

T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES



**RISK OF COMPANY ON FOREIGN CURRENCY EXCHANGE
BORROWINGS IN TURKEY**

THESIS
Mohammad AL-ALI

Department of Business Administration
Master of Business Administration Program

Thesis Supervisor: Assoc.Prof. Dr. ZELHA ALTINKAYA

June - 2018

T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES



**RISK OF COMPANY ON FOREIGN CURRENCY EXCHANGE
BORROWINGS IN TURKEY**

THESIS
Mohammad Al-Ali
(Y1612.130027)

Department of Business Administration
Master of Business Administration Program

Thesis Supervisor: Assoc.Prof.Dr. ZELHA ALTINKAYA

June - 2018



T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜ

Yüksek Lisans Tez Onay Belgesi

Enstitümüz İşletme İngilizce Ana Bilim Dalı İşletme Yönetimi İngilizce Yüksek Lisans Programı **Y1612.130027** numaralı öğrencisi **Mohammad Khader Mohammad AL ALI**'nin **“RISK OF COMPANY ON FOREIGN CURRENCY EXCHANGE BORROWINGS IN TURKEY”** adlı tez çalışması Enstitümüz Yönetim Kurulunun 08.06.2018 tarih ve 2018/17 sayılı kararıyla oluşturulan jüri tarafından *aybır. Lige* ile Tezli Yüksek Lisans tezi olarak *KABUL*...edilmiştir.

Öğretim Üyesi Adı Soyadı

İmzası

Tez Savunma Tarihi : 29/06/2018 – 10:00

1)Tez Danışmanı: Doç. Dr. Zelha ALTINKAYA

2) Jüri Üyesi : Prof. Dr. Akın MARŞAP

3) Jüri Üyesi : Doç. Dr. Abdullah Kadir DABBAĞOĞLU

Zelha Altinkaya
.....

A. Kadir Dabbagoğlu
.....

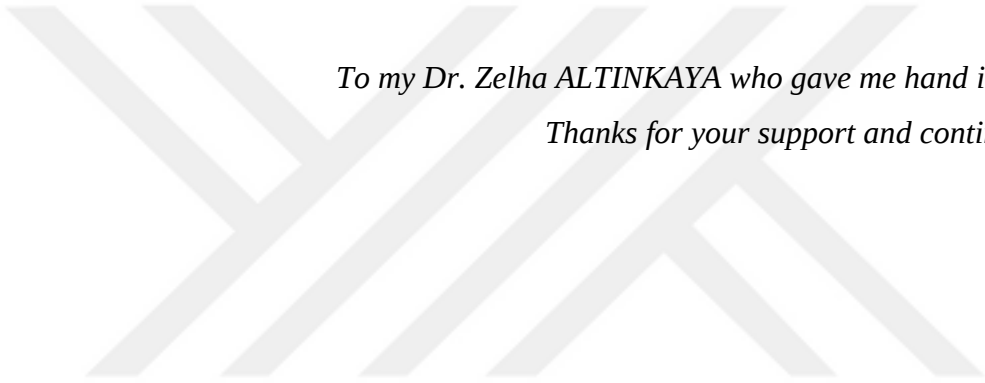
Not: Öğrencinin Tez savunmasında **Başarılı** olması halinde bu form **imzalanacaktır**. Aksi halde geçersizdir.

DECLARATION

I hereby declare that all information in this thesis document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results which are not original to this research.

Mohammad Al-Ali





*To my Dr. Zelha ALTINKAYA who gave me hand in hard time
Thanks for your support and continuous care.*

FOREWORD

I would like to acknowledge the help of my thesis supervisor Dr. Zelha ALTINKAYA in every step of thesis research. In addition, my warm thanks to my lovely wife for her supports in research period. I'm thankful to all teachers and friends whose names I did not mentioned here.

I am grateful especially to my mother Nadia Qasem for moral, material help, believe and for supporting me in my decisions. Thanks for assistance, care and guide in my life.

June 2018

Mohammad Khader Mohammad AL-ALI

TABLE OF CONTENTS

	<u>Page</u>
FOREWORD	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABBREVIATIONS	x
ABSTRACT	xi
ÖZET.....	xiii
1. INTRODUCTION.....	1
1.1 Problem Statement	4
1.2 Significance of the Problem	4
1.3 Aim and Objective.....	5
1.4 Research Questions	5
1.5 Research Method and Hypothesis	5
2. THEORIES ON FOREIGN EXCHANGE RATE SYSTEMS AND FOREIGN EXCHANGE BORROWING	6
2.1 Exchange Rate Systems.....	6
2.1.1 Fixed exchange rate system	6
2.1.2 Flexible exchange rate system	7
2.1.2.1 Managed floating rates.....	7
2.2 History of Exchange Rate System.....	8
2.3 Foreign Exchange Rate Systems And Borrowing Abroad	13
2.3.1 Foreign exchange volatility and its risk.....	19
2.3.2 Company borrowing	21
2.3.3 Foreign currency risk of borrowing and hedging policies of companies ..	23
2.4 Hedging Foreign Currency Risk via Derivatives	24
2.4.1 Description of hedging.....	24
2.4.2 Corporate objectives of hedging	25
2.4.3 Types of derivative market instruments:	26
2.4.3.1 Currency forwards.....	26
2.4.3.2 Currency futures.....	27
2.4.3.3 Hedging positions in futures and forward contract	27
2.4.4 Currency options.....	29
2.4.5 Currency swap	30
2.5 Main Factors Affecting Corporate Decision to Hedge Foreign Currency Risk	33
2.5.1 Policy	33
2.5.2 Leverage.....	33
2.5.3 Liquidity and profitability.....	33
2.5.4 Nature of operation	34
2.5.5 Cost of hedging.....	34
3. FOREIGN BORROWING IN TURKISH ECONOMY.....	35
3.1 Turkish Economy	35

3.2 Liberalization Policies and Turkish Economy Crisis in 1994 and 2001	38
3.2.1 The currency crises in Turkey in 1994s	38
3.2.2 Turkey financial crisis in 2001	39
3.3 International Trade and Balance of Payment	42
3.4 International Investment Position and Foreign Exchange Borrowing	44
3.5 Literature Review on Effects of Volatility of Foreign Exchange in Turkey	45
3.6 Risk of Foreign Currency Exchange Borrowing At Company Level	45
4. RISK OF COMPANY ON FOREIGN CURRENCY EXCHANGE	
BORROWINGS IN TURKEY CASE STUDY: CONSTRUCTION INDUSTRY	
IN TURKEY	55
4.1 Construction Industry and House Construction In Turkey	57
4.2 Case Study: A Construction Company with High Foreign Exchange Borrowing	
in Turkey	57
4.2.1 Methodology	57
4.3 Analysis	58
4.4 Results	75
5. CONCLUSION.....	76
REFERENCES.....	79
RESUME.....	87

LIST OF TABLES

	<u>Page</u>
Table 2.1 : Wholesale price index in United States, United Kingdom, Germany, and France For the period 1816-1913.....	10
Table 2.2 : The history of gold exchange rate.....	11
Table 2.3 : Borrowing rates that make a basis the argument between fixed and floating exchange rate.	31
Table 2.4 : The Comparisons between financial derivatives	32
Table 3.1 : Population Statistics in Turkey (In Thousand)	35
Table 3.2 : Major economic indicators in Turkish economy for the period 2002 – 2017	37
Table 3.3 : Macroeconomic indicator in Turkish economy for the period 1990-2000	41
Table 3.4 : Export and Import history in Turkish economy / Billion USD	42
Table 3.5 : Balance of payment in Turkey (2000-2017).....	43
Table 3.6 : International Investment Position / Billion USD \$	44
Table 3.7 : Sectoral Composition of Long Term Debt in Turkey (Billion USD \$)	48
Table 3.8 : Sectoral composition of short term debt in Turkey	49
Table 3.9 : Credit rating of Turkish companies	50
Table 3.10 : Foreign exchange position deficit and surplus.....	51
Table 3.11 : Top 10 Largest Company in Turkey / 2017	52
Table 4.1 : The top 30 Turkish construction companies.....	56
Table 4.2 : ENKA construction company balance sheet for the year (2011, 2017)	59
Table 4.3 : ENKA Company borrowing for the year 2011-2017	63
Table 4.4 : ENKA Company effective interest rate on borrowing for the year 2011-2017	64
Table 4.5 : ENKA company debt ratio for the year 2011-2017.....	64
Table 4.6 : DuPont System analysis for the year 2011-2017	65
Table 4.7 : ENKA company vertical analysis of income statement for the year 2011-2017	66
Table 4.8 : Analyzing ENKA Construction Company for the period 2012-2017 ..	70

LIST OF FIGURES

	<u>Page</u>
Figure 2.1 : The comparison between advanced an emerging market countries: Exchange rate regimes 1991, 1999, 2006	14
Figure 2.2 : The policy of macroeconomic trilemma	16
Figure 2.3 : Cross-border borrowing from bank dominated in foreign currency	19
Figure 2.4 : The relationship between fixed exchange rate and flexible exchange rate systems	22
Figure 2.5 : Types of hedge position in future and forward contract	28
Figure 2.6 : Participant in option contract	29
Figure 2.7 : The relationship between count party and the lender in SWAP contract	31

ABBREVIATIONS

BIS	: Bank of International Settlement
CBOT	: Chicago Board of Trade
CBRT	: Central Bank Republic of Turkey
CEECs	: Central and Eastern European Countries
CFO	: Chief Financial Officer
EPS	: Earnings Per Share
FCL	: Foreign Currency Loan
FRS	: Federal Reserve System
FXCM	: Foreign exchange capital market
GDP	: Growth Domestic Product
GNP	: Growth National Product
IIP	: International Investment Position
IMF	: International Monetary Fund
OTC	: Over the Counter
OECD	: Organization for economic and co-operation and development
ROA	: Return on Assets
ROE	: Return on Equity
VOIP	: (Vadeli İşlem ve Opsiyon Piyasası) Future Option Markets

RISK OF COMPANY ON FOREIGN CURRENCY EXCHANGE BORROWINGS IN TURKEY

ABSTRACT

Turkey is a fast developing country, large manufacturing firms are started their big projects and some of them use foreign currency borrowing to finance their projects, these firms are exposed to a high risk from fluctuations of the currency when pay the borrowing. Foreign exchange risks strategies and techniques in managing the risks has become very important to international companies, while the risk of borrowing becoming low when the fluctuation of exchange rate is positively linked to income in the company.

