ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

FINANCIAL RISK MANAGEMENT PRACTICES: THE CASE OF ETHIOPIAN AIRLINES

By

Elsabeth Melesse Teka (ID No. SGS/0310/2009A)

JUNE, 2018

ADDIS ABABA, ETHIOPIA

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ELSABETH MELESSE TEKA

A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Abreham G. (Ass.Prof). All sources of materials used for this thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institutions for the purpose of any degree.

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St. Mary's University, Addis Ababa. June 2018

Confirmation

I confirm that this thesis has been advised by me and submitted for examination with my approval.

Abraham G. (Ass. Prof.) _____

Advisor Signature

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ACRONYMS

CNY- Chinese Yuan

ET- Ethiopian Airlines

ETB- Ethiopian Birr

EUR- Euro

GBP- Great Brittan Pound

IATA- International Air Transport Association

IMF- International Monetary Fund

LIBOR- London Interbank Offered Rate

USD- United States Dollar

CFO- Chief Financial Officer

VP- Vice President

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ABSTRACT

The Aviation Industry is one of the industries that is capital intensive and circled around multifaceted financial and other enterprise risks. The major financial exposures of airlines are fuel price risk, foreign exchange risk, and interest rate risk. The objective of this paper is to analyze the financial risk management practices in the case of Ethiopian Airlines. The study employed descriptive research design using primary and secondary data. The data for this study was obtained through semi-structured interview for the primary data and annual reports, financial statements, due diligence reports, and company policies for the secondary data. Interviews were conducted with three managers to triangulate and supplement the data obtained from the secondary data. The result reveal that the Airline uses various risk management tools in respect of foreign currency risk (such as natural hedging, currency pooling, dollar indexed bonds purchase, treasury bill purchases, forward contracts, currency swap, and property purchase) and interest rate risk (through making a mix of fixed and floating interest rate based on the market trend); but the Airline does not have any risk management tool with regard to fuel price costs. The Airline follows a wait-and-see approach for fuel price risks and it missed the possibility of hedging fuel prices especially for the current fiscal year where fuel price is escalating at an alarming rate. Based on such finding, the conclusion drawn is that the non-use or limited use, or non-availability of, financial derivatives as a major tool for financial risk management is an indication that the Airline is vulnerable to any fuel cost, interest rate, and currency volatility. The study recommends that the Airline should work more towards devising ways of increasing the expertise of its concerned staff and management by offering formal trainings and availing various systems of forecasting the hedging market. This will help the Airline to try hedging exercises (including in cases of fuel price hedging) in an informed manner.

Key Words: Currency, Financial Risk, Fuel Cost, Interest Rate, Hedging

CHAPTER ONE: INTRODUCTION

This chapter discusses the essence of financial risk management and introduces the company that is the subject of the research. Likewise, it also encompasses the problem statement, research questions and objectives arising therefrom. The significance of the study, scope of the study, and limitation of the paper are also covered in this chapter.

1.1. Background of the Study

One attribute of a business activity is risk. No business will operate in a risk free environment. Even if risks are inevitable in a business environment, the extents of such risks are dependent, among other things, on whether or not the company is operating locally or internationally. Comparing with local companies, the ones in an international business environment may face complex and multi-dimensional risk factors, with greater losses or profits (Tsai, 2008).

In every industry, organizations encounter various risks including strategic, financial, and operational risks, as well as unusual events. Strategic risks may lead the company in a wrong direction as the result of inappropriate decision making. Operational risks create potential losses from the transformation of revenue and resources, particularly the shift of the operational expenditures. Financial risks may produce uncertainty regarding future cash flows due to changes in global and domestic economic conditions and due to specific changes in operations and financing costs (Tsai, 2008). Risk management aims at reducing the risk to acceptable proportions by hedging, offsetting or possibly eliminating it, depending on the courses of action that were available.

The major specific financial risks that airline companies normally emphasize in relation to daily operations are interest rates, foreign exchange rates and fuel prices, which may be hedged with an appropriate instrument (Horcher, 2005). The issue of financial risk and its management deserves special attention because of its volatility and the high values involved in it. Fuel price, for instance, accounts for 17% of the total expenditures of the airlines globally (and 32% when it comes to Ethiopian Airlines) (IATA 2017).

The airline industry is an industry where high levels of risk exist. This is an industry with traditionally low levels of profit and high overhead costs along with volatile input costs. This combined with the many influences on demand such as security concerns and fashions, currency exchange rate fluctuations along with the low profit rates increase risk (Abbey, 2007). The international nature of airline operations also invites issues of foreign currency and problem in repatriating the money that the airlines accumulated in local currency. On the other hand, airlines aggressively borrow money to finance their commitments means they are exposed to interest rate volatility. Given the seriousness of the financial exposures on the continuing existence of the company, it is expected that the airline should take practical measures to manage them and this paper explores whether such practical measures are taken in the case of Ethiopian Airlines.

The objective of this paper is to analyze the financial risk management practices in the case of Ethiopian Airlines. Given the stiff competition environment that they are operating in, airlines are doing everything to reduce costs but there are risks which stem from complex industry structure. Because there are no prior studies on financial risk management practices of the Airline industry in the Ethiopian context, the paper has a practical importance to the airline and to any other party faced with comparable financial risks on the nature and extent of the risks and the required management mechanisms that have to be put in place.

1.2. History of the Company

Ethiopian Airlines Group is a flag carrier of Ethiopia which was established in 1945. The Airline is 100% owned by the government of the Federal Democratic Republic of Ethiopia and as per a recent amendment to its Establishment Regulation, the new regulation (Regulation No. 406/2017), the authorized capital of the Airlines is Birr 100,000,000,000.00 (One Hundred Billion Birr) of which Birr 31,216,632,692.00 (Thirty One Billion Two Hundred Sixteen Million Six Hundred Thirty Two Thousand Six Hundred Ninety Two Birr) is paid up in cash and in kind.

The Airline is now the largest air carrier of Africa in fleet size, profit and connectivity. Operating at the forefront of technology, the Airline has also become one of Ethiopia's major industries and a veritable institution in Africa. It commands a lion's share of the pan African network including

the daily and double daily east-west flight across the continent. Ethiopian currently serves more than 100 international and 21 domestic destinations operating the newest and youngest fleet age of 5 years in average (Ethiopian Airlines, 2016).

In the latest audited financial statement (Fiscal Year 2016/17), Ethiopian has registered its net profit of 5.32 billion birr. This remarkable achievement has been registered while the other African carriers are registering a loss. The International Air Transport Association (IATA) disclosed that African carriers made a loss of 900 million dollars in 2015 and close to 800 million dollars loss in 2016. This figure is also stagnant for the year 2017. Carriers in Africa are expected to deliver the weakest financial performance with a net loss of $800 million (broadly unchanged from 2016, and for each passenger flown this amounts to an average loss of $9.97). (IATA, 2016)

In addition to its major passenger transportation services, Ethiopian Airlines has also business units that feed in to its success story. Some of the business units are (1) MRO (saves huge cost by maintaining and repairing the Aircraft of the Airline and increase revenue by giving this service to third party Aircraft, (2) Aviation Academy (which is claimed to be the gateway to the aviation industry and the major school that provides pilots, technicians, and cabin crew to mention but a few), (3) Catering (the unit that is entrusted in providing inflight meal and beverages), (4) Cargo (a unit with main task of transporting freighters and mail through the air). The Airline is also permitted in participating in hotel and tourism services and is currently finalizing construction of a five star hotel in front of the Millennium Hall. As of July, 2017, the above referenced Regulation has also merged Ethiopian Airports Enterprise to Ethiopian Airlines the effect of which, according to the Regulation, is Ethiopian Airports will become one of the other business units of Ethiopian Airlines.

The success story of the Airline should not however conceal the stiff environment that the aviation industry is operating and the various financial risks it is exposed. Besides the cut-throat competition from the Middle East carriers and other carriers (that in aggregate have control of 80% of the aviation market of Africa), there are also other financial exposures that the airline has been passing through. Given that the airline is operating in more than 100 passenger and cargo destinations with more than 100 Aircraft, there are various financial exposures inherent to

international operation (Ethiopian Airlines, 2016). This paper is meant to analyze the financial risk management practices within the context of Ethiopian Airlines Group.

1.3. Statement of the Problem

Business organizations are exposed to different risks. In the process of providing financial services, they assume various kinds of financial risks. Without a doubt, in the present-days unpredictable and explosive atmosphere all industries are in front of hefty risks like commodity price risk, credit risk, liquidity risk, operational risk, market risk, foreign exchange risk, and interest rate risk, along with others risks, which may possibly intimidate the survival and success of the industries (Santomero, 1997).

The airline industry is not immune from most of the financial risks affecting industries in general. According to Horcher (2006), the aviation industry has three financial exposures or risks: Fuel Cost, Currency, and Interest Rate. Given that such risks, if not properly addressed or managed, are fatal to the very existence of the airline, special consideration should be made to closely follow-up the trend of each risk. Thus, the issue of financial risk management is a big deal for Ethiopian Airlines. This is because the airline incurs huge costs for commodities including fuel. It is also transacting in many currencies due to its international operation. Also it is financing acquisition of its multimillion dollar Aircraft through loan agreement with interest rates (Ethiopian Airlines, 2016).

The issue of financial risk management in relation to the airline industry is not studied and yet to be addressed in Ethiopia. There are various researches abroad conducted on financial risk management. For instance, Fernando (2006) analyzed the use of financial risk management tools in the airline industry by selecting 15 airlines around the globe. All of the airlines selected have clear risk management policy and practices. However, it does not cover the financial risk management practices of an African based Airline.

On the other hand, Misiura (2015) examined organizational structures and practices of airline risk management systems and their technical and institutional drivers. In particular, this study focuses on the phenomenon of Enterprise Risk Management and its alignment to the requirements of airline business contexts. The study demonstrates that the adoption of enterprise

risk management in airlines drives development of new institutions, rules, and routines for comprehensive management of risks. Consistent with the tenets of contingency theory, this study also conveyed lack of a universally appropriate design of an airline enterprise risk management system. The paper is generally related to the enterprise risk management and not specifically concerned on the financial risk management and the examined airlines are not African based.

In the context of Ethiopian Airlines, there is a research undertaken on explaining why Ethiopian Airlines has succeeded and what lessons that other public enterprise or other private companies learn from this success story (Selamawit, 2012). In contrast from Selamawit (2012), the current paper pays emphasis on the three financial risks of the airline, and how the airline is mobilizing its resources towards managing those risks.

Another research on the issue of financial risk management is undertaken by Eneyew (2013). He has investigated the impact of financial risks on the profitability of commercial banks for a total of eight commercial banks in Ethiopia, covering the period of 2000-2011. He finds that credit risk and liquidity risk have a negative and statistically significant relationship with banks' profitability. However, the relationship for interest rate risk and foreign exchange rate risk is found to be statistically insignificant. Nevertheless, financial risks of the banking sector (credit risk and liquidity risk) are different from the financial risks of the airline industry, (interest rate and foreign exchange risk). The current research is different because the sectoral difference makes it to have different risks compared from the financial sectors. Thus this paper aims to assess the financial risk management practices of Ethiopian Airlines.

1.4. Research Questions

This research intends to address the following research questions

- What are the financial risks that Ethiopian Airlines is exposed to?
- How the airline is exposed to the financial risks?
- Does the airline deploy risk management tools to manage the financial risks?

1.5. Objectives of the Study

1.5.1. General Objective

The main purpose of the study is to assess the financial risks management practices in the case of Ethiopian Airlines.

1.5.2. Specific Objectives

The specific objectives of the research are

- To assess the major financial risks of Ethiopian Airlines
- To examine the extent of each financial risk
- To evaluate the financial risks management tools of Ethiopian Airlines

1.6. Significance of the Study

The existence or otherwise, let alone the profitability or otherwise, of an airline is dependent on its ability to manage its financial risks. A slight adjustment in any of the financial risks causes irreparable damages to the airline if adequate management mechanisms of the risks are not installed.

This research is important in that it shows the exposure level of the financial risks to Ethiopian Airlines and the possible precautionary measures to contain such risks. Because the aviation industry is operating in a very competitive environment, the airline is expected to prepare itself in every dimension and a reasoned analysis of the financial risks and managements would help the airline to see areas that it is good at and areas that it has to improve. Accordingly, the research has a practical importance to the airline and to any other party faced with comparable financial risks (be it fuel, interest rate, or currency) on the nature and extent of the risks and the required management mechanisms that have to be established. Furthermore, the study will contribute to the available literature by serving as a reference to future researchers on related topic.

1.7. Scope of the Study

The research is confined to the assessment of financial risk and its management practices in the case of Ethiopian Airlines. On the other hand, all the three types of financial risks of the airline industry (fuel cost, currency, and interest rate) have been assessed in the research. Furthermore, qualitative method of research was used to undertake this paper

1.8. Limitation of the Study

Due to the confidentiality policy of the company, some of the officials were not open to give the data they knew. This lack of sufficient data may affect the study's result quality. Unlike case study, which adopts various data collection methods, this study used only interview and secondary data because of the fact that the number of target group is very small which may have an effect on the study result.

1.9. Organization of the Paper

The paper consists of five chapters. The first chapter deals with the introduction part that includes background of the study, statements of the problem, objectives of the study and research questions, significances of the study, and scope of the study. Chapter two reviews the related literatures on financial risk and its management with particular emphasis to the Airline industry. The research methodology is presented in chapter three. In chapter four, the results and discussions of the study is discussed. Finally, the last chapter deals with the summary of findings, conclusions and recommendations that are forwarded based on the result obtained.

CHAPTER TWO: REVIEW OF LITERATURE

This Chapter is aimed at evaluating and discussing the related literature on the issues of risk, financial risk and financial risk management.

