distribution, but if we move away from the normality assumption, we cannot rely on variance as a complete measure of risk. Distributions can deviate from normality because of skewness and kurtosis. Skewness is a measure of a distribution’s deviation from the perfect symmetry (the normal distribution has a skewness of zero). A positively skewed distribution is characterized by relatively many small losses and a few extreme gains and has a long tail on its right side. A negatively skewed distribution is characterized by relatively many small gains and a few extreme losses and has a long tail on its left side.
2.3.4.2 Measuring Nonfinancial Risks

Defusco et al. (2004) further argue that non-financial risks are intrinsically very difficult to measure. Indeed, some of the non-financial exposures we have discussed, such as regulatory risk, tax risk, legal risk, and accounting risk, could easily be thought of as not measurable in any precise mathematical way. They are unlike market risk and the VaR concept because we usually lack an observable distribution of losses related to these factors.

Some of these risks could be thought of as more suitable for insurance than measurement and hedging. Like a flood that occurs every 50 years, they might well affect a large number of instruments or contracts. Here, it is possible to learn from best practice in the insurance industry. Insurance companies usually have sufficient assets and are capitalized to withstand these uncertain events. Where it is possible to model a source of risk, actuaries often use techniques like extreme value theory, but even these techniques are only as good as the historical data on which they are based.

2.3.5 Managing Risk

Sanders and Cornett (2003) argue that, in managing risk, some of the questions we ask are: how do we know how much risk is acceptable for us to take? What is the overall exposure assumption capacity for the firm, and how close to full capacity should we run? The firm risk management system will be incomplete without a well-thought-out approach to setting appropriate risk tolerance levels and identifying the proper corrective behaviour to take if our actual risks turn out to be significantly higher or lower than is consistent with our risk tolerance. Note here that in many circumstances, it could cause as many problems to take too little risk as to take too much risk. As we noted at the beginning of this chapter, companies are in business to take risk and taking too little risk will more than likely reduce the possible rewards; it could even make the company vulnerable to takeover. In a more extreme scenario, insufficient risk taking may lead to situations in which the expected return stands little chance of covering variable (let alone fixed) costs.
2.3.5.1 Managing credit risk through limiting exposure

Limiting the amount of exposure (Chow, 1995) to a given party is the primary means of managing credit risk. Just as a bank will not lend too much money to one entity, neither will a party engage in too many derivatives transactions with one counterparty. Exactly how much exposure to a given counterparty is “too much” is still not easy to quantify. Experienced risk managers often have a good sense of when and where to limit their exposure and they make extensive use of quantitative credit exposure measures to guide them in this process. Banks have regulatory constraints on the amount of credit risk they can assume, which are specified in terms of formulas.

2.3.5.2 Managing Credit Risk by marking it to Market

One device (Kiev, 2002) that the futures market uses to control credit risk is marking tradable positions to market. The OTC derivatives market also uses marking to market to deal with credit risk: some OTC contracts are marked to market periodically during their lives. Recall that a forward contract or swap has a market value that is positive to one party and negative to another. When a contract calls for marking to market, the party for which the value is negative pays the market value to the party for which the value is positive. Then the fixed rate on the contract is recalculated, taking into account the new spot price, interest rate, and time to expiration.

2.3.5.3 Managing risk with netting

Jobson and Korbie (1981) argue that one of the most common features used in two-way contracts with a credit risk component, such as forwards and swaps, is netting. This process, which we have already briefly discussed, involves the reduction of all obligations owed between counterparties into a single cash transaction that eliminates these liabilities. For example, if a payment is due and Party A owes more to Party B than B owes to A, the difference between the amounts owed is calculated and Party A pays the net amount owed. This procedure, called payment netting, reduces the credit risk by reducing the amount of money that must be paid.
2.3.5.4 Performance Evaluation

In order to maximize (Madhavan, 2002) risk-adjusted return through the capital allocation process, we must measure performance against risks assumed and budgeted at both the business unit or sub-strategy level and enterprise or overall portfolio level. All business activities should be evaluated against the risk taken, and a considerable body of knowledge has developed concerning the evaluation of investment performance from a risk-adjusted perspective.

Traditional approaches (Jorion, 1992), which take into account return against a risk penalty, are now used in other areas of business activity besides portfolio management. Some banks and service providers have developed sophisticated performance evaluation systems that account for risk, and they have marketed these systems successfully to clients. Risk-adjusted performance, as measured against sensible benchmarks, is a critically important capital allocation tool because it allows for the comparison of results in terms of homogenous units of exposure assumption. If these measurement tools are absent, market participants with high risk profiles are likely to be given higher marks for positive performance than they arguably deserve because they derive more from increased exposure assumption than they do from superior portfolio management methodologies. Furthermore, most investment professionals are compensated on the basis of the performance of their portfolios, trading positions, or investment ideas, and it is appropriate to judge performance in risk-adjusted terms.

2.3.5.5 Capital Allocation

In addition to its unquestionable value in the task of capital preservation, risk management (Michaud, 1981) has become a vital, if not central, component in the process of allocating capital across units of a risk-taking enterprise. The use of inputs, such as volatility/correlation analysis, risk adjusted return calculations, scenario analysis, etc., provides the allocators of risk capital with a much more informed means of arriving at the appropriate conclusions on how best to distribute this scarce resource. The risk management inputs to the process can be used in formal, mathematical, “optimization” routines, under which enterprises input performance data into statistical programs that will then offer appropriate capital allocation combinations to make efficient use of risk.
Quantitative output may simply serve as background data for qualitative decision-making processes. One way or another, however, risk management has become a vital input into the capital allocation process, and it is fair to describe this development as positive from a systemic perspective.

Chow et al. (1999) further stipulate that as part of the task of allocating capital across business units, organizations must determine how to measure such capital. One of the methodologies employed is nominal, notional, or monetary position limits. Under this approach, the enterprise simply defines the amount of capital that the individual portfolio or business unit can use in a specified activity, based on the actual amount of money exposed in the markets. It has the advantage of being easy to understand, and, in addition, it lends itself very nicely to the critical task of calculating a percentage-based return on capital allocated. Such limits, however, may not capture effectively the effects of correlation and offsetting risks. Furthermore, an individual may be able to work around a nominal position using other assets that can replicate a given position. For these reasons, although it is often useful to establish notional position limits, it is seldom a sufficient capital allocation method from a risk control perspective.

The other methodology (Michaud, 1998) is maximum loss limits. Irrespective of other types of limit regimes that it might have in place, it is crucial for any risk-taking enterprise to establish a maximum loss limit for each of its risk-taking units. In order to be effective, this figure must be large enough to enable the unit to achieve performance objectives but small enough to be consistent with the preservation of capital. This limit must represent a firm constraint on risk-taking activity. Nevertheless, even when risk-taking activity is generally in line with policy, management should recognize that extreme market discontinuities can cause such limits to be breached.

2.3.5.6 Psychological and Behavioural Considerations

Over the past several years, a body of research has emerged that seeks to model the behavioural aspects of portfolio management. This concept has important implications for risk management for two reasons. First, risk takers may behave differently at different points in the portfolio management cycle, depending on such factors as their recent performance, the risk characteristics of their portfolios, and market conditions. Second,
and on a related note, risk management would improve if these dynamics could be modelled.

Although the topic merits more discussion than it can possibly be included in this context, the main factor to consider from a risk management perspective is the importance of establishing a risk governance framework that anticipates the points in a cycle when the incentives of risk takers diverge from those of risk capital allocators. One prominent example (Malkiel, 2004) (although by no means the only one) occurs when portfolio managers who are paid a percentage of their profits in a given year fall into a negative performance situation. The trader’s situation does not deteriorate from a compensation perspective with incremental losses at this point (i.e., the trader is paid zero, no matter how much he loses), but of course the organization as a whole suffers from the trader’s loss. Moreover, the risks at the firm level can be non-linear under these circumstances because of concepts of netting risk covered earlier. These and other behavioural issues can be handled best by risk control and governance processes that contemplate them.

2.4 How Do We Successfully Execute Investment Portfolio Decisions?

The investment process has been described as a three-legged stool supported equally by securities research, portfolio management, and securities trading. Of the three, trading is often the least understood and least appreciated function. Clark and Mark (1996) state that a deeper appreciation for the trading function can be a powerful help in achieving investment success. It is important to build the knowledge and explain the concepts needed to understand how managers and traders interact with markets, choose trading strategies and tactics, and measure their success in trading. Here, perspective is chiefly that of a portfolio manager (or investment adviser) whose objective is to execute portfolio decisions in the best interests of the client. The portfolio manager’s agents in doing so are the firm’s traders. These buy-side traders are the professional traders employed by investment managers or institutional investors who place the trades that execute the decisions of portfolio managers. The job of such traders is to execute the desired trades quickly, without error, and at favourable prices. Execution is the final, critical step in the interlinked investment process.
The portfolio decision (Treynor, 1987) is not complete until securities are bought or sold. A portfolio manager is not a professional trader. However, a portfolio manager does need to communicate effectively with professional traders, evaluate the quality of the execution services being provided for the firm’s clients, take responsibility for achieving best execution on behalf of clients in his or her role as a fiduciary. In order to accomplish these goals, the portfolio manager needs a grounding in the market institutions within which traders work, including the different types of trading venues to which traders may direct orders, the measurement of trading costs, and the tactics and strategies available to the firm’s traders and the counterparties with whom they deal, including important innovations in trading technology.

Market orders and limit orders (Wagner, 2004) are the two major types of orders that traders use and that portfolio managers need to understand. A market order is an instruction to execute an order promptly in the public markets at the best price available. A limit order is an instruction to trade at the best price available but only if the price is at least as good as the limit price specified in the order. For buy orders, the trade price must not exceed the limit price, while for sell orders; the trade price must be at least as high as the limit price. An instruction always accompanies a limit order specifying when it will expire. Markets are organized to provide liquidity (the ability to trade without delay at relatively low cost and in relatively large quantities), transparency (availability of timely and accurate market and trade information), and assurity of completion (trades settle without problems under all market conditions—trade settlement involves the buyer’s payment for the asset purchased and the transfer of formal ownership of that asset).

There is an argument from Perold and Sharpe (1988) that says Markets are organized to provide liquidity, transparency, and assurity of completion, so they may be judged by the degree to which they have these qualities in practice. In detail, a liquid market is one that has the following characteristics. The market has relatively low bid–ask spreads. Such a market is often called tight. Quoted spreads and effective spreads are low. The costs of trading small amounts of an asset are themselves small. As a result, investors can trade positions without excessive loss of value.
Ross et al. (1993) state that bid–ask spreads are high, investors cannot profitably trade on information except when the information is of great value. Depth means that big trades tend not to cause large price movements. As a result, the costs of trading large amounts of an asset are relatively small. Deep markets have high quoted depth, which is the number of shares available for purchase or sale at the quoted bid and ask prices. In a resilient market, if any discrepancies between market price and intrinsic value tend to be small and corrected quickly. The great advantage of market liquidity is that traders and investors can trade rapidly without a major impact on price. This, in turn, makes it easy for those with relevant information to bring their insights and opinions into the price of securities. Corporations can then attract capital because investors can see that prices efficiently reflect the opportunities for profit and that they can buy and sell securities at will at relatively low cost. Liquidity adds value to the companies whose securities trade on the exchange. Investors will pay a premium for securities that possess the valuable trait of liquidity. Higher security prices enhance corporate value and lower the cost of capital.

2.4.1 Trading Costs

Today, the prevalent view is that all costs of trading are negative performance. The lower the transaction costs, the more portfolio management ideas that can be executed to add value to the portfolio. Solnik and Dennis (2004) stipulate that the management of transaction costs is today a leading concern of investors and many other market participants. Fund sponsors track transaction costs as part of their responsibility to conserve assets. Investment managers do so both to document their performance in managing costs and to gain information for improving the trading function. Brokers, exchanges, and regulators are also concerned with measuring and evaluating trading costs. Transaction cost measurement not only provides feedback on the success of the trading function; today, its concepts are used in setting trading strategy.

Trading costs can be thought of as having two major components: explicit costs and implicit costs. Explicit costs are the direct costs of trading, such as broker commission costs, taxes, stamp duties, and fees paid to exchanges. They are costs for which a trader could be given a receipt. Implicit costs, by contrast, represent indirect trading costs. No receipt could be given for implicit costs; they are real nonetheless. Quantitative managers will balance three factors—return, risk, and cost—in selecting the optimal trade size. But
even non-quantitative managers need to make the right choices in terms of balancing expected return against expected entry and exit costs.

2.4.2 Types of traders and their preferred order types

We first need to understand how investment style affects trading objectives. Implementation strategy and cost (Marshal, 2001) are direct consequences of investment management style. Some investment strategies are inherently inexpensive to implement—for example, contrarian, passive, and other “slow idea” strategies. Other strategies, particularly those based on stock price momentum or widely disseminated “news,” are inherently more expensive to implement. The success of the investment strategy depends on whether the information content of the decision process is sufficient relative to the costs of executing the strategy, including trading costs. Thus, the keystone of the buy-side trader’s choice of trading strategy is the urgency of the trade (the importance of certainty of execution).

From the portfolio manager’s perspective, the key to effective trading is to realize that the portfolio decision is not complete until securities are bought or sold. Because execution is so important, market information is critical. When a trade is first seriously contemplated, the trader needs to ask: How sensitive is the security to buying or selling pressure? How much volume can be accumulated without having the price move out of the desirable range? Are there any special considerations (e.g., news, rumours, competing buyers, or anxious sellers) that make this a particularly good or particularly poor time to deal in this stock? In other words, how resilient is the market? Is the price being driven to a level at which a dealer wants to reduce or increase inventory (i.e., the dealer’s layoff or buy-in position, respectively)? Armed with this tactical information, the portfolio manager finetunes his interest in the security.

Information-motivated traders, according to Elton et al. (2004) needs to trade immediately and often trade large quantities in specific names. Demands for high liquidity on short notice may overwhelm the ready supply of stock in the market, triggering adverse price movements as the effect of these demands reverberates through the market. Information traders may use fast action principal trades. By transacting with a dealer, the buy-side trader quickly secures execution at a guaranteed price. The major cost of these trades arises because the dealer demands a price concession to cover the
inventory risks undertaken. Furthermore, information-motivated traders fear that the price may move quickly to embed the information, devaluing their information edge. They are aware that their trading often moves the market, but they believe their information justifies the increased trading cost. Accordingly, information-motivated traders may wish to disguise their anxious trading need. Where possible, they use less obvious orders, such as market orders, to disguise their trading intentions. This behaviour has led information traders to be called ‘‘wolves in sheep’s clothing.’’

The value-motivated trader develops an independent assessment of value and waits for market prices to move into the range of that assessment. Thus, the market comes with excess inventory to the trader and presents him with attractive opportunities. The typical value-motivated trader uses limit orders or their computerized institutional market equivalent. An attractive price is more important than timely activity. Thus, price is controlled but timing is not. Even though value-motivated traders may act quickly, they are still accommodative and pay none of the penalties of more anxious traders. As Treynor (1987) pointed out, value traders can sometimes operate as ‘‘the dealer’s dealer,’’ buying stock when dealers most want to sell stock.

Liquidity-Motivated Traders The commitment or release of cash is the primary objective of liquidity-motivated traders. The types of orders used include market, market not-held, best efforts, participate, principal trades, portfolio trades, and orders on ECNs and crossing networks. Low commissions and small impact are desirable, and liquidity traders can often tolerate somewhat more uncertainty about timely trade completion than can information-motivated traders. Many liquidity-motivated traders believe that displaying their true liquidity-seeking nature works in their favour. When trading with a liquidity-motivated trader, dealers and other market participants can relax some of the protective measures that they use to prevent losses to informed traders.

While on the other hand, for passive traders, low-cost trading is a strong motivation of passive traders, even though they are liquidity-motivated in their portfolio-rebalancing operations. As a result, these traders tend to favour limit orders, portfolio trades, and crossing networks. The advantages, in addition to certainty of price, are low commissions, low impact, and the possible reduction or elimination of bid–ask spread costs. The major weakness is the uncertainty of whether trades will be completed within a reasonable time.
frame. These orders and markets are best suited to trading that is neither large nor heavily concentrated.

2.4.3 Trade execution decisions and tactics

The diversity of markets, order types, and characteristics of the particular securities that must be traded means that the task of selecting a trading strategy and promptly executing it is quite complex. Trading costs (Chow, 1995) are controllable, necessitating thoughtful approaches to trading strategies. Poor trading involving inattentive or inappropriate trading tactics leads to higher transaction costs. Conversely, good trading lowers transaction costs and improves investment performance.

The ability of the sell side system of brokers and exchanges to adapt and create solutions to investment requirements is impressive. Saunders and Cornett (2003) state that different order types and different venues serve investors with different motives and trading needs. In return, the broker/dealers and exchanges earn a competitive price for providing the services. Technological advances continue to play a major role in reducing transaction costs. Faster dissemination of information, improved public access, more sophisticated analysis, and eventually the replacement of exchange floor trading by electronic trading can be expected.

These efficiencies will reduce the cost of running the exchange system, but they will not necessarily reduce the cost of dealer services provided. Nor will the pressure to reduce costs and improve portfolio performance diminish. Because of the intensity of competition and the readiness to adapt and innovate, costs will continue to fall. Buy side traders who demand the facilities and conveniences provided by the exchange community must expect to pay the costs. To reduce trading costs, an ever-evolving understanding of the trading process and its implied costs is essential. Sponsors and investment advisers (Michaud, 1998) may face make-or-buy decisions concerning future trading and trading subsidized services. High speed connectivity and algorithmic trading are clear examples of how costs can be effectively reduced by removing extraneous middlemen from the trading process. Portfolio managers, investors and traders are accustomed to a market that handles the duties, costs and risks of trading.
2.5 Chapter Summary

Economic fundamentals influence the average returns of many assets, the risk associated with one asset’s returns is generally related to the risk associated with other assets’ returns. If we evaluate the prospects of each asset in isolation and ignore their interrelationships, we will likely misunderstand the risk and return prospects of the investor’s total investment position. Hence, for portfolio managers, it is quite imperative to constantly analyze how asset allocation benefits in controlling risk as well as the different optimization choices at hand. This again goes in line with effectively identifying, measuring and managing the associated portfolio risk so that investment portfolio managers can successfully execute their investment decisions.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that comprises the research design, the population and sampling design, the data collection methods, the research procedures, the data analysis method followed by the chapter summary.