Due to the globalization, the exchange rate movements, deepening entered the financial markets. And also, have been more important for both the financial institutions and the real sector, also for non-profit organization concerning the exchange rate risk for both assets and liability. Management of exchange rate risk exposure affecting the competitiveness of the companies.

The research focusing on the effect of exchange rate volatility on the company profits and evidence from Turkey. The effect of exchange rate fluctuations on firm performance are negatively rely on the total sales. When the companies have a high share of exports, are more vulnerable to exchange rate fluctuations, a low exporting firms are more control the liability dollarization after the crises. The recently positive correlation of liability dollarization with the export ratio and the firm size may be limiting the risk.

The finding of this study suggest that, however of the improvement of the leverage ratios and interest rate risk, after 2001 financial crises in Turkey, liability dollarization and short maturity structure of debt are still appear to be the main sources of fragility in Turkish corporate sector against external upcoming financial shocks.

After the 2001 a financial crises, the private companies in Turkey are like to borrow from abroad capital markets more than in comparison to local markets in order to achieve low interest rate on borrowing. Since 2010, the argument about the importance of choosing effective exchange rate regimes in Turkey cannot be ignored as of the size of risk that the country endure it and the affect in the political stability, also influence the developing the finance method, and the construction sectors. The goal of this research is to measure the effect of exchange rate volatility and the affection on the profitability, also to give the ways how to measure the ratios that used by the companies to control the risk of volatility, also this research discussed the types of derivative instrument used by the companies in order to minimize the risk of exchange rate volatility.

The goal of this research is to highlight the riskiness of borrowing abroad and how it can affect the company profitability. This paper is give a solution in order to avoid this risk by using a derivative market while borrowing through foreign currency. The research provide the methods and ways firms can apply in order to be in safe against

the volatility of exchange rate. The data gathered and collected from the financial statement of one of the biggest construction company in Turkey called ENKA Company, which analyzed to measure the ratios and test the changes of effective interest rate and measure the DuPont system to test the company ability to pay the borrowing and avoid the risk.

This research is prepared in two main parts; the first part, takes and reviewed the relevant literature of the foreign currency systems, hedging policies of the companies, the derivative instruments, hedging currency risk with a financial derivative, reviewed the Turkish economic, followed by analyzing the financial statement one of the biggest companies in Turkey.

Finally, it is concluded that according to analyzed financial statement of ENKA corporation for the period 2011-2017 found 2017 the company obtain the highest borrowing, and this affecting the leverage ratios and the company capability to pay the loan, it is suggest for the company to use derivative instrument in order to avoid the exchange rate fluctuations.

Keywords: *Exchange Rate Risk, Foreign Currency Loans, Borrowing Risk, Hedging, Future Markets, Industry Protection, Turkish's Economy, current account deficit, international investment position.*

TÜRKİYE'DE ŞİRKETLERİN DÖVİZLE BORÇLANMA RİSKİ

ÖZET

Türkiye hızla gelişmekte olan bir ülkedir, büyük ölçekli imalat firmaları büyük projelere başlamış ve bir kısmı projelerini finanse etmek için döviz kredisi kullanmaktadır, bu firmalar borçlanmayı öderken para birimindeki dalgalanmalardan dolayı yüksek bir riske maruz kalmaktadır. Kur riskinin yönetilmesinde döviz riskleri stratejileri ve teknikleri uluslararası şirketler için çok önemli hale gelmiş, döviz kurundaki dalgalanma ise şirketteki gelir ile pozitif olarak ilişkilendirildiğinde borçlanma riski azalmıştır.

Küreselleşme nedeniyle, döviz kuru hareketleri, derinleşme finansal piyasalara girdi. Ayrıca hem finansal kurumlar hem de reel sektör için, hem varlık hem de borç için döviz kuru riskiyle ilgili kar amacı gütmeyen kuruluşlar için daha önemli hale gelmiştir. Şirketlerin rekabet gücünü etkileyen döviz kuru riski yönetimi.

Araştırma, döviz kuru oynaklığının şirket karı üzerindeki etkisine ve Türkiye'den kanıtlara odaklanmıştır. Döviz kuru dalgalanmalarının firma performansı üzerindeki etkisi, toplam satışlara olumsuz etki etmektedir. Şirketler yüksek oranda ihracat payına sahip olduklarında, döviz kuru dalgalanmalarına karşı daha savunmasız durumdadırlar, düşük ihracat yapan firmalar ise kriz sonrasında borç dolarizasyonunu daha fazla kontrol etmektedirler. Son dönemde, borç dolarizasyonunun ihracat oranı ve firma büyüklüğü ile pozitif korelasyonu riski sınırlandırabilir.

Bu çalışmanın bulgularına göre, kaldıraç oranlarının ve faiz oranı riskinin iyileştirilmesine rağmen, 2001 yılında Türkiye'de yaşanan mali krizlerin, borç dolarizasyonunun ve kısa vadede borç yapısının Türk şirketler sektörünün ana kırılganlık kaynağı olarak görüldüğü görülmektedir. dış gelecek finansal şoklara karşı.

2001'den sonra finansal krizler, Türkiye'deki özel şirketler, borçlanmada düşük faiz oranı elde etmek için yurt dışı piyasalardan yerel piyasalara kıyasla daha fazla borçlanmaktan hoşlanırlar. 2010'dan bu yana, ülkemizde etkili döviz kuru rejimlerinin seçilmesinin önemi ile ilgili argüman, ülkenin buna katlandığı risk büyüklüğü ve politik istikrar üzerindeki etkisinden dolayı göz ardı edilemez, aynı zamanda finans yönteminin geliştirilmesini ve inşaat sektörlerini de etkiler. . Bu araştırmanın amacı, döviz kuru oynaklığının ve karlılığa olan ilginin etkisini ölçmek ve aynı zamanda şirketlerin volatilité riskini kontrol etmek için kullandıkları oranların nasıl ölçüleceğini açıklamaktır. Döviz kuru oynaklığı riskini en aza indirmek için şirketler tarafından kullanılan türev enstrüman.

Bu araştırmanın amacı yurtdışında borçlanma riskini ve şirketin karlılığını nasıl etkileyebileceğini vurgulamaktır. Bu yazıda, yabancı para biriminden borç alırken bir türev piyasa kullanılarak bu riskin önlenmesi için bir çözüm getirilmiştir. Araştırma, firmaların döviz kuru oynaklığına karşı güvende olmak için uygulayabilecekleri yöntemleri ve yöntemleri sunmaktadır. Türkiye'nin en büyük inşaat şirketlerinden birinin mali tablolarından toplanan ve toplanan veriler, oranların ölçülmesi ve etkin faiz oranındaki değişikliklerin test edilmesi için analiz edilen ENKA Şirketi olarak

adlandırılmış ve şirketin ödeme kabiliyetini test etmek için DuPont sistemini ölçmüştür. borç almak ve riski önlemek.

Bu araştırma iki ana bölümde hazırlanmıştır; Birinci bölümde, yabancı para cinsi sistemlerin ilgili literatürü, şirketlerin riskten korunma politikaları, türev araçlar, finansal riskten korunma riski, Türk ekonomisinin gözden geçirilmesi ve en büyük şirketlerden biri olan finansal tabloların incelenmesi Türkiye'de.

Son olarak, 2011-2017 dönemine ait ENKA firmasının analiz edilmiş mali tablosuna göre 2017'nin en yüksek borçlanmayı elde ettiği, bu da kaldıraç oranlarını ve şirketin borç ödeme kabiliyetini etkilediği sonucuna varmıştır. Döviz kurundaki dalgalanmaları önlemek için türev enstrümanı kullanmak.

Anahtar Kelimeler: *Döviz kuru riski, döviz kredileri, şirketlerin, borçlanma riski, riskten kaçınma, vadeli piyasalar, Türk ekonomisi, cari açık, uluslararası yatırım pozisyonu*



1. INTRODUCTION

The fundamental reason of this research is related to the fact that Turkey one of the quickly growth developing country all over the world, with rapidly increasing in the population and with high demand for goods and services. Turkey is the 4th largest export country in the world which this increasing the manufacturing industry and increasing asking for material from abroad and demand for foreign currency to make payments, in some of these firms need to borrow abroad to make repayment the loan and some time the fluctuation of the currency can negatively affect the exchange rate which increase the amount of loan.