2.1. Theoretical Review

2.1.1. Overview of Risk

Risk is the potential of gaining or losing something of value. Holton (2004) defined risk as the existence of uncertainty about future outcomes. Risk is a key factor in economic life because people and firms make irrevocable investments in research and product development, plant and equipment, inventory, and human capital, without knowing whether the future cash flows from these investments will be sufficient to compensate both debt and equity holders. If such real investments do not generate their required returns, then the financial claims on these returns will decline in value. According to Holton (2004) financial risk is often defined as the unexpected variability or volatility of returns and thus includes credit risks, liquidity risks and market risks.

The result of increasingly global markets is that information is available instantaneously, which means that change and subsequent market reactions occur very quickly. Financial risk arises through countless transactions of a financial nature, including sales and purchases, investments and loans, and various other business activities. According to Horcher (2005), there are three main sources of financial risk. First there are financial risks arising from an organization's exposure to changes in market prices, such as interest rates, exchange rates, and commodity prices (such as aviation fuel prices in respect of airlines). The second sources of financial risk relates to financial risks arising from the actions of, and transactions with, other organizations such as vendors, customers, and counterparties in derivatives transactions. The third source is financial risks resulting from internal actions or failures of the organization particularly people, processes, and systems.

2.1.2. Financial Risk in the Airline Industry

The airline industry is specifically characterized by distinctive features such as seasonal demand, strong price competitions from various carriers operating in the same route, high capital investment and gearing levels, extraordinary events, estimation of price increases in commodities, high fixed costs of labor and equipment, and various regulatory impediments (including ownership control, landing rights, and commercial permits to load/offload passengers and cargo) (Cento, 2009). Therefore, most of the time, should something happen, the impact would be extremely serious on the financial performance of the airline companies when compared to the effect on other industries. The airline industry is an industry where high levels of risk exist. This is an industry with traditionally low levels of profit and high overhead costs along with volatile input costs. This combined with the many influences on demand such as security concerns and fashions, currency exchange rate fluctuations along with the low profit rates increase risk (Cento, 2009).

In general, there are three major categories of the financial risks of the airline industry to which Ethiopian Airlines is not an exception. These are Commodity Prices (particularly fuel price in the context of the airline industry), Currency, and Interest rate. Of course, there are also other financial risks that affect the industry such as credit risk and liquidity risk. Though not in a larger scale, airlines are exposed to credit risk because they provide credit opportunities to their customers. Airlines also undertake their sales through ticketing agents and given that the agents will remit their sales to the airline periodically, there is a credit risk that they may not remit the sales. Credit risk is defined as the risk that a counterparty may become less likely to fulfill its obligation in part or in full on the agreed upon date (Christoffersen, 2012). Thus credit risk consists not only of the risk that a counterparty completely defaults on its obligation, but also that it only pays in part or after the agreed upon date.

Airlines are also exposed to liquidity risk because of the various commitments they have to respond every day. Such various commitments involving huge amount of money may create a scenario where the available cash flow of the airline may be lower than the commitments. This subsection is devoted to discuss such risks in detail.

2.1.2.1. Commodity Price Exposure

The first financial risk is Commodity Price risk especially the oil/fuel price. The oil price has been a very volatile series, with periods of extreme price movements. This has made life difficult for oil producers and consumers and increased the demand for risk management to handle this problem. Fluctuations in the price of oil or, more particularly, jet fuel have been a major issue for airlines (Cento, 2009). They need to show consistent pricing and, in many instances, set prices well ahead of the point where they provide the service. Hence they have sought various means to manage these price risks; these include extensive operational hedging and financial instruments. Commodity prices may be affected by a number of factors, such as expected levels of inflation, interest rates, exchange rates, general economic conditions, costs of production and ability to deliver to buyers, availability of substitutes and shifts in taste and consumption patterns, and weather, particularly for agricultural commodities and energy, political stability.

Among all the financial risks affecting airlines, fuel price risk may be the most severe for two reasons (Laux et el, 2014). First, fuel prices are highly volatile. Second, fuel is the largest or second largest cost for most airlines. Fuel is one of the major cost of airline operation and a slight movement in the price of fuel have substantial impact on the profitability or otherwise of an airline operation. When airlines enter in to contract with fuel suppliers, they generally agree with a formula of market price (base price) + margin. Accordingly, they do only have control on the margin, not the base price so that when there is an increase in the base price, the supplier will directly transfer such increase to the airline.

One of the most recent shifts in the airline industry has been the increasing proportion of jet fuel costs to an airline's cost structure. According to IATA, the global airline industry's fuel bill is estimated to account for over 17% of operating expenses in 2017. However, there is a substantial variation in the percentage of costs of fuel from airline to airline. As the price of crude oil has continued steadily rising, airlines have been subjected to a cost that has increased nearly sevenfold in just five years (Vasigh, 2009). This seven fold increase of fuel price is unparalleled with any ordinary increase of price in respect of other commodities.

The major problem concerning fuel for airlines is that, unlike some other costs, jet fuel prices are largely out of an airline's control. The reason for this is the simple fact that the price of jet fuel is ultimately the result of a market clearing price. An airline's inability to have control over its

largest cost is the source of an immense amount of risk. In fact, jet fuel in the airline industry is probably one of the largest costs that any firm has no direct control over (Vasigh, 2009).

The volatility of aviation fuel price is extreme. One research has shown that the annual fuel price volatility amounts to a monthly average between 1994 and 2000 of approximately 26 per cent (Tsai, 2008). As a point of comparison, it is found that the annualized volatility of the major currencies to be only 11 per cent. The cash flow of an airline is also sensitive to extreme jet fuel price changes when compared to changes in capital expenditures. Overall, airline exposure to fuel prices is economically significant, and considerable cost savings would be realized by airlines hedging in the event of an extreme price increase (Tsai, 2008).

Carter, Rogers, and Simkins (2002) have argued that airlines also face an under-investment problem when profitable investment opportunities arise during times of high jet fuel costs. In general, there is a positive correlation between industry investment opportunities and jet fuel costs in the airline industry, while higher fuel costs are consistent with lower cash flow. Given that jet fuel costs are hedgeable, airlines with a desire for expansion may find value in hedging future purchases of fuel. As the principal benefit of fuel hedging by airlines comes from a reduction of under-investment costs, the empirical evidence shows a positive relation between hedging and value increases in capital investment (Tsai, 2008).

Airline profitability is reduced by the direct and indirect costs associated with fuel prices. Since competition prevents an airline from perfectly undoing the impact of changes in fuel prices by adjusting its fare schedule or seat capacity according to the optimal mark-up, the fuel price exposure coefficient is predicted to be negative.

On the other hand, care has to be given while adopting hedging exercises. Because hedging companies have their own risk management methods, ill-calculated hedging agreements may be fatal to Airlines. As also noted above, one source of financial risk is the airline's ill-informed hedging strategies. It may be the case that the hedging companies are in a better position than the airline to forecast the market and this may put the airlines in a disadvantageous position. There are growing concerns for taking care of financial risks in the aviation industry and there are some airlines (such as Kenya Airways) whose success story is upside down within few years because they are, among other things, unable to manage their financial risks properly.

According to Star Biz Magazine (2009) after making what some call “careless hedges”, Kenya Airways paid the price as it emerges that is locked into contracts that compel it to pay US$65 per barrel of oil for the year 2009 while the global price was at the time US$ 45 per barrel. There are some researches that demonstrate that hedging is not necessarily advantageous to airlines. Such researches argue that Airlines’ cost structures are such that the value-added to hedging is limited. Specifically, fuel costs on average tend toward concavity, suggesting that cost savings when oil prices drop exceed cost increases when oil prices spike (Laux et al, 2014). This is to underline that hedging is not always the ideal solution to manage financial risks of the airline and the airline is expected to evaluate the best possible forecast of the market before deciding whether to hedge or not.

2.1.2.2 Currency (Foreign Exchange) Exposure

The second financial exposure of aviation industry is Currency. Studies have confirmed the influence of currency risk on airlines for a number of reasons (Tsai, 2008). Firstly, most of the expenses and revenues are deployed in several of the local and major currencies of either currency affect the profitability of airlines in varying degrees. Secondly, borrowing costs may also be stated in different currencies, so the liabilities of the airline may change along with the equity.

Foreign operations include the settlement of the expenses and receipt of revenue in foreign currency, which will have to be converted into a third major currency, resulting in an additional level of exchange uncertainty. However, the local operating expenses are payable in local currency, which is difficult to adjust according to the daily exchange rate, and the airline need to absorb potential exchange rate losses. Also, competition in the airline industry is expected to prevent airlines from fully protecting their revenues from the impact of these currency movements.

As per one study by IATA in 2016, the issue of blocked funds is growing and a source of increasing concern for airlines. It puts that airlines reported blocked amount has reached (at historical rates) USD 4.885 Billion and from this figure USD 1.7 Billion is devalued (IATA, 2006). Countries with an excessive dependence on oil exports or a similar commodity and those countries with less developed, undiversified economies, with weak foreign exchange reserve positions are the sources of such problem.

Recalling that the major market of the airline is Africa, which is the most volatile region in terms of currency, this financial risk is also worthy of considering. The currency of a given country could be devalued overnight showing how vulnerable the airline is. This is because the airline sells airline tickets in local currency and when that currency devaluates, it will be affected directly.

2.1.2.3. Interest Rate Exposure

The third financial risk affecting the airline industry is interest rate. Interest rate risk arises from movements in interest rates. Interest rate risk had several effects. The fact that borrowing costs, lending rates, bond prices and yields were unpredictable meant that financial institutions were unwilling to enter into long-term fixed-rate commitments. In response, firms increased hurdle rates on investments, required faster payback and sought better ways to manage the risk (Moles, 2013).

Interest rates are important to companies and governments because they are the key ingredient in the cost of capital. Most companies and governments require debt financing for expansion and capital projects. When interest rates increase, the impact can be significant on borrowers. Needless to mention the fact that the aviation industry is capital intensive because it operates one of the most expensive equipment, that is Aircraft. A wide body Aircraft costs the airline more than 150 million US dollars (Ethiopian Airlines Annual Report, 2016).

The interest rate is an important factor in the airline industry, as loans, operating leases, and financial leases are extensively used to finance the acquisition of airplanes. High financial leverage ratios are observed in the financial reports of airline companies. Equity investment can be difficult to source because of the high earnings volatility. The direct result of this capital intensive industry is the fact that the debt to equity ratio of an airline is very high. When the debt to equity ratio of the airline is very high, lenders are discouraged to extend loan to the airline and they will increase the interest rate they impose while extending the loan. On the other hand, the interest rate has feature of volatility due to various factors and when there is a change in the interest rate due to such volatility, it will affect the airline seriously because it is already subjected to high interest rate due to its high debt to equity ratio. Borrowing costs are directly related to interest rate changes. This is applicable if companies have variable or floating rate

leases and loans as opposed to fixed interest rate. Accordingly, if the airline opts to go for floating interest rate, it will be vulnerable to any change in the interest rate market.

The above being the financial risks that a given organization faces, the organization is expected to devise mechanisms of managing such risks. For most kinds of activity, risk is unavoidable as long as the outcome is uncertain. Therefore, taking on risk and handling it is a core management discipline. All major corporate decisions involve choices as to how much risk to take and how best to manage these risks. At its simplest, risk management involves procedures for becoming aware of risks and the methods used to analyze risks, assess their impact and respond accordingly (Moles, 2013).

2.1.3. Financial Risk Management

The previous section was related to the risks in general and the major financial risks in the airline industry. Once such risks are ascertained, the purpose of this section is analyzing the means by which the risks are managed. It has two sub-sections. While the first sub-section examines risk management and financial risk management tools in general, the second sub-section is exclusively devoted to discussing financial derivatives as one form of financial risk management tool.

2.1.3.1. Risk Management

The seriousness of financial risks and their impact to the existence of a business organization incentives companies to look for tools to manage them. In line with this, financial risk management practices are those activities and procedures that are employed by managers in an effort of safeguarding an organization from credit risks, liquidity risks and market risks. Financial risk management is a process to deal with the uncertainties resulting from financial markets (Horcher, 2005). It involves assessing the financial risks facing an organization and developing management strategies consistent with internal priorities and policies. According to Holton (2004), financial risk management practices fall into three major categories; credit risk practices, liquidity risk management practices and market risks management practices.

Risk management exercise has always been practices since the down of time. Financial risk management has always been implicit in the management of the firm. Its recent development as a major management responsibility, however, is the result of two major post-war developments (Moles, 2013). The first was the collapse of the Bretton Woods Agreement following the decision by the US on 15 August 1971 to stop exchanging dollars for gold at the fixed price of $35 per oz. From that moment on, foreign exchange markets became more volatile, a factor that directly affected interest rates and, indirectly, other assets such as commodities, many of which are priced and traded in dollars. The collapse of the fixed exchange rate system was shortly followed by the first oil shock, when the price of oil quadrupled in the winter of 1973–4. These two events led directly to a demand for instruments to manage these risks. The increased price uncertainty or volatility that has been seen since the early 1970s has been one of the main driving forces behind changes in financial risk management tools and techniques and the increased choice available to practitioners.

Another development encompassed the fundamental changes that took place in the behavior of economic variables from the mid-1960s. With the collapse of the Bretton Woods Agreement, individual countries were able to pursue divergent economic policies, the impact of which was now transmitted through the free floating exchange rate. To combat inflation and to prevent excessive currency depreciation, countries needed to have a more aggressive approach to managing interest rates, which in some cases were raised to unprecedented levels.

The combination of increased market volatility and the availability of financial instruments for hedging purposes have led to the development of modern financial risk management techniques. The key management task in financial risk management is to balance the desirable objective of risk reduction with the costs of so doing (cost–benefit analysis). The cost of risk management relates to the price to be paid for risk control, be it via insurance, management time or lost opportunities from hedging. Firms will want to economize on these incidental expenses of being in business. In doing so, firms will want to arrive at an acceptable level of exposure in order to allow managers to focus on the core activity of value creation and not be preoccupied by the nature, extent and consequences of the risks in the business to the exclusion of its value-enhancing objective (Moles, 2013).