3.2 Research Design

This research employs a positivist viewpoint with a deductive analysis. The research design is the blueprint that guides the collection, measurement and analysis of data in this research work. The research design in this chapter uses a case study with an exploratory approach. The reason (Altshud and Wtkin, 2000) why the writer is opting to this approach is in an attempt to lay the groundwork that will lead to future studies and also to determine if what is being observed is explained by the currently existing theory.

Some of the major contributions of the exploratory approach to this research project is that it will help in establishing major dimensions of the research task, help in developing concepts, establish priorities, develop operational definitions and thereby improving final research design. Miles and Huberman (1994) stipulate that the exploratory approach also helps in defining the problem more accurately by isolating key variables and relationships for further investigation. This at the same time will help in developing several hypotheses about possible causes of the problem as well as identifying the relevant course of action. Furthermore, the exploratory approach uses secondary data which also holds true for this research work. This research work uses reliable, accurate secondary data in conducting the research analysis. The exploratory approach uses experience surveys. In the same manner, the writer of this research work also goes out, seeks to discover significant aspects of portfolio management and gathers momentous data from the most experienced, top level management in the field of management of investment portfolios.

The research design in this research work defines the allocation of assets and risk management as the dependent variables while the various macro-economic aspects as independent variables, namely: the interest rate, exchange rates, inflation rate, FDI, GDP,
fiscal policy, monetary policy, political situations as well as the social capital structure. The reliable secondary data used in this research work as it is has considered and incorporated adjusting measures to counteract the extraneous influences.

3.3 Population and Sampling Design

3.3.1 Population

The population for this research work is the thirteen major development finance institutions (DFIs) in the East African region. The thirteen major DFIs used as a population for this research work are AfDB, BIO, CDC, DEG, European investment bank, Finnfund, FMO, IFC, Norfund, OPIC, Proparco, PTA Bank and Swedfund. Among institutional investors in the region, the writer of this research has resorted to the analysis of the management of investment portfolios by the non-profit institutional investors, the DFIs, in the East African region, owing to the fact that the writer believes portfolio investments that are currently being carried out by the DFIs are making the most impact in the lives of people living in the region. DFI portfolio managers must balance a development focus with fiscal independence, leading many DFIs to prioritize investments that present both attractive financial returns and social/environmental impact. DFIs can therefore be considered the first active impact investors, both globally and in East Africa in particular.

Furthermore, they play other important roles related to impact investing, such as providing capital to other impact investors, catalyzing the flow of private capital into new markets, and working with national governments to reform investment policy. In general, despite the main challenges of investing in African frontier markets such as bribery and corruption, weak legal and government institutions, political risk etc., institutional investors view Africa as holding the greatest overall investment potential of all frontier markets globally. Henceforth, institutional investors plan to increase their asset allocation in African markets over the coming five years. The other eye-catching factor for institutional investors to invest significantly in the African continent is the emerging middle class ahead of commodities and natural resources.
3.3.2 Sampling design

The writer is employing a non-probability sampling design with a purposive sampling approach. This is owing to the fact that cost and time do not allow to do the research in another way. Among the population listed, the writer has chosen to analyze the management of investment portfolios of AfDB as a sample in accordance with the research questions of this research work. AfDB is selected as a sample for this research work due to its immense, premier, track proven impact in the East African region through its large scale portfolio investments that is currently supporting the development agenda of the countries in this region.

3.3.2.1 Sampling frame

There is no sampling frame owing to the fact that the researcher is using a purposive non-probability sampling method. However, the AfDB is selected for the analysis of management of its investment portfolios amongst the population of thirteen DFIs listed in 3.3.1 based on the research questions of this research work.

3.3.2.2 Sampling Technique

The sampling technique used in this project work is non-probability method with a purposive sampling approach. The usage of highly reliable secondary data and experience surveys conducted with highly experienced senior management of AfDB makes bias negligible. The probability method is not feasible or appropriate in this instance since the data is time dependent and the there is a significant difference between the base period and the current period that would have caused significant cost and time.

3.3.2.3 Sampling size

By the circumstances and nature of sampling method employed in this research as discussed 3.3.2.2, the sample size is limited to analyzing the management of investment portfolios of AfDB in accordance with the research questions of this research work.
3.4 Data Collection Methods

In line with the research design used in this project which is the exploratory approach, the data collection methods employed are collection of reliable secondary data and conducting personal interviews with the right, well-informed, senior level management of AfDB. The resulting data obtained as a result of these data collection method are of nominal, ordinal, interval, ratio data types. The secondary data is highly reliable and most recent obtained from globally highly rated research and statistical department of AfDB. The writer is able to extract the relevant, momentous, and descriptive information from this data eliminating the possibility of bias.

The interview questions are researcher developed designed by the writer of this research in accordance with the research questions of this project. The interviewees’ responses and perspectives are meaningful, knowable and can be readily made explicit, and that their perspectives positively affect the success of this project. There was great cooperation between the writer/interviewer and the interviewees as they were willing and comfortable in sharing what the interviewer hoped to explore. Interviewers (Thomas, 1993) should have superb listening skills and be skillful at personal interaction, question framing, and gentle probing for elaboration, as such is the case with the interviewer/writer of this project.

3.5 Research Procedures

The writer of this research work designed and developed the personal interview questions so that the questions can fill the gap raised in the research questions. The writer further did go through the interview questions to check and make sure the questions are relevant enough in addressing the research questions. The writer then booked a personal interview appointment, a two week ahead of notice, with Mr Gabriel Negatu, Regional Director of the Eastern Africa Regional Centre, African Development Bank Group and with Mr Lawson Zankli Late Dodji, Chief Regional Programme Officer, Eastern Africa Regional Resources Centre (EARC) of the African Development Bank Group on two separate days, to conduct a forty five minutes interview with each of them. The interview with Mr Negatu, the Regional Director of AfDB was conducted at the eleventh floor of his regional headquarter office in Nairobi, Kenya. The interview with Mr Lawson, Chief
Programme Officer was also conducted at his office on the ninth floor of the AfDB regional headquarter office building in Nairobi, Kenya.

Both the Regional Director and the Chief Regional Programme officer were very cooperative knowable and addressed the carefully designed interview questions with full capacity. During the conduct of the interview, there were neither interruptions nor disruptions in any way that would have affected the outcome of the interview. The interviewer was very careful in not rewording, paraphrasing or reordering of the interview questions to avoid any errors that might occur as a result of that. The interviewer used a mobile, sound recording device in the course of the interview so that he will be able to grasp points that he may overlooked as he later goes through the recordings. The interview questions are void of complex words and they explore all the momentous issues that need to be addressed in this research work as per the research questions. The interviewees mentioned in the above paragraph have also made the statistical data resource centre of AfDB readily available to the interviewer and also provided the interviewer with all the necessary data and documents he needed. This has enabled the research a great deal in garnering valid, reliable, and practicable data.

3.6 Data Analysis Method

The data analysis method incorporated in this research work is a mix of quantitative and qualitative data analysis methods through validation of findings using the quantitative and qualitative data sources obtained from the personal interviews and the highly reliable secondary data obtained from the AfDB statistics department and financial control departments. The basic premise of this methodology (Kidder and Fine, 1987) of analysis of data is that such integration permits a more complete and synergistic utilization of data than do separate quantitative and qualitative data collection and analysis provide. The writer uses a convergent design to compare findings from qualitative and quantitative data sources. It involves collecting both types of data at roughly the same time; assessing information using parallel constructs for both types of data; separately analyzing both types of data; and comparing results through procedures such as a side-by-side comparison in a discussion, transforming the qualitative data set into quantitative scores, or jointly displaying both forms of data.
Here, it is worth to note that the two types of data can provide validation for each other and also create a solid foundation for drawing conclusions about the intervention. For the past decade, the procedures (Creswell and Clark, 2011) of a mix of qualitative and quantitative analysis have been developed and refined to suit a wide variety of research questions. These procedures include advancing rigor, offering alternative mixed methods designs, specifying a shorthand notation system for describing the designs to increase communication across fields, visualizing procedures through diagrams, noting research questions that can particularly benefit from integration, and developing rationales for conducting various forms of mixed methods studies. Interpretation and analysis of data is a complex and dynamic craft, with as much creative artistry as technical exactitude, and it requires an abundance of patient plodding, fortitude, and discipline.

The core characteristics of a well designed mixed methods analysis incorporates collection analysis of both quantitative (closed-ended) and qualitative (open ended) data in a manner at which both qualitative and quantitative components either concurrently or sequentially implemented. The writer of this research work uses different data analysis tools, namely computer application packages such as Excel and SPSS. The various data is also categorized in the forms of tables, charts, and different figures.

### 3.7 Chapter Summary
Research in common parlance refers to a search of knowledge; it is a scientific and systematic search for pertinent information on the research questions identified. Research methodology is a way to systematically solve the research problem. The roadmap of this project work has adopted an exploratory approach in a deductive analysis to fill the gap addressed in the research questions. The writer has selected thirteen major development finance institutions (DFIs) in the East African Region as the population of the research work. A non probability sampling design with a purposive sampling approach is incorporated owing to the fact that cost and time would not have allowed the research to be conducted in any other sampling design method. AfDB is selected as a sample for this research work due to its immense, premier, track proven impact in the East African region through its large scale portfolio investments that is currently supporting the development agenda of the countries in this region. Highly reliable secondary data and carefully designed personal interviews are used as sources of data with a mix of quantitative and qualitative data analysis methods.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

In line with the research questions and the research design stated in chapter three, this chapter brings forward the results and findings of this research work. The results and findings in this chapter are obtained from personal interviews conducted with well-informed, senior level management of AfDB and from a reliable secondary data source of the statistical department of AfDB. Chapter four has four sections: the first section gives general information on the investment portfolio of AfDB in accordance with the research questions, followed by two sections that explicitly present findings on how AfDB aligns its strategic/tactical asset allocation in line with its investment portfolio goals and how it tackles its risk management issues in its investment portfolio respectively. The final section of this chapter puts forward the chapter summary.

4.2 General Information

The African Development Bank Group (AfDB) was established in 1964. AfDB is selected as a sample for this research work due to its immense, premier, track-proven impact in the East African region through its large scale portfolio investments that is currently supporting the development agenda of the countries in the region and as well as the rest of Africa by promoting sustainable economic growth. The constituent institutions of AfDB are the African Development Bank (ADB), the African Development Fund (ADF) and the Nigeria Trust Fund (NTF). The shareholders of AfDB constitute fifty three African countries (Regional Member Countries) and twenty six non-African countries (Non-Regional Member Countries). The authorized capital of AfDB as of December 31, 2014 was UA 66.98 billion and with a subscribed capital of UA 65.13 billion. Table one summarizes the fast facts of the AfDB group.

The African Development Fund (ADF or the Fund) was established in 1972 as an international institution to assist the African Development Bank (ADB or the Bank) in contributing to the economic and social development of the Bank’s regional members,
promote cooperation and increased international trade particularly among the Bank’s members, and to provide financing on concessional terms for such purposes.

By its resolution F/BG/2010/03 of May 27, 2010, the Board of Governors increased the membership of the Board of Directors of ADF from twelve to fourteen, made up of seven members selected by the Bank and seven members selected by State Participants.

The Board of Directors reports to the Board of Governors, which is made up of representatives of the State Participants and the ADB. The ADB exercises fifty percent of the voting powers in the ADF and the President of the Bank is the ex-officio President of the Fund.

The Nigeria Trust Fund (NTF) is a special fund administered by the Bank. The Fund’s resources primarily consist of subscriptions by the Federal Republic of Nigeria. The NTF was established in 1976, for an initial period of thirty years, when an agreement establishing the NTF was executed between the Bank and the Federal Republic of Nigeria, with a provision for extension by mutual agreement. After two annual extensions in 2006 and 2007, the operation of the NTF was extended for ten years with effect from April 26, 2008, following a positive evaluation of its performance during the initial 30 years of operation.

Total Bank Group operations in the year amounted to UA 5.05 billion, 15.1 percent higher than the UA 4.39 billion approved in 2013. The value of approvals at the ADB window increased by three-quarters to UA 3.20 billion from UA 1.83 billion in 2013. Approvals for various operations at the ADF window stood at UA 1.59 billion, some 30 percent below the amount recorded in 2013 (See Figure one).

Other approvals include UA 11.49 million from NTF and UA 244.22 million from Special Funds. The drop in financing by the ADF, the Bank’s concessional window, was partly due to the slow take-off of activities in 2014, the first year of the implementation of the ADF-13 Replenishment. The Bank’s efforts to diversify its client base helped extend ADB public-sector lending to 11 countries, almost double the number in 2013. The ADB private-sector window helped leverage some UA 13.0 billion in co-financing, more than double the year’s target of UA 6.0 billion.
### Fast Facts

**African Development Bank Group**

<table>
<thead>
<tr>
<th>Constituent Institutions</th>
<th>The African Development Bank (ADB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders</td>
<td>The African Development Fund (ADF)</td>
</tr>
<tr>
<td></td>
<td>The Nigeria Trust Fund (NTF)</td>
</tr>
<tr>
<td>Mission</td>
<td>To promote sustainable economic growth and reduce poverty in Africa</td>
</tr>
<tr>
<td>Authorized Capital</td>
<td>UA 62.98 billion</td>
</tr>
<tr>
<td>as of December 31, 2014 (ADB)</td>
<td></td>
</tr>
<tr>
<td>Subscribed Capital</td>
<td>UA 85.19 billion</td>
</tr>
<tr>
<td>as of December 31, 2014 (ADB)</td>
<td></td>
</tr>
<tr>
<td>Paid-up Capital</td>
<td>UA 4.88 billion</td>
</tr>
<tr>
<td>as of December 31, 2014 (ADB)</td>
<td></td>
</tr>
<tr>
<td>Callable Capital</td>
<td>UA 80.27 billion</td>
</tr>
<tr>
<td>as of December 31, 2014 (ADB)</td>
<td></td>
</tr>
<tr>
<td>Total Reserves</td>
<td>UA 2.82 billion</td>
</tr>
<tr>
<td>as of December 31, 2014 (ADB)</td>
<td></td>
</tr>
<tr>
<td>Approved Operations, 2014</td>
<td>252 operations totaling UA 5.05 billion, financed as follows:</td>
</tr>
<tr>
<td></td>
<td>ADB: UA 5.02 billion</td>
</tr>
<tr>
<td></td>
<td>ADF: UA 1.55 billion</td>
</tr>
<tr>
<td></td>
<td>NTF: UA 11.5 million</td>
</tr>
<tr>
<td></td>
<td>Special Funds*: UA 244.2 million</td>
</tr>
<tr>
<td>Of which:</td>
<td>Loans: UA 0.89 billion (69 operations)</td>
</tr>
<tr>
<td></td>
<td>Grants: UA 0.15 billion (30 operations)</td>
</tr>
<tr>
<td></td>
<td>Equity Participation: UA 0.15 billion (6 operations)</td>
</tr>
<tr>
<td></td>
<td>Guarantee: UA 176.1 million (6 operations)</td>
</tr>
<tr>
<td></td>
<td>Special Funds*: UA 244.2 million</td>
</tr>
<tr>
<td>Loan and Grant Approvals</td>
<td>Infrastructure: UA 2.50 billion (55.5 percent)</td>
</tr>
<tr>
<td>by Sector, 2014</td>
<td>Agriculture and Rural Development: UA 460.3 billion (10.0 percent)</td>
</tr>
<tr>
<td></td>
<td>Electric: UA 968.9 million (17.9 percent)</td>
</tr>
<tr>
<td></td>
<td>Food Security: UA 176.1 million (6 operations)</td>
</tr>
<tr>
<td></td>
<td>Industry, mining and quarrying: UA 39.1 million (0.7 percent)</td>
</tr>
<tr>
<td></td>
<td>Environment: UA 33.2 million (0.7 percent)</td>
</tr>
</tbody>
</table>

**Figure 4.1: Fast Facts – African Development Bank Group**

*Source: AfDB Statistics Department (2014)*

**Figure 4.2: Bank Group Approvals by Window, 2012-2014 (UA billion)**

*Source: AfDB Statistics Department (2014)*
4.3 How is AfDB able to align its strategic/ tactical asset allocation in line with its investment portfolio goals?

The AfDB gets its funds from several sources or windows. The three major windows of sources of funds AfDB are the ADB window, the ADF window and the NTF window. There is also a fourth window which is not as big as the above three mentioned windows which is known as Special Funds. The ADB is a non-concessional, market based window which sources its funds by going out to the market, from the reflows of the various loans it gives out as well as subscriptions from member countries.

The ADF window is a special concessional window of AfDB which lends at almost interest free rates for heavily indebted, low income, poor African countries for a term that can extend for up to forty years in a form of grant, loan or a blend of both. The other sources of fund for ADF are subscriptions and contributions by state participants as well as investments made by the ADF in the international market. The NTF window fund’s resources primarily consist of subscriptions by the Federal Republic of Nigeria. The NTF provides financing in the form of loans to the least developed and Low-Income Regional Member Countries at concessionary rates in order to enhance economic development and social progress in Africa. AfDB administers and invests the funds from the NTF in the international market as well.

The sources of funds for the above three windows are similar: namely subscriptions, reflows from loans and investments in the international market under various conditions and amounts. The ADB window is the largest source of funds for AfDB, henceforth, this research work presents findings of the alignment of the strategic / tactical asset allocations in line with the AfDB investment portfolio goals.