The main reason and objective of this paper is to explain the riskiness of the fluctuation of currency exchange rate when borrowing from abroad, and how this risk can affect the profitability of the firm and decrease the wealth of the company. This paper is focusing on the way can use in order to avoid the risk from fluctuation exchange rate, by using a derivative market, firms can using derivative instrument in order to minimize the risk of borrowing abroad.

This chapter is talking about the situation in Turkish economic and discuss a little about the topics written in this paper, a research problem and significance of this research, and the aim and objectives, and the research questions, research hypothesis and the research method used to analyses in the research. This part explains the history of economic in Turkey, and the time of the crisis occurred in Turkey.

This paper wrote accordance to give a protection to the firms against the currency fluctuation in Turkey, and also in order to give a mechanism for the companies to be in the safe side as the currency is going up and down in order to prevent inflation in price that coming when there is devaluation in currency against dollar, therefore firms pay more money in order to repayment the money from borrowing abroad and the cost for the manufacturing increase which will increase the price for the product and the inflation harm the individual from this increasing in the price. What happened in Turkey to protect against the inflation which is happened in 1994s, a

very robust financial crises hit the Turkish Economy, The Turkish lira was depreciating about 70 percent versus U.S Dollar in the first quarter of 1994, in that time there was no correction measures has been taken, it was a policy mistake, increasing the necessary for a local borrowing had to be maintained in order to keep the inflation at low level and to keep the reserves in a high level, however of this policy mistake needs for the domestic debt instrument such bonds, notes and mortgages still in continuous.

In 2001 there were imbalance and weaknesses in Turkish Economy, which return back to policies and regulations puts in the last two decades. In 1999, Turkey Economy met unusual recession, according to that Turkish government and with assist from the Bretton Wood Institutions (BWI) put program called exchange rate based stabilization program, in order to minimize the inflation and to control the unaffordable public debt accumulation, the program worked well and the public feel confidence and the International Monetary Fund (IMF) officials accepts the program. Unfortunately. In September 2000, the economic situation required interventions from the IMF, in order to support the program to be in progress, after a little time later the program was not sustainable and exposed to a huge attacks on the currency and exit of capital, again by advising from IMF, a free floating exchange regime had been replaced with a currency peg. The main reasons behind the failing of the program it was lunched return back to the program faced many problem and difficulties in the banking system and public financing, in more details the banking system was primarily depends on increasing the interest rate in order to generate revenue from deposit and T-bills.

In the late of 1970s, Turkey faced deficit in foreign debt payment, so Turkey had started to implement liberalization policy and open to capital market. In the late of 1980s the foreign trade was liberalized. Foreign exchange trade was liberalized in 1984s, and Istanbul Stock exchange was opened again in 1986s. The central bank of Republic of Turkey was reopened in 1987. In 1996, when the custom union in the European country was connecting, Turkey was totally applying liberalization system Fixed exchange rate system started at the beginning of the gold standard system and expanded into the Bretton Wood System, here the monetary authority is responsible in each country to puts and declare the exchange rates for their currency and committed to assist it.

Crawling peg is a type of fixed exchange rate system and there is progressively movement all the time and there is obligation from the central bank to stay in a specified range, and crawling area, which let the exchange rate to fluctuate within a specified range.

Managed float rate happened when the Central Bank and Government are intervene to increase or to decrease the exchange rate when buying or selling their own currencies in the market. In order to prevent the reduction in the export, the government of the countries and Central bank may have intervene in order to stop these decreasing, if the price of the country is increasing very rapidly in order to prevent inflation.

The classical gold standard, this period returns as back to 1880s, which each country used a fixed quantity of gold to equate it is transaction. In this period the countries used Gold are committed to follow this regime which is fixed quantity of Gold. The price of gold in United States was fixed to 20.67 dollar per once. According to Kingstone (2006), says the gold standard was developed when the national currency is fixed to Gold quantity, this means the exchange rate between two countries is the same quantity of gold. After the World War II, the world needed a new financial systems. In that period the gold standard was spread in the world wide, economist and financial decision maker were afraid from the devaluation of the currency to increase export in the country. In 1944s, The (Bretton Wood System) had discovered to set new financial monetary system, in order to avoid the crisis occurred after the war under the gold standard, in that time the fundamental currency was the United States dollar, and it was directly convert into gold at a fixed price 35 dollar per once, and the other currency should be converted into dollar first and then should be gold.

Borrowing in a foreign exchange currency under fixed exchange rate system is preferable for firms, because there is limited exchange rate volatility, therefore borrowers consider a high devaluation in a domestic currency to repay the loan, also fixed exchange system since 1994 played role in every financial crises and firms do not use hedging strategies in that time which lead up to financial crises.

The adoption of flexible exchange rate system increase the currency mismatch, and there were a two reasons for that firstly, there is direct relationship between domestic

interest rate risk and the stability of the currency, secondly, the domestic interest rate will increase because of exchange rate volatility correlate with floating rate.

Hedging is techniques the firm's uses in order to reduce the risk come from exchange rate fluctuation and to increase the profit of the company. The revenue generate when the firm using hedging techniques is better than without but there is no certainty. Hedging can be used to minimize exchange rate risk and to protect accompany from exchange rate losses when it use as instrument to eliminating risk, whereas it can be uses to increase the profitability in the company when it used as instrument of speculation.

This paper discussing the four types of derivative instrument that using to protect the firms against currency exchange rate fluctuation from borrowing abroad.

Derivative instrument is a contract between two parts in which it gives the right, and sometimes the obligations, to buy or sell an underlying asset, and specified conditions like: the quantities and value of underlying variables or the dates, and the price between parties.

1.1 Problem Statement

The main focus of this research is to identify the risk of borrowing foreign currency and how it can affects the profitability in the firms, and how this risk can affect the inflation in the country, this paper put a solution to avoid this risk.

1.2 Significance of the Problem

The important aspect of the problem that the foreign currency volatility and its risk have a fundamental role in determining the earning in the firms, and a sudden changes in the currencies brings abnormal gains or losses which directly affect the earning whether it is positive or negative movements. Using hedging against a sudden currency movements can helps the firm to stabilize and focusing in developing.

1.3 Aim and Objective

This study will examine how to determine the foreign exchange risk from fluctuation and thereby increase profitability. To identify the important derivative instrument use to hedging against the fluctuations

1.4 Research Questions

The main aim and objective of this research are to highlight the issues that are related to the risk of borrowing foreign currency that are encountered most corporation in Turkey.

The research aims to answer to these questions as follows:

- Does foreign currency risk affect the profitability in the company?
- Does the foreign exchange risk company face decrease when the firm borrowed abroad?
- What are the factors affect firms to use derivative instrument to exposure against fluctuation?

1.5 Research Method and Hypothesis

In the thesis, firstly, literature review on foreign exchange volatility and foreign exchange borrowing will be done. Then, quantitative research method used in order to analyze the data in the financial statements. The quantitative research method focusing on the mathematical and numerical and ratios of the data collected from the financial statements.

Ho: Company has risk on foreign currency exchange borrowing in Turkey.

H1: Profitability does not change when the company apply foreign exchange risk management.

2. THEORIES ON FOREIGN EXCHANGE RATE SYSTEMS AND FOREIGN EXCHANGE BORROWING

In this section, main exchange rate system will be defined. Theories on foreign exchange rate will be reviewed. The Gold Standard in 1870s and up to the middle of 1914s, The Bretton Woods system is the one of main system covering large period of time after the Second World War will be also discussed in detail. Finally, how the risk of borrowing affect under fixed exchange system and flexible exchange system, and how Bretton woods System have an influence on exchange rate system will be the main concern.

2.1 Exchange Rate Systems

2.1.1 Fixed exchange rate system

It is an exchange rate regime that fix the exchange rate of the currency to rate of another currency. It is consider an alternative of exchange rate system. Type of fixed exchange rate systems: Hard Peg, crawling peg, and soft peg.

It is an exchange rate system, occurs when the domestic currency not fixed to another currency and the government is totally stop to use their currency and start to use more strong currency. According to Fischer (2001), the crawling peg is progressively movement all the time and there is obligation from the central bank to stay in a specified range, and crawling area, which let the exchange rate to fluctuate within a specified range. Kingston in (2006), said in the crawling peg regime, movement between the currencies being modified depend on a number of a specified indicators or situation which make the adjustment very important. It is an exchange rate system, is slant more to a flexible exchange rate than to the hard peg system, but still working with the peg mechanism way.

2.1.2 Flexible exchange rate system

It is an exchange rate system, which the price of rate is determined freely to the seller or buyer in the exchange market. The foreigner purchasing the dollar from the United States when they need to buying goods or assets from United States, while the citizen in the United States is selling the U.S dollars in order to buying a foreigner currency when they buying goods or assets from another country (Labonte, 2004). Types of flexible exchange rate system are Managed Floating Rates and.

2.1.2.1 Managed floating rates

Managed floating rate is the system the Central Bank and Government intervene to the foreign exchange market to increase or to decrease the exchange rate although there is flexible exchange rate system (Rosenberg, 2008). In order to prevent the reduction in the export, countries Government and Central bank may have intervene in order to stop these increasing, if the price of the country is increasing very rapidly.