Organizations can undertake two different kinds of hedging (Moles, 2013). There is operational hedging (which shares some of the characteristics of the third approach discussed below), which

involves the firm in changing sources of supply, the location of manufacturing and so on in order to reduce the impact of economic factors. The alternative is via financial hedging, which uses both on-balance-sheet and off-balance-sheet instruments. Organizations using foreign-currency-denominated borrowings, for instance, seek to eliminate foreign exchange rate risk by using foreign currency income to service the foreign currency loan. On the other hand, the great expansion in what were formerly off-balance-sheet instruments (largely through the use of derivatives) used to manage financial risk has greatly increased the organization's scope for such financial engineering. The advantage of these specialized instruments is that they are relatively low cost but can be rapidly adjusted to take account of changing economic circumstances. On balance-sheet hedging is less flexible in this regard and becomes very inflexible when real assets, such as property and plant, are involved

Financial risk management is a process to deal with the uncertainties resulting from financial markets. Financial risk management is the task of monitoring financial risks and managing their impact. The airline sector is one in which corporate hedging is likely to add value by minimizing the under-investment problems. In the study of corporate risk management, hedging adds value by reducing company taxes, minimizing costs associated with reorganizing financially troubled companies, and preserving (or strengthening) management's incentives to invest in the company's future (Carter, Rogers, and Simkins,2006).

Financial risk management is the task of monitoring financial risks and managing their impact (Arif, 2015). It is a sub-discipline of the wider function of risk management and an application of modern financial theory and practice. Financial risk management falls within the financial function of an organization and is a reflection of the changing nature of this function over time (Arif, 2015). Traditionally, the financial function has been seen in terms of financial reporting and control. The modern approach is to consider the financial function in terms of financial policy and financial decision making. This includes the management of the firm's operational, business and economic risks.

Strategies for risk management often involve derivatives. Derivatives trade on interest rates, exchange rates, commodities, equity and fixed income securities, credit, and even weather. The ability to estimate the likelihood of a financial loss is highly desirable. However, standard theories of probability often fail in the analysis of financial markets. Risks usually do not exist in isolation, and the interactions of several exposures may have to be considered in developing an

understanding of how financial risk arises. Sometimes, these interactions are difficult to forecast, since they ultimately depend on human behavior. Horcher (2005) claims that the process of financial risk management involves identifying and prioritizing key financial risks, determine an appropriate level of risk tolerance, implement risk management strategy, and measure, report, monitor, and refine as needed.

The organization affected by the financial risks have plenty of options to choose from and there alternatives for managing risk. One is doing nothing and accepting all the risks; the other is hedging a portion of exposures by determining which exposures can and should be hedged; and the third is hedging all the exposures possible. However, the key to the risk management process is choosing those risks to accept, not seeking to avoid all risks. According to Moles (2013), the risk management process has three generic approaches, namely hedging, diversification and insurance. Hedging leads to the elimination of risk through its sale in the market, either through cash or spot market transactions or through a transaction, such as a forward, future or swap, that represents an agreement to sell the risk in the future. For instance, the UK-domiciled exporter being paid in euros when the goods are delivered at some date in the future can hedge this exchange rate risk by entering into a forward exchange agreement (with a bank) to sell the euros it will receive at a fixed price and receive a known amount of British pounds rather than leave the result to unknown fluctuations in the exchange rate.

Diversification reduces risk by combining less than perfectly correlated risks into portfolios. For instance, while individual borrowers from a bank each represent a significant element of credit risk, for the depositors at the average bank there are virtually no concerns about credit risk. On the other hand, insurance involves paying a fee to limit risk in exchange for a premium. For example, one has only to consider the benefits to be derived from paying a fixed premium to protect against property damage or loss, or for life assurance, in the traditional insurance contract. In doing so, the insurer, usually an insurance company takes on the risk of unknown future losses.

From an investment perspective, hedging allows airline companies to fund investment when jet fuel prices are high and airline operating cash flows and values are down. There is a positive relationship between hedging and value, suggesting that investors view such investment as positive net present value projects. Airlines have incentives to hedge fuel exposure to protect their internal cash flow in order to meet future commitments to purchase aircraft (thereby

avoiding financial distress). Thus, fuel cost levels tend to be negatively correlated with investment in new planes. Investors see the existence of the hedging premium largely as the result of hedging on capital investment. The process of hedging involves offsetting the risk of a possible future event by betting on the opposite of that event (Vasigh, 2009). After studying the future market on whether the price will be decreasing or increasing, companies will take action opposite to the event they forecast. It is to be noted however that the use of derivatives does not guarantee profitability or a reduction in risks as seen with Japan Airlines, and other companies such as Gibson Greetings that sought to use derivatives to reduce risk and when it actually led to their down fall (Abbey, 2007).

Considering a number of questions can assist the airline how to hedge (Morell & Swan, 2006). These questions include; at these price levels, what is the greatest concern; what are the consequences of hedging and not hedging, what the competitors doing, and so on. Airlines that want to stabilize operating expenses and assure bottom line profitability might seek to hedge fuel price exposure. Airlines that hedge could do so using either operational hedging mechanisms or financial derivatives mechanisms (Laux et al, 2014). Operational hedging mechanisms include engaging in long-term contracts for fuel purchases, attempting to raise ticket prices in response to high fuel prices, and flying slower or less into-the-wind to preserve fuel when fuel is expensive. Airlines may also engage in some operational practices that have the same effect as forward contracts. For example, some airlines negotiate fuel pass-through arrangements with other airlines, whereby a larger airline assumes the risk of fluctuating fuel prices and shields a smaller airline (Laux et al, 2014).

Financial derivatives hedging mechanisms, discussed in detail below, include futures, options, swaps and collars on jet fuel or other petroleum products such as crude oil, heating oil, or even gasoline.

2.1.3.2. Financial Derivatives

Airlines adopt various tools to manage their financial risk exposures. These are also known as derivatives because their value is derived from an underlying security (Vasigh, 2009). In order to understand hedging, three critical questions must be answered: Should the firm hedge? If so, how to hedge? How much to hedge? Once financial risks have been identified, a decision needs to be made as to whether or not the airline should hedge. There is no universally correct answer on whether an airline should hedge jet fuel and/or currencies. Historically, airlines have both prospered and been hurt through hedging strategies.

Ultimately, the successes of hedging actions made today are determined by the outcome of events far in the future. Since the future price of jet fuel or a currency exchange rate is unknown, the outcome of the hedging strategy is unknown; however, hedging can significantly help reduce the range of prices, thereby reducing an airline's exposure to risk.

In order to be successful at hedging, one requires a hypothesis about the price of jet fuel or the currency exchange rate in the future (Vasigh, 2009). To form a reasonable hypothesis, an understanding of the factors affecting the risk item is essential. As basic economic theory states, the price of any good is the equilibrium point between the supply and demand for the good. Related to crude oil, the price of oil should be the equilibrium between the supply of crude oil and the demand for crude oil. However, in financial markets, speculation can comprise a significant portion of a commodity's price. Speculation is the buying (selling) of a good today in the expectation that the future price of the good will go up (down) (Vasigh, 2009). Therefore, speculation will affect the price of the good today. Buying drives up the price (increase in demand) and selling drives the price down (decrease in demand).

Since commodities are traded on exchanges, if the current belief is that the price of oil will be high in the future, then speculators will be taking stances on oil today that ultimately drives up the price of crude oil today. Therefore, speculation is the component of a commodity's price that is not the result of supply and demand, but of future expectations about the commodity's price.

Unlike supply and demand, which contains fundamental underlying market principles, speculation not only creates significant swings in the price of a commodity, but is also difficult to assess and determine. Since jet fuel represents the greatest risk exposure for an airline, an

understanding of the factors impacting the supply and demand for jet fuel is crucial in helping determine a hedging strategy for jet fuel. If it has been deemed beneficial to hedge a commodity, the next question involves how to actually hedge? Hedging involves using financial derivatives which are instruments whose payoffs and values are derived from an external source. While hedging involves using multiple financial derivatives, all hedging activity is based upon forward and future contracts (Vasigh, 2009).

Once it is decided to use derivatives, which will be discussed in the next sections in detail, the last question is how much to hedge. Many airlines are losing money on their current fuel hedges as they bet that fuel prices would continue to rise after going up to a high of about $140/barrel. Since the profitability of hedging has great disparity, providing no considerable amount of risk minimization, the optimum level of hedging rests where the benefits/costs of hedging are offset by any considerable increase/decrease in the commodity's spot price.

Another factor involved in the decision-making concerning the amount to hedge is cash flow. Fuel hedging costs money, and for some strategies, requires premiums to be paid up-front. For airlines, cash flow is always a critical issue and the Extent of jet fuel purchases requires a significant cash outlay for the airlines to hedge.

Forward and Future Contracts, Options, and Swaps are financial derivatives. These financial derivatives are discussed in the following sub-sections.

2.1.3.2.1. Forward contract

Forward contract is an agreement between two parties to buy or sell a specified amount of a commodity at a specific price at a specific time in the future. Here, there is an agreement to buy the underlying assets and the transaction takes place on a predetermined future date and the price at which the transaction will take place is also predetermined. One prerequisite of a forward contract is that there should be another party which is willing to take the reverse condition on the other corner. In forward contract, while an agreement can be enforceable in a court of law, both sides are taking on some level of credit risk as either party has the potential to default on the forward contract (Abbey, 2007).

2.1.3.2.2. Future Contract

A future contract is effectively a forward contract which is standardized in nature and is exchange traded. As a result of the shortcoming of forward contract, future contacts are one of the more desirable financial derivatives used in hedging as they are similar to forward contracts, but feature more formalized and standardized characteristics. They are Standardized contracts with set criteria of the amount, price, and future delivery date of a currency, security, or commodity that are bought and sold at futures exchanges (Abbey, 2007).

Futures Contracts provides the airline with a known, hedged price for a commodity at a predetermined point in the future. One of the major benefits of futures contracts is that they are widely traded for as far out as eight years, making them an attractive solution for a long-term hedging strategy (Vasigh, 2009). Since no premiums exist for purchasing and selling futures contracts, futures contracts represent an absolute gain/loss scenario, where if the spot price of the commodity exceeds the futures price at maturity, a hedging gain is recorded and a hedging loss is recorded when the spot price falls below the future price. In essence, a futures contract acts in a similar way to a swap, but does not involve settlements as the contract is for only a month (one time). To sum up forward and future contracts are obligations on both the buyer and the seller

2.1.3.2.3. Options

An Option Contract is a contract which gives one party the right to buy or sell the underlying asset on a future date at predetermined price. The other party has the obligation to sell/buy the underlying asset at this predetermined price (called the strike price). The option which gives the right to buy is called the call option while the option which gives right to sell is called the put option. It is to be noted that the right always remains with the buyer of the option while the seller of an option has the obligation. In return, the buyer pays the seller a premium for getting the right. This premium is the maximum possible loss for the buyer and the maximum possible gain for the seller.

Options is used when the company is concerned about fuel price increases but it also want to be able to benefit if fuel price move lower. Here the company pays premium. There are two different options: a call option and a put option.

2.1.3.2.3.1. Call Option

If it is believed that the price of jet fuel is going to increase in the future, a call option can limit an airline's exposure to soaring jet fuel prices. However, the major benefit of call options is that if the spot price of jet fuel does not exceed the strike price, the airline does not record a hedging loss, except the cost of the options' premiums (Vasigh, 2009)). Therefore, unlike a swap, to be discussed below, where an airline records a hedging loss if the price of jet fuel dips below the fixed price, options still provide the airline with the benefit of lower than expected spot prices.

The strike price for an options contract represents the price at which an asset can be purchased. From a hedging standpoint, the strike price represents the ceiling for crude oil and is the maximum that one would pay for crude oil. If the price of crude oil is above the strike price, a hedging gain is recorded (less the premium); while if the price of crude oil is below the strike price, the option is not exercised and the only financial loss to the airline is the premium paid.

An important factor to consider when hedging using call options is that while a hedging loss may not be recorded, cash needs to be spent upfront to purchase call options at the premium price. The issue of spending cash upfront is a major deterrent to many companies, especially airlines, since the company may not have sufficient funds for the investment.

Call option is the right, but not the requirement, to buy a particular asset at a predetermined fixed price (strike price) at a time up until the maturity (expiration) date of the option. Buyers of call options pay a premium for the right to buy the commodity at the specified price (Vasigh, 2009). Call options act as caps on the price of a commodity (such as jet fuel). If the market price of the commodity is less than the strike price, the holder of the call option will not exercise his option and will simply buy the commodity at market price. However, if the market price of the commodity is above the strike price the holder of the call option will utilize his call option in order to buy at the lower strike price. If the value of the asset is below the strike price, the owner of the option simply lets it expire unexercised. The primary advantage of buying options is that the investor cannot lose more than the premium. The opposite of call options are put options.

2.1.3.2.3.2. Put Option

Put options are the right, but not the requirement, to sell a particular asset at a predetermined fixed price (strike price) at a time up until the maturity date of the option. Put options protect the seller of a commodity by placing a floor on the price they will be able to sell the commodity for; a put option will only be exercised if the market price falls below the strike price. There are always two parties involved in the purchase of an option. There is the writer (seller) and the buyer. The buyer pays the writer a premium for the contract to compensate the writer for the risk that the option may be exercised. The amount of this premium depends on the value of the underlying commodity, the volatility of its price, and the time to maturity of the option (Vasigh, 2009).