4.3.1 Subscriptions Paid In

Subscriptions to the capital stock of the Bank are made up of the subscription to the initial capital, a voluntary capital increase and the six General Capital Increases (GCI) made so far. The Fifth General Capital Increase (GCI-V) was approved by the Board of Governors of the Bank on May 29, 1998 and became effective on September 30, 1999 upon
ratification by member states and entry into force of the related amendments to the Agreements establishing the Bank. The GCI-V increased the authorized capital of the Bank by 35 percent from 1.62 million shares to 2.187 million shares with a par value of UA 10,000 per share.

The GCI-V shares, a total of 567,000 shares, are divided into paid-up and callable shares in proportion of six percent (6%) paid-up and ninety-four percent (94%) callable. The GCI-V shares were allocated to the regional and non-regional members such that, when fully subscribed, the regional members shall hold 60 percent of the total stock of the Bank and non-regional members shall hold the balance of 40 percent.

Prior to the GCI-V, subscribed capital was divided into paid-up capital and callable capital in the proportion of 1 to 7. With the GCI-V, the authorized capital stock of the Bank consists of 10.81 percent paid-up shares and 89.19 percent callable shares. Prior to the Sixth General Capital Increase (GCI-VI) and by its resolutions B/BG/2008/07 and B/BG/2009/05, the Board of Governors authorized two capital increases bringing the Authorized Capital of the Bank from UA 21,870 million to UA 22,120 million to allow the Republic of Turkey and the Grand Duchy of Luxembourg to become members of the Bank. The membership of these two countries became effective upon completion of the formalities specified in the Agreement establishing the Bank and in the General Rules Governing Admission of Non-Regional countries to Membership of the Bank. Consequently, on October 29, 2013 and May 29, 2014, the Republic Turkey and The Grand Duchy Luxembourg respectively were formally admitted as the 78th and 79th member countries of the Bank.

In 2009, the Board of Directors endorsed a proposal made by Canada and Republic of Korea offering to subscribe, temporarily, to additional non-voting callable capital of the Bank in the amounts of UA 1.63 billion and UA 0.19 billion, respectively. This proposal was adopted by the Board of Governors on February 22, 2010. Accordingly, the authorized capital stock of the Bank increased from UA 22,120 million to UA 23,947 million by the creation of additional 182,710 non-voting shares. These non-voting callable shares were to be absorbed by the subscriptions of Canada and the Republic of Korea to GCI-VI when they become effective.
Figure 4.3 Summary of Bank Group Operations, Resources and Finance, 2005-2014 (UA million)

Source: AfDB Statistics Department (2014)
<table>
<thead>
<tr>
<th>Sector</th>
<th>ADB</th>
<th>ADF</th>
<th>AfDB</th>
<th>NTB</th>
<th>Bank Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Amount</td>
<td>Number</td>
<td>Amount</td>
<td>Number</td>
</tr>
<tr>
<td>Agriculture and Rural Development</td>
<td>12</td>
<td>22</td>
<td>17.7</td>
<td>22</td>
<td>21.1</td>
</tr>
<tr>
<td>Social</td>
<td>15</td>
<td>32</td>
<td>338.9</td>
<td>32</td>
<td>338.9</td>
</tr>
<tr>
<td>Education</td>
<td>7</td>
<td>5</td>
<td>100.2</td>
<td>5</td>
<td>100.2</td>
</tr>
<tr>
<td>Health</td>
<td>8</td>
<td>23</td>
<td>144.6</td>
<td>23</td>
<td>144.6</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>1</td>
<td>30.8</td>
<td>5</td>
<td>30.8</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>20</td>
<td>29</td>
<td>731.2</td>
<td>29</td>
<td>731.2</td>
</tr>
<tr>
<td>Water Supply and Sanitation</td>
<td>5</td>
<td>4</td>
<td>36.3</td>
<td>4</td>
<td>36.3</td>
</tr>
<tr>
<td>Energy Supply</td>
<td>6</td>
<td>9</td>
<td>249.7</td>
<td>9</td>
<td>249.7</td>
</tr>
<tr>
<td>Financial Services</td>
<td>1</td>
<td>1</td>
<td>50.9</td>
<td>1</td>
<td>50.9</td>
</tr>
<tr>
<td>Transport</td>
<td>8</td>
<td>12</td>
<td>435.6</td>
<td>12</td>
<td>435.6</td>
</tr>
<tr>
<td>Finance</td>
<td>14</td>
<td>1</td>
<td>32.5</td>
<td>1</td>
<td>32.5</td>
</tr>
<tr>
<td>Multisector</td>
<td>6</td>
<td>23</td>
<td>167.1</td>
<td>23</td>
<td>167.1</td>
</tr>
<tr>
<td>Industry, Mining and Quarrying</td>
<td>2</td>
<td>3.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Urban Development</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environment</td>
<td>4</td>
<td>12</td>
<td>32.3</td>
<td>12</td>
<td>32.3</td>
</tr>
<tr>
<td><strong>Total Loans and Grants</strong></td>
<td>69</td>
<td>111</td>
<td>1,554.7</td>
<td>111</td>
<td>1,554.7</td>
</tr>
<tr>
<td><strong>A. Total Loans and Grants</strong></td>
<td><strong>10</strong></td>
<td><strong>1</strong></td>
<td><strong>8.2</strong></td>
<td><strong>1</strong></td>
<td><strong>8.2</strong></td>
</tr>
<tr>
<td><strong>B. Other Approvals</strong></td>
<td><strong>6</strong></td>
<td><strong>10</strong></td>
<td><strong>13.5</strong></td>
<td><strong>10</strong></td>
<td><strong>13.5</strong></td>
</tr>
<tr>
<td><strong>NPC/LDC Relief</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Post Conflict Country Facility</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Equity Participation</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Guarantees</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Loan Realization</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Other Funds</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Approvals</strong></td>
<td><strong>70</strong></td>
<td><strong>112</strong></td>
<td><strong>1,596.1</strong></td>
<td><strong>112</strong></td>
<td><strong>1,596.1</strong></td>
</tr>
</tbody>
</table>

**Figure 4.4 Summary of Bank Group Approvals, 2014 (UA million)**

*Source: AfDB Statistics Department (2014)*
The GCI-VI was approved by the Board of Governors of the Bank on May 27, 2010. GCI-VI increased the authorized capital stock of the Bank from UA 23,947 million to UA 67,687 million with the creation of 4,374,000 new shares. The new shares created are to be allocated to the regional and non-regional groups in such proportions that, when fully subscribed, the regional group shall hold 60 percent of the total capital stock of the Bank, and the non-regional group 40 percent. The new shares and the previous ones described above shall be divided into paid-up and callable shares in the proportion of 6 percent paid-up shares and 94 percent callable shares. Upon conclusion of the GCI VI capital increase and following the Board of Governors’ resolutions, the temporary non-voting callable shares of Canada and Korea described above were effectively retired in 2011 and 2012, respectively thereby reducing the authorized capital of the Bank for each of these periods by 163,296 and 19,414.

Following its Resolution B/BG/2012/04 of May 31, 2012, the Board of Governors authorized a Special Capital Increase of the authorized share capital of the Bank to allow for: subscription by a new regional member country (the Republic of South Sudan) of the minimum number of shares required for it to become a member; and the resulting subscription by non-regional members of the number of shares necessary to comply with the 60/40 ratio requirement between the shareholding of regional and non-regional members. Accordingly, the Board of Governors, decided to increase the authorized capital of the Bank by the creation of 111,469 new shares, out of which 66,881 shall be available for subscription by the Republic of South Sudan, and 44,588, shall be available for subscription by non-regional members. In 2014, by Resolution B/BG/2014/02, the Board of Governors revised down to 33,895 shares the initial subscription of South Sudan, in line with its IMF quota. The additional shares are subject to the same terms and conditions as the shares authorized in the GCI-VI. The membership of the Republic of South Sudan shall become effective upon completion of the formalities specified in the Agreement establishing the Bank and in the General Rules Governing Admission of Regional Countries to Membership of the Bank. As at December 31, 2014, such formalities had not been completed.
As at December 31, 2014, the paid-up capital of the Bank amounted to UA 4.86 billion, with a paid-in capital (i.e. the portion of paid-up capital that has been actually paid) of UA 3.44 billion, compared with UA 4.96 billion and UA 3.15 billion of paid-up and paid-in capital, respectively, at the end of 2013. The Bank’s callable capital at December 31, 2014 stood at UA 60.27 billion including UA 21.57 billion from nonborrowing member countries rated A- and higher, compared with UA 60.25 billion and UA 21.25 billion, respectively, as at the end of the previous year.

In accordance with the Bank’s Share Transfer Rules, shares for which payment have become due and remain unpaid are forfeited after a prescribed period and offered for subscription to member countries within the same membership group (i.e. regional or non-regional). Details of the Bank’s capital subscriptions at December 31, 2014 are shown in the Statement of Subscriptions to the Capital Stock and Voting Powers, which forms part of the Financial Statements included elsewhere in this Report.

<table>
<thead>
<tr>
<th>Authorized Capital</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid-up Capital</td>
<td>3,289</td>
<td>4,983</td>
<td>4,982</td>
<td>4,685</td>
</tr>
<tr>
<td>Callable Capital</td>
<td>34,033</td>
<td>60,252</td>
<td>60,248</td>
<td>60,288</td>
</tr>
<tr>
<td>Total Subscribed Capital</td>
<td>37,322</td>
<td>65,215</td>
<td>65,210</td>
<td>65,133</td>
</tr>
</tbody>
</table>

**Figure 4.5: Bank’s capital subscriptions at December 31, 2014**

Source: AfDB Statistics Department (2014)

The Bank’s capital as at December 31, 2014 and 2013 was as follows:

<table>
<thead>
<tr>
<th>(UA thousands)</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Authorized (in shares of UA 10,000 each)</td>
<td>66,975,050</td>
<td>66,975,050</td>
</tr>
<tr>
<td>Less: Unsubscribed</td>
<td>(1,641,829)</td>
<td>(1,764,919)</td>
</tr>
<tr>
<td>Subscribed Capital</td>
<td>65,133,222</td>
<td>65,210,131</td>
</tr>
<tr>
<td>Less: Callable Capital</td>
<td>(60,268,709)</td>
<td>(60,247,795)</td>
</tr>
<tr>
<td>Paid-up Capital</td>
<td>4,064,517</td>
<td>4,982,339</td>
</tr>
<tr>
<td>Shares to be issued upon payment of future installments</td>
<td>(1,426,520)</td>
<td>(1,815,390)</td>
</tr>
<tr>
<td>Add: Amounts paid in advance</td>
<td>354</td>
<td>359</td>
</tr>
<tr>
<td>Less: Amounts in arrears</td>
<td>(119)</td>
<td>(221)</td>
</tr>
<tr>
<td>Capital at December 31</td>
<td>3,438,232</td>
<td>3,147,084</td>
</tr>
</tbody>
</table>

**Figure 4.6: Bank’s capital as at December 31, 2014 and 2013**

Source: AfDB Statistics Department (2014)
Included in the total unsubscribed shares of UA 1,841.83 million at December 31, 2014 was an amount of UA 38.83 million representing the balance of the shareholding of the former Socialist Federal Republic of Yugoslavia (former Yugoslavia). Since the former Yugoslavia has ceased to exist as a state under international law, its shares (composed of UA 38.83 million callable, and UA 4.86 million paid-up shares) have been held by the Bank in accordance with Article 6 (6) of the Bank Agreement. In 2002, the Board of Directors of the Bank approved the proposal to invite each of the successor states of the former Yugoslavia to apply for membership in the Bank, though such membership would be subject to their fulfilling certain conditions including the assumption pro-rata of the contingent liabilities of the former Yugoslavia to the Bank, as of December 31, 1992. In the event that a successor state declines or otherwise does not become a member of the Bank, the pro-rata portion of the shares of former Yugoslavia, which could have been reallocated to such successor state, would be reallocated to other interested non-regional members of the Bank in accordance with the terms of the Share Transfer Rules.

The proceeds of such reallocation will however be transferable to such successor state. Furthermore, pending the response from the successor states, the Bank may, under its Share Transfer Rules, reallocate the shares of former Yugoslavia to interested non-Regional Member States and credit the proceeds on a pro-rata basis to the successor states. In 2003, one of the successor states declined the invitation to apply for membership and instead offered to the Bank, as part of the state’s Official Development Assistance its pro-rata interest in the proceeds of any reallocation of the shares of former Yugoslavia. The Bank accepted the offer.
Figure 4.7: Subscriptions by member countries and their voting power at December 31, 2014

Source: AfDB Statistics Department (2014)
Prior to the fourth General Capital Increase (GCI-IV), payments on the share capital subscribed by the Non-Regional Member Countries were fixed in terms of their national currencies. Under GCI-IV, and subsequent capital increase payments by regional and non-regional members in US dollars were fixed at an exchange rate of 1 UA = US$ 1.20635. This rate represented the value of the US Dollar to the SDR immediately before the introduction of the basket method of valuing the SDR on July 1, 1974 (1974 SDR). As a result of these practices, losses or gains could arise from converting these currencies to UA when received. Such conversion differences are reported in the Cumulative Exchange Adjustment on Subscriptions account.
At December 31, 2014 and 2013, the Cumulative Exchange Adjustment on Subscriptions (CEAS) was as follows:

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at January 1</td>
<td>172,654</td>
<td>186,825</td>
</tr>
<tr>
<td></td>
<td>884</td>
<td>5,829</td>
</tr>
<tr>
<td>Balance at December 31</td>
<td>173,538</td>
<td>172,654</td>
</tr>
</tbody>
</table>

**Figure 4.9: Cumulative Exchange Adjustment on Subscriptions (CEAS)**
*Source: AfDB Statistics Department (2014)*

### 4.3.2 Reflows from Loans

The Bank’s loan portfolio comprises loans granted to, or guaranteed by borrowing member countries as well as certain other non-sovereign-guaranteed loans. Amounts disbursed on loans are repayable in the currency or currencies disbursed by the Bank or in other freely convertible currency or currencies approved by the Bank. The amount repayable in each of these currencies shall be equal to the amount disbursed in the original currency. Loans are granted for a maximum period of 20 years, including a grace period, which is typically the period of project implementation. Loans are for the purpose of financing development projects and programs, and are not intended for sale. Furthermore, management does not believe there is a comparable secondary market for the type of loans made by the Bank.

The types of loans currently held by the Bank and the terms applicable are described below:

**Loan Portfolio:** The Bank’s loan portfolio is currently made up of three primary types of loans based on the financial terms: fixed rate, floating rate and variable rate loans. Fixed rate and variable rate loans have both multi-currency and single currency terms—that is, offered in multi-currency or in a single currency. While floating rate loans only bear single currency terms.

**Other Loans:** The Bank also offers parallel co-financing and A/B loan syndications. Through syndications the Bank is able to mobilize co-financing by transferring some or
all of the risks associated with its loans and guarantees to other financing partners. Thus, syndications decrease and diversify the risk profile of the Bank’s financing portfolio. Syndications may be on a funded or unfunded basis and may be arranged on an individual, portfolio, or any other basis consistent with industry practices.

The Bank also offers its RMCs local currency loans if the Bank is able to fund efficiently in the local currency market. The local currency loans are offered under the fixed spread loan pricing framework with a “cost-pass-through” principle to ensure that the overall cost of funds is compensated.

**Figure 4.10: Bank’s loan portfolio**

*Source: AfDB Statistics Department (2014)*

The ADB provides loans to its clients on non-concessional terms. The Bank’s standard loans are categorized either as Sovereign Guaranteed Loans (SGLs) or Non-Sovereign Guaranteed Loans (NSGLs). SGLs are made to Regional Member Countries (RMCs) or public sector enterprises from RMCs supported by the full faith and credit of the RMC in whose territory the borrower is domiciled. Multinational institutions are eligible for SGLs if they are guaranteed by an RMC or by the RMCs in whose territory or territories the projects will be executed and 3 month JIBAR for ZAR, a funding margin that is a function of the Bank’s cost of funding relative to LIBOR, EURIBOR or JIBAR computed every six months, and a contractual spread, that was set at 60 basis points (bps) with effect from January 1, 2011. At a borrower’s request, the EVSL offers a free option to convert the floating base rate into a fixed base rate (amortizing interest rate swap rate set at borrower’s request for disbursed and outstanding loan balances). The repayment period for sovereign and sovereign guaranteed loans is up to 20 years, including a grace period not exceeding 5 years.

The lending rate on the FSL comprises a floating base rate (6-month LIBOR for USD and YEN, 6-month EURIBOR for Euro and 3 month JIBAR for ZAR) which remains floating until maturity date or a fixed base rate plus a risk-based credit spread. NGSLs have a
repayment period of 15 years including a grace period not exceeding 5 years. In December 2013, the ADB Board of Directors approved the introduction of the Fully Flexible Loan (FFL) product to the suite of products available to sovereign and sovereign-guaranteed borrowers. The FFL embeds risk management features currently offered through the Bank’s risk management products in SGLs, thereby providing full customization flexibility in interest rate and currency conversion to borrowers. It also introduces a maturity-based pricing structure due to the lengthening of the maximum tenor, grace period and average loan maturity (i.e. the weighted average time to repay a loan which considers both repayment dates and amounts in order to provide a better estimation of how quickly a loan is repaid) of SGLs from the current 20, 5 and 12.75 years to 25, 8 and 17 years, respectively to allow borrowers to select loan profiles that match their funding needs and debt management capacities.

The lending rate of the FFL product is consistent with that of the EVSL plus a maturity premium, where applicable. With maturity-based pricing, loans with maturity less than or equal to 12.75 years will not attract a maturity premium. However, loans with average loan maturity greater than 12.75 years but less than or equal to 15 years will attract a 10 bps maturity. The Bank makes loans to its Regional Member Countries and public sector enterprises guaranteed by the government. Loans are also extended to private sector enterprises without government guarantee.