The reason the Government and Central Bank returns to intervention are:

- To stabilize the exchange rate in order to assist the economic for the country in the desired level which helps to increase the net export for the country.
- The Central Bank may have to intervene in order to calm down disorderly market.
- To collect more reserve by buying the amount of exchange rate that pronounced in the market at a consistent rate over time and gain on an opportunistic level when other Central bank want to added to their reserve.
- Supply foreign exchange in the market, when the government becomes the main receiver of the foreign exchange (Fischer, 2012).

The movement of exchange rates in the market are controlled by monetary authorities, and donot pronounced the exchange rate in the market (Bofinger, 2003).

Under floating exchange system both of national money markets and national good market be segments, the individual countries may enable when segmenting the money markets to realize a higher levels of employment in order to apply independent monetary policies, while segmenting the good markets this means the resources allocation less efficient (Aliber, 1976). A significant policies issue when

adoption a flexible exchange rate system gives the authorities and the government to have an impact on real exchange rate (Krugman, 1993).

The discussion of which regime systems use escape to focus on the basic issue, how is easily a mobility of the capital among countries (Tobin, 1978).

A fixed exchange rate is a monetary rule, it gives the country the monetary policy of the partner country. If compare a fixed rate which is a monetary rule to a flexible rate which is not committed rule absence of monetary rule, the fixed exchange rate give a precise monetary policy which gives the country the inflation rate of it is partner country (Mundell, 2000).

2.2 History of Exchange Rate System

In the late of 1850s, exchange rate was equaled to a fixed expensive metal (Gold). When we talking about the gold standard, we mean it is a system founded to determine the value of any currency in terms of some Gold. Gold standard was used to balance the market for trade rather than used as valuable metal. This period return back to 1880s, which each country used a fixed quantity of gold to equate it is transaction. In this period the countries used Gold are committed to follow this regime which is fixed quantity of Gold. The price of gold in United States was fixed to 20.67 dollar per once (Kamil, 2012).

The gold standard is developed when the national currency is fixed to Gold quantity, this mean the exchange rate between two countries is the same quantity of gold. The ratio of the gold used between two countries is called Mint Parity, in the figure below explain the way how the countries dealing with gold in pricing goods.

The Mint parity was used if there were two currencies between two countries and the two countries were based on gold standard, the exchange rate between them was calculated by using the mint-parity ratio. The exchange rate must not spread very much from the mint parity in order to be in safe. Let's take this example to explain more, suppose Turkey and United States, if the gold exchange rate in the United States is overstated, then the exchange rates is being profitable to exchange Turkish lira for American dollar and after buying American Gold, if transferring the gold back to Turkey, the transportation cost and the American dollar still overstated, this will earned profit (Ontario, 2006).

As back as 1912, during the era of fallen gold standard, the famous economist John Mynard Keynes was the first person in 1924 published 'A Tract on Monetary Reform', his contribution was that after the world 1, using of gold was not effective way as before, and not working efficiently in the same mechanism in the earlier years (Keynes, 2009). Maryos (2007) comment on the discussion of John Mynard, he said the Gold standard for the period between 1870 to 1914, was the first system used at the beginning of the World War 1, and almost all the countries followed in that time the Gold-Standard System, whatever if the countries make currency convertible to gold or stabilized their currency rate. Gold standard did not comprise all the countries, some of the countries were encompassed and which lead by Britain, France, the Netherlands, Germany, and in the United States. The Gold Standard was working operationally all over the world (Mundell, 2000).

England was the first country adopted the gold standard system in 1819, United state the second country adopted in 1834 and the price of the gold was fixed to 35 \$/ounce. In these days the dollar becomes more a greatest currency in 20th century all over world, and United State become superpower as the country of stabilization currency (Mundell, 2000). The classical gold standard was limited to a monetary independence because of a highly globalized time with an extremely fixed rates and unrestricted capital mobility (Eichgreen, 1996).

The figure below explain the price index since 1816-1913. 2.1 below shows the wholesale price levels of the Great Britain, United States, France, Germany breakdown by the same percentage from 40-50 percent during the period 1873-1896, and then for the period of 1896-1913 (KAMIL, 2012).

Table 2.1: Wholesale price index in United States, United Kingdom, Germany, and France For the period 1816-1913

Years and period	United States	United Kingdom	Germany	France
Indexes (1913=100)				
1816	150	147	94	143
1849	82	86	67	94
1873	137	130	114	122
1896	64	72	69	69
1913	100	100	100	100
Changes (%)				
1816-1849	- 45	- 41	- 29	- 33
1849 – 1873	67	51	70	30
1873-1896	- 55	- 45	- 40	- 45
1896- 1913	56	39	45	45

Source: McKinnon, 1989. https://link.springer.com/chapter/10.1007/978-94-017-1288-0_7

McKinnon (1989), discussed that, the economic market in the world at end of 19th century was recognized, the price of any amount of tradable goods that selling and buying globally were correlate across the countries, this means the purchasing power parity (PPP) aligned to any national currencies which were used in the domestic market to selling and buying of goods.

The table below talk about the evolution of gold exchange rate since 1870s.

Table 2.2: The history of gold exchange rate

Historical Annual Closing Gold Prices Since 1870									
Year	Close	Year	Close	Year	Close	Year	Close	Year	Close
2015	\$1,060.00	1990	\$386.20	1965	\$35.50	1940	\$34.50	1902	\$20.67
2014	\$1,199.25	1989	\$401.00	1964	\$35.35	1939	\$35.00	1901	\$20.67
2013	\$1,204.50	1988	\$410.15	1963	\$35.25	1938	\$35.00	1900	\$20.67
2012	\$1,664.00	1987	\$486.50	1962	\$35.35	1937	\$35.00	1899	\$20.67
2011	\$1,531.00	1986	\$390.90	1961	\$35.50	1936	\$35.00	1898	\$20.67
2010	\$1,420.25	1985	\$327.00	1960	\$36.50	1935	\$35.00	1897	\$20.67
2009	\$1,087.50	1984	\$308.00	1959	\$35.25	1934	\$35.00	1896	\$20.67
2008	\$869.75	1983	\$380.00	1958	\$35.25	1933	\$32.32	1895	\$20.67
2007	\$836.50	1982	\$447.00	1957	\$35.25	1932	\$20.67	1894	\$20.67
2006	\$635.70	1981	\$400.00	1956	\$35.20	1931	\$20.67	1893	\$20.67
2005	\$513.00	1980	\$594.90	1955	\$35.15	1930	\$20.67	1892	\$20.67
2004	\$435.60	1979	\$459.00	1954	\$35.25	1929	\$20.67	1891	\$20.67
2003	\$417.25	1978	\$208.10	1953	\$35.50	1928	\$20.67	1890	\$20.67
2002	\$342.75	1977	\$161.10	1952	\$38.70	1927	\$20.67	1889	\$20.67
2001	\$276.50	1976	\$133.77	1951	\$40.00	1926	\$20.67	1888	\$20.67
2000	\$272.65	1975	\$139.29	1950	\$40.25	1912	\$20.67	1876	\$22.30
1999	\$290.25	1974	\$183.77	1949	\$40.50	1911	\$20.67	1875	\$23.54
1998	\$288.70	1973	\$106.48	1948	\$42.00	1910	\$20.67	1874	\$23.09
1997	\$287.05	1972	\$63.84	1947	\$43.00	1909	\$20.67	1873	\$22.74
1996	\$369.00	1971	\$44.60	1946	\$38.25	1908	\$20.67	1872	\$23.19
1995	\$387.00	1970	\$38.90	1945	\$37.25	1907	\$20.67	1871	\$22.59
1994	\$383.25	1969	\$41.00	1944	\$36.25	1906	\$20.67	1870	\$22.88
1993	\$391.75	1968	\$43.50	1943	\$36.50	1905	\$20.67		
1992	\$333.00	1967	\$35.50	1942	\$35.50	1904	\$20.67		
1991	\$353.15	1966	\$35.40	1941	\$35.50	1903	\$20.67		

Source: Only-Gold, published by CMI Gold & Silver <http://onlygold.com/Index.asp>

The figure above shows the evolution of gold price during the two decade before and how it changes during this period. The reason behind the evolution was return to many factors that was happened in the short run and there were reasons that happen in the long run, in the short run the market supply and demand for a gold was the fundamental factors influenced the gold price in the market, but in the long run the reason was more than the supply and demand for a gold, it was used as an instrument to hedge against inflation of a gold price model (Dierick, 2012)

Century ago, the choosing of the exchange rate regime was very easy and not complicated, which the choice was between four standard only the gold standard (called specie standard), and the fixed exchange rate in one side and the fiat money

(which derived their value from the supply and demand) and the floating rate system from the other side (Bordo, 1993).

After the World War II, the world needed a new financial system, in this period the gold standard was spread in the world a wide, economist and financial decision maker were afraid from the devaluation of the currency to increase export in the country. In 1944s, The Bretton Wood System had discovered to set new financial monetary system, in order to avoid the crisis occurred after the war, under the gold standard. The fundamental currency was the United States dollar, and it should be directly convert it into gold at a fixed price 35 dollar per once, the other currency should be converted into dollar first and then should be gold (Kingstone, 2006).

After 1965, the global economy problem faced the world was from inflation from the reactional of Federal Reserve policies issued and used to finance Vietnam War and the Great inflation. Inflation in United States was published to the balance of payments in surplus countries in Europe and Japan which force them in 1971s to begin convert the outstanding dollar they hold into gold, as the president Richard Nixon want to shut down the window of the U.S gold and the Bretton Woods System (Bordo, 2003).