2.1.3.2.3.3. Collar

More recently airlines have moved toward using combinations of a call and a put option called a collar (Morrell and Swan, 2006). The call protects the holder from adverse price increases above its strike price, at a cost of the option premium that must be paid in any event. The holder of this call also writes a put option that limits the advantage it can take of price reductions below its strike price. The total cost of taking the two options is the call option premium paid less the put option premium received (Morrell and Swan, 2006). This is popular with airlines since it locks in the price that will be paid for fuel between two known values.

A collar limits the speculative risk to a small range of price moves. Collar is a scenario which involves purchasing a call option and at the same time selling a put option. Collars require the sale of a put option to compensate for the premium associated with purchasing a call option. While the purchase of call options provides a significant ceiling for a commodity's price, the expense of options premiums either pushes a firm from not using call options, or pushes the strike price to such a high level that it merely guards against a catastrophic increase in the price of the commodity.

While the notion of not recording a significant hedging loss is comforting, going long with (purchasing) call options provides a relative amount of volatility, especially if the strike price is substantially above the current spot price. One potential solution to minimize price volatility are collars; these involve going long on a call option, while subsequently going short (selling) on a

put option. When combined, both a price ceiling and a price floor are created providing the airline with increased cost certainty. Depending on the specific call and put options that are bought and sold, a collar hedging strategy can be cost free.

2.1.3.2.4. Swap

The basis behind any swap is to exchange a floating price for a fixed price over a period of time. A swap is entered into by two parties, with one party assuming the variable price while the other assumes the fixed price. In the case of the airline industry, an airline wishes to reduce their variability in the price of jet fuel; therefore, the airline will assume the fixed price portion of the swap. Since a swap contract does not involve either party taking physical control over the commodity, a swap is deemed an off-balance-sheet financial arrangement where both parties settle their contractual obligations through a transfer of cash. As a result, a swap contract ultimately results in one party "winning" and another party "losing". While the airline may experience substantial variation in settlement payments from month to month, since the airline would continue purchasing jet fuel at the spot price, the settlement payments act as a mechanism to ensure that the airline continues paying a single fixed price for the duration of the contract.

No upfront cash payment is needed in swap. It is used when one is concerned that an increase in fuel prices next year could have an impact on the airlines profit margin. At the end of the period, the company pays the physical invoice to the fuel supplier as normal and a separate settlement will occur with the swap provider. If the average price for the period is higher than the swap then the swap provider pays the difference, if it is lower the company pays the difference. The disadvantage of Swap is it has no scope to benefit from downside price participation.

2.2. Empirical Review

There are prior studies conducted in different countries which are related to the topic/problem of this study. In order to show the research gap and justify the importance of this study the following section presents review of the empirical evidence that have examined financial risk management practices of Airlines.

A study made by Tsai (2008) focused on analyzing the impact of financial risk factors, including interest rate exposures, currency fluctuations, and fuel price changes on the airline industry. It investigated risk exposures in the South African airline industry and uses data on South African Airways and Comair to calculate the impact of risk factors on exposure significance. Based on the financial ratio analysis of the airline characteristics, the results indicate that South African Airways shows a better return on investment better than Comair. Particularly South African Airways shows an improvement in performance with an increase in revenues and stable cost bases, despites the unexpected increase in oil dollar prices by 42%, which contributes to a large increase in returns. The study adds that the common financial speculation of higher risks are accompanied by higher returns may not be feasible to the airline industry, but strategic planning changes and future financial management adaptations to fit the global economy may bring a positive impact on the industry.

Misiura (2015) examined organizational structures and practices of airline risk management systems and their technical and institutional drivers. In particular, this study focuses on the phenomenon of Enterprise Risk Management and its alignment to the requirements of airline business contexts. The methodology used was an exploratory field study in a panel of ten international airlines complemented with findings from two explanatory case studies. The adoption and implementation of enterprise risk management in airlines are found to be driven primarily by coercive and normative pressures, and expectations of improved organizational effectiveness and efficiency. The study also demonstrates that the adoption of enterprise risk management in airlines drives development of new institutions, rules, and routines for comprehensive management of risks. Consistent with the tenets of contingency theory, this study also conveyed lack of a universally appropriate design of an airline enterprise risk management system.

Fernando (2006) reviewed the use of financial derivative instruments in the airline industry to manage risk exposure. It provides the main objective of airiness to enter in to derivative contracts with a counter party and the scope of usage of such instruments. The Airline industry employs derivative instruments primarily to manage volatility in jet fuel prices, interest rate, and foreign exchange rates. It claims that in spite of the lack of consistent information provided in the annual reports, there is strong evidence to support the effective use of derivative instruments to manage operating costs and thereby maximize firm value.

A study by Yashouda (2016) explores the long run and dynamic relationships between the stock price of two airlines namely, Cathay Pacific Airways and China Airlines, against key determinants of financial risks exposure confronting the airline industry, which include interest rate, exchange rate and fuel price risk exposures for the period of January 1996 to December 2011. The co integration technique was employed to detect any long time trending relationship followed Vector Error Correction Model and Vector Auto-Regression. The generalized forecast error variance decomposition and the generalized impulse response function were employed to comprehend the effects of theses financial risk exposures. The empirical results suggest that exchange rate movements have a substantial impact, compared to the fuel price and interest rate exposures against the stock price of the analyzed airlines. The findings play a pertinent role in the determination of the respective airlines foreign vulnerability and financial policies which would be helpful for industry players and policy makers from a financial stability perspective.

In Ethiopia, there are no empirical researched conducted on financial risk management specific to the airline industry. There are studies on financial risks on other industries such as banks and insurances. Eneyew (2013) examines the impact of financial risks on the profitability of commercial banks for a total of eight commercial banks in Ethiopia, covering the period of 2000-2011. The study adopts a mixed methods research approach by combining documentary analysis and in-depth interviews. The study reviews the financial records of eight commercial banks in Ethiopia and relevant data on macroeconomic factors considered. The findings of the study show that Credit risk and liquidity risk have a negative and statistically significant relationship with banks' profitability. However, the relationship for interest rate risk and foreign exchange rate risk is found to be statistically insignificant. The study suggests that focusing in credit risk

management and keeping optimal level of liquidity which enables banks to meet their contractual commitments could maximize return on assets of Ethiopian commercial banks.

A study by Daniel (2017) empirically examines the effect of financial risk on performance of insurance companies in Ethiopia and interprets the result by relating with the applicable regulations. The study used balanced panel model in examining the regression model and collect data from eight insurance companies covering the period of sixteen (16) consecutive years, 2000-2015. It employed a mixed method research approach by combining documentary analysis and unstructured in-depth interviews. The study used panel data techniques specifically fixed effect model on the regression analysis and used E-view8 software. The study used one dependent variable return on asset (ROA), six independent variables that are credit risk, liquidity risk, reinsurance risk, solvency risk, technical provisions risk and underwriting risk. The regression result show that credit risk, liquidity risk, solvency risk, underwriting risk and technical provisions risk show negative and significant effect at 1% and 5% significance level on performance of insurance companies in Ethiopia, whereas reinsurance risk has insignificant effect at 5% significance level on performance of insurance companies. The research concluded that financial risk has significant effect on the performance of Ethiopian insurance companies and argues in support of each variable for Ethiopian insurance companies to give due attention on financial risk to enhance their performance significantly.

The empirical reviews above signify that the available literature on risk management of airlines are scattered and do not dwell on a common agenda. Despite the growing interest of scholars and practitioners in improving the risk management practice of airlines, the discussion of relevant literature on this subject revealed a series of limitations in academic research. The existing studies of airline risk management systems tend to tackle different dimensions of the risk management practice in an isolated manner, contributing to loci-research on risk management structures and practices in airlines, and marginally subscribing to the complex understanding of risk management in a comprehensive perspective (Misiura, 2015). The available research on certain aspects of risk management in the airline industry is extensive, while other dimensions of risk management remain enigmatic. Risk management has been analyzed in academic literature in different dimensions and a unified conceptualization and understanding of these dimensions is needed, for their integration has been poorly assessed in subject literature.

Given that there are no prior studies on the financial risk management of the aviation industry in Ethiopia, information about the impact of financial risks on the airlines' performance remains unclear. This study therefore, is an attempt to address this gap of information on financial risk management practices of the Ethiopian aviation sector.

CHAPTER THREE: METHODOLOGY

The preceding chapter presented the review of the existing literature on risks, financial risks and financial risk management practices with particular emphasis on the airline industry. This chapter presents the research design, research approach, data source and data analysis used in order to address the research questions.

3.1. Research Design

Research design is a plan on how to conduct the research as it aims to connect empirical data to the research questions, and to the conclusion as mentioned by Yin (1994). This Study is a case study design as the only aviation public enterprise in Ethiopia is Ethiopian Airlines. The central feature of case study research design is the investigation of the one or more specific 'instances of' something that comprises the cases in the study (Susan, 2015). A case can be something relatively concrete such as an organization, a group or an individual, or something more abstract such as an event, a management decision or a change program.

Case studies are a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals. Cases are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time (Creswell, 2014). Other common features of case study include; in-depth study; data are collected and analyzed about a large number of features of each case; Cases are studied in their real-life context; understanding how the case influences and is influenced by its context is often of central interest to case researchers; Cases are naturally occurring in the sense that they are not manipulated as in an experiment; The use of multiple sources of data including interviews, and archival documents to allow triangulation of findings. The case study method in research demands a high degree of depth, breadth and rigor, with careful attention to showing the way in which evidence supports the conclusions reached (Susan, 2015).

The ability of case studies to investigate cases in depth and to employ multiple sources of evidence makes them a useful tool for descriptive research studies where the focus is on a specific situation or context. Case study research can be considered a robust research method particularly when a holistic, in-depth investigation is required (Zainal, 2007). One of the reasons for the recognition of case study as a research method is that researchers were becoming more concerned about the limitations of quantitative methods in providing holistic and in-depth explanations of the social and behavioral problems in question. According to Zainal (2007), through case study methods, a researcher is able to go beyond the quantitative statistical results and understand the behavioral conditions through the actor's perspective.

One of the more controversial design issues in case study research is whether or not a single case is sufficient (Susan, 2015). Objections to single case research can arise from concerns about the representativeness of the chosen case, the extent to which generalizability is possible and the vulnerability to confirmation bias, the tendency for the collection or analysis of data to be biased so as to confirm the researcher's preconceived opinion. It is also difficult to carry out comparative analysis with a single case study. However, there are for a single case design, namely that the case is critical in some way (e.g. in theory testing), that it is either unique or typical, that it is revelatory (previously inaccessible to researchers), or that the study is longitudinal, comparing the case at different points in time. Although case study methods remain a controversial approach to data collection, they are widely recognized in many social science studies especially when in-depth explanations of a social behavior are sought after (Zainal, 2007).

This study has used a single case because it is typical in the sense that it is practically difficult to include the financial risk management practices of another airline for there is no private airline in the same status as Ethiopian Airlines and selecting a foreign airline is not feasible at this stage. The study used a descriptive case study to describe and explain findings. Descriptive research is used to describe characteristics of a population being studied (Creswell, 2014).

3.2. Research Approach

When conducting a research, there are different ways of approaching the problem. According to Creswell (2009), there are three approaches of research; quantitative, qualitative and mixed. Quantitative research approach is a means for testing objective theories by examining the relationship among variables (Creswell, 2009). On the other hand, qualitative research approach is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem with intent of developing a theory or pattern inductively (Creswell, 2009). Finally, mixed methods approach is an approach in which the researchers emphasize the research problem and use all approaches available to understand the problem (Creswell, 2003). Hence, based on the above discussions of the three research approaches and by considering the research problem and objective, this study used qualitative research approach.

A qualitative approach is characterized by more of description instead of numerical data and aim to create a common understanding of the subject being studied. Qualitative methods provide a depth of understanding of issues that is not possible through the use of quantitative, statistically based investigations. A major strength of the qualitative approach is the depth in which explorations are conducted and descriptions are written, usually resulting in sufficient details for the reader to grasp the idiosyncrasies of the situation (Devetak, et al. 2010).

The ultimate aim of qualitative research is to offer a perspective of a situation and to provide well written research reports that reflect the researcher's ability to illustrate or describe the corresponding practice (Devetak, et al. 2010). However, knowledge produced may not generalize to other people or other settings (i.e., findings may be unique to the relatively few people included in the research study). It is difficult to make quantitative predictions and it is more difficult to test hypotheses and theories, it may have lower credibility due to the impression that the results are more easily influenced by the researcher’s personal biases.

The use of qualitative approach for this study is justified because the financial risk management practices of the airline cannot be explained solely by analyzing the financial statements and the numericals. It needs further exploration as to why some practices are used or not used. The issues

under discussion deserve provision of a depth of understanding that is not possible through the use of quantitative, statistically based investigations (Devetak, et al. 2010).

3.3. Sampling Design

The researcher used non- probability sampling to select the sample where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected. The technique that the researcher has selected to gather data from primary source is purposive sampling. Purposive sampling method proves to be effective when only limited numbers of people can serve as primary data sources due to the nature of the research design and aims and objectives (Creswell, 2014). Since only the concerned officials of the Airline are primary data sources on issues of financial risk management, this explains why the study uses purposive sampling.

3.4. Data Sources

This research has used both primary and secondary data to ensure that most aspects concerning risks and the management of risks are covered in this research. While primary data helps in collecting real life cases dealing with managing risks, secondary data help in demonstrating the past actions and historical data about how firms deal with managing risks from scientific point of view (Abdeselam, 2014).

3.4.1. Primary Data

Given the nature of case studies that this study used as a research design, which requires in-depth analysis of phenomenon, primary data were collected using semi-structured interviews with the Chief Financial Officer, Director Treasury, and Manager Financial Risk Management of the Airline. These officials of the Airline are selected because they are directly responsible for the issue of financial risk and its management practices.