Cumulative loans signed, net of cancellations, as at December 31, 2014 amounted to UA 32.24 billion. This is UA 1.13 billion higher than the balance at December 31, 2013 when the cumulative loans signed stood at UA 31.11 billion.

![Table](Image)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans approved*</td>
<td>2,238.15</td>
<td>2,446.72</td>
<td>1,801.47</td>
<td>1,705.04</td>
<td>3,052.29</td>
</tr>
<tr>
<td>Disbursements</td>
<td>1,339.85</td>
<td>1,808.79</td>
<td>2,208.17</td>
<td>1,430.78</td>
<td>1,939.53</td>
</tr>
<tr>
<td>Undisbursed Balances</td>
<td>4,055.33</td>
<td>5,301.02</td>
<td>4,463.23</td>
<td>4,490.13</td>
<td>3,751.22</td>
</tr>
</tbody>
</table>

*Excludes approvals of special funds and equity participations but includes guarantees.

**Figure 4.11:** Evolution of loans approved, disbursed and undisbursed balances from 2010 to 2014.

*Source: AfDB Statistics Department (2014)*

Loan disbursements during 2014 amounted to UA 1.94 billion, compared to UA 1.43 billion in 2013. At December 31, 2014, cumulative disbursements (including non-
sovereign loans) amounted to UA 28.49 billion. A total of 895 loans were fully disbursed amounting to UA 24.50 billion, representing 85.99 percent of cumulative disbursements. Loan disbursements in 2014 by country are shown in Table 7.5.

Principal loan repayments amounted to UA 795.56 million in 2014 compared to UA 767.03 million realized in 2013, representing an increase of 3.72 percent over the previous year. Cumulative repayments as of December 31, 2014 were UA 15.69 billion compared to UA 15.06 billion at December 31, 2013. Figure 4.11 shows the evolution of loan disbursements and repayments for the period, 2010-2014.

The continuing turbulence in the global macroeconomic, political and financial markets is expected to impact the Bank’s financial results given their sensitivity to changes in these domains. The Bank will continue to diligently monitor such impacts on the volume of its lending and the timing of repayment of its loans to ensure that it continues to deliver on its development mandate. The new 10-year strategy of the Bank approved in 2013 is expected to continue to shape its interventions and operations over the ten years planning horizon to 2022. The strategic focus on two overarching objectives of inclusive growth and transition to green growth, with five operational priorities including infrastructure development, regional integration, private sector development, governance and accountability, and skills and technology provides the Bank with a unifying framework for effective management of its operational activities in 2015 and beyond.

![Figure 4.12: Disbursements and Loan Repayments](source: AfDB Statistics Department (2014))
At December 31, 2014 and 2013, the carrying and estimated fair values of outstanding loans were as follows:

<table>
<thead>
<tr>
<th>Loans at Amortized Cost</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Rate Loans</td>
<td>10,186,538</td>
<td>9,107,483</td>
</tr>
<tr>
<td>Floating Rate Loans</td>
<td>2,254,402</td>
<td>2,252,117</td>
</tr>
<tr>
<td>Variable Rate Loans</td>
<td>188,859</td>
<td>209,774</td>
</tr>
<tr>
<td>Subtotal</td>
<td>12,623,809</td>
<td>13,589,374</td>
</tr>
<tr>
<td>Loans at Fair Value</td>
<td>12,647,808</td>
<td>13,555,923</td>
</tr>
<tr>
<td>Total</td>
<td>12,647,808</td>
<td>13,555,923</td>
</tr>
</tbody>
</table>

Accumulated provision for impairment on loans at amortized cost: (151,268) |

Net Loans: 12,496,518 |

<table>
<thead>
<tr>
<th>Loans at Amortized Cost</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Rate Loans</td>
<td>10,186,538</td>
<td>9,107,483</td>
</tr>
<tr>
<td>Floating Rate Loans</td>
<td>2,254,402</td>
<td>2,252,117</td>
</tr>
<tr>
<td>Variable Rate Loans</td>
<td>188,859</td>
<td>209,774</td>
</tr>
<tr>
<td>Subtotal</td>
<td>12,623,809</td>
<td>13,589,374</td>
</tr>
<tr>
<td>Loans at Fair Value</td>
<td>12,647,808</td>
<td>13,555,923</td>
</tr>
<tr>
<td>Total</td>
<td>12,647,808</td>
<td>13,555,923</td>
</tr>
</tbody>
</table>

Accumulated provision for impairment on loans at amortized cost: (151,268) |

Net Loans: 12,496,518 |

**Figure 4.13: Carrying and Estimated Fair Values of Outstanding Loans**

*Source: AfDB Statistics Department (2014)*

The contractual maturity structure of outstanding loans as at December 31, 2014 and 2013 was as follows:

<table>
<thead>
<tr>
<th>Periods</th>
<th>Fixed Rate</th>
<th>Floating Rate</th>
<th>Variable Rate</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>One year or less</td>
<td>656.84</td>
<td>479.88</td>
<td>180.32</td>
<td>1,316.04</td>
<td>1,007.41</td>
</tr>
<tr>
<td>More than one year but less than two years</td>
<td>647.59</td>
<td>292.25</td>
<td>3.70</td>
<td>939.54</td>
<td>1,039.20</td>
</tr>
<tr>
<td>More than two years but less than three years</td>
<td>781.83</td>
<td>249.45</td>
<td>2.95</td>
<td>1,034.23</td>
<td>891.68</td>
</tr>
<tr>
<td>More than three years but less than four years</td>
<td>801.93</td>
<td>319.98</td>
<td>1.08</td>
<td>1,122.79</td>
<td>887.97</td>
</tr>
<tr>
<td>More than four years but less than five years</td>
<td>829.16</td>
<td>176.79</td>
<td>-</td>
<td>1,005.95</td>
<td>894.02</td>
</tr>
<tr>
<td>More than five years</td>
<td>6,470.29</td>
<td>782.96</td>
<td>0.01</td>
<td>7,233.26</td>
<td>6,865.56</td>
</tr>
<tr>
<td>Total</td>
<td>10,186.54</td>
<td>2,273.21</td>
<td>186.06</td>
<td>12,647.81</td>
<td>11,585.84</td>
</tr>
</tbody>
</table>

**Figure 4.14: Contractual Maturity Structure Of Outstanding Loans As At December 31, 2014 And 2013**

*Source: AfDB Statistics Department (2014)*

At December 31, 2014, outstanding loans with an aggregate principal balance of UA 396.79 million (2013: UA 330.35 million), of which UA 265.34 million (2013: UA 260.32 million) was overdue, were considered to be impaired. The gross amounts of loans and charges receivable that were impaired and their cumulative impairment at December 31, 2014 and 2013 were as follows:
The movements in the accumulated provision for impairment on outstanding loan principal for the years ended December 31, 2014 and 2013 were as follows:

<table>
<thead>
<tr>
<th>(UA thousands)</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at January 1</td>
<td>145,145</td>
<td>128,506</td>
</tr>
<tr>
<td>Provision for impairment on loan principal for the year</td>
<td>1,586</td>
<td>22,886</td>
</tr>
<tr>
<td>Provision reversal for loan written off</td>
<td>-</td>
<td>(4,720)</td>
</tr>
<tr>
<td>Translation effects</td>
<td>4,577</td>
<td>(1,521)</td>
</tr>
<tr>
<td>Balance at December 31</td>
<td>151,288</td>
<td>145,145</td>
</tr>
</tbody>
</table>

Accumulated provisions for impairment on outstanding loan principal included the provisions relating to public and private sector loans. During the year ended December 31, 2014, a net reversal of provision for impairment made on private sector loans amounted to UA 0.37 million (2013: UA 22.32 million). The accumulated provisions on private sector loans at December 31, 2014 amounted to UA 55.39 million (2013: UA 52.49 million). Borrowers may repay loans before their contractual maturity, subject to the terms specified in the loan agreements. The currency composition and types of outstanding loans as at December 31, 2014 and 2013 were as follows:
The weighted average yield on outstanding loans for the year ended December 31, 2014 was 2.86% (2013: 3.00%). The Bank may enter into special irrevocable commitments to pay amounts to borrowers or other parties for goods and services to be financed under loan agreements. At December 31, 2014, outstanding irrevocable reimbursement guarantees issued by the Bank to commercial banks on undisbursed loans amounted to UA 0.63 million (no outstanding irrevocable reimbursement guarantees issued by the bank in 2013). Also, the Bank provides trade finance and repayment guarantees to entities within its Regional Member Countries for development loans granted to such entities by third parties. Guarantees represent potential risk to the Bank if the payments guaranteed for an entity are not made. Guarantees provided by the Bank outstanding at December 31, 2014 amounted to UA 164.11 million (2013: UA 73.78 million).
4.3.3 Investment in the International Market

In accordance with IFRS 9, the Bank manages its financial assets in line with the applicable business model and, accordingly, classifies its financial assets into the following categories: financial assets at amortized cost; financial assets at fair value through profit or loss (FVTPL); and financial assets at fair value through other comprehensive income (FVTOCI). In line with the Bank’s business model, financial assets are held either for the stabilization of income through the management of net interest margin or for liquidity management. The Bank’s investments in the equity of enterprises, whether in the private or public sector is for the promotion of economic development of its member countries and not for trading to realize fair value changes. Management determines the classification of its financial assets at initial recognition.

A financial asset is classified as at “amortized cost” only if the asset meets two criteria: the objective of the Bank’s business model is to hold the asset to collect the contractual cash flows; and the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding. The nature of any derivatives embedded in debt investment are considered in determining whether the cash flows of the investment are solely payment of principal and interest on the principal outstanding and are not accounted for separately.

If either of the two criteria above is not met, the financial asset is classified as at fair value through profit or loss. Financial assets at amortized cost include some loans and receivables on amounts advanced to borrowers and certain debt investments that meet the criteria of financial assets at amortized cost. Receivables comprise demand obligations, accrued income and receivables from loans and investments and other amounts receivable. Loans and receivables meeting the two criteria above are carried at amortized cost using the effective interest method.

Loan origination fees are deferred and recognized over the life of the related loan as an adjustment of yield. However, incremental direct costs associated with originating loans are expensed as incurred; as such amounts are considered insignificant. The amortization of loan origination fee is included in income from loans. Loans that have a conversion option that could potentially change the future cash flows to no longer represent solely
payments of principal and interest are measured at FVTPL as required by IFRS9. The fair value is determined using the expected cash flows model with inputs including interest rates and the borrower’s credit spread estimated based on the Bank’s internal rating methodology for non-sovereign loans.

Debt instruments that do not meet the amortized cost criteria as described above are measured at FVTPL. This category includes all treasury assets held for resale to realize short-term fair value changes as well as certain loans for which either of the criteria for recognition at amortized cost is not met. Gains and losses on these financial assets are reported in the income statement in the period in which they arise. Derivatives are also categorized as financial assets at fair value through profit or loss.

In addition, debt instruments that meet amortized cost criteria can be designated and measured at FVTPL. A debt instrument may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases.

On initial recognition, the Bank can make an irrevocable election (on an instrument-by-instrument basis) to designate investments in equity instruments not held for trading as financial assets measured at Financial Assets at Fair Value through Other Comprehensive Income (FVTOCI). Equity investments are initially measured at fair value plus transaction costs. Subsequently, they are measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income. The cumulative gains or losses are not reclassified to profit or loss on disposal of the investments and no impairments are recognized in the profit or loss. Dividends earned from such investments are recognized in profit and loss unless the dividends clearly represent a repayment of part of the cost of the investment.

Securities purchased under resale agreements, securities lent under securities lending agreements, and securities sold under repurchase agreements are recorded at market rates. The Bank receives securities purchased under resale agreements, monitors the fair value of the securities and, if necessary, closes out transactions and enters into new repriced transactions. The securities transferred to counterparties under the repurchase and security
lending arrangements and the securities transferred to the Bank under the resale agreements do not meet the accounting criteria for treatment as a sale.

Therefore, securities transferred under repurchase agreements and security lending arrangements are retained as assets on the Bank balance sheet, and securities received under resale agreements are not recorded on the Bank’s balance sheet. In cases where the Bank enters into a “reverse repo”—that is, purchases an asset and simultaneously enters into an agreement to resell the same at a fixed price on a future date—a receivable from reverse repurchase agreement is recognized in the statement of financial position and the underlying asset is not recognized in the financial statements.

This category has two sub-categories: financial liabilities held for trading, and those designated at fair value through profit or loss at inception. Derivatives are categorized as held-for-trading. The Bank applies fair value designation primarily to borrowings that have been swapped into floating-rate debt using derivative contracts. In these cases, the designation of the borrowing at fair value through profit or loss is made in order to significantly reduce accounting mismatches that otherwise would have arisen if the borrowings were carried on the balance sheet at amortized cost while the related swaps are carried on the balance sheet at fair value.

In accordance with IFRS 9, fair value changes for financial liabilities that are designated as at fair value through profit or loss, that is attributable to changes in the Bank’s “own credit” risk is recognized in other comprehensive income. Changes in fair value attributable to the Bank’s credit risk are not subsequently reclassified to profit or loss.

All financial liabilities that are not derivatives or designated at fair value through profit or loss are recorded at amortized cost. The amounts include certain borrowings, accrued finance charges on borrowings and other accounts payable. Financial liabilities are derecognized when they are discharged or canceled or when they expire.

The Bank uses derivative instruments in its portfolios for asset/liability management, cost reduction, risk management and hedging purposes. These instruments are mainly cross-currency swaps and interest rate swaps. The derivatives on borrowings are used to modify the interest rate or currency characteristics of the debt the Bank issues. This economic
relationship is established on the date the debt is issued and maintained throughout the terms of the contracts. The interest component of these derivatives is reported as part of borrowing expenses. The Bank classifies all derivatives at fair value, with all changes in fair value recognized in the income statement. When the criteria for the application of the fair value option are met, then the related debt is also carried at fair value with changes in fair value recognized in the income statement.

The Bank assesses its hybrid financial assets (i.e. the combined financial asset host and embedded derivative) in its entirety to determine their classification. A hybrid financial asset is measured at amortized cost if the combined cash flows represent solely principal and interest on the outstanding principal; otherwise it is measured at fair value. As at December 31, 2014, the Bank had hybrid financial assets that were measured at fair value in accordance with IFRS 9.

Derivatives embedded in financial liabilities or other non-financial host contracts are treated as separate derivatives when their risks and characteristics were not closely related to those of the host contract and the host contract was not carried at fair value with unrealized gains or losses reported in profit or loss. Such derivatives are stripped from the host contract and measured at fair value with unrealized gains and losses reported in profit or loss.

The Bank applies fair value hedge accounting to interest rate swaps contracted to hedge the interest rate risk exposure associated with its fixed rate loans. Under fair value hedge accounting, the change in the fair value of the hedging instrument and the change in the fair value of the hedged item attributable to the hedged risk are recognized in the income statement.

At inception of the hedge, the Bank documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking the hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Bank documents whether the hedging instrument is highly effective in offsetting changes in fair values of the hedged item attributable to the hedged risk. Hedge accounting is discontinued when the Bank’s risk management objective for the hedging relationship has changed, when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer qualifies for hedge accounting. The
cumulative fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortized to profit or loss from that date.

The top-notch credit ratings enjoyed by the Bank enables it to issue securities at attractive interest rates. Its borrowing activities are guided by client and cash flow requirements, asset and liability management guidelines, and risk management policies. The 2014 borrowing program in the capital markets was approved on December 4, 2013 for a maximum amount of UA 3,188 million including an envelope of up to UA 130 million under the Enhanced Private Sector Assistance (EPSA) for Africa Facility. On July 7, 2014, the Board approved an increase in the 2014 borrowing program to UA 3,258 million in order to accommodate an increase of UA 70 million on the EPSA envelope. Under both components including the EPSA facility, the Bank raised a total of UA 3,219 million.

Targeted efforts were made to canvass new investors, new currencies and new markets throughout the year. Borrowings in 2014 were in line with the Bank’s funding strategy to maintain a regular presence in the Global benchmark market and strategic domestic markets. Notably, the Bank issued two new USD 1 billion dollar global transactions for 3-years and 7-years, the latter being its first-ever offering at this tenor. It also issued its maiden transactions in Swedish krona through the green bond market, and continued to build its curve in Australian dollars while returning to both the Sterling and New Zealand dollar markets after a long absence. The year also saw the Bank issue its inaugural Naira bond in the domestic market of Nigeria, as well.

The Bank has also been active with various private placements, African currency-linked notes and uridashi transactions in Japan. Euro Commercial Paper borrowings complete the range of markets utilized during the year. As at December 31, 2014, the Bank’s outstanding borrowing portfolio stood at UA 14.38 billion. The borrowing program for 2015 was approved by the Board of Directors for a maximum amount of UA 4,507 million, made up of two components: up to UA 4,302 million to be raised in the capital markets, and an envelope of UA 205 million under the EPSA facility.
As at December 31, 2014 and 2013, the Bank’s borrowings were as follows:

**Figure 4.17: Bank’s Borrowings**

*Source: AfDB Statistics Department (2014)*

The Bank’s borrowings as at December 31, 2014 included subordinated borrowings in the amount of UA 489.33 million (2013: UA 462.20 million). The capital adequacy framework approved by the Board of Directors adopted the use of a single debt to usable capital ratio to monitor the Bank’s leverage. The ratio caps the Bank’s total outstanding debt at 100 percent of usable capital. Usable capital comprises the equity of the Bank and the callable capital of its non-borrowing members rated A- or better. The Bank’s usable capital at December 31, 2014 was UA 27.60 billion. The Bank uses derivatives in its borrowing and liability management activities to take advantage of cost-saving opportunities and to lower its funding costs.

Certain long-term borrowing agreements contain provisions that allow redemption at the option of the holder at specified dates prior to maturity. Such borrowings are reflected in the tables on the maturity structure of borrowings using the put dates, rather than the contractual maturities. Management believes, however, that a portion of such borrowings may remain outstanding beyond their earliest indicated redemption dates.