During the Bretton Wood System started, the floating exchange rate system was common used then turn out to be fixed and after this period between the time of 1970-1990 the fixed exchange rate regime was denominate which accounted 26 percent, the percent becoming more between the period 1990-2001 (Reinhart & Rogoff, 2004).

Polices issued by few central banks such as the federal reserve systems, the bank of England, and the bank of France were control the stability of gold (Keynes, 1924). So many papers discuss the evolution of dollar currency in the world. According to Robert Mundell (2000), Canadian Economist said, in 19th century the United States possessed the central bank, which gained the importance in the international monetary system, and it was the most powerful bank in the world compare to bank of England. In 20th the Federal Reserve System (FRS) was created and it was one of the most important events in that time. The Dollar becomes the most important currency in the world by supporting from Federal Reserve System (FRS).

After the world II, World Bank and the international monetary fund (IMF) in that time were created and accompanied of creation of Bretton Woods System and was encompass 44 countries. In that time the fixed exchange rate system was the choice, and dollar was correlated to gold at a fixed parity equal at 35 \$/once. After this period U.S dollar becomes predominated and play role as reserve assets instead of Gold, which called Dollar Standard (Mundell, 2000).

The world increasingly argue about the choice between the fixed exchange rate and flexible exchange rate system and increasingly becoming the world debate (Obstfeld & Rogoff, 1995).

2.3 Foreign Exchange Rate Systems And Borrowing Abroad

In the recent years, the world is becoming more competitive and does not work as a simple as the way it considered before, before in 1970s, there was a little research about theory of exchange rate, this slowdown in research was correlated to lack of a useful monetary system in the real world. This theory discusses the developing of the exchange rate in recent years. The fundamental reason to classifying exchange rate regimes, according to (Reinhart & Rogoff, 2004), said the modern thinking is basing on the cost and the benefit generating when applying any of the alternatives exchange rate regimes, and the differences in trade, growth, inflation, business cycle, and commodity price behavior are influenced of the decision of which system to apply.

In the post 1999s the exchange rates were determined return back to difference places, such as picks currency year book, picks black market yearbooks and world currency reports, and also by international monetary fund (IMF), in the recent period between 1999-2001, the market exchange rate was determined in the basis of monthly data return to the original sources in the country take from the Central Bank (Reinhart & Rogoff, 2004).

As Tobin (1978), says over the last thirty years, the world depends to a lot of outcomes and benefits that generating from increase the integration of the economic worldwide, this economic integration considers partial and unstable in front of the financial market which becomes more internationalized faster than any other financial economic and political institution.

In view of Fisher (2008), said for the country to apply bipolar exchange rate system for the country in the emerging market and industrialized countries was becoming more importance, when the countries increasing outside ownership of capital account, and also says when the countries adopted international capital flows, the possibility of variety of flexible exchange regime with soft exchange rate pegs were not favorable, then the result of using this policy in more countries will not be caring about exchange rate fluctuation.

During the 1990s, the exchange rate systems were bipolar in view according what mentioned above, this figure below shows the comparison of use the exchange rate regimes between the developed and emerging market countries for the time between 1991-2006, the figure also shows that the developed and emerging market countries move to bipolarity, especially in the period between 1991-1999 (Fisher, 2008).

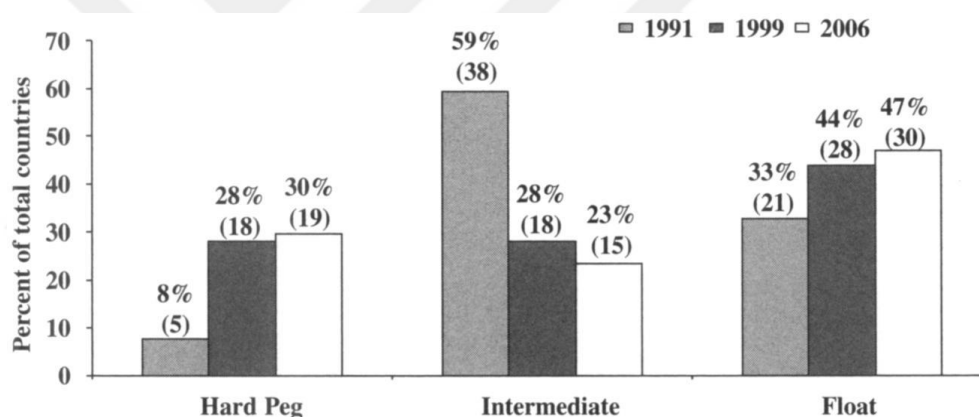


Figure 2.1: The comparison between advanced an emerging market country:
Exchange rate regimes 1991, 1999, 2006

Source: International Monetary Fund

https://people.ucsc.edu/~hutch/241B/Ec%20241b%20SYLLABUS%20Winter%202009_files/Fischer_BipolarRegimes2001.pdf

Figure 2.1 above shows the reader the countries with emerging market and developed moved to side of bipolarity for the time between 1991-1999 but shifting to decrease, the major reasons of change dwell in according to Fisher (2001), the euro showed in the world, and to a lot of crises in the emerging financial market.

Since 1970th the world becoming more opened to work together and start financially conjoined, and the gross domestic product (GDP) of cross-border assets and liabilities started to arise in the mid of 1980s from 50% in 1970th to more than 400%

in 2007th. This big changing has been the result of reduction the authorized restriction which the countries imply on capital account transactions, furthermore many economic advanced countries eliminated the restriction on capital (Prati, 2012). When the countries open their capital account, benefits generates from that and it becoming at lower cost and this leads to higher investment and higher growth (Prati 2012).

According to Paul Krugman (1993), whatever adoption fixed exchange rate or flexible exchange rate depend on the flexibility of nation goods or labor markets, and the nature of the microeconomics objective of policy, the types of shocks the country is likely to experience, and the extent of the microeconomic gains that might be associated with a common currency area (Krugman, 1993). Some countries choose to adopt a fixed exchange rate system because the advantages they take, this system allows the government to sets the rules to maintains the changes affect the polices. According to Chang R. (1999) says, there are two expectation the researcher can find, firstly talks about borrowing currency abroad when the central bank stop lending money to the commercial bank in case of bankruptcy, in the same study found that country can have effective economy when the central bank can allows to help the commercial bank as a lender, the second expectation is more important, under the currency abroad each currency is supported with dollar in the central bank (Chang & Reserve, 2000). Only transaction cost can have small effect on the both exchange rate systems, fixed rate or flexible (Aliber, 1976).

Mundell (2000), says that fixed exchange rate system allows countries to affect the money supply by the intervention in the exchange market, when there is a surplus in the country in order to prevents the currency of appreciating the central bank intervene to prevent by buying the foreign currency for a domestic currency. And when supply of domestic currency increase, the banking system increases the reserve and automatically the surplus will be correct. In contrast, when there is a deficit in the country, the central bank intervene to prevent depreciation by sell foreign currency to help the domestic currency to gets back, and automatically the banking system reduces the reserve, and the money supply and domestic expenditure, therefore the deficit corrects (Mundell, 2000).

Nicita (2013), put high light on the relationship between the exchange rate volatility and volume of trade, her debate that the international trade increase when the

exchange rate volatility decrease, and the incentives to make international trade will increase according to minimize the risks and the transaction cost when the exchange rate volatility decrease.

Obstfeld et. al. (2005), they see that exchange rate regime determined by the monetary policy trilemma, which puts by macroeconomic globalization department to achieve these objectives:

- To stabilize the exchange rate
- To gain free capital mobility
- To enter in a monetary policy concerned with domestic goal.

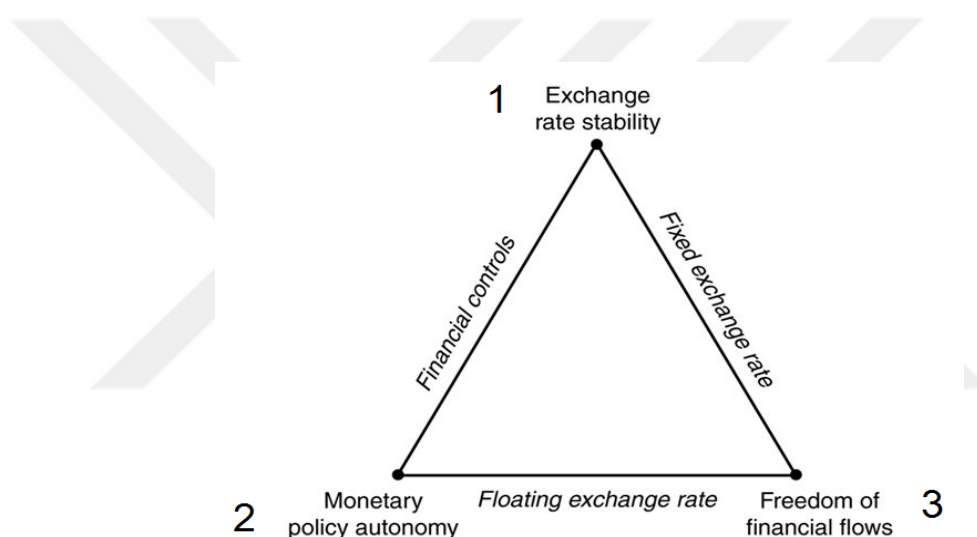


Figure 2.2: The policy of macroeconomic trilemma

Source: <https://www.mitpressjournals.org/doi/abs/10.1162/0034653054638300>

Trilemma constrains the policy makers to decide one of the three objective and give up the others, means if the policymakers choose a monetary policy (2), this means the ability to determine a local interest rate then apply the arbitrage in exchange rate stability, and leads to open capital market (Obstfeld, et. al. , 2005).