3.4.2. Secondary Data

In addition to primary data, the study used secondary data from the annual reports of the Airline and other documents including financial statements, due diligence reports, and company policies. The study collected and analyzed different data of the Airline (such as fuel costs, currency data, and loan agreements and the proportion of fixed and floating interest rate) accumulated over the last 5 years and interpret the extent of the financial risks and its management. The research considers the volatility and variety of trends in interest rates, currency values, and fuel prices throughout such periods. These include exposure to the foreign currency exchange rate fluctuations, fuel price fluctuations, and interest rate fluctuations.

3.5. Data Analysis

After necessary data were collected from the primary and secondary sources, the data was processed and analyzed using the appropriate tools. To analyze the findings, the researcher used descriptive statistics for the secondary data results. Descriptive Statistics is employed because it uses the data to provide description of the population, either through graphs, tables, or charts. An interview is used to explain the situation in relation with the financial risk management practices of the airline. Interviews were conducted with three managers to triangulate and supplement the data obtained from the secondary data.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

The previous chapter presents the research methodology adopted in the study. The purpose of this chapter is to present and discuss results of data obtained from different sources used in the study. As mentioned in Chapter Three, qualitative research approach was used. The necessary data gathered from secondary data were analyzed using descriptive statistics. The primary data was collected with semi-structured interviews to triangulate and supplement the data obtained from the secondary sources. Therefore, the following subsections present the results of the documentary analysis and semi-structured interviews.

4.1. Financial Risks of Ethiopian Airlines

According to the result obtained from the annual report of the Airline, Ethiopian Airlines has identified foreign currency risks, interest rate risks, and fuel prices as the three major financial risk of the Airline (Ethiopian Airlines Annual Report, 2016). Therefore, the type of financial risks affecting Ethiopian Airlines are not different from the financial risks affecting the airline industry in general identified by Horcher (2005) that are discussed in Chapter Two.

The first financial risk is Foreign Currency Risk. The Airline claims that as an enterprise operating in many countries from its main hub in Addis Ababa and with major operations in Africa (where the volatility is expected to be more severe because of the political and economic uncertainties in the continent), the Airline is exposed to huge foreign currency risks resulting from changes in foreign exchange rates, partially attributable to inability to repatriate its funds as a result of regulatory restrictions, adverse economic conditions or actions taken by governments in the respective countries (Ethiopian Airlines Annual Report, 2016).

The Second Financial Risk that Ethiopian Airlines faces is Fuel Price Risk. As expected, this is a risk because jet fuel cost is the major expenditure for the Airline (Ethiopian Airlines, 2016). Interest Rate Risk is the third financial risk of Ethiopian Airlines (Ethiopian Airlines, 2016). The Airline is exposed to changes in interest rates mainly on the aircrafts acquired through finance lease (Loan Agreement). The Airline declared that the current ratio of finance lease as compared to the total fleet of the Airline is about 59%. This indicates that 59% of the Aircrafts of the Airline are acquired through loan agreement while the rest 41% is acquired through operating lease i.e. the Airline pays monthly rent for the aircraft during the lease term and the Aircraft will be redelivered to the Lessor at the end of the lease term.

Therefore, the financial risks affecting Ethiopian Airlines are similar with those risks affecting the other airlines of the globe. In this regard, the results of this paper are in line with the relevant literature on the subject issue.

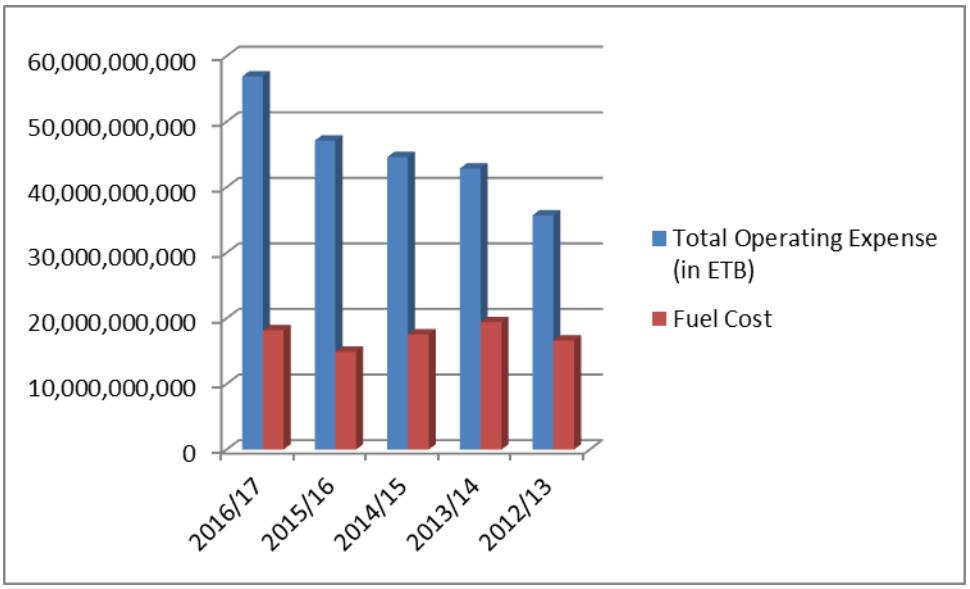
4.2. The Extent of Financial risks of Ethiopian Airlines

Once the types of the financial risks of the Airline have been identified, the next step is indicating whether the risks are worthy of considering or not. If the amount of money involved with the financial risk is very minimal, there is no need to worry much about it. If however, the financial risks involve a relatively huge amount of money, the issue is indeed serious and deserves special attention. The purpose of this section is then to demonstrate that each of the financial risks identified by the Airline involves a great deal of money and financial risk management is certainly a serious issue for the Airline.

4.2.1. The Extent of Fuel Price Risk

Fuel Price is the major cost of Ethiopian Airlines. The graph below shows that the fuel cost that the Airline has incurred as compared to its total operating costs for the last five years.

Figure 4.1: Fuel Cost of the Airline compared to its total operating expense



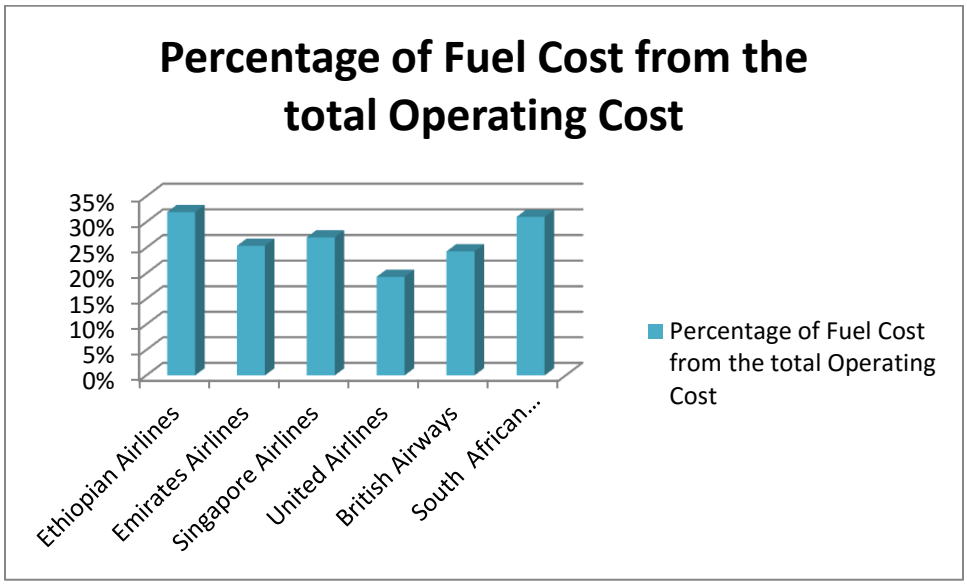
Source: Own calculation from the Annual reports of Ethiopian Airlines (2012/13-2016/17)

The above graph demonstrates that fuel is the major cost of the Airline though the fuel cost has shown a decrease over those years. Fuel cost accounts for 32-47% of the operating cost of the Airline over the last five years.

Due to the fact that Ethiopian Airlines has major operations in Africa and that the African region fuel cost is higher than the rest of the region, it is very pressing that fuel cost holds significant portion of the total operating costs of the Airline. Jet fuel prices in some African capitals are double the global average and it is posing a threat to its aviation sector development. The high cost of jet fuel in Africa compared to other regions due to distribution inefficiencies and infrastructure constraints has held back the development of airlines and fare reduction.

The Chart below shows the percentage of fuel cost from the total operating cost of the best performing airlines in five continents.

Figure 4.2: Percentage of Fuel Cost from the total Operating Cost of Airlines



Source: Own calculation from the Annual reports of Ethiopian Airlines (2016/17)

As it can be clearly shown in the above chart, the two African carriers, Ethiopian Airlines and South African Carriers incur the highest cost for fuel than the other Airlines. This strengthens the assertion that fuel costs in Africa are very high compared to the other regions. This region specific problem adds fuel to the already high cost of aviation fuel for Airlines. High percentage of fuel cost for Ethiopian Airlines and South African Airways means the issue of risk management in respect of fuel cost is more significant to the African Airlines than the other major carriers of the globe. High fuel costs in Africa means the airlines whose principal operation is in Africa are exposed to high fuel price costs and this makes the fuel price risk more significant to the African Carriers compared to non-African carriers.

On the other hand, taking the fuel cost across the airlines whose data is compiled in the above table, the annual report of each of these airline show that fuel cost is the highest operating cost of all the airlines. On a related note, the already increased cost of aviation fuel is expected to be even higher in the year 2018. IATA reported jet fuel price at $1.88 per gallon and $623 per metric ton as of March 2, 2018, up 21.9 percent from 2017. IATA is among those who predicted higher jet fuel bills for airlines around the globe in 2018, as strong travel demand as well as oil prices continue to grow. To compare, jet fuel price was $76.5 per barrel on November 17, 2017,

which is 35 percent higher than a year earlier. On January 26, 2018, jet fuel price was $85.5 per barrel, 30 percent higher than a year earlier, IATA reports.

Interview with Director Treasury at the Ethiopian Airlines, shows that financial risks exposures, including fuel price risks, are very high because of the very nature of the exposures in the sense that the exposures cannot be controlled by the market fundamentals and these are beyond the control of the Airline. He claimed that the market fundamentals are demand and supply and it is the principle that every price movement is the result of demand and supply. But that is not the reality in the case of fuel prices. There are political and geographical factors that push the fuel price to go up and down irrespective of the reality of the market fundamentals. The fuel price may sometimes depend on the political will of the oil producing countries that may have agendas of furthering their needs.

In the current fiscal year (2017/18), the proportion of fuel cost to the total operating cost of the Airline is expected to go beyond 40% as per interview with the Manager Financial Risk Management of the Airline. This is because of the record increase of fuel prices in the international market. Therefore, it can be summarized that the Airline's fuel cost exposure is very high. This complements the assertion by Laux et el (2014) where it is pointed out that commodity price (especially fuel price) is one of the major financial risks of airlines. It is a major financial risk because of the proportion it takes from the total operating cost of the airlines.

4.2.2. The Extent of Foreign Currency Risk

The second financial risk that Ethiopian Airlines made reference is Foreign Currency Risk. Given the international nature of its operations and currently serving 100 international destinations, it deals with various currencies across the globe. The fact that the Airline sales tickets in different currencies means it is exposed to any currency fluctuations affecting the countries in which it operates.

The following table demonstrates the current percentage of sales of the Airline by different currencies. The percentage is calculated after converting various currencies into the reporting currency of the Airline (Ethiopian Birr) as a common denominator.

Table: 4.1- Revenue Breakdown by Currency

Name of Currency	Cur Code	Total Sales	Equiv. Birr	% age
Ethiopian Birr	ETB	9,517,199,564.79	9,517,199,564.79	15%
Chines Yuan	CNY	1,673,767,473.75	5,703,496,568.21	9%
United States Dollar	USD	758,697,664.33	17,864,826,292.69	29%
HONG KONG Dollar	HKD	1,381,701,833.75	4,168,746,419.64	7%
Indian Rupee	INR	5,932,958,438.08	2,085,078,913.48	3%
Nigerian Naira	NGN	30,802,776,481.10	2,295,114,875.61	4%
European Euro	EUR	205,984,505.77	5,383,784,069.66	9%
United Kingdom Pound	GBP	35,629,238.23	1,056,155,370.96	2%
Angolan Kuanza	AOA	8,344,534,373.83	931,250,036.12	1%
United Arab Emirates	AED	195,959,617.85	1,256,214,807.03	2%
Saudi Riyal	SAR	126,550,318.56	794,539,847.54	1%
CFA Franc BEAC	XAF	93,277,205,740.05	3,544,533,818.12	6%
South African Rand	ZAR	586,089,478.76	1,022,257,268.86	2%
Sudanese Pound	SDG	184,170,028.02	272,741,077.89	0%
Canadian Dollar	CAD	35,601,796.76	613,378,728.22	1%
All Other Currencies			5,699,675,641.18377	9.16%
Total			**62,208,993,300.00**	**100.00%**

Source: Due Diligence Report of Ethiopian Airlines Finance (2017)

The above table demonstrates that majority of the revenues collected by the Airline are not collected through hard currencies. Hard currency is any globally traded currency that serves as a reliable and stable store of value. Factors contributing to a currency's hard status might include the long-term stability of its purchasing power, the associated country's political and fiscal condition and outlook, and the policy posture of the issuing central bank (Goldfajn and Rigobon, 2018). Hard currency behaves like a hedge for a reference portfolio of risky assets conditional on movements in global risk aversion.

The currencies of some developed countries have earned recognition as hard currencies at various times and these are the United States dollar, Euro, Swiss franc, British pound sterling, and Japanese yen. Taking this notion of hard currency for the purpose of this paper and evaluating the above table, it can be deduced that only 30% of the sales of Ethiopian Airlines are through hard currency. In other words, 70 % of the sales of the Airline are conducted in soft currencies which imply that such sales are subjected to currency fluctuations.