The Bank has entered into cross-currency swap agreements with major international banks through which proceeds from borrowings are converted into a different currency and include a forward exchange contract providing for the future exchange of the two currencies in order to recover the currency converted. The Bank has also entered into interest rate swaps, which transform a floating rate payment obligation in a particular currency into a fixed rate payment obligation or vice-versa.

A summary of the Bank’s borrowings portfolio at December 31, 2014 and 2013 was as follows:

<table>
<thead>
<tr>
<th>Borrowings at fair value</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13,481.63</td>
<td>12,127.91</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Borrowings at amortized cost</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>994.32</td>
<td>819.53</td>
</tr>
</tbody>
</table>

| Total                 | 14,375.95 | 12,947.44 |

72
Figure 4.18: Bank’s borrowings portfolio at December 31, 2014 and 2013

Source: AfDB Statistics Department (2014)
The contractual (except for callable borrowings) maturity structure of outstanding borrowings as at December 31, 2014 was as follows:

<table>
<thead>
<tr>
<th>Periods</th>
<th>Ordinary</th>
<th>Callable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>One year or less</td>
<td>699.51</td>
<td>261.33</td>
<td>960.84</td>
</tr>
<tr>
<td>More than one year but less than two years</td>
<td>3,238.80</td>
<td>-</td>
<td>3,238.80</td>
</tr>
<tr>
<td>More than two years but less than three years</td>
<td>2,288.89</td>
<td>-</td>
<td>2,288.89</td>
</tr>
<tr>
<td>More than three years but less than four years</td>
<td>2,563.28</td>
<td>-</td>
<td>2,563.28</td>
</tr>
<tr>
<td>More than four years but less than five years</td>
<td>750.79</td>
<td>1.26</td>
<td>752.05</td>
</tr>
<tr>
<td>More than five years</td>
<td>3,641.32</td>
<td>16.65</td>
<td>3,657.97</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13,182.39</td>
<td>290.24</td>
<td>13,472.63</td>
</tr>
</tbody>
</table>

*Source: AfDB Statistics Department (2014)*
The fair value of borrowings carried at fair value through profit or loss at December 31, 2014 was UA 13,481.63 million (2013: UA 12,127.91 million). For these borrowings, the amount the Bank will be contractually required to pay at maturity at December 31, 2014 was UA 13,452.87 million (2013: UA 12,499.58 million). The surrender value of callable borrowings is equivalent to the notional amount plus accrued finance charges. There was a net loss of UA 36.73 million on fair-valued borrowings and related derivatives for the year ended December 31, 2014 (2013: net gain of UA 46.82 million). The fair value loss attributable to changes in the Bank’s credit risk included in the other comprehensive income for the year ended December 31, 2014 was UA 32.14 million (2013: gain of UA 46.08 million).

Fair value changes attributable to changes in the Bank’s credit risk are determined by comparing the discounted cash flows for the borrowings designated at fair value through profit or loss using the Bank’s credit spread on the relevant liquid markets for ADB quoted bonds versus LIBOR both at the beginning and end of the relevant period. The Bank’s credit spread was not applied for fair value changes on callable borrowings with less than 1-year call date. For borrowings designated at fair value through profit or loss at December 31, 2014, the cumulative unrealized fair value losses to date were UA 828.27 million (2013: losses of UA 611.04 million).

The Bank is committed to supporting climate-smart and low carbon investments that produce visible and sustainable outcomes on the continent. It is in this context that the Bank launched its green bond program in 2013, targeting socially responsible investors.
(SRI) across the globe who wanted to make a difference with their investments by helping to finance climate change solutions in Africa. In February 2014, the Bank executed a SEK 1 billion five-year floating-rate green bond benchmark, fully-placed with a Swedish life insurance and asset management company. The transaction was the Bank’s inaugural issue in the SEK market and the second green bond to be issued off its green bond program. The success and positive momentum of the initial offering led to a follow-on transaction in March 2014, with the Bank executing a second five-year SEK 1 billion (UA 100 million) fixed-rate green bond. Swedish domestic demand accounted for 65 percent of the investors in the transaction.

Proceeds of the Bank’s green bonds support the financing of low carbon and climate resilient projects. The total amount of ADB green bonds outstanding at the end of 2014 (including past private placement/uridashi issuance) stands at USD 864 million (UA 577 million). Full details of the Bank’s eligible projects benefiting from green bond proceeds can be found on its green bond website and annual newsletter.

4.4 How is AfDB able to tackle its risk management issues in its investment portfolio?

The Bank’s development operations are undertaken within a risk management framework which includes: a clearly defined risk appetite statement for lending credit risk, a capital adequacy and exposure management policy; credit policy; risk management governance framework; credit risk management guidelines; and an end-to-end credit process. The Bank seeks to minimize its exposure to risks that are not essential to its core business of providing development finance and related assistance. Accordingly, the Bank’s risk management policies, guidelines and practices are designed to reduce exposure to interest rate, currency, liquidity, counterparty, legal and other operational risks, while maximizing the Bank’s capacity to assume credit risks to public and private sector clients, within approved risk limits.

Over the past few years the Bank has considerably enhanced its risk management framework and end-to-end credit processes to ensure that its risk management functions remain robust. Some of the specific measures taken have included: creation of the office of Group Chief Risk Officer, reporting directly to the President of the Bank;
strengthening of the Credit Risk Committee; enhancement of the credit risk assessment skills of Bank staff through training and hiring of experienced and competent credit officers; implementation of robust and optimized credit risk assessment models; strengthening of the credit risk infrastructure by improving quality at entry; continuous efforts to fully implement the operational risk management framework which was recently approved by the Board; and implementation of best of breed solutions in the form of an integrated and workflow driven software platform that allows all stakeholders involved in the credit risk assessment process to streamline their work in order to enhance efficiency. The Bank has, additionally, strengthened the monitoring of the current portfolio and continued to proactively undertake portfolio restructuring measures including cancellation of long-standing “signed but not disbursed” loans to free up capital for new lending.

4.4.1 Portfolio Dynamics and Risk Profile

The growth and risk profile of the sovereign and non-sovereign portfolio is impacted by key drivers such as the number of approvals and type of instruments, portion of loans within the grace period, rating migrations, and the number of unsigned and undisbursed projects. Figure 4.22 shows portfolio approvals for the last 5 years. As of 3Q-2013, approvals were UA 1,386 million, with the estimated approvals for the year at UA 2,711 million12, in line with the slowdown registered in 2012 and the declining trend following the record of volume of approvals of UA 5.3 billion in 2009.

<table>
<thead>
<tr>
<th>Key Drivers</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>3Q-2013</th>
<th>Estimated 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approvals (UA million)</td>
<td>1,665</td>
<td>5,309</td>
<td>2,426</td>
<td>2,500</td>
<td>1,935</td>
<td>1,386</td>
<td>2,711</td>
</tr>
<tr>
<td>Share of Private Sector</td>
<td>54%</td>
<td>22%</td>
<td>50%</td>
<td>35%</td>
<td>39%</td>
<td>59%</td>
<td>63%</td>
</tr>
<tr>
<td>Share of PBL</td>
<td>8%</td>
<td>29%</td>
<td>5%</td>
<td>23%</td>
<td>5%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Disbursements</td>
<td>729</td>
<td>2,352</td>
<td>1,340</td>
<td>1,889</td>
<td>2,208</td>
<td>942</td>
<td>1,432</td>
</tr>
</tbody>
</table>

**Figure 4.22: Portfolio Approvals for the Last 5 Years**

*Source: AfDB Statistics Department (2014)*
Over the past five years, new approvals reached on average 64% of estimated Indicative Operational Program (IOP) except in 2009 when demand for countercyclical lending from non-traditional borrowers picked-up sharply as a result of the global financial crisis. For 2013, public sector lending is expected to grow at a marginal level of above 3% compared to the preceding two years. However, to partially offset the constraint the Bank face in North Africa, efforts to attract the demand of non-traditional borrowers have resulted in the approvals in 2013 of projects in other RMCs such as Namibia and Nigeria. For the private sector portfolio, as articulated in the 2008 PSO strategy and business plan, growth has leveled off to a sustainable lower pace around 5% compared to the exponential after several years of rapid growth in previous years. For 2013, the non-sovereign portfolio, comprising loans and equity, is expected to remain stable at 26% of the total asset book, relative to 27% in 2012.

The pace of disbursements is expected to decrease in 2013 compared to last year partially due to the slow-down in new approvals from public sector and despite efforts on the private sector to accelerate disbursements. Moreover although the room for cancellations or restructuring for the sovereign portfolio have been more stable with a volume of cancellations of UA 1,099 million during the last three years, private sector loan cancellations for private sector over the last three years have accounted for UA 835 million or 12% of total approvals and can largely be traced to the effects of the global financial crisis and specific national political events.

In terms of financing requests, Policy Based Loans (PBL) and Project Loans (PL) remain the instruments of choice for public sector borrowers while Lines of Credit (LOCs) together with the recently approved Trade Finance Program are favored in the private sector. Exposure to Low Income Countries (LICs) has only shown a moderate growth of the total Bank’s portfolio from 12% in 2012 to 13% as of September 2013. This trend is expected to continue in the coming years as the Bank’s non-sovereign operations reaches country risk limits.

Figure 4.23 shows the repayment schedule of public and private outstanding loans for the next years. In general, repayment from both budget support lending and public sector Project will remain slightly above those from the private sector and gradually increasing with a peak of UA 841 million repayments in 2019.
However, it is important to note that since 59% of the private sector loans (projects and LOCs) will enter the principal repayment period by the end of 2013 (73% is expected for 2014), total repayments from private sector lending will represent on average 44% of the total repayments to the Bank for the next years. Portfolio quality is measured through a set of indicators such as the weighted average risk rating (WARR), portfolio risk class profile, concentration matrix, and analysis of migrations and workouts.

Despite multiple downgrades of Egypt and Tunisia, the Bank’s overall portfolio quality remains sound with a WARR of 2.97 as of September 2013, below the target range of 3-
As presented in figure 4.24, more than three quarters of the Bank’s outstanding sovereign portfolio is in the Low and Very Low risk class despite the recent downgrades of Egypt and Tunisia which still remain in the Low Risk category. The share of High and Very High risk in the sovereign portfolio consists of legacy loans granted before the adoption of the current credit policy when all RMCs were eligible to borrow from the ADB window. However, this exposure is gradually decreasing as these old loans amortize.

For the private sector portfolio, the increase in the portion of High risk to Very High Risk comprises a few projects currently experiencing difficulties (notably Ambatovy, Enfidha, Rascom, Helios Towers, Lekki Toll Road, Dakar Airport) adequately provisioned for those required. Although these projects are adequately provisioned for, they are currently subject to special monitoring and active management to ensure successful turnaround. The Equity investment portfolio has grown significantly since 2006 both in terms of annual approval and outstanding volumes. As shown in Figure 4.26: net outstanding balance stood at UA 365 million in June 2013 compared to only UA 74 million in 2006 mostly driven by private equity funds which now represent more than 70% of the portfolio from only 29% in 2006. However, although direct participations (all into financial institutions) have fallen as share of the portfolio, in outstanding amount have doubled since 2006.
The overall WARR of the equity portfolio improved to 4.37 in June 2013 compared to 4.49 last year. As shown in figure 4.27 below, the portfolio is concentrated in the Moderate Risk Class although the High and Very High Risk categories have increased over the last 3 years representing 30.5% of the overall portfolio as opposed to 28% in 2012 and 19% in 2010. This reflects the large share of first time funds in recent approvals but also the increasing capital returns made by some of the better rated funds.

The aggregate cumulative return (It is calculated as the Net Asset Value (NAV) plus dividends and capital repatriations received divided by the amount of disbursed capital per June 2016 expressed as a percentage) for the equity portfolio stands at +28% as shown in figure 4.28 which provides the break-down by type of investments (funds and direct). This represents an improvement from 2012 due in part to a significant increase of DFI’s valuations. It is important to note that a large part of these returns are yet unrealized with the Net Asset Value (NAV) representing 81% of the total value of the
portfolio. However the Bank has already received through distributions 25% of disbursed amounts, mostly from private equity funds. Although being mostly driven by two infrastructure funds approved in 1996 and 2000, several funds are starting to make distributions as they come out of their investment period. This will have a positive impact on the cash returns of the portfolio in the near terms.

Figure 4.28: Break-Down by Type of Investments (Funds and Direct)

Source: AfDB Statistics Department (2014)

4.4.2 Portfolio Management and Risk Monitoring

Credit risk in the portfolio is managed through compliance monitoring and portfolio management. These functions are outlined in the Bank’s Exposure Management Framework, which ensures that clearly defined prudential and operational limits are monitored for better alignment with the Bank’s evolving business strategy, risk appetite and risk bearing capacity. The limits allow for monitoring of credit policy compliance, including portfolio concentration. Ongoing monitoring and reporting of compliance with these limits is carried out periodically. As part of the institutional risk oversight function, this is presented to the Board through the semi-annual capital adequacy and exposure management reports.

Over the past few years focus on these areas has considerably improved the risk management framework and resulted in an end to end credit process with the establishment of a Credit Risk Committee in 201218. Credit management approaches, methodologies and practices continue to evolve in line with best practices and in order to address emerging risks and challenges and ensure the most efficient use of the Bank’s risk capital. Going forward the Bank needs to increase its efforts to the management of
problematic projects in the private sector portfolio, which calls for specialists from different departments (operations, legal and risk).

In the risk appetite statement of the Bank, 90% of the risk capital is allocated to core risks (DRE Portfolio in the proportion of 45% for sovereign and 45% for non-sovereign) and 10% to other risks (market risk and operational). As at end September 2013, DRE used 52% of the total risk capital of the Bank of which 24.2% and 27.6% were used by the sovereign and non-sovereign portfolios respectively against their target allocations of 45% each. These figures confirm that overall there is sufficient headroom available to sustain lending growth and absorb adverse rating migrations.

Limited headroom for Equity Investments and the breach of the limit for High Risk loans is further illustrated in figure 4.29. The High Risk Limit consumption has grown significantly over the past year from 7.5% to 10.7%, largely due to adverse rating actions on Ambatovy, which consumes about 2.5% of Non-Sovereign Risk Capital and to a lesser extent due to the signing of newly approved projects in the High Risk category (Ciprel and Sonibank). Growth in the equity portfolio on the other hand remained well controlled and in line with the increase in the Bank’s risk capital base.

Figure 4.29: Limited headroom for Equity Investments and the breach of the limit for High Risk loans

Source: AfDB Statistics Department (2014)

The evolution of the High Risk limit calls for a road map that ensures the sustainable business volumes, i.e. avoiding limit breaches. In particular, models to calculate
sustainable business volumes are required for equity, loans above cut-off and high growth areas such as exposure to the Financial Service sector. In this regard, measures for managing the High Risk limit include the use of innovative instruments such as the Private Sector Facility (PSF), and the sale of tranches of High Risk exposures when possible.

Rating migrations may change the exposures in the High Risk category, therefore, careful selection, project readiness, structuring and good collateralization of High Risk transactions is needed and can lead to lower risk charges and ultimately leverage the limited headroom. Furthermore, it is important that the projects in the High Risk pipeline are prioritized based on credit and development outcome metrics in view of the headroom limitations. Priority should be given to projects with good credit fundamentals from countries with high risk ratings, as opposed to projects with weak fundamentals from countries with low to moderate risk ratings.

4.4.3 Portfolio Threats and Stress Tests

The financial services portfolio accounts for a large portion of the Bank’s non-sovereign portfolio. At the end of June 2013, it accounted for 37.1% of the total non-sovereign portfolio (outstanding and undisbursed) and is expected to continue growing in the near future. In order to test the Bank’s vulnerability to a deterioration of the credit quality of its financial services portfolio, the following stress tests were conducted: (C) a downgrade by one notch of the financial services counterparts in the Bank’s portfolio; and (D) a downgrade by three notches of all of the financial services counterparts in the Bank’s portfolio. These two scenarios are derived from the likelihood of deterioration in the global economic environment with corollary implications on the continent and on the financial services sector specifically given its ties with the real economy. The results of this stress test are summarized in the table below.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>RCUR</th>
<th>RAC before adjustments</th>
<th>RAC after adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>59.6%</td>
<td>25.9%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Scenario C</td>
<td>63.9%</td>
<td>25.6%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Scenario D</td>
<td>65.9%</td>
<td>24.7%</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

Figure 4.29: Impact of the downgrade of financial sector on the banks RCUR and RAC

Source: AfDB Statistics Department (2014)
This figure shows that the Bank has the capacity to withstand the stressed shock of a downgrade by three notches of exposures in the financial services sector. Under such scenario, RCUR increases to 65.9% while the RAC ratio drops to around 14.3%. Such level is expected to result in the downgrade of the Bank’s SACP to “AA” while its final rating may be affirmed at triple-A. Given this vulnerability, the Bank should prioritize lines of credit to only the most creditworthy institutions with reach within the LIC and FS. Such strategy will help the Bank to achieve the double objective of increasing the financing of LIC and FS economies while maintaining the risks under control.

4.4.4 Risk Mitigation Initiatives

Although as a supranational institution, the Bank is not regulated, one of the key pillars to maintain the sound financial profile of the Bank is the compliance and enhancement of its own risk management framework, governance and risk infrastructure. Over the last year, the Bank has embarked on several initiatives directed at minimizing or mitigating the risk inherent in the lending portfolio.

At the core of risk management is the proactive identification, measurement, monitoring and management of risks to ensure that Bank meets its business objectives. To assist in credit risk evaluation and provide a level of consistency across the portfolio for risk measurement, credit risk rating models are used. The Bank has thus far managed its capital adequacy framework on the basis of an adjusted regulatory capital approach primarily based on Basle II principles, which is a formula based approach. However, Management will shortly seek Board approval for the implementation of an Economic Capital Framework.