Trade flows have a symmetric effect when exchange rate volatility happened either in the aggregate level or at the commodity level, which means the traders increase the volume of trade when the volatility is not much volatile and they trade decrease when the volatility in a high level, in more details when the volatility increased by 3%, and the traders more certain when the central bank fixing the exchange rate and

decrease the volatility, then they might increase the size of trade (Bahmani et. al. 2017)

Some theories focusing about international trade, found that the exchange rate volatility minimize trade, because of a high level of uncertainty on international trade transaction for the exporter view by the risk of volatility, this idea suggested by (Aristotelous, 2001).

NfNacita (2013), finds that in order the country to stabilize the real exchange rate fluctuation and to reduce the exchange rate volatility, should increase the trade flows, although there are many countries not considered the exchange rate volatility as critical issue when making international trade, the reason of these countries correlate there risk from exchange rate volatility to a derivatives financial instruments such as forward contract, future and currency option that help the firms to hedge against these volatility risk.

Bearce (2008), argue that in the high developing country national economic, after the Bretton woods period, fixed exchange rate system adopted and the central bank does not work as a compliment organization, but in opposite side with a greater central independence, OECD governments making the fixed exchange rate system difficult to achieve a stability exchange rate when the central bank was a high independence, nevertheless it works as institutional substitute for the same country after 1973.

Frankel & Wei (2008), put their opinion, in most of the studies analysis the classification of exchange rate systems that set related to official classification, they put the way of accounting to the country of use when a country have a floating system, this country has a high exchange fluctuation according to reserve, and if the country use fixed exchange rate system this country have a small change in exchange rate related to reserve.

Many region of the world, companies and individual are looking continuously for borrowing to cover their needs, and firms always looking forward how to minimize the risk that returns to the borrowing by using different strategies and techniques in order to maximization profit. Paul Krugman (1993), explains the importance of a foreign currency borrowing for establishment to make investment which generate profit and yields a high income to assistance the company to pay back the loan, but if the investment returns are weak, the firm cannot pay back the debt and require areal

depreciation (Paul Krugman, 1993). As shown by Niepmann & Schmidt (2017), found the factors which make firms to take a decision to borrow in foreign currency, the income the firm generate, and the assets to buy, and the size of the company plays role in taking decision of foreign currency borrowing, and say if the firm is big, are more favourable to borrowing in foreign currency.

Niepmann & Schmidt-Eisenlohr (2017), indicated that hedging through foreign exchange rate fluctuation become more important if the firm borrowing money in foreign currency and generate revenue in local currency, when the local currency depreciate the firm face higher risk to repay back the loan. Figure 1 illustrates this fact using data from the Bank for International Settlements (BIS) on cross-border banking, more than 70 percent of funds borrowed cross-border and less than 40 percent from advanced countries.

Beckmann and Stix (2014), predict foreign exchange borrowing is more widespread in many region of the world, the Middle East countries take 40%, and in the USA reach to 25%, and to 50% in the several central and eastern European countries (CEEC). According to Hermalin & Rose (1999), found there are two important points affect financial systems during borrowing, first, borrowers and lenders don't have the same information about each other, typically borrower have enough about how to repayment the debt back to the lender, the lender bearing the risk if the borrower non-payment and therefore charging premium for this risk. Second, the lender bearing risk when the borrower renege to making repayment for the loan, and in this case enforcement risk shared together between borrower and lender, here this issue lead to less level of financial activity, therefore the lender cost the borrower high interest rate, and create investment risk (Hermalin & Rose, 1999).

The figure below using date from the Bank for International Settlements (BIS) on a cross-border banking dividing countries into emerging economics and advanced economics.

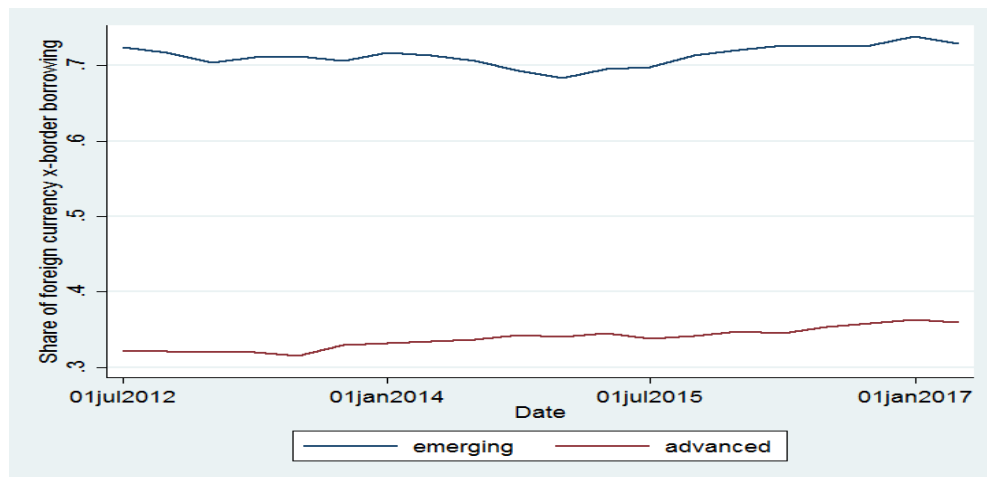


Figure 2.3: Cross-border borrowing from bank dominated in foreign currency

Source: (Niepmann & Eisenlohr 2012-2017) <https://217ad3f7-a-62cb3a1a-s-sites.google.com/site/timschmidteisenlohr/risk.pdf?attachauth=ANoY7coLGDpL-r8P-iS6QTvJIaS9ha9O0vJjCuP->

Note: this chart above shows the relationship between cross-border borrowing from banks in BIS reporting countries with other currency in two different countries, advanced and developing countries.

2.3.1 Foreign exchange volatility and its risk

Since the collapse of the Bretton Woods system of a fixed exchange rate which progressed for the period between 1946 and 1973), the exchange rates between the currencies have been highly unstable (Krugman, 2002). After 1973, the World using floating exchange rate system, which was determined by buying and selling the currencies in the foreign exchange market, the instability of floating exchange systems made the economists and businessmen disappointed because not expected to face the risk of uncertainty.

If the firms have subsidiaries in various country and using different currencies, in order to make a consolidated financial statements, any little variation of exchange rate can cause a high level of exchange rate risk and generate a high loss and a negative impact on the profitability, when the company are not managed effectively the fluctuation of exchange rate (Nyugen, 2012).

If the firms reducing the volatility of exchange rate by managing a foreign exchange risk, this help firms to forecast effectively a future cash flows and being sure of funds they come in and out of the company in order to make any investments or expansion

and also to make any other needs, the objective of some firms from using hedging, in order to manage the fluctuation of exchange rates, which allow the firms to focus and put concentration on their business (Goldberg & Drogdt (2008). Companies operating their work in international market environment are massively influence to the change of exchange rates and exposed to three different types of risks:

Transaction exposure risk, translation exposure risk, economic exposure risk.

- Transaction exposure

The most known and common type of currency risk, this exposure happened when there are a fluctuation of the currencies of the home country and the currency of the other country in which a transaction is dominated (Nguyen, 2012).

The most affected part in the balance sheet from transaction exposure are the account receivable and account payable, increasing the transaction exposure can occur when the firm buying or selling in foreign currency, borrowing or lending in foreign currency (Antoci, 2015).

- Translation exposure

This type of exposure coming when the company keep the assets and liabilities in the foreign currency, and the company require to translate the foreign currency into domestic currency for financial statements preparation use by management, and for preparing stockholders reporting (Soenen, 1979).

The changes of foreign exchange rates can cause the company to the translation exposure from the risk of translation the accounts dominated in foreign currency. (Antoci, 2015).

- Economic exposure

Economic exposure relates to risk from a fluctuation of the present value of uncertain future cash flows from a changes of foreign exchange rates, which the changes in price and the volume and have an impact on future revenue and expenses (Döhring, 2008).

This type of exposure is the most difficult type to manage comparing with other types of exposure according to it is needs lots of inquiry of the firm's locations, process and the currencies included and analyzing these data and generate a

meaningful reports which it can be calculate effective results and measures (Antoci, 2015).

Arteta and Hale (2008) analyzed the first systematic analysis of the effects of foreign debt crises on the foreign credit to the private sector, the empirical literature regarding analysis shows the effects of sovereign debt crises which focused on the impact on sovereign borrowing. They focus on the short and medium run effects of sovereign debt crises on private firm's access to foreign credit. Sovereign debt crises can lead to reduced foreign credit to private domestic firms via the decline in supply, as lender perceptions of country risk worsen, via the decline in aggregate demand that is triggered by a sovereign debt crisis and its results and via exogenous shocks that affect both the probability of sovereign debt crisis and the amount of foreign credit to the private sector (Arteta and Hale, 2008).