Needless to mention that the nature of an airline operation requires the company to transact in a currency of jurisdiction and it is expected that most local law prohibits transacting in hard currency. An Airline which generates over three quarter of its sales in soft currency (as demonstrated in the above table) is subjected to an exposure to convert this to hard currency. Given that most of the countries in which the Airline operates are in Africa (53 destinations in Africa (Ethiopian Airlines Report, 2016)), where frequent instability and the resultant currency devaluation is prevalent, the table clearly showed that the exposure of the Airline to this currency risk is significant.

When the expenditure side of the Airline in connection with the currencies used is analyzed, it can be said that the problem is more serious because the expenditures (commitments) of the Airline in hard currency are greater than the revenues the Airline has collected in hard currency. The table below demonstrates this fact in detail.

Table 4.2- Cost Breakdown by Currency

Name of Currency	Curr. Code	Costs - Loc Curr	ETB Equivalent	% of Costs
United States Dollar	USD	1,143,481,610	26,925,218,416.39	48%
Ethiopian Birr	ETB	16,654,584,820	16,654,584,819.83	29%
Chines Yuan	CNY	559,643,484	1,907,029,944.90	3%
European Euro	EUR	144,862,714	3,786,253,579.49	7%
CFA Franc BEAC	XAF	26,345,100,969	1,001,113,836.82	2%
Swiss Franc	CHF	43,097,717	1,033,903,460.85	2%
Indian Rupee	INR	2,645,038,769	929,572,424.88	2%
United Arab Emirates	AED	111,203,335	712,877,877.33	1%
South African Rand	ZAR	369,958,644	645,281,866.61	1%
All Other Currencies			3,054,378,772.9	5%
Total			56,650,215,000	100.00%

Source: Due Diligence Report of Ethiopian Airlines Finance (2017)

As it shown in the above table, 57% of the commitments of the Airline are in hard currency and only 43% of the commitments are in soft currencies. Comparing the high proportion of the commitments in hard currency with the revenue the airline accumulated in hard currency, the Airline is in a disadvantageous position because it is expected to convert the revenues it has collected in soft currencies to hard currencies to fulfill its commitments. Given that the soft currencies are exposed to currency fluctuations as against the hard currencies, this will cause the Airline to incur more costs.

The other aspect of foreign currency risk is currency repatriation problem. Data from the IATA shows that in 2016, 20 African governments owed African and foreign airlines $1.4 billion in

stuck funds. Nigeria, which devalued its currency twice, held the highest amount, $339 million, followed by Egypt with $310 million, then Angola with $190 million, Sudan $250 million and Algeria $125 million.

Ethiopian Airlines shares significant portion of the above problem faced by the global carriers in Africa. The Airline claimed that it had difficulties repatriating funds especially in some oil-producing African countries. Repatriating funds held up in Nigeria, Egypt, Angola and Sudan as a result of the oil price declines accounted for more than $220 million worth of revenue of the Airline stuck in these countries. The Airline also claimed that it booked a currency loss of ETB 430 million as a result of continuous currency Ethiopian Airlines Annual Report, 2016).

Interview with the Manager Financial Risk Management at the Ethiopian Airlines demonstrate that the Airline is currently transacting with 76 international currencies. This shows that the exposure of currency risk for the Airline is very high. Because, when one is dealing with various currencies, its risk will also be very high. This is similar with the assertion of the Director Treasury of the Airline who argued that due to the aggressive growth of the Airline in various continents, it requires transaction in different currencies other than the reporting and functional currencies. When one is dealing with other currencies than the reporting and functional currencies, the exposure will also become high. According to him, while the reporting currency of the Airline is ETB, the functional currency is USD.

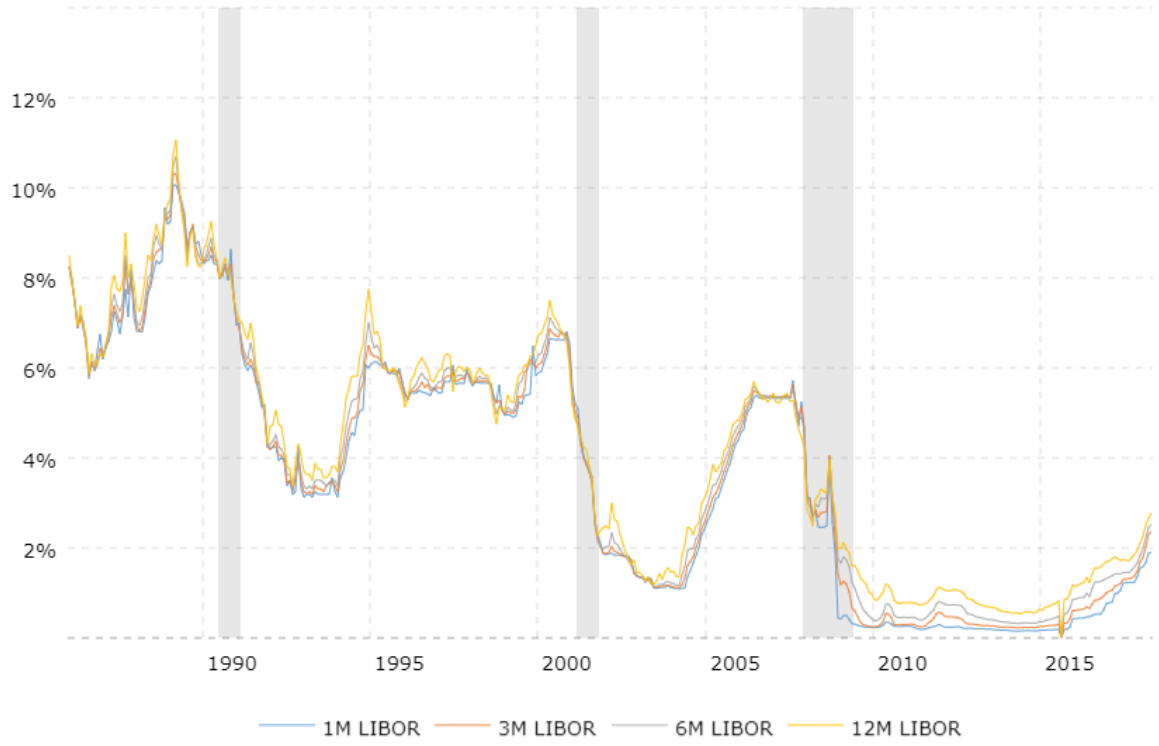
The discussions in this section prove that currency risk exposure of Ethiopian Airlines is very high. This is compatible with the assertion of Tsai (2008) that currency risk is the other major financial risk of airlines in general.

4.2.3. The Extent of Interest Rate Risk

Interest rate Risk is the third financial risk affecting Ethiopian Airlines. Because Aircrafts are one of the most expensive assets, the Airline could not select and buy aircrafts from its own equity. An Airline does also have various expensive projects such as construction of aircraft hangars, Maintenance facilities and other multimillion dollar projects. Hence, the Airline is expected to resort to various loan agreements to finance acquisition of such Aircrafts and construction of the projects.

When the Airline concludes a loan agreement with the lenders and financiers, it will pay interest on the outstanding balance of the loan on each interest payment date. The interest rate is volatile by its nature as discussed in detail in Chapter two. The line chart below is a clear indicative of the volatility of LIBOR (London Interbank Offered Rate) for the last three decades. The 3 month US Dollar LIBOR interest rate is the average interest rate at which a selection of banks in London are prepared to lend to one another in American dollars with a maturity of 3 months. Alongside the 3 month US Dollar (USD) LIBOR interest rate there are also a large number of other LIBOR interest rates for other maturities and/or in other currencies.

Figure 4.3- LIBOR Rates - 30 Year Historical Chart



Source: Macro Trends (2018)

The above historical table demonstrates that though the international trend in respect of interest rates volatility was relatively constant from the year 2010 to 2015, it is signaling significant increase in interest rate starting from the year 2015. Accordingly, the current year (2018) is considered as one of those years interest rate is at its higher side.

According to the Director Treasury of the Airline, to the extent the Airline has managed to agree on a fixed interest rate, the interest rate that it will be required to pay will be fixed on or few days before the date of disbursement of the loan and the amount that the Airline will pay during the tenure of the loan will remain the same. In that case, it is protected from any increase of interest rate in the international market. In the contrary, if the international market shows decrease in the interest rate, it is not in favor of the Airline because it continues to pay the fixed interest rate throughout the duration of the loan agreement irrespective of the rate in the international market.

On the other hand, if the Airline decides to go with a floating interest rate, the interest rate that it will be required to pay during the tenure of the loan is dependent on the international market. The interest rate payment follows the market. Accordingly, if the market shows the trend of decreasing interest rates, the Airline will share the benefit of the decreasing rate in the market because the interest rates will float with the market. If, to the contrary, the market brings increase in the interest rate, the Airline will be disadvantageous because the interest rate that it is required to pay will also increase with the market.

The Airline is expected to make a mix of fixed and floating interest rates depending on the forecast of the market. If the market forecast signals that interest rate in the international market will decrease in the future during the tenure of the term, it will fight with the lenders to make the interest rate floating. The reverse will be true if the market forecast indicates increasing interest rate trends in which case the Airline will tend to go for fixed interest rate.

For the financing of acquisition of aircraft and other equipment and other construction projects of the Airline, Ethiopian Airlines has concluded loan agreements and finance leasing arrangements in the currencies of United States Dollar (USD), Euro (EUR), Chinese Yuan (CNY), and ETB. The table below summarizes the fixed and floating interest rate proportions from the loans of Ethiopian Airlines as of June 30, 2017.

Table 4.3: Long Term Loans of Ethiopian Airlines

Currency of loan	Loan Type	Loan Amount
USD	Fixed interest rate	2,653,574,143
	Floating interest rate	413,039,064
Total		**3,066,613,206.87**
EUR	Floating interest rate	132,780,296.00
Total		**132,780,296.00**
CNY	Floating interest rate	753,062,500.00
Total		**753,062,500.00**
ETB	Fixed interest rate	497,620,800
Total		**497,620,800.00**

Source: Due Diligence Report of Ethiopian Airlines Finance (2017)

The above table (which is also provided in detail in Annex 1 of this paper) is one strong manifestation of the capability of Ethiopian Airlines to borrow money without active involvement or foreign guarantee of the government of the Federal Democratic Republic of Ethiopia. Any external borrowing in respect of all projects by the government of Ethiopia are considered Public and publicly guaranteed (PPG) external debt. According to the International Monetary Fund, PPG debt includes the debt of the federal government, regional governments, and major state-owned enterprises except Ethiopian Airlines (International Monetary Fund, 2015). Ethiopian Airlines meets the criteria for exclusion set out in the 2013 Staff Guidance Note on the DSF for LICS (Annex 3) because it is run on commercial terms, has a sizeable profit margin (as reflected in audited accounts published annually), enjoys managerial independence, and borrows without government guarantee (International Monetary Fund, 2015).

According to the table, the Airline has borrowed USD denominated loan in an amount of USD 3,066,613,206.87 as a long term loan and the purpose of those loans are in order to finance the acquisition of the different Aircrafts of the Airline across the years. From such loan that the Airline borrowed from various lenders, USD 2,526,074,143 (which constitutes 82% of the USD loan) is a fixed interest rate loan so that the Airline continues to pay the fixed interest rate during the tenure of the loan agreement even though the market is indicating an increase in interest rate. That means, only 18% of the loan is floating interest rate loan and the Airline will pay an interest rate based on the interest rate available in the market. This is evidence that the Airline has a mix of fixed and floating interest rate for its loan agreements with substantial percentage to the fixed interest rate. According to Director Treasury of the Airline, the decision of the Airline to fix significant portion of its loan agreements while interest rate is justified because interest rate was very low in the last decade since the financial crisis in 2008. Interest rate is reviving for the last couple of years and it is showing significant increase in the current fiscal year and most of the Airline's loan agreements are closed in fixed interest rates means it will not be affected by the interest rate increase.

Coming to the loan agreements of the Airline denominated in Euro, 100% of the total EUR 132,780,296.00 loan has floating interest rate. The loans are with the development banks of France and Germany and the purpose of the loan has been for the construction of the Ethiopian Airlines Aviation Academy and construction of expansion project of the Cargo terminal of Ethiopian Airlines. Hence, the interest rate of the Airline for the Euro loans will follow the market so that if the market shows increase in interest rate, the Airline will also be subjected to increased cost. The Airline will only benefit in case the international market on interest rate decreases.

The third currency that the Airline agreed to use in the loan agreement is Chinese Yuan (CNY). CNY was used because the loans were arranged by the Export-Import Bank of China and the purposes of the loan were for the construction of Ethiopian Airline's five star hotel project and construction of new Aircraft hangars for the Airline. All the CNY 753,062,500.00 borrowed by the Airline from the Export-Import Bank of China has floating interest rate. So in the same token with the Euro loans, the airline is subjected to increase the interest rate if the market goes up any time in any interest payment date and the Airline will receive a reduced interest rate if the reverse is true. The fact that interest rate for EUR and CNY denominated loans are agreed in

floating rate means the Airline is subjected to be affected by any increase of interest rate in the international market. As discussed above, as the interest rate market is reviving in the current fiscal year, the Airline will be affected because the interest rate that the Airline pays is adjusted upwards.

The other currency is Ethiopian Birr (ETB). This is the loan in the amount of ETB 497,620,800.00 that the airline borrowed for the purpose of purchasing one MD (11) Aircraft and the interest rate is a fixed rate. In general like any other big company, Ethiopian Airlines is heavily dependent on loans to finance acquisition of Aircraft and construction of its major projects. Since this involves a very huge amount of money as seen in the preceding discussion and poses potential financial risk, there has to be a mechanism of managing such risk. This will be the main theme of the subsequent sections of this paper.