The Economic Capital approach is a simulation based approach and generally reflects more adequately the specific business environment in which institutions operate, while regulatory capital is based on general rules imposed by regulators. When compared to a regulatory capital framework, there are several advantages to the implementation of an Economic capital framework which include the followings: improve the management of correlation and concentration risk and ensure the coverage of a wider risk scope specific to the institution.
The most significant impact of the Economic Capital is the need to appropriate more capital to account for the correlation risk in the sovereign portfolio. The Board through its oversight role is responsible for the effective management of risks faced by the Bank. In making its credit decisions, the Board is supported by the Operations Committee (OpsCom) and a dedicated Credit Risk Committee (CRC) responsible for overseeing compliance with credit risk policies and guidelines. In line with the Presidential Directive approved on May 22 2012, the CRC must provide its written recommendations to OpsCom on whether each proposal should be further processed. More recently, the function of a Chief Risk Officer for the Bank has been created with the goal of providing an overall perspective of all risks the Bank faces.

In order to alleviate the Bank’s financial constraints and preserve its triple-A rating, Management is in the process of redefining the Bank’s credit policy and identifying/implementing few innovative financing instruments such as the Private Sector Facility and the MDBs asset swaps/cross guarantees. Some of the portfolio risk management initiatives are:

**4.4.4.1 Amendment of the Bank’s Credit Policy**

As previously mentioned, the available lending headroom for some North African countries has dropped significantly resulting in lower approvals for the Bank’s public sector portfolio. Until recently, lending for these countries accounted for a major portion (56.1% on average over the past ten years) of the Bank’s approved loans. Nontraditional borrowers, particularly Southern and Western African countries might become active thanks to the strong efforts deployed by the regional operational departments to revive the Bank’s lending relationship with this cluster of countries.

Nonetheless, the Bank has embarked on amending its credit policy, subject to Board approval, to permit ADB lending to all countries, subject to a set of clearly defined criteria. If approved, this will further increase the number of eligible countries for public sector ADB window. The proposal is in line with the Ten Year Strategy (TYS) in these rapidly growing countries where the needs for infrastructure investments and economic transformation remain substantial. This amendment could help the Bank reach the triple
objective of: increasing its business volume in these underrepresented countries; diversify its risks away of the North African region; and preserve its financial strength.

4.4.4.2 MDBs exposure swaps and bilateral guarantees agreement for sovereign portfolio

The Bank has reached a point where additional intervention in concentrated countries could pose serious risks to the maintaining of its “AA+” SACP and triple-A final rating. In order to alleviate headroom constraints and ensure the relevance of the Bank to its most active and valuable customers, exposure swaps with other Multilateral or bilateral agencies have been identified as possible solutions. The Bank is engaged in early stage discussions with a number of multilaterals regarding such instruments which, once implemented, could create additional lending headroom for concentrated countries. At the same time, other possibilities currently being explored include obtaining guarantees from countries on a bilateral basis for specific exposures.

4.4.4.3 Business Development Review

Management is finalizing a review of several initiatives to adopt the Bank’s enhanced business model with the purpose to make it more agile and responsive in meeting the needs of its clients, both in the public and private sectors. Some of the goals identified include the need to increasingly seek new sources of financing and use scarce development resources to leverage and crowd in private finance; the need to redesign and streamline its processes and eliminate any cost penalty to its clients. Under the new business development initiative, the Bank intend to diversify its portfolio, both geographically and in terms of products and target a growing number of underserved and untapped market opportunities in public and private sector, including in Public Private Partnerships (PPPs).

4.4.4.4 Private Sector Facility

With the aim of supporting the Bank in expanding its activities in Low Income Countries and Fragile States while maintaining risks, ADF deputies approved the creation of the Private Sector Facility (PSF). PSF’s main objective would be to provide ADB with credit enhancement mechanisms to reduce the risks attached to private sector transactions in LICs and FS thereby allowing for higher intervention through leverage maximization. ADF deputies approved an initial seed contribution of UA165 million (USD250 million). The structuring of the PSF and the assessment of its implications for ADB’s activities and
triple-A rating are still work in progress. Preliminary indications from rating agencies, however, show a neutral impact on the Bank’s rating.

4.4.4.5 External Credit Enhancement through Insurance
Innovative instruments are currently being explored such as Risk Participation Agreements, Credit Risk Insurance and Secondary Sales. Key benefits from these products include the expansion of the investor base in project finance by crowding in new investors such as insurance companies, new DFIs, sovereign wealth funds, pension funds, and other institutional investors. Also, these instruments transfer a portion of the risk capital used by some transactions to counterparties with a better rating hence freeing up some capital. These proposed innovative financing instruments complement the Banks existing syndication instruments such as co-financing, parallel funding and A/B Loan structures.

4.4.4.6 Active Portfolio Management for Special Operations through a Workout Unit
With the growth of the portfolio and as the portfolio starts to mature, there are an increasing number of projects that experience teething problems that require active management as opposed to passive monitoring. This may necessitate the creation of a specialized work out unit that engages actively with the other stakeholders in these projects and is dedicated to bring the operations on the right track. In addition, the Bank can leverage its experience as an honest broker. Recent experience in financing Public Private Partnerships has shown that the Bank is well positioned to act as a mediator and facilitate discussions between sponsors, banks and the respective governments (i.e. Enfidah, Aeroport International Blaise Diagne) in search for constructive solutions.

4.5 How is AfDB able to execute its investment portfolio decisions successfully?

The execution of investment portfolio decisions by AfDB in terms of securities research, portfolio management, risk management and securities trading have been analyzed in the previous sections. Here, we will discuss how AfDB manages its investment portfolios in some of the selected East African countries for this research work.
4.5.1 Ethiopia

Ethiopia officially joined the AfDB on Sept. 10, 1964. Since then, the Bank has emerged as one of the most important partners of the Ethiopian Government. In the spirit of true partnership, the African Development Bank has continued to design country strategy papers which are in line with the current trends and prospects in Ethiopia. Accordingly, the Bank has in recent times shifted its focus of support in Ethiopia toward fewer but larger projects that have higher development impacts, in line with the Country Strategy Paper’s (CSP) principle of strategic selectivity.

The average project size currently stands at UA81 million, which is more than twice the Bank’s average of UA30 million. Ethiopia’s economy has enjoyed robust growth over the last 10 years, driven primarily by high public investment in infrastructure, commercialization of agriculture and expansion of non-traditional exports. The real GDP growth rate averaged 11% over the past nine years. In 2013, GDP growth was 9.7%. Growth prospects are positive, with 11.4% projected for 2014/15. Inflation peaked at 34% in 2012 but has declined since then, to 13.5% in 2013 and being projected at 7.9% in 2014. The contributions of the services and industrial sectors to GDP have increased while the share of agriculture has been declining steadily.

Ethiopia is a beneficiary of debt relief granted under both HPIC and MDRI initiatives. The AfDB approved a cancellation of $55.7m under HIPC and 100% cancellation of MDRI debt in April 2006. Since 1975, the AfDB has developed a diverse portfolio in Ethiopia, approving 119 loans and grants. These were distributed across its three windows: the non-concessional AfDB window allocated about $800m (19.6%), the concessional ADF window allocated $2bn (79.9%) and the Nigeria Trust Fund allocated $16m (0.4%). Cumulatively, operations financed by the AfDB have covered multi-sector operations (26.3%), transport (21.1%), power supply (20.6%), agriculture and rural development (15.8%), social sector (5.1%), water and sanitation (4.7%), industry and mining (3.3%) and communications and the financial sector (3.1%).

Lately, especially after 2011, the AfDB has been shifting toward the support of fewer but larger projects with higher development impact, in line with the Country Strategy Paper’s principle of selectivity. The thrust of the AfDB’s CSP for Ethiopia 2011-2015 is to create an enabling environment for broad-based growth and economic transformation. It is
focused on two pillars: infrastructure development and governance and accountability. Under the CSP, the AfDB has approved six major operations, most of which have regional impact. One was in the energy sector (Ethiopia-Kenya Electricity Highway Project), three were in the transport sector (Bedele-Metu Road, Modjo-Hawassa Road Project and Mombasa-Nairobi-Addis Ababa Road Phase III), one was a special programme in the agricultural sector (Drought Resilience and Sustainable Livelihoods Program), and one supported good governance and decentralized provision of basic services (Promotion of Basic Services III Program).

Under the private sector window, the Bank has approved funding for Ethiopian Airlines and Derba cement, and is considering several investment proposals in the mining, industrial and agriculture sectors. There are 15 ongoing projects in the AfDB’s portfolio for Ethiopia: 13 in the public sector and 2 in the private sector, for a total commitment amount of $1.65bn. The performance and overall quality of the AfDB’s portfolio has seen steady improvement with performance rating improving from 2.15 in 2008 to 2.72 in 2013 (on a scale of 0 to 3).

The AfDB recognizes that inadequate infrastructure is a major constraint to growth and poverty reduction in Ethiopia. Henceforth, it has committed to improve the quality of infrastructure services, especially in the transport and energy sectors. Specifically, it continues to focus on the development of major road corridors, particularly trunk roads linking areas of high agricultural potential to markets and trade, including regional corridors. The purpose is to improve interconnectivity and help diversify the country’s access routes to seaports. The AfDB’s lending activities are being complemented by its technical assistance and advisory services to enhance transport and trade facilitation, including harmonization of customs procedures and transit management systems.

The total road network has increased from 56,190km in 2011/12 to 58,338km in 2012/13. The AfDB has committed to support Ethiopia’s efforts to harness its vast renewable energy resources through construction of grid expansion. For example, the AfDB recently financed the power transmission lines for Ethiopia-Djibouti Inter-Connection Project, the Ethiopia-Kenya network and the expansion of the power distribution network under the Universal Electrification Access Programme. The AfDB-supported Rural Water Supply
and Sanitation Program has constructed 4,203 water supply schemes; enabled an estimated 1.6m people access to safe water supply and sanitation facilities, and reduced the burden of fetching water in the rural communities.

The AfDB is a member of the Development Assistance Group (DAG) in Ethiopia that comprises about 26 multilateral and bilateral partners. The DAG serves as the central body that coordinates the activities of DPs. From 2011 to 2013, the AfDB was the co-chair of the DAG, a rotational position among the leading members. The AfDB also participates actively in many of the DP Sector Working Groups (SWG) and the government, including, transport, energy, agriculture, water and sanitation, education, social protection, public financial management and private sector development. The AfDB is a member of the Aid Effectiveness Task Force jointly constituted by the government and DPs. The AfDB has increased its use of country systems and does not use parallel project implementation units in Ethiopia.

4.5.2 Kenya

Kenya’s economy is predominantly service-based, with a relatively small industrial sector. In 2012, agriculture contributed about 28% of real GDP, the industrial sector about 16% (of which manufacturing contributed about 9.5%) and services, 63%. GDP grew by an annual average of around 5.0% in recent years, with agriculture growing by 2.3% and the industrial and services sectors by 4.0% and 5.0%, respectively. The short-term outlook is positive, with projected GDP growth of around 6% over the next two years, driven mainly by higher private investment and increased exports. Services, especially, finance, ICT and construction, are expected to be the key drivers of GDP growth. The discovery of oil, gas and coal in 2012 might have the potential to boost Kenya’s overall socioeconomic development, but exact deposit quantities as well as fiscal and economic impacts are yet to be fully established.

Kenya is not considered by the AfDB as a fragile state. However, Kenya faces some dimensions of fragility, mainly political and socioeconomic. The violent conflict following the 2007 elections presented a real risk to political stability. What began as a reaction to the contested election quickly degenerated into a violent conflict among ethnic groups. The magnitude of the violence surprised nearly all observers, system and the
broad perception that some groups were not receiving exposing longstanding discontent with Kenya’s ‘winner-takes-all’ a fair share of the country’s resources. In the political sphere, the root causes of fragility include politicization of ethnicity, poor adherence to the rule of law, reliance on centralized forms of governance, inequitable development and perceived corruption. Social causes of conflict have emerged from generations of political and economic disenfranchisement. The new constitution was designed to address these issues, proposing new systems and institutions in an effort to establish social and economic justice and achieve sustainable peace.

Another dimension of fragility in Kenya is conflict in neighbouring countries, particularly Somalia. The Somali extremist group Al-Shabaab has made incursions into Kenya, most recently the Westgate Shopping Mall attack of September 2013. In this regard, countries within the EAC have resolved to find a collective solution to insecurity in the region. Since 1967, when the AfDB commenced its support to Kenya, the cumulative loans and grants approvals to Kenya amount to UA1.55bn ($2.36bn). The largest share of the support has been allocated to infrastructure (68%), comprising transport (24.8%); power (23.3%); and water supply and sanitation (19.9%). The remaining sectoral distribution is as follows: agriculture (10.8%); social sector (10.3%); multi-sector (4.5%); industry/mining/quarrying (3.2%); finance (2.4%); and environment (0.9%). The AfDB has a longstanding experience in the infrastructure sector in Kenya and has made a significant contribution to its development. Among DPs, the AfDB is one of the main players in the infrastructure sector in Kenya.

The AfDB’s ongoing national portfolio in Kenya, as of end-December 2013, consists of 28 operations with a total commitment of UA778.8m ($1.18bn). The largest share is allocated to infrastructure (85.7%), comprising power (43.5%); water supply and sanitation (27.7%); and transport (14.5%). Social sector is allocated 9.0%, and agriculture 5.3%.

The overarching objective of the AfDB’s Country Strategy Paper (CSP) 2014-2018 for Kenya is job creation, particularly for the youth, The CSP is articulated around two complementary pillars: enhancing physical infrastructure to unleash inclusive growth and developing skills for the emerging labour markets of a transforming economy. The main objective of the strategy under pillar I is to create job opportunities by establishing a more
conducive environment for the private sector through investments in physical infrastructure; while that under pillar II is to help develop skills of the Kenyan workforce, notably the youth, to improve employability and build capacities to start businesses. AfDB investments in Kenya have generated important development impacts in recent years. For example, the Small-Scale Horticulture Development Project has habilitated 7 out of 9 irrigation schemes with 1,463 hectares (out of 2,886 planned) under irrigation. This has resulted in an improvement in household incomes by up to Ksh 28,000 ($325) per month. The Community Empowerment Project contributed to the implementation of the devolution process by supporting the training of 102 county officers to improve their competencies in public planning for county governments.

The Menengai Geothermal Development Project supported the drilling of 18 wells. Steam from eight wells was also tested and discharged with a capacity of 70 megawatts. Six kilometres of main trunk sewers were completed under the Nairobi River Basin Rehabilitation Project, with an additional 1,000 people benefiting from improved sewerage treatment facility in Nairobi. The Green Zone Development Support Project has empowered community households, especially women, through the promotion of income generating activities. It supports a total of 17,000 households, of which at least 6,800 (40%) are women, through mini-irrigation, provision of high-value fruit trees and medicinal plants and apiculture. Through the Water Services Boards Support Project, a total of 80,000 people in the rural areas of the project are benefitting from improved access to water and sanitation; 175,000 people are benefitting from improved water supply in Muranga North and South districts while water and sanitation levels have improved for 48,000 people in Kibera.

Through the EARC, the AfDB participates at all levels of aid coordination. It chairs the DPs Working Group on Education and co-chaired the Aid Effectiveness Group with the National Treasury. The AfDB is the main DP partner intervening in higher education and skills development (TIVET) and has a strong comparative advantage based on its experience in Kenya. The EARC also participates in several sector working groups including those on roads, water and sanitation, energy, and PFM; and hosts the recently established the Information Centre of Extractives Sector which has the potential to be scaled up to a regional level. The EARC is working with government and other stakeholders to carry out analytical and sector work on the state of the private sector,
regional integration, PFM, devolution, the extractive industry, green growth, inclusive growth and the state of infrastructure in Kenya, to produce timely, relevant Knowledge Products to inform policy. The AfDB launched its knowledge product on “The State of Kenya’s Private Sector” in 2013.

4.5.3 Rwanda

Economic performance in recent years has remained strong in spite of external shocks. Real GDP growth increased from 7.2% in 2010 to 7.5% in 2011 before declining slightly to 7.3% in 2012, reflecting the beginning of the negative impact on growth of the suspension of budget support amounting to 1.2% of GDP. Growth continued to decline to an estimated 4.6% in 2013, when the impact of the aid cuts further unfolded. Growth during 2011-13 was largely driven by services and industry, which grew at an average of 7% and 12% respectively. Growth in agriculture was moderate at 3% with performance being adversely affected by fluctuations in commodity prices and weather conditions. The medium term growth outlook remains favourable. GDP growth is projected to benefit from increased capital spending to finance the GoR’s strategic investments; increased agricultural productivity due to scaled-up public and private investments in the sector; as well as sustained growth in industry and in the service sector.

Since the commencement of the AfDB’s support to Rwanda in 1974, it has approved loans and grants amounting to a total commitment of UA1.5bn ($2.28bn) as of December 2013. The largest share of this support has been allocated to infrastructure (31.7%), with agriculture (24.9%), multi-sector (21.1%) and social sector (17.1%) following. Support to finance, industry, communications and the environment jointly accounted for 5.2% of the cumulative commitments during this period. Hence, the AfDB has made a significant contribution to the development of Rwanda’s infrastructure, rural development and enhanced food security, as well as structural reforms. The overarching objective of the AfDB’s Country Strategy Paper (CSP) 2012-16 for Rwanda is to promote economic competitiveness for accelerated poverty reduction and inclusive growth. The CSP has been articulated around two complementary pillars: infrastructure development and enterprise and institutional development.
Interventions in infrastructure are designed to address the country’s energy and transport bottlenecks while support under pillar 2 is aimed at bolstering local entrepreneurship for job creation. The AfDB’s ongoing portfolio in Rwanda at end-2013 consisted of 24 operations, including 10 public sector projects, nine multinational projects and five private sector operations. These operations have a total commitment value of UA365.61m. Infrastructure represents the largest share of the ongoing portfolio (62.4%) with nine projects distributed across three sectors including energy (23%), transport (31%) and water/sanitation (8.4%). Agriculture (14%), private sector (11%), multi-sector (8.6%) and human development (4%) are the other sectors being supported by the AfDB. Its portfolio in Rwanda is profit led in the Annex.