2.3.2 Company borrowing

Firms face risk on borrowing abroad coming from exchange rate fluctuation. Bale (1961) said when the company borrow foreign currency in the present value of exchange rate, then it will face risk from movement of currency in other direction in the future, if the firms converted now the foreign currency into local currency at a discount it can get gain, but when the exchange rate of the foreign currency goes in the other direction at premium, firms will hazard from this movement of exchange rate and will affect the profitability. This is a risk which the borrower, whether individual or companies, international or local should care about (Bale, 1961).

This section explain three parts that determine and classify the accompany borrowing:

First: Determinants of Foreign Currency Borrowing.

According to Rosenberg & Tirpák (2008), found that the choice of borrowing between local and foreign currency depends substantially on interest rate differential between local and foreign currency, which this differential depends on the credibility of interest rate of the exchange rate system or expectation of interest rate movement and also on inflation differential. The figure below shows when the countries have a high credible fixed system, only a little interest rate differential can make a move in lending shape, while in a flexible exchange rate system, a large differential maybe required to induce the same shift.

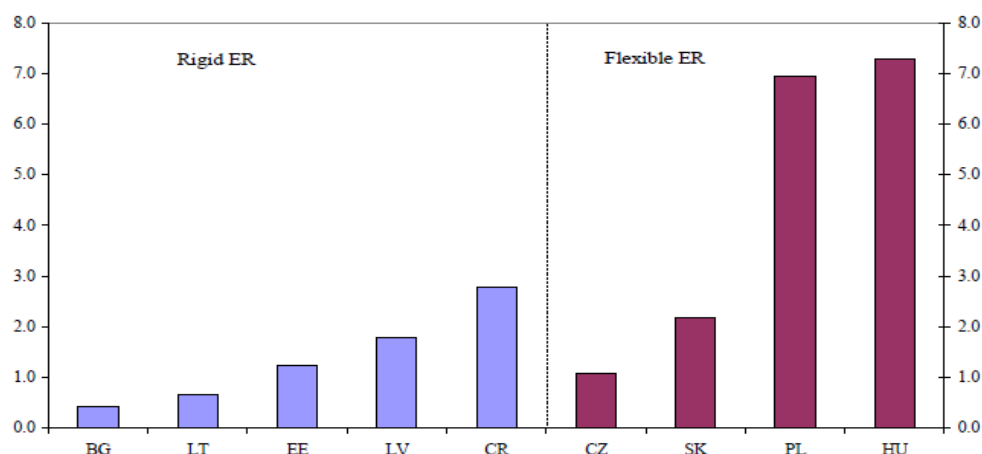


Figure 2.4: The relationship between fixed exchange rate and flexible exchange rate systems

Source: (Rosenberg & Tirpák, 2008) http://journal.fsv.cuni.cz/storage/1160_str_216_228_rosenberg.pdf

Second: what is the risk on foreign currency borrowing?

Gitman & Zutter (2010), defined risk as an uncertainty of the return the investment will get, in other word the variability of the returns make the risk of uncertainty, in order to measure the risk, in general management and shareholders are concern of the company financial situation, in order to monitor the company profitability.

Third: how debt ratio and DuPont ratio can serve borrowing foreign currency?

Companies can use this two ratio explain below debt ratio and DuPont ratios to measure the level of risk in the current time and in future, which is important for management, which allow the current and future shareholders who are interesting to invest in the firm, and also the banks to use this ratios in order to rank the company for making sure of the company ability of paying interest and principles payments, or to measure the company profitability.

Under fixed or pegged regime, the firms encourage to borrow foreign currency, because the government give a guarantee to the firms according the exchange rate movement. And the Central Bank under fixed or pegged regime keeps the volatility of exchange rate under control range in order to effectively minimizing the risk (Kamil, 2012).

Adoption of flexible exchange rate system will increase the currency mismatch, and there are two reasons for that firstly, there is a direct relationship between domestic

interest rate risk and the stability of the currency, secondly, the domestic interest rate increase because of exchange volatility correlate with floating rate it was found (kamil 2012).

2.3.3 Foreign currency risk of borrowing and hedging policies of companies

The risks from fluctuating in currency exchange rate and related risks are considered one of the most important issues that facing firms these days, because of its different types around the world which makes the countries suffer from fluctuating exchange rate in its national currency and other countries that dealing with it. Many firms that have international activities suffer from multiple problems in their work from the unexpected fluctuations in foreign exchange rates which leads to a massive losses in that firms activity that were not expected, as well as to affect and influence the plans that were used. So, the firms always look to find out a way to avoiding the expected and unexpected risks from the exchange rate fluctuations that sacrificing potential profits in the future and that what is called hedging against currency fluctuations.

According to Fischer (2008)x when the market is disorderly means there is a high volatility exchange rate, and in order to stabilize the disorderly movement of exchange rate, the central bank should have to intervene to minimize the volatility and must be careful from if the central bank easily and more intervene, the more disturb the development for the country in the robust market, so it is possible for the firms to hedging against exchange rate movement and without depend on government intervention.

Unhedged borrowers of foreign currency borrowing are quickly increased all over the world. In order to achieve low interest rate, previous studies found foreign currency borrowing is proper and optimal for individual & society and for the countries in growing economic area to achieve this purpose. During the financial crisis in some countries of (CEECs) see that if there is depreciation of the currency and the rise of the loan indebtedness, it looks obvious that the foreign currency borrowings have a high influence and threat to unhedged borrowers especially in the countries exposed to high currency fluctuation, the most important determinant of widespread foreign currency loans FCL is the exchange rate risk (Beckermann & Stix 2014).

As Beckermann & Stix (2014) suppose when the firms obtain a loan in Euro currency, then if the respective local currency depreciates against the Euro, then the loan in installment affects against the depreciation.

The fundamental advantage of currency devaluation, the firms enhancing their performance in order to high foreign demand for the domestic goods and product because of the currency is cheap to buy, but in some time, because of the borrowers affect by the changes in interest rate on balance sheet and income statement, it can be a reason of a currency crisis and make a systematic financial risk (Niepmann & Schmidt-Eisenlohr, 2017).

In order to avoid the risk of mismatch translation currency, firms that generate a local currency income should obtain a local currency borrowing, most of the researches say when the country have a high volatile inflation environment, then the borrowers face risk from inflation when they make a future repayment in local currency if they generate income in local currency, so foreign currency loans is more safe and less risky than local currency in high and volatile environment (Beckermann & Stix, 2014).

2.4 Hedging Foreign Currency Risk via Derivatives

Derivative instrument as a contract between two parts in which gives the right, and sometimes the obligation, to buy or sell an underlying asset, and specified conditions such the quantities and value of underlying variables or the maturity date, and the price and the money should be transfer between the parties (Nyguen, 2012). The derivative as a financial instrument in which values derives and depend on the other assets. Sometimes the underlying derivatives assets are the value of traded, like a stock option whose value depends on the other price of stock derivative instrument can be determined by any other variable (Hull, 2012).

2.4.1 Description of hedging

Hedging a techniques firms are using to reduce the risk from exchange rate fluctuation and use as speculation instruments to increase the profit of the company. As Hull (2012) sees that the outcome when the firm using hedging techniques better than without but there is no certainty. Hedging can be used to minimize exchange rate risk and protect accompany from exchange rate losses in abroad companies

when it is used as instrument of eliminating risk, whereas it can be used to increase the profitability in the company when used as instrument of speculation (Feng, 2007).

Hedging defined by as a strategy the firms uses to defend against risks, the international firms that take a loan or lending money, undertaking hedging contract such as forward, future, and option or swapping assets and liabilities with other side (Gitman & Zutter, 2010). The idea of using different types of hedging techniques minimizes the risk of unfavorable exchange rate moving in the financial market (Nguyen, 2012).

2.4.2 Corporate objectives of hedging

In the recent years the volatility in foreign exchange rates, and interest rates, and market prices for securities, and commodity prices are the main issue for the firm than in previous decades. These fluctuations in financial prices can have significant effects on the profitability. Therefore, firms have to understand that cash flows and accounting earnings are significant objectives for hedging strategies even in the set of the largest firms in both countries. One argument attempts to say that the accounting earnings important are to management because of their significance to analysis perceptions and predictions of future forecasting and because of their relevance in firm's compensation. Small companies are less likely to use hedging than in big firms, because small firms have more incentives to focus on earning. We can conclude that small companies concentrate on accounting earning more as hedging goal than in large firms, which the large companies concerning of using derivative in order to avoid a large risk of fluctuation (Sener, 1998).

As Nance et. al. (1993), indicated that the incentives the firms generating from hedging strategies as follows:

- Firms can reducing expected tax, by using hedging, the important for reducing expected tax when the firms use convex effective tax schedule. In other word a high reduction in expected tax, the more the convex the effective tax schedule. This mean firms have a greater incentives to hedge when the firms have more range of pretax income.
- Firms can reducing the transaction cost

Mayers and Smith (1982) & Smith and Stulz (1985), discuss and suggest that hedging protect the firms to encounters financial distress by reducing the difference of the firm value and thus reduce the expected cost from financial distress.

Berkman & Bradbury (1996), raise some other criteria of using derivative market, sees that the nature of operation affects the decision of using derivative market to reduce risk, such as import and export firms which have international branch use derivative market to reduce the risk of currency exchange rate fluctuation.

2.4.3 Types of derivative market instruments:

There are four types of derivative instruments explain as bellow:

2.4.3.1 Currency forwards

It is a contract which both parties can hedge their side at agreed price now regardless of currency price changes. A forward contract simply can deferred as a submission of some assets with an agreed sale price set in the current time, and each part required to respect to the end the delivery price, the forward contract each party puts in the safe side from fluctuation in future price (Bodie et al., 2014).