The interviews with the officials of the Airline strengthen the assertions above. The Director of Treasury claimed that the Airline business is one of those businesses which are capital intensive and it affects the debt-to-equity ratio of the Airline to a great extent. Any Airline, including Ethiopian Airlines, relies on loan to acquire the capital intensive aircrafts and such loan has interest rates fixed with them. The interest rate risk exposure as a major financial risk for Ethiopian Airlines is also compatible with practices of other airlines as confirmed by Moles (2013).

4.3. Financial Risk Management Practices of Ethiopian Airlines

The preceding two sections emphasized on analyzing the types of financial risks of Ethiopian Airlines and the Extent of each of the identified financial risks. They were important in asserting that because the issue of financial risk involves a great deal of money in the context of Ethiopian Airlines, the Airline is expected to resort to meaningful risk management practices. In this section, the paper addresses the financial risk management practices of Ethiopian Airlines.

Ethiopian Airlines has adopted a policy on financial risk management known as “Corporate Finance Procedures Manual Financial Risk Management Policy” whose last revision date was December 15, 2017. The purpose of the Financial Risk Management Policy is to establish the hedging policy for, and provide general procedural direction regarding the use, procurement, and

execution of fuel price, interest rate, and currency exchange rate hedging, including the contractual exchange of different fixed and variable payment streams through various hedging structures and strategies.

The Policy defines hedging as a contractual tool used to reduce exposure to volatile and potentially rising costs. Hedging reduces exposure to price risk by shifting that risk to companies that have opposite risk profiles or to investors who are willing to accept the risk in exchange for profit opportunity. The policy entrusts the Treasury department of the Airline to ensure that fuel prices, interest rates and exchange rates are mitigated; Ethiopian Airlines enters into hedging transactions to ensure planned profit margin by locking in budgeted fuel prices, interest rates and exchange rates; and its cash flow and profitability is protected from unforeseen exposures due to sudden changes in the world economy affecting commodity prices in the financial markets.

The Treasury Department of the Airline is mandated to communicate with potential banks, financial organizations, trading companies, and financial agents/brokers, that could give service to collect information on Jet Fuel, interest rate and currency market; liaise with suppliers, financial organizations, banks, hedging companies, professional experts/agents/brokers, trading companies etc.; analyze and submit recommendation on issues such as prevailing market situation, forecast of market situation, available hedging structures and strategies, the workings of the market and how the available structures and strategies can be used for price management purpose, the risks involved in hedging, and recommendation on the best fuel hedging structure and strategy. Once the recommendation to proceed with hedging is approved by the management, Treasury Department will then implement the decision by itself by formalizing the contract with the hedging providers.

The Policy does not however anticipate only the positive side of hedging exercise. Interestingly, it has also admitted that hedging may bring negative outcome. In the latter case, the Policy provides that this will be considered as the cost of doing business (business risk). While all effort and the best knowledge of the market situations should be applied in the initiation of hedging and transacting and further due diligence and careful approach should be exercised, in the event of the transaction ending in the loss of money by Ethiopian Airlines, it should be considered as business risk resulting from differences on and deviations from the speculation due to unforeseen circumstances and volatile nature of such transaction.

4.3.1. Fuel Price Risk Management Practices

The first financial risk of the Airline whose management risk is analyzed is fuel price risk. The Financial Risk Management Policy of the Airline has section dedicated on the procedures of hedging increasing fuel prices. The Policy provides that it is the policy of Ethiopian to hedge fuel price based on up to the maximum of 75% of its annual fuel volume uplift requirements at any one time. It is the policy of Ethiopian to hedge fuel prices for a maximum period of one year. However, if conditions are believed to be extremely favorable to hedge fuel prices for more than one year, proper approval is required. As far as the procedure for fuel hedging is concerned, the Policy provides that Treasury Department reviews price trends, forecast of hedging structure available in the market and recommend to top management for implementation of hedging. It could also recommend adopting natural hedging mechanism if the available information in the market justifies this type of hedging treatment. Treasury Department will invite selected hedging companies and request their quotation.

Upon receipt of hedging price quotation from selected hedging companies, the Treasury Department analyzes factors including, but not limited to the structure (Swap, Option, Collar, etc.), Period of hedge, volume to hedge, target price, and recommendation, and up on approval by the Chief Financial Officer, it will proceed to implementation.

After the implementation of the hedging exercise, the Policy provides that on the date of maturity of the placed hedge product, Treasury Department shall immediately notify Chief Financial Officer with a report on the outcome of the hedging process; follow-up, collect and ensure the amount due to Ethiopian Airlines is deposited to Ethiopian Airlines designated account timely; or immediately notify Chief Financial Officer and the Vice President Internal Audit and Compliance in the event the hedging results in additional loss of money by Ethiopian and settle the amount due to the hedging company as directed and in accordance with the signed contract.

The Airline claimed that during the fiscal year of 2015/16, there was no hedging exercise. But, because of the world economic downturn and the supply and demand situations, the price of fuel is at its lower levels which calls for time to see the trend of the price fluctuation and consider the hedging exercise if found feasible. However, as discussed in the preceding sections, the price of

fuel price is manifesting significant increase in the current fiscal year (2018) but so far no hedging exercise has taken place by the Airline.

Interview with Director Treasury shows that apart from prescribing financial risk management policy, the Airline does not currently have any hedging practice. The Airline is very risk aversive when it comes to using derivatives to hedge the currently increasing fuel costs. The Airline considers a hedging exercise very technical and it does not have the expertise to deal with the complexities involved with hedging. This is because the concerned staff and management of the Airline do not take formal training on financial risk management tools and are not provided with some systems used to forecast financial risks and guide to use risk management tools. To some extent, the Director of Treasury also argued that the non-availability of the use of financial derivatives in some African states also share part of the problem. Also, the Airline does not invest in availing (purchasing) some financial risk management systems (software) that ease the task of the finance staff in forecasting the market and recommending use of financial derivatives in real time for the required intervention by the Airline. On the Other hand, the Airline also pays due attention to the experience of Airlines, such as the neighboring Kenyan Airways, that are proximate living examples against hedging.

The Manager of Financial Risk Management of Ethiopian Airlines argues that given the fuel price is gradually approaching USD 80 per barrel from USD 40 per barrel at the start of the Airline's fiscal year (July, 2017), the Airline has missed an opportunity of using a hedging tool (specifically call option). This only has cost to the Airline in respect of the initial premium but the Airlines would have been a huge beneficiary. Even if the department has recommended the use of call option this year, it was not materialized because the recommendation has not been endorsed by the management of the Airline. Most of the airlines in the world use various hedging instruments that are discussed in Chapter Two.

According to Fernando (2006), all the 15 major international airlines use hedging as risk management tool against fuel price volatility. From the 15 airlines examined in the study, only two airlines, namely Air Canada and Hawaiian Airlines have registered a loss of USD 3 million and USD 4.2 million have registered a loss by using hedging instruments against their fuel price exposure. All the other airlines have registered significant profits by using hedging strategies. Such include South West Airlines (USD 892 million), Qantas Airlines (USD 403.5 million), British Airways (USD 303 million), Singapore Airlines (USD 167 million), American Airlines

(USD 64 million), Easy Jet (EUR 12.3 million), and West Jet (USD 155,000) (Fernando, 2006). These figures clearly demonstrate that hedging exercises used by most of the airlines are profitable to the Airline. While it may be good to be conservative on using hedging tools in order to avoid possible losses, a history using no hedging exercises in the case of Ethiopian Airlines in sharp contrast from the practices of most of the airlines of the globe.

4.3.2. Interest Rate Risk Management Practices

The other financial risk of the Airline whose management practice is to be considered is interest rate risk. The policy provides that it is the policy of Ethiopian Airlines to manage interest rates on a natural hedge basis by keeping a balance between fixed and floating rates. However, if the rates are floating and there are indications that interest rates are going to increase, it shall hedge in the available financial markets that are favorable to the Airline.

The Policy prescribes that at the time of securing aircraft loan on or prior to the delivery date of the aircraft, the Airline will negotiate with lending institutions to fix the interest rate or take the floating option. If the conditions are favorable and LIBOR is at the lowest possible end, the Airline will opt to fix it. This will bring a natural hedge. If the rate is left floating due to the circumstances at the time, it follows that the Airline will be exposed to risks of increases in interest rates. In this case, Treasury Department will review interest rate trends, forecast of hedging structure available in the market for interest rates and recommend to top management for implementation of hedging. Treasury department could also recommend adopting natural hedging mechanism (creating a balance between fixed and floating rates) if the available information in the market justifies this type of hedging treatment.

Coming to the procedure of hedging for interest rate risk per the Policy, Treasury Department will invite selected hedging companies and request their quotation on interest rate swaps. Upon receipt of hedging price quotation from selected companies, Treasury Department will set criteria and analyze issues such as the current LIBOR structure and interest rate markets, the hedging options available in the market for interest rates, amount of the loan and the interest rate to be hedged, target interest rates, and recommendation to management for decisions. Once approved by the management, it will finalize negotiation with the shortlisted hedging company and follows up same during the tenure of the hedging. The final stage in the exercise of fuel hedging that was discussed above is also applicable to the interest rate risk and this includes

communicating negative outcome of the hedging exercise to the CFO and Vice President Internal Audit and Compliance.

The Airline declared that due to the prevailing low rates at the time of aircraft deliveries in the last five years, the Airline opted to use fixed interest rate for the major portion of the loan. Ethiopian Airlines was also able to use the capital markets for its recent loans associated with the acquisition of the Boeing 787s and 777s Aircrafts which provided lower fixed interest rates as compared to the other interest rate offers in the market.

4.3.3. Foreign Currency Risk Management Practices

The Risk Management Policy of the Airline has also dedicated clauses on risk management practice for foreign currency risk. It is the policy of Ethiopian to manage the fluctuation of exchange rates by transferring to hard currencies (USD, GBP, and EUR). It uses natural hedging by swapping from one hard currency to another and keep the balance. However, as a multi-currency operator, when there are marketable currencies, it can hedge in the known financial markets and mitigate the impact of devaluation.

According to the Policy, Treasury closely monitors the movement of currency exchange rates of all sales currencies regularly in cooperation with respective area managers. On regular basis, Treasury reviews and monitors exchange rate trends, study hedging structures available in the market for the currencies the airline is exposed, and recommend to top management for implementation of the exchange rate hedging.

In order to secure approval of the hedging exercise by the CFO, Treasury has to first receive hedging price quotation from selected hedging companies and will analyze, among others the availability of the hedging market for the currency under discussion, hedging structures for exchange rates (such as swaps, options, and forward contracts), period of currency hedge, the amount of money to be hedged, and target exchange rate compared to the prevailing rate. Assessment of the hedging exercise will be evaluated at the end of the tenure of the currency hedging and same should be communicated to the CFO and VP Internal Audit and Compliance.

Apart from the policy, the Annual report of the Airline has indicated that in order to mitigate foreign currency risk, the Airline uses mainly a natural hedge by effecting payments in the currency of sales and maintains a higher percentage of its reserve cash in relatively stable hard

currencies such as USD, EUR and GBP. The report also claims that recently, due to high fluctuation of most currencies against the US Dollar, as well as critical shortage of foreign exchange in some of the major markers in Africa, the Airline is closely working with IATA for possible ways of hedging of selected currency risks in major financial markets with selected banks.

As per the Acting Chief Financial Officer, the problem in most African countries is the absence of hedging market. There is no hedging market in Angola, Ethiopia, Sudan, and Zimbabwe and the market is only available in Nigeria. However, comparing with the other management practices of the Airline towards the other risks, it can be noted that the Airline has gone far in managing its foreign exchange risks. Interview with the three officials of the Airline identify that different management tools are used to manage foreign currency risk.

The first of all these management is the so called natural hedging. This is a fundamental principle of the Airline that any cost in a given jurisdiction should be incurred in the currency of sales. As discussed above, this is also the underlying principle of the Financial Risk Management Policy of the Airline. One mandate of the financial risk management department of the Airline is to negotiate on this point and following up its implementation. For example, since the sales in Angola are made in Angolan Kwanza, any cost in Angola should also be incurred in the currency of sales, i.e. Angolan Kwanza. The Airline promotes this principle aggressively. Natural hedging is the most effective means of financial risk management. As discussed in Chapter Two, the use of financial derivatives has its own risks and it may lead the Airline to incur losses. By using natural hedging, not only does the Airline manage its risk, it also manages it without cost.

The other tool being used by the Airline is Currency Pooling. This requires that all sales made in local currency should immediately be converted to hard currency and be transferred to the concentration hard currency accounts of the Airline in CITI Bank (New York) and Deutsche Bank (Germany). This enables the Airline to prevent any devaluation of the local currency if it is kept unconverted. If done promptly without leaving any possibility for devaluation, this can serve as effective risk management practice.

The Airline also has a foreign exchange risk management tool known as Dollar Indexed Bonds. This is especially important in case the Airline has difficulties of repatriating the funds by converting them in hard currencies. In order to minimize the risk of devaluation, the Airline

enters in to dollar indexed bonds arrangement with the government. This was particularly practiced in Angola. When the Airline lends local currency to the government, the local currency will be indexed (referenced) in USD at the prevailing rate at the time of the contract and when the loan matures after one year or six months, the local currency that the Airline will get at maturity date is the USD equivalent of the local currency at such maturity date. Still the Airline is not getting hard currency but it can at least transfer the risk of devaluation.

The Manager of Financial Risk Management said that the Airline was able to protect 80% of the trapped funds in Angola (which were approximately USD equivalent of 100 million in Angolan Kwanza) through these dollar indexed bonds. Furthermore, buying Treasury bill of the government is another foreign exchange tool the Airline is using. Because the interest rate is very high (as high as 20% per annum) when buying treasury bills, the Airline can at least offset the effect of devaluation through proceeds from the interest rate by engaging in these kinds of arrangements.