The AfDB’s investments in Rwanda have generated important development results in recent years. For instance, the Rural Water and Sanitation project has funded the construction of eight water supply systems spanning 248km in seven districts, enabling 467,320 people to benefit from new or improved access to water. The average distance travelled to collect water has consequently fallen from 2km to 500m, in turn reducing the average travel time to the nearest water point from 1 hour to less than 10 minutes.

Human development support has provided full scholarships in science and technology to 190 female students across three national universities for the 2013 academic year, contributing to a 98% retention rate for female students in science and technology in the three beneficiary universities. The Competitiveness and Enterprise Development Project supported the creation of 1,103 new jobs and about 300 SMEs were coached and mentored, of which 221 have obtained credit guarantees from the Business Development Fund. The credit guarantees enabled 118 SMEs to access funding from commercial banks, 58 of which are female-owned businesses.

The Bugesera Agricultural Development Project funded the rehabilitation of 400ha of marshland, all of which is now under rice production. Upgrading of 50km along the Nyamitanga-Ruhwa-Ntendezi-Mwityazo multinational road has increased all-weather road accessibility, reducing vehicle operating costs and doubling the average monthly household incomes in the project region. Rehabilitation of 31.24km along the Butare-Kitabi-Ntendezi road reduced travel time by almost a third and vehicle operation costs by 25%. The AfDB has established itself as a key DP with leadership roles in the transport,
energy, and private sector development. In 2012 the government asked the AfDB to undertake production of three knowledge products in energy, transport, and SME financing through the capital markets to help inform the respective sector strategies under EDPRS-2. The AfDB continues to play a lead role in aid coordination and harmonization. It co-chaired the Budget Support Harmonization Group numerous times and also co-chaired the water and sanitation Sector Working Group (SWG) from 2011 to 2013. In line with the revised division of labour among DPs, the AfDB was designated co-chair for the transport and private sector development and youth employment SWGs in September 2013.

4.6 Chapter Summary

AfDB gets its sources of funds through the three windows: the ADB non-concessional window, the ADF concessional window, and the NTF window. The sources of funds for the above three windows are similar: namely subscriptions, reflows from loans and investments in the international market under various conditions and amounts. The chapter presents detailed data on how AfDB is able to successfully allocate these assets to its investment portfolio goals. The chapter further illustrates how AfDB is tackling risk management issues by explaining its portfolio dynamics in relevance to the risk profile, its portfolio management and risk monitoring, its portfolio threats and stress tests, as well as its risk mitigation initiatives.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The title of this research work is the enhancement of the management of investment portfolios in the East African region. It comprises five chapters. The first chapter gives an introduction of the topic thoroughly discussing the background of the problem, statement of the problem, purpose of the study, the research questions, the significance of the study as well as the scope of the study. Chapter two presents the literature review section which is structured in accordance with the research questions ensuring relevance to the research problem. The literature review presents an overview of previous relevant contributions to the problem. Chapter three discusses the research methodology used in the research work in such a manner that other researchers can follow the procedures and are able to come up with similar results. Chapter four brings forward and explains the data / findings based on the research questions. It consists of tables, graphs and charts to present the data. Chapter five brings forward interpretations of the major findings by comparing them to findings of previous studies and theoretical background presented in the literature review of Chapter Two. The chapter presents conclusions drawn in relevance to the research questions followed by recommendations for practice or improvements and for further studies.

5.2 Summary

The problem statement for this work is how we can enhance the efficiency of the management of investment portfolios in the East African region. Today, Eastern Africa is on the rise as an integrated and competitive region from which several growth poles have the potential to emerge. The economic growth in the region brings forward the necessity of an efficient management of investment portfolios to sustain this economic growth and make an impact to the daily lives of people living in the region.

Henceforth the research questions are set to address this important issue. The first research question focuses on how we can align the strategic / tactical asset allocation in line with the goals of investment while the second research question gives emphasis on how we are able to successfully tackle risk management issues in investment portfolios. It
is a momentous decision for investors to choose the specific types of asset for a portfolio and thereby allocating funds amongst the various asset classes. Selection of the asset classes and the allocation of funds have a significant effect on the expected return, the cash flow pattern and the risk management process as well. Determining the suitable asset allocation for a given investor lies upon how well the allocation characteristics align and match up with the investment objectives and conditions stated in the investor investment policy, the IPS. The other crucial aspect is addressing the management of risk issues in the investment portfolio so that we can efficiently attain the desired the very goals of the investment portfolio. Thus, appropriate identification, measurement and control of risk are critical for the success of the investment portfolios, and adequate amount of resources ought to be allocated.

The use of inputs, such as volatility/correlation analysis, risk adjusted return calculations, scenario analysis, etc., provides the allocators of risk capital with a much more informed means of arriving at the appropriate conclusions on how best to distribute this scarce resource. The risk management inputs to the process can be used in formal, mathematical, “optimization” routines, under which enterprises input performance data into statistical programs that will then offer appropriate capital allocation combinations to make efficient use of risk and thereby enable the investor achieve its investment portfolio objectives. It is also equally important to analyze how AfDB is able to execute its investment decisions successfully.

The research design in this research work uses a case study with an exploratory approach in an attempt to lay the groundwork that will lead to future studies and also to determine what is being observed is explained by the currently existing theory. Some of the major contributions of the exploratory approach to this research project is that it will help in establishing major dimensions of the research task, help in developing concepts, establish priorities, develop operational definitions and thereby improving final research design.

This research work uses reliable, accurate secondary data in conducting the research analysis. The population for this research work is the thirteen major development finance institutions (DFIs) in the East African region: namely, AfDB, BIO, CDC, DEG, European investment bank, Finnfund, FMO, IFC, Norfund, OPIC, Proparco, PTA Bank and Swedfund. This writer of this research work has resorted to the analysis of the
management of investment portfolios by the non-profit institutional investors, the DFIs, in the East African region, owing to the fact that the writer believes portfolio investments that are currently being carried out by the DFIs are making the most impact in the lives of people living in the region.

The writer is employing a non-probability sampling design with a purposive sampling approach owing to the very fact that cost and time do not allow to do the research in another way. The AfDB is selected by the writer for analysis of its management of investment portfolios owing to the tremendous, track proven impact it is making in the East African region through its momentous, large scale portfolio investments that is strengthening the development agenda of the countries in the East African region. The sampling technique used in this project work is non-probability method with a purposive sampling approach. The usage of highly reliable secondary data and experience surveys conducted with highly experienced senior management of AfDB makes bias negligible.

5.3 Discussion

The strategic asset allocation of AfDB specifies and reflects on the firm’s desired exposure to systematic risk which in turn emphasizes that adoption and implementation of strategic asset allocation is an effective way to exercise control over systematic risk exposures. AfDB resources come from: the subscribed shares of the authorized capital, a portion of which is subject to call in order to guarantee ADB borrowing obligations, funds received in repayment of ADB window loans, funds raised through ADB borrowings on international capital markets, income derived from ADB loans, and other income received by the Bank, e.g. income from other investments.

The main source of risk in the Bank’s portfolio stems from the potential negative credit migrations. Indeed given the young nature of the non-sovereign portfolio, its quality is still difficult to assess and is expected to be volatile in the coming years. Without sufficient historical data on defaults, transition matrices and rating migrations, proxies with reasonable assumptions are being used to stress test the portfolio in order to better evaluate its credit risk. The stress testing factors in key parameters comprise factors such as projects in countries facing socio-political transitions or economic difficulties, projects
recently downgraded or under watch-list as well as sectors under stress or with systemic risk.

**5.3.1 Alignment of strategic / tactical asset allocation in line with the goals of investment**

The initial authorized capital of the Bank was 250 million Units of Account (UA). Since then, the capital has undergone a series of special capital increases, a voluntary capital increase and six general capital increases. The capital stock of the Bank is composed of paid-up and callable capital. The paid-up capital is the amount of capital payable over a period determined by the Board of Governors' resolution approving the relevant Capital Increase. The Bank's callable capital is subject to payment as and when required by the Bank to meet its obligations on borrowing of funds for inclusion in its ordinary capital resources or guarantees chargeable to such resources. This acts as protection for holders of bonds and guarantees issued by the Bank in the unlikely event that it is not able to meet its financial obligations.

In the event of a call, pro-rata payment must be made by member countries in gold, convertible currency or in the currency required to discharge the obligation of the Bank for which the call was made. There has never been a call on the callable capital of the Bank. The latest general capital increase - Sixth General Capital Increase (GCI-VI) - was approved by the Board of Governors of the Bank on 27 May 2010 and became effective immediately. The GCI-VI increased the authorised capital of the Bank from 2,394,746 shares to 6,768,746 shares with a par value of UA 10,000 per share. The regional members hold 60% of the total stock of the Bank and non-regional members, the balance of 40%. The GCI-VI shares, a total of 4,374,000 shares, are divided into paid-up and callable shares in proportion of 6% paid-up and 94% callable. Similar to GCI-VI, GCI-V shares were divided into paid-up and callable shares in the proportion of 6% paid-up and 94% callable while the proportion under GCI-IV was 12.5% paid-up and 87.5% callable.

The Bank actively borrows in the capital markets to meet the development needs of African countries. Resources raised from capital markets are used to ensure that the Bank has sufficient liquidity to meet its cash flow requirements for a one-year rolling period and provide cost-effective resources to fund its clients and projects. The Bank uses a
variety of instruments and markets to source funds. It also uses the derivatives market for asset and liability management purposes. Responsiveness and flexibility are the hallmarks of the Bank's activities in the capital markets. Its strategy for achieving its funding goals is based on the following building blocks: establishing a track record of issuing regular, liquid benchmark transactions in the capital markets to attract competitive funding levels and generate additional funding opportunities; developing diversified access to public and private markets in various currencies, and building name recognition; accessing medium to long-term funding, subject to market conditions; deepening and broadening the bank's investor base through a proactive investor relations strategy and promoting the development of African capital markets and provide local currency funding to its clients by issuing bonds denominated in local currencies.

As the premier borrower from Africa, the bank enjoys widespread name recognition in major international and domestic capital markets. As of December 31, 2015, the Bank's outstanding borrowing portfolio was around UA 16 billion (USD 23 billion) across 17 currencies. The Bank enjoys the highest possible credit rating, AAA, assigned by the international credit rating agencies Fitch, Moodys, S&P and Japan Credit Rating Agency. AfDB bonds are zero percent risk weighted under Basel II and level 1 assets under Basel III. In line with the above fact, the role and objectives of AfDB Treasury’s Investment Division activities include: the management of the Bank Groups’ liquidity and dedicated funds; the preservation of the Bank’s Capital and the optimization of returns on the Bank’s liquidity within the framework of the ADB/ADF/NTF Asset-Liability Management (ALM) Guidelines; the management of liquid resources allocated to the HIPC (Highly Indebted Poor Countries) initiative with the objective of meeting the HIPC countries future debt liabilities and within the framework of the HIPC Guidelines; contribution, within a very strict risk control framework, to AfDB Group’s net income; while always cash-flow needs are met (e.g. disbursements to Regional Member Countries, repayment of Bank’s debt) in a timely fashion as well as contribution to the preservation of the Bank’s AAA credit rating and maintenance of its financial integrity.

5.3.2 Tackling the issues of risk management in line with the investment portfolio

When the Bank lends to public sector borrowers, it generally requires a full sovereign guarantee or the equivalent from the borrowing member state. The credit risk ratings of the bank’s borrowing member states are reviewed quarterly by an independent team of

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country risk analysts within the credit risk management division. The sovereign credit risk process leverages on the hands-on, in-depth expertise of the Bank’s large resource base of field economists.

When the Bank lends to private sector borrowers or enclave projects, it does not benefit from full sovereign guarantees or its equivalent. Consequently, the expected loss rate on its non-sovereign portfolio changes as a result of project rating changes and the evolution of the outstanding portfolio during the year. The credit risk ratings of projects are reviewed on a quarterly basis by a team of private sector specialists within the credit risk management department. To achieve the objective of protecting the Bank from changes in market interest rates, the Bank matches the sensitivity of its assets and liabilities. The Bank’s strategy for implementing the desired matching is to divide the balance sheet into the two broad types of interest rate sensitive assets and liabilities (floating rate and fixed rate) and to align the interest rate profiles of each balance sheet component to the appropriate benchmark.

The agreement establishing the Bank explicitly prohibits it from taking direct currency exchange exposures by requiring liabilities in any one currency (after swap activities) to be matched with assets in the same currency. As the Bank’s net assets are denominated in Units of Account (UA), which are equivalent to the SDR, the Bank has a net asset position that is potentially exposed to translation risk when currency exchange rates fluctuate. The Bank seeks to minimize potential fluctuation of the value of its net worth in UA by matching to the extent possible the currency composition of its net assets with the currency basket of the SDR.

As a long-term development lender, the Bank holds sufficient liquid assets to enable it continue normal operations even in the unlikely event that it is unable to obtain fresh resources from the capital markets for an extended period of time. The Bank’s policy requires maintaining a prudential minimum of liquidity based on projected net loan transfers, contingent liabilities and debt service payments. Equally, the Bank’s policy permits the increase of liquid resources up to an operating level based on the minimum in addition to taking into account undisbursed and irrevocable commitments to take advantage of low cost funding opportunities as they arise.
Operational risk is defined as losses due to process, system or human failures, unexpected events or unenforceability of contracts. This class of risks has unlimited downside and can expose an institution to serious financial and reputational losses, as evidenced in recent well-publicized large corporate failures around the world. Similar to other financial institutions, the Bank is exposed to various types of operational risk, including the potential losses arising from internal activities or external events caused by breakdowns in information, communication, physical safeguards, business continuity, supervision, transaction processing, settlement systems and procedures and the execution of legal fiduciary and agency responsibilities.

The Bank Group’s operational risk activities currently comprise improvements in the systems environment and process changes and are expected to also include the implementation of an integrated control framework. Over the last several years, the Bank Group has implemented wide-ranging reforms intended not only to improve the efficiency with which the Bank Group executes its mandate, but also to strengthen the overall internal control environment. Such reforms have included people related reforms such as the recruitment of new staff with the competencies required to remedy identified skills gaps; increased attention to training, to equip staff with the skills necessary to perform effectively; the recently introduced mobility program to ensure staff rotation, thereby renewing motivation and avoiding risks associated with monotony of activities.

Furthermore, in conjunction with the people-related reform, there has been a significant renewal of the information technology environment of the Bank Group that comprises the consolidation of most of the transaction processing activities under a single integrated enterprise wide software (SAP), the management of the Bank’s treasury activities in a state-of-the-art software environment (SUMMIT/ Numerix). To meet the needs of its borrowers, manage its exposure to fluctuations in market interest rates and currency exchange rates, and to temporarily invest its liquidity prior to disbursement, the Bank utilizes various financial instruments and deals with a multitude of counterparties and securities organizations. All of these transactions involve, to varying degrees, the risk that the counterparty in the transactions may be unable to meet its obligation to the Bank.
5.3.3 Executing the investment portfolio decisions successfully

Structural transformation is at the core of the challenges which need to be addressed to realize the AfDB’s vision of a prosperous Africa. This challenge as articulated by AfDB’s African Economic Outlook 2013, involves the reallocation of economic activity away from low productivity sectors of an economy into more productive ones. In fact, it is estimated that close to half of the growth in underlying labour productivity that has marked the more successful economic record of the new millennium has been attributable to the structural transformation arising from a shift of labour between economic sectors identified the specific gains achieved by five Eastern African economies in this regard and concluded that the while trend is positive, it must be sustained and deepened. This transformational trend stands in distinct contrast to 1990-1999, when structural change was a negative drag on economy-wide productivity in Africa.

Successful transformation in Eastern Africa will involve actions across a broad range of investment portfolios that harness various development activities. Presently the economies in the region are predominantly “factor-driven” – heavily reliant upon natural resources as the principal generators of output, as the providers of jobs and livelihoods and as the basis of trade with other nations. In order for the region to realize the substantial progress projected above, countries must progress along a path toward greater competitiveness. Using concepts articulated by the World Economic Forum (WEF) in the Africa Competitiveness Report 2013, countries must first seek to become “efficiency-driven” in order to better compete in the world economy, and ultimately should aim to become “innovation-driven” if they wish to become among the most competitive on the global scene.

At present, the WEF estimates that of the African countries it has examined, very few can be categorized as “efficiency-driven” – none of which are Eastern African. However, one state which is in transition to becoming “innovation-driven” is indeed Eastern African: the island nation of Seychelles. Other Eastern African countries remain substantially factor-driven, even though some countries (Sudan, Eritrea and Kenya) have larger manufacturing bases than others. The changes they require to progress along the competitiveness continuum are grounded in the imperative to extract greater efficiency
and productivity from their natural resources and human resources. Fifty years from now, Eastern African countries could be predominantly efficiency driven, with leading growth poles having progressed toward innovation-based competition. Eastern Africa has huge untapped potential for structural transformation if the right steps are taken.

Those “right steps” include measures to improve all drivers of productivity, including human capital, physical infrastructure, market scale and institutional capacity in addition to natural resource productivity. However, since natural resources are the continent’s primary source of comparative advantage, Africa will most likely base its structural transformation on that by establishing a strong and diversified natural resource-based economy that better exploits the potential of the continent’s energy, minerals and agriculture. The AfDB recognizes that each country’s development strategy must be uniquely tailored to its circumstances.

5.4 Conclusion

5.4.1 Alignment of strategic / tactical asset allocation in line with the goals of investment

The Treasury Risk Management Division (FFMA.3) would continue to carry out daily monitoring of compliance with the Guidelines and would report on any exceptions. The Asset and Liability Management Committee (ALCO) would continue to exercise Management oversight on the Fund’s investment management process, based on monthly reports for the Fund’s investment performance and quarterly rebalancing of the Operational and Investment Portfolios.

Changes in the Fund’s encashment policies over the past few years have resulted in a progressive increase in the size of the Fund’s liquid assets. This has created the opportunity to move to a dual portfolio structure with an Operational Portfolio and an Investment Portfolio in order to stabilize the Fund’s investment returns while continuing to ensure adequate liquidity to support its operational activities.
5.4.2 Tackling the issues of risk management in line with the investment portfolio

Portfolio quality is measured through a set of metrics among which are the weighted average risk rating (WARR), share of moderate and low risk classes, concentration indices, and vintage analysis of migrations and workouts. The good WARR level is essentially driven by the share of creditworthy and investment grade countries in the portfolio. Migrations in this segment of the portfolio will yield to a deterioration of the WARR. Therefore, there is the need to ensure quality at entry of the transaction in the portfolio irrespective of the fact that it is sovereign or non-sovereign lending.

Further migration from moderate to high and very high risk in the portfolio is not desirable particularly in the non-sovereign window. In this respect, it is important to note that a large share of the private sector portfolio is immature (less than 4 years old) and some of it is still within the grace period. As the portfolio ages, there are likely to be rating migrations that could affect the quality of the portfolio. This underscores the need for strengthening portfolio management and good collateral management.

Through the risk-based pricing, the Bank seeks to balance its objective of being competitive in the private sector market place with the need to recover the cost of extending risk bearing capacity to its borrowers. The new pricing framework seeks to correct the inadequacies of the existing pricing model as it relates to full recovery of the costs of risks, including concentration risks and recovery of administrative charges. The specific feature of the pricing mechanism is that the total risk premium is calculated as the sum of charges for credit risk and concentration risk. It introduces a flexible margin in the pricing structure to enable the Bank to adapt its pricing to those of other lenders and the market in order to maintain its competitiveness.

The Bank maintains stringent rating eligibility criteria for counterparties and adheres to a framework of exposure limits based on counterparty credit rating and size, subject to a maximum of 10% of the bank’s total risk capital. Furthermore, the Bank executes an ISDA master agreement and netting agreement with its derivative counterparties prior to undertaking any transactions. To ensure the execution of and compliance to overall risk management policies and guidelines in terms of exposure limits, concentration limits and volatility limits on the Bank's assets and liabilities, the treasury risk manager plays a focal
role in the continued monitoring of such exposures and reporting for periodic realignment purpose.

5.4.3 Executing the investment portfolio decisions successfully

Given the opportunities and challenges set out in this research work, it is clear that the AfDB has a key role to play in the region. As its execution of its investment portfolios must adapt to regional and country requirements, its strategy must be flexible and able to adapt to particular needs. Yet, there are a number of areas where AfDB’s role will be broad and critical for Africa generally and Eastern Africa specifically. The AfDB has an important role in supporting the full range of policies and investments central to the structural transformation of the continent.

As Africa’s premier financial institution, it can provide important levels of resources to supplement government and private sector resources. It can also ensure that the investments it funds are supporting efforts that facilitate transformation. On the policy side it can assist governments by identifying best practices from across the continent and facilitating adoption of such practices. Its analytic work can also draw lessons from how other development regions have addressed transformation. The AfDB ought to sustain its role as the leading financier of infrastructure in Eastern Africa. The AfDB plays a major role in supporting the energy, water, transport and ICT sectors and ought to continue to work closely with the region’s governments to improve service provision. Combining increased funding with policy and institutional reforms, the AfDB can ensure that the populations of the region are more broadly served with more efficient services in the future through the efficient execution of its investment portfolio.

5.5 Recommendations

5.5.1 Recommendations for improvement

5.5.1.1 Alignment of strategic / tactical asset allocation in line with the goals of investment

The steady build-up in liquidity, however, has also coincided with a secular decline in market interest rates in all of the major currencies. As a consequence, the AfDB’s investment income has not kept pace with growth in the volume of liquidity. This has
brought to the forefront one of the principal objectives of the AfDB’s asset management, which is to earn a reasonable return on the AfDB’s liquid investments, and hence a frequent review of the duration limit and investment benchmark is important to counteract interest rate sensitivity of the AfDB’s investment returns. This in turn will enable the bank to capitalize on the flexibility created by the larger portfolio size.

As a result of its excellent and top-notch credit ratings, the bank ought to be able to continuously issue securities at attractive interest rates in the capital markets mainly to provide cost-effective resources to finance development projects and programs in the East African region. The robust portfolio investment strategy of the bank ought to give priority to capital preservation and liquidity over attempting to generate higher income by taking on additional risks. As such, the Bank continues to target high-quality liquid assets with short maturities with a focus on secured investments where possible. As a result, the credit quality and liquidity profile of the Bank’s investments remains very strong.

**5.5.1.2 Tackling the issues of risk management in line with the investment portfolio**

Although the Bank still has enough cushion to support credit migration in the currently young private sector portfolio, it needs to build resilience through adequate transfer of income to reserve, ensure good collateralization and strong guarantees at entry of new transactions in the portfolio, and enhanced supervision of existing private sector portfolio in the East African region.

In approving lending proposals for stressed countries in the East African region, the Bank needs to ensure adequate balance between: the objective of providing adequate resources to a reliable client in implementing the reforms needed to ensure sustained growth, and the imperative requirement to contain the high and growing concentration risk. In this regard, a programmatic approach should be followed. This approach ought to consist of structuring a 3-5 year program based envelope in several tranches associated with each reform package in which the Bank is called upon to intervene. It also entails that the sum of the multi-tranches (a tranche for each year) should not be more that the cumulative annual sustainable lending to the country over the planning horizon.
The guidelines that document credit principles and processes for identifying, assessing, controlling, reporting and managing credit risk ought to be reviewed to reflect not only new developments in the Bank’s operating environment and growing complexity but also recent changes in the strategies governing the Bank’s operations in the region. Further developments ought to be underway to accommodate events or changes foreseen in the near future, such as changes to Economic Capital framework and the Expected Loss approach in risk measurement; Basel III and implications for existing frameworks; Changes to relevant International Financial or Credit Reporting Standards.

The ongoing turbulences in financial markets and socio-political transition related developments in several of the East African borrowers could create some threats and risks to the Bank. Stress testing of the portfolio to systemic risks and other potential extreme events indicates that the Bank has enough risk bearing capacity to absorb shocks. However, the reputational risk could be high and the Bank ought to be proactive and should strengthen its communication strategy with bondholders, rating agencies and other external stakeholders.

The use of less consuming risk capital products and accessible to a large number of East African region borrowers (e.g. well-structured trade finance products to existing specialized regional institutions of the continent; a more extensive use of credit substitute; a roll-over of equity investments (through selling-off existing positions and engage in new positions to maintain risk capital allocation within limit), and hedging of concentration risk (whenever feasible) could help ensure healthy portfolio growth. Greater attention also needs to be paid to the development and management of the pipeline. Furthermore, the Bank ought to continuously strengthen institutional governance of risk and all internal stakeholders will gain in enabling the implementation of an enterprise-wide approach to risk management including lending risk.

5.5.1.3 Executing the investment portfolio decisions successfully

Through the efficient execution of its investment portfolios, AfDB ought to play a key and central role in the regional integration efforts of Eastern Africa. Realising the long-term vision of a region where goods, capital and people can move across borders to create a larger market ought to be a key AfDB priority and will be essential to secure the
economies of scale necessary for more effective participation in world markets by the successful execution of the investment portfolios it is managing. The AfDB should support this development with an expanded analytic work program that identifies opportunities for regional cooperation and provides policy advice on how to best secure the benefits of multi-country cooperation. Increased AfDB funding ought to be envisaged to be made available for major regional projects. Building on extensive past experience, regional infrastructure investments should be given a priority. The AfDB ought to work closely with the full range of regional institutions to enhance their capacity and effectiveness in facilitating cross border relations and supporting transformation of the region.

5.5.2 Recommendations for further studies

AfDB ought to substantially expand its investment portfolios in the private sector. In lieu of its expanded private sector window and a range of new instruments for private sector support, the AfDB will be able to have the capacity to support private sector investments more actively and rigorously. Further research has to be carried out in how AfDB will be able to considerably diversify and enhance its investment portfolios in the private sector which requires sparing no efforts in working with governments of the perspective business environments across East Africa region.
REFERENCES


APPENDICES

APPENDIX I: INTERVIEW

INTERVIEW – I

Interview with Mr Gabriel Negatu,
Regional Director of the Eastern Africa Regional Centre,
African Development Bank Group, Nairobi, Kenya

I, Anteneh Zewdu, was the interviewer. The interview was conducted on the 11th floor of its headquarter office in Nairobi, Kenya.

Interviewer: Where does AfDB get its sources funds that later uses in its asset allocation?

Mr Negatu: AfDB gets its funds from several sources/windows. There is one called ADB window which is a non-concessional market based window and the money for that comes from two sources. These are, the first one, the bank goes out to the market and the second is from reflows or payment of loans.

The second window which is the ADF window is a special concessional window which lends almost interest free, for up to a term of forty years, money to low income countries with debt sustainability problem. They either get in the form of grants or loan, or a blend of both. And the money comes from member countries, mostly non regional countries. The other sources of funds are the reflows and investment in the international market through the ADF window.

The NTF is the third window which supplements the above two windows and provided by the government of Nigeria. There are also other funds like Africa China Growing Together Fund- a several billion dollar infrastructure support program in Africa with the collaboration of the Chinese government.

Interviewer: Where do you go to market? Does AfDB go to the local market?

Mr Negatu: We actually go to the international market and since AfDB is a AAA rated company by all the famous rating companies in the world, as a result, given the huge
amount of money we borrow, we get the loans at a very affordable, lower cheaper rates. There is not anything stopping it going to the local market, it is just that given the amount of money we borrow, if we do it at the local market, it will constrict the available cash so we opt to go to the international market.

**Interviewer:** Can I get historical data on the type and allocation of assets of AfDB?

**Mr Negatu:** The Regional Country Officer, Mr Lawson, will give you all the necessary data and information that you need. By the way, I would like to highlight to you that the portfolio for the East Africa, managed under this office currently stands at $8.5 billion.

**Interviewer:** Can you please elaborate on how the resources and funds are allocation of assets within AfDB? What are some of the criteria employed in that regard as well?

**Mr Negatu:** That’s a very good question. There are several criteria. Clearly, there is technical, economical criteria, and so forth which are standard for any asset or project analysis. But AfDB being a development institution, our prime objective is not to make profit; our expenses of course have to covered but the primary objective is to make a development impact. You will not find AfDB lending to Casino, Disco Clubs or anything like that. Whatever we do, it must have additionality beyond the financial transactions.

In terms of within a country or a sector, we generally allocate what we call sustainable lending limit to a given country. For instance for Kenya, over the period of three years, we have allocated 2.5$billion. That takes into consideration the size of the economy, ability to pay back, the potential for returns, the sustainability, the current debt stock, the current debt/GDP ratio (it is over 50%, then certain precautions ought to be taken), a couple of other macroeconomic indicators to determine the prowess of the country to pay. Ability of various countries to pay is not the same. For instance the ability of Djibouti and Kenya cannot be the same. Ethiopia and Kenya should be the same but Ethiopia is highly indebted because there is a lot of public sector lending, and because of that Ethiopia has reached the headroom, and thus affecting the GDP ratio. You worry about debt when you calculate it as the ratio of GDP.
The other important effect will be the ratio of foreign earnings, as loans are paid in foreign currency. But in general, we look at both financial and non-financial aspects when we allocate the amount of resources. Then we sit down with the necessary parties, ministers, cabinet secretaries and reach on the final decision. Just two days ago, I had a meeting with the Finance Minister of Kenya, Mr Henry Rotich, we sat down; we went through the projects that we are going to do in the 2016-2017; six projects in road and infrastructure, seven in energy, four in water, and two in agriculture; so we look at each project, then we look at how the portfolio looks; as a result we have 45% for transport, 29% for energy, 11% for agriculture, and 2% for water, 58% for other sectors of the portfolio.

We look at the country’s demand, the ability to absorb the money; look at the existing debt burden in the sector i.e. if there is an existing non-performing loan project in the sector, and then there is no need of adding additional loan adding the debt burden. So in general, as asset allocation is a process and a result, we look at the technical aspects (IRR, feasibility and so on), once these are calculated, we need to use some judgement considering financial, non-financial, and several economic aspects.

**Interviewer:** In your expert opinion, what are some of the challenges AfDB is currently facing in regards to its asset allocation process?

**Mr Negatu:** Well, as the global economy contracts, these countries who traditionally give money to the AfDB will be constrained. The future is not relying on the contributions of these countries but rather in being able to raise funds from the private sector. Few years back, we can go to the market and raise 10 billion dollars overnight, but that is no more. As the US closes its competitive easing and as the global economy begins to shrink, the market is now moving more money to the US because of the favourable interest rates; hence money that was previously was going to emerging markets now going to the US markets.

As a result, when we look for big funds for huge projects like roads, railways and so on, it becomes challenging. However, there are newer sources of funds for large investments such as the sovereign wealth funds, private equity funds, all kinds of bonds such as green bond, Islamic bond, Diaspora bonds which are all available by taking risk on a
government paper. These are going to be the alternate sources of funds in the future. It is also worth noticing that this is as a result of not only what happens in the world but also of what happens in Africa. When Africa’s export demand goes down, manufacturing goes down, price of commodities and various categories of resources goes down like copper, gold goes down; all these coupled with the quantitative easing of the US economy will force countries to default. These are things that we are watching closely as they unfold.

**Interviewer:** In light of what we just discussed, it is evident that senior management ought to take care of risk within the institution such as in AfDB. How is senior management in AfDB conducting the risk management and risk governance?

**Mr Negatu:** Well, you know, risk just like in life, is also evident in investment of portfolios. There are certain basic things you do to tackle risk. First, identify and try to mitigate those you can mitigate and mitigate them. For those you cannot mitigate, there are several things we can do.

Allocate to where it is best handled. Is it the borrower, lender, sponsor? There are different factors in any transaction. When you look at the given risk, you sit down, analyze and decide who is best addressing the risk. We as a banker have to take care of certain schemes that we need to take care of and assume thereby some risk, you as a borrower need to assume some risk, ‘X’ as a financier or sponsor of a project, there is some risk he/she has to assume; so we have to take the risk where it is best managed.

So, you first identify the risk, then you mitigate those you can mitigate, you then allocate the one you cannot mitigate and price it and you pass it on to the right party. We have a risk management unit dealing entirely and solely on risk, the Regional Country Officer will supply you with all the necessary data and information on major types of risks we face and how it is handled.

**Interviewer:** Thank you Mr Negatu for dedicating your priceless time for this interview!

**Mr Negatu:** You are very welcome and I wish you all the best in your degree program!
INTERVIEW – I I

Interview with Mr Lawson Zankli Late Dodji,
Chief Regional Programme Officer, Eastern Africa Regional Resources Centre (EARC) of the African Development Bank Group, Nairobi, Kenya

I, Anteneh Zewdu, was the interviewer. The interview was conducted on the 9th floor of its headquarter office in Nairobi, Kenya.

Interviewer: Where does AfDB get its sources funds that later uses in its asset allocation?

Mr. Lawson: AfDB has three types of fund’s source; the first one is the ADB window that provides non-concessional loans which are guaranteed by the government. The window has two types of loans; private and public. The resources for this window come from the bank going to the international market and issue bonds and other securities. The recent one amounting $1billion was oversubscribed in less than an hour. The second window is the ADF window which provides concessional resources, cheaper loans, depending on the debt sustainability analysis for each country. If I show you from this latest chart on the wall, countries that are identified by the green colour are of low risk (these countries receive grants), the countries in yellow will receive grants and loans and the countries in red will receive only loans. This is the kind of strategization plan for each country. The resources for this window come from the bank shareholders; these are funds that are replenished every three years. Mainly we have non-African countries that provide funds to that window. We are also having more contributing countries that have resources such Angola, before oil prices come down, provide additional resources. In addition to that we have some specific funds, like climate funds and so on which are subscribed countries for certain causes are available.

As instructed by the Regional Director, I will provide you with all the necessary data and information that you need from the statistical department of AfDB.

Interviewer: What are some of the criteria employed by AfDB in the allocation of assets?
**Mr. Lawson:** In the ADB window, the lot of emphasis is on the ability of the project, especially in the private sector. We do a lot of analysis for that loan before it is being issued in line with the strategies we have for each country. For each country, depending on the risk analysis, there is the amount we commit, the amount of funds you can allocate need to be specific. For instance, for Kenya, we have allocated $2 billion. For the various assets and projects, we analyze financial viability and development contribution with due diligence. In the ADF window such as the ADB window, we do background analysis as in line with the Country Program for each country. Based on these economical and infrastructure indexes, we set aside some funds through the ADB/ADF window in regional projects so that they will have an impact on regional integration; if for instance, let us say the country’s commitment is $10 million, ADF will top up $15 million from the regional envelope; this will encourage countries to use their resources for regional integration. We also have countries which have very specific needs, also known as fragile states; we set aside some resources from the ADF window in addition to what the government usually allocates.

**Interviewer:** Any Challenges that you have encountered during this process?

**Mr. Lawson:** In ADB window, the volatile world economy presents some challenges in allocating assets for projects that are in the pipeline. In the ADF window, some of the major contributors like the US and UK are facing economic constraints; as a result of that we are focusing more on generating funds internally by adjusting policies.

**Interviewer:** How is the risk management and governance conducted in AfDB?

**Mr. Lawson:** We have a special Risk Management Unit that thoroughly conducts risk assessment for allocation of assets. For ADB window, for instance, the Risk Management Unit does a thorough analysis for each activity under its categorized units. I will provide you with all the necessary data regarding the risk governance and management conducted by this unit that will give you a thorough and detailed inside view of the risk management process.

**Interviewer:** Thank you Mr. Lawson for dedicating your valuable time for this interview.

**Mr. Lawson:** It is a pleasure! I wish you all the best in your future endeavours.