The other practice is property purchase in local currency. This is again the management practice when repatriation is an issue. The Airline purchases buildings in the local currency so that it can use them for office/residential purposes for its airline operation and/or generates revenue through leasing the premises. The Airline has buildings in Zimbabwe, Tanzania, and Uganda through such process. There are also attempts to do the same in Sudan, Angola, and Nigeria as one option of avoiding the risks of currency devaluation in these countries. Interview with the Acting CFO of the Airline demonstrate that this practice of property purchase is one of the methods also used by other airlines looking for managing their foreign currency risks.

In the case of Nigeria, the government allowed the use of forward contracts to minimize the currency repatriation problems in the country. This is a method by which the Airline enters in to contract with banks so that the NYRA amount against one USD the Airline will get after some months will be fixed in advance and the parties will make reconciliation at maturity date. For example, let's say the parties fix the rate of NYRA to USD at 400 for six months and for a maximum of USD 1 million. If the official rate of USD to NYRA becomes 500 after six months, the Airline has the right to get NYRA 100 per each USD. To the contrary, if the rate of USD to NYRA reduces to 300, the Airline will pay NYRA 100 per USD. With this forward contract, the Airline managed to get USD equivalent of 15 million as a profit. The Airline was very much beneficiary of the forward contract. The problem of this arrangement is the nature of the forward

contract is non-delivery forward, as opposed to delivery forward. By Non-delivery forward it means that at maturity of the forward contract, the Airline will only be paid in local currency, not hard currency. That means, it can only reduce any devaluation of the currency after the maturity date. The Airline is expected to look for other options of managing the risk of devaluation.

Currency Swap is the other foreign exchange risk management tool being used by the Airline. This tool is also important in case there is currency repatriation problem. Agreements that Ethiopian Airlines concluded with Kenya Airways and Dangote Cement will fall under this risk management tool. Because ETB is the reporting currency of Ethiopian Airlines, the Airlines agree to swap ETB with Kenyan Shilling and Nigerian NYARA. That means, Kenya Airways and Dangote Cement paid Ethiopian Airlines in ETB in exchange for which Ethiopian Airlines will make the equivalent Kenyan Shilling and Nigerian NYRA respectively.

Before implementing the currency swap tool, the Airline's legal department and finance will undertake a due diligence exercise on the other company as to compliance of this company to the tax and other laws to ensure that the Airline is not transacting with illegal companies and is not involving in money laundering activities. Notification and approval should also be secured from the National Bank of Ethiopia before proceeding with the transaction.

The Airline has also made use of diplomatic pressures to repatriate its blocked funds. This is particularly the case in Nigeria when there was an acute hard currency problem over the last years. According to the Acting Chief Financial Officer of the Airline, when Ethiopian Airlines was invited by the government of Nigeria to start scheduled operation in Kaduna, one of the provinces of Nigeria, the Airline made a pre- condition that it should get its trapped funds in NYRA repatriated in hard currency. Since other airlines were against the idea of starting operation in Kaduna and Ethiopian Airlines took the initiative to do this, the government was able to accord the Airline with a special privilege of repatriating most of its funds accumulated in NYRA.

4.3.4. Summary on Financial Risk Management Practices of Ethiopian Airlines

The purpose of this section is to compare the experience of the Airline with the international practices that are discussed in the literature review. The major departure of the practice of Ethiopian Airlines is its fuel price risk management. Despite the international financial derivative practices of global airlines propagated by Vasigh (2009), Abbey (2007), and Morell and Swan (2006), Ethiopian Airlines does not make use of these financial derivatives for fuel cost risks. With respect of interest rate risks, the major risk management tool of the Airline is assessing the global market and deciding whether to go for fixed or floating interest rate. However, it should be noted that the Airline is not using financial derivatives to manage financial risk managements despite the international practices. On currency risk, the Airline deploys risk management tools including natural hedging, currency pooling, dollar indexed bonds purchase, treasury bill purchases, forward contracts, currency swap, and property purchase. Compared to the other risks, the Airline has make use of financial derivatives in connection with currency risks.

CHAPTER FIVE- SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The previous chapter discussed the findings of the study obtained from different data sources. The purpose of this chapter is to give summary of findings, conclusions and recommendations. Accordingly, the chapter is organized in three sections, the first section presents the summary of findings followed by conclusions of the study in the second section and the third section presents the recommendations provided based on the findings of the study.

5.1. Summary of Findings

This paper was all about the financial risk management practices of Ethiopian Airlines. It can be summarized that the Airlines has make use of various tools to manage its interest rate risk and currency risk per the available risk management tools. As far as currency risk is concerned, Ethiopian Airlines has used risk management tools in both scenarios where there is currency repatriation problem and when there is not. If there is no repatriation problem, it uses tools such as Natural Hedging by aggressively implementing the principle that the airline's commitments in a given location are discharged in the currency of sales, and Currency Pooling (where local currencies are converted to hard currencies and transferred to concentration accounts of the Airline immediately). In the cases of repatriation problems, it was discussed that the Airline uses tools such as purchase of Dollar Indexed Bonds, Purchase of Treasury Bill, make use of non-

delivery forward contracts, currency swapping, and property purchase to manage its financial risks.

On Interest rate risk, though no practice of using the financial derivatives, the Airline is trying to make a mix between fixed interest rate and floating rate albeit the proportion of the fixed rate is very big. It was discussed that 82% of the USD indexed loans have fixed rate as their interest rate. This is a positive move given the fact that interest rate these days is increasing and the Airline is benefiting because of the fixed rate.

Regarding the fuel cost risk management, the Airline has followed a wait and see approach when it comes to hedging fuel cost risks. There is no hedging exercise for fuel cost. Despite the recommendations from Treasury department to go for call option amid the increasing fuel costs, the management is still too hesitant to endorse the proposal.

It is also witnessed that the Treasury Department of the Airline and the financial risk management division within Treasury Department did not receive any formal training on financial risk management tools and are not equipped with the required expertise to deal with the complexities involved in hedging exercises. There is no formal training that the staff has taken on issues of financial risk management and the issues are known thus far by the individual self-learning initiatives of the staff.

Financial Risk Management division of the Airline is not also provided with the required systems that can assist in forecasting the market and proactively managing risks by alerting the management. It is also seen that until recently the main objective of outstation managers of the Airline is solely to sell tickets and they do not give due attention to do something about the ticket sales to protect it from being devaluated before it is converted to hard currency and repatriated to the concentration accounts of the Airline. Because there are no finance managers in each outstation office, this has also an impact on the financial exposure of the Airline.

5.2. Conclusion

As discussed in the previous chapter, the Airline is making use of various risk management tools in relation to currency and interest rate risk. This implies that the Airline has devised tools against currency and interest rate volatility. But, no risk management tool is being exercised by

the Airline as far as fuel cost risk is concerned, implying that it is not protected against fuel price volatility.

However, Ethiopian Airlines does not have active participation in the financial derivatives market discussed in Chapter Two and currently being used by other global airlines to manage their financial risks. No financial derivative is being used by the Airline with regard to fuel price and interest rate risks. The Airline uses financial derivatives to a limited extent in the case of the foreign exchange risk. This is explained by the fact that financial derivative markets are not available in most African countries, the financial risk management staff and the management of the Airline does not have adequate resources by way of dedicated formal training and equipment to engage in the financial derivative market. The non-use and/or non-availability of the financial derivatives as a major tool for financial risk management is an indication that the Airline is vulnerable to any fuel cost, interest rate, and currency volatility.

5.3. Recommendations

Based on the conclusion and findings in the preceding section, the following recommendations are forwarded:

- While it is good to benchmark Airlines that have lost by using hedging tools, the Airline is expected to revisit its total disregard to hedging tools especially for fuel cost risks. Currently, Fuel price is moving upwards and the management of the Airline should consider hedging its risk per the recommendation of its financial risk management division. There are also best practices from the other airlines that have profited or at least managed their cash flow by using hedging tools.

- The financial risk management staff of the Airline should be equipped with the required formal training and systems on financial risk management so that they can confidently alert the management on the possible financial risk management tools in real time. The aggressive cost saving initiative of the Airline should be balanced with its long term human capital management.

- The management of the Airline and the outstation managers should treat financial risk management as one major item that deserves special attention. They should be trained on the financial risk exposures and the management tools in a better detail and depth.

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ANNEX 1: Long Term Loan of Ethiopian Airlines

Year	Lender	Asset	Loan Date	Loan Maturity	Original Loan	Loan Paid	Loan Balance as of Jun 2017	Terms & conditions
2003	Barclays	(1) 737-700 & (1) 767-300ER	1/11/2003	30/06/2017	162,695,808	162,695,808	0	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2010	Export Development Canada	(8) Q400 & Spare Parts	17/03/2010	16/07/2022	149,864,306	75,937,228	73,927,077.88	12 years Guaranteed Loan /Interest : Fixed
2010	Citibank	(5) 777-200LR & Spare Engine (Senior Loan)	21/09/2010	20/07/2023	590,704,925	313,595,500	277,109,424.74	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2011	AFC, PTA & AFDB	(5) 777-200LR (Junior Loan)	23/05/2011	22/07/2018	82,202,847	72,600,912	9,601,935.00	7 years Loan /Interest rate ,Floating
2011	JP Morgan	(5) 737-800	22/11/2011	21/04/2024	183,526,525	81,728,967	101,797,557.86	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2011	ING Capital LLC	(5) 737-800 (Junior Loan)	22/11/2011	21/04/2019	25,175,686	17,646,883	7,528,803.46	7 years Loan /Interest rate ,Floating
2011	JP Morgan	(1) CFM56-7B27 Spare Engine	22/11/2011	21/11/2023	5,021,850	2,406,303	2,615,546.83	12 years ECA Guaranteed Loan ;Fixed
2012	JP Morgan-Capital Markets	(7) 787-8 (Senior Loan)	5/12/2012	4/5/2026	647,888,109	219,348,563	428,539,545.84	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2014	JP Morgan-Capital Markets	(3) 787-8 (Senior Loan)	12/6/2014	14/08/2026	273,965,000	56,947,919	217,017,081.00	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2012	ING Capital LLC	(7) 787-8 (Junior Loan)	25/10/2012	24/05/2021	87,500,000	49,553,571	37,946,428.73	7 years Loan /Interest rate ,Floating
2014	ING Capital LLC	(3) 787-8 (Junior Loan)	1/10/2014	1/10/2021	37,500,000	15,178,571	22,321,428.62	7 years Loan /Interest rate ,Floating

2014	JP Morgan/Capital Market	(1) Genx spare engine(MSN 956460)	7/11/2014	7/11/2022	14,466,000	4,642,747	9,823,253.00	7 years Loan /Interest rate ,Floating
2012	Export Development Canada	(5) Q400	28/09/2012	27/09/2024	93,546,620	36,222,305	57,324,315.14	12 years Guaranteed Loan /Interest : Fixed
2013	TDS - Capital Markets	(1) 777-200LR	10/2/2013	9/2/2025	124,604,000	41,534,672	83,069,328.00	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2013	ING Capital LLC	(1) 777-200LR (Junior Loan)	7/2/2013	6/7/2020	17,113,632	9,168,017	7,945,614.74	7 years Loan /Interest rate ,Floating
2014	JP Morgan-Capital Markets	(2) 777-60F (Senior Loan)	12/12/2014	9/11/2026	294,257,000	67,433,893	226,823,107.00	12 years ECA Guaranteed Loan ;/Interest : fixed (Banks ,Capital market)
2014	ING Capital LLC	(2) 777-60F (Junior Loan)	18/11/2014	31/10/2021	40,912,509	14,611,610	26,300,898.62	7 years Loan /Interest rate ,Floating
2017	African Development Bank	A350-900-(Senior Loan)	24/01/2017	31/01/2029	127,500,000		127,500,000.00	12 years Loan ,Fixed
2017	African Development Bank	A350-900-(Junior Loan)	24/01/2017	31/01/2025	31,324,789		31,324,789.00	7 years Loan, Floating
2016	ING Capital LLC	A350 PDP loan Facility	1/1/2017	31/12/2018	76,843,600.87		76,843,600.87	Upon Delivery, Interest rate: Floating
	Total Loans in USD				**3,066,613,206.87**	**1,241,253,470.36**	**1,825,359,736.51**	
2010	Agence Francaise de Development	Aviation Academy Project	12/10/2010	11/10/2025	30,000,000	7,885,603	22,114,397	10 Years Project Loan(3 year Grace Period) /Interest :Floating
2017	Agence Francaise de Development/Commitment	Cargo Terminal	15/12/2014	14/12/2026	70,000,000	0	70,000,000	12 Years Project Loan(3 year Grace Period) /Interest :Floating

2017	KFW/Commitment	Cargo Terminal	18/1/2014	18/1/2028	32,780,296	0	32,780,296	12 Years Period, Interest Rate: Floating
Total Loans in EUR					**132,780,296.00**	**7,885,603.24**	**124,894,692.76**	
2019	Ex-Im Bank of China/Commitment	New Mainteance Hangar	31/05/2019	30/04/2028	489,000,000	0	489,000,000	10 Years Project Loan(3 year Grace Period) /Interest :Floating
2017	Ex-Im Bank of China/Commitment	Hotel Project			264,062,500		264,062,500	7 Years Project Loan(2 year and six months Grace Period) /Interest :Floating
Total Loans in CNY					**753,062,500.00**	**-**	**753,062,500.00**	
2007	Commercial Bank of Ethiopia	(1) MD11	26/09/2007	25/01/2019	497,620,800	389,129,105	108,491,695	12 year Guaranteed Loan/Interest : fixed
Total Loans in ETB					**497,620,800.00**	**389,129,104.72**	**108,491,695.28**	

Source: Due Diligence Report of Ethiopian Airlines Finance (2017)