According to Wilmott (2000), describes some important characteristics of a forward derivative contract, which the rate of one currency converted to other currency as written in the contract is called stick rate, and the date when the contract exercise is called expiration date, the action to exercise the contract is called exercise (Wilmott P., 2000).

Firms dealing with international clients and suppliers are get several benefits from using a forward contract such as:

The most important and primary purpose of using a forward contract is to get certainty of future outcome. Under the risky fluctuating currency market, none of the parties cannot expect the future exchange rate, it is better to each party to be certain instead of a gamble on probability of outcome (Stephens, 2001, p 61).

Another benefit can generate from using a forward contract, when the company removing the uncertainty of exchange rate fluctuation, it allows the company to focus puts accurate budget. And company and other officers can clearly focus on other thing of business, instead of wasting time, money and assets on tracking daily changing of exchange rate. Forward currency exchange contract can also give some

flexibility to allow early exercise and also addition time of the contract (Stephens, 2001, p. 64).

The disadvantages of currency forward contract, when one of the two parties are taking the agreement and dispute the contract from any side, both of them are responsible in front of court (Stephens, 2001, p. 61).

In other word as Watson & head (2010), says the drawbacks of using a forward contract is when the exchange market shift against the holder's interest, the other party is not allows to leave from the contracted location and exercise the contract to get profit from movement (Watson & Head, 2010, p. 393).

2.4.3.2 Currency futures

As Hull (2012), defined a future contract as an agreement among two parties which it can buy or sell assets on a certain time in the future and on certain price, and unlike forward contract which future contract standardized can be traded on an exchange market. Accordingly, each party does not know each other, the exchange market give the participants security that the contract will be honored and safe to exercise.

According to Stephens (2001), future contract originally established from forward contract, and the difference between future and forward contract, future contract standardized and traded on public at the exchange market.

The first organization adopted and develop the future contract was Chicago Board of Trade (CBOT), and used future contract in agriculture product in the U.S. which farmers in American Midwest and traders in the agriculture product in U.S are the first users for future contract because they were afraid from flood and famine attended with agriculture crops. Which they established a place to exchange product which all interested to buy or sell their product for a forward contract (Stephens, 2001).

2.4.3.3 Hedging positions in futures and forward contract

The long hedge is the long position in the future contract, which used in order to hedge against price volatility (Hull, 2015). As Nguyen (2012) sees long hedge the purchaser can lock the price, to reducing the risk in a short position.

The short hedge is a short position in the future contract (Hull, 2015). Nguyen (2012) defined short hedge as the part that sell the currency in the future, and expect a

decrease in the currency, so he or she trying to be in safe side against volatility in price to reduce the risk in the long position (Nguyen, 2012).

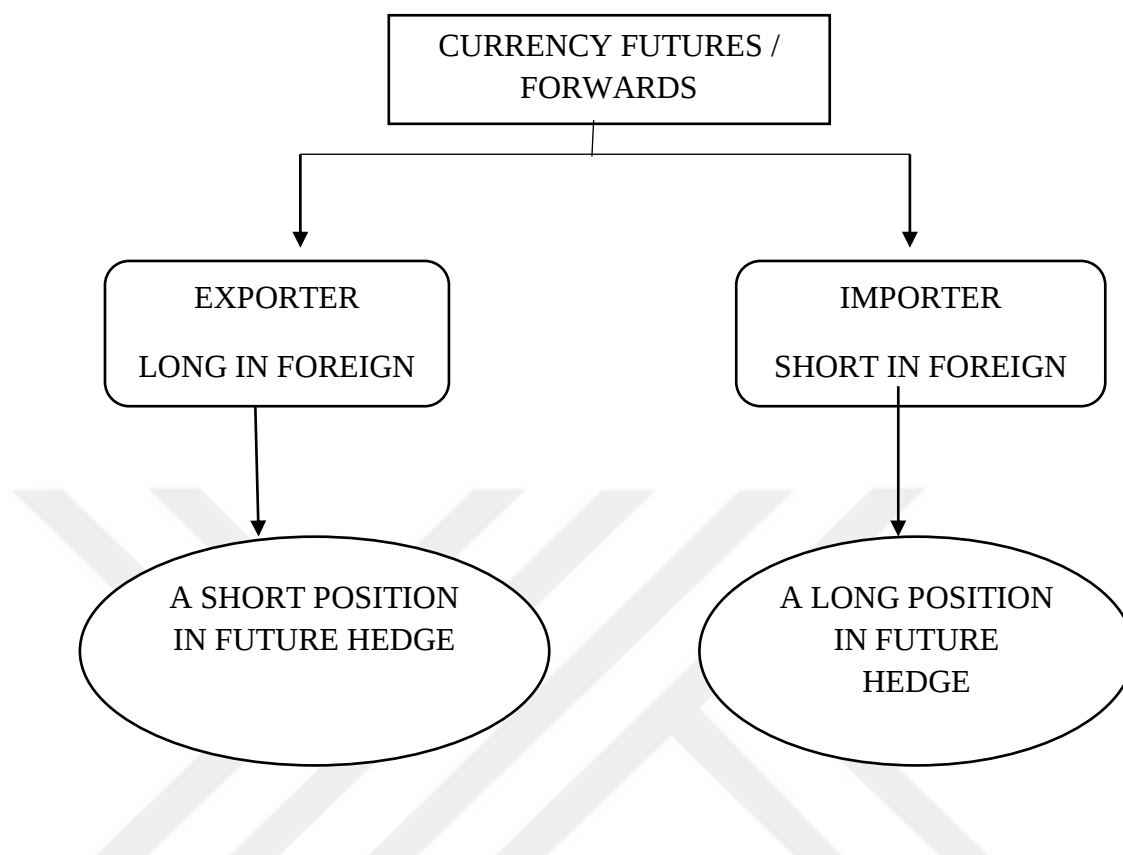


Figure 2.5: Types of hedge position in future and forward contract

The advantages of the future contract are a grantee by separate organization called clearing house, intermediary between each part of contract. In the currency future market have many of buyers and sellers which put the price in the market with a high degree of liquidity provided by public and others professional speculative capital (Naidu & Shin, 1981).

The limitations of currency future contract are low correlation between the price changes of future and the cash price of the currency, lack of liquidity, and the delivery problem (Brinkmann & Rabinovitch, 1995).

As Nguyen (2012), discussed the disadvantage of using future contract does not cover and satisfy needs for a small participant in the market, the reason of content of documents are not customized to individual needs before the contract is listing for trading in the secondary market.

Another drawback of future contract is about the deposit, and the holder should compulsory required to put cash deposited in the clearing house if the margin is coming to decrease to the safety level (Nguyen, 2012).

2.4.4 Currency options

It is a standardized exchange traded contract, which gives the purchaser of the contract the right to buy or to sell something on agreed strike price in the past on specified time in the future. This right is not obligated and gives the holder the right to expire or not in the expiration date. The seller's premium considers the cost the buyer should pay in order to obtain the contract. The figure 7 below shows the sides in the option contract.

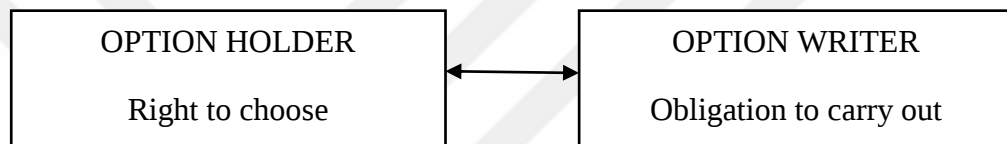


Figure 2.6: Participant in option contract

The option contract has two parts one part gives the other part, right to buy or to sell or not the option holder gives the part who hold the contract, in sometimes called option buyer or option talker, because the right to buy or to sell currency on specified price and specifid time in the future, the person who sell the option is a call option seller or option granted, who should obliged to the contractual option, and committed to perform the choice (Nguyen, 2012).

There are two different types of option contract:

- Call option: gives the buyer the right but not the obligation to purchase the underlying assets at a strike price at upon agree future date, the seller have the obligation to sell the underlying assets at strike price and only if the buyer exercise the option.
- Put option: gives the buyer the right but not the obligation to sell the underlying assets at a strike price at a certain date in the future, a seller has the obligation to purchase again the underlying asset at the strike price if the buyer exercises the option (Morgan, 2013).

Currency option gives the holder protection against adverse in fluctuation exchange rate, which gives the holder the flexibility to buy or to sell (Nguyen, 2012).

2.4.5 Currency swap

Another type of derivative instruments techniques call SWAP contract is used when the large companies cross-border capital flows faced constraint and control by governments, they found something allow them to make apparel loans between themselves. And after removal these constraints and controls these loans, the swap instrument developed. In 2009 approximately 414 trillion, the amount of SWAP transaction traded and continue to increase as a quick rate change (Kasilingam, 2012).

SWAP is as a contract which can be traded over-the-counter (OTC), and can be traded informal security trading, among two firms. The time when the amount have to pay and how to calculate the amount defined in the contract (Hull, 2012). As Hera (2010), introduced his definition of SWAP as a simple, an agreement used to exchange cash flow which can be used as insurance financial strategies to cover the real business risks.

The advantages of using a SWAP contract are to reducing the interest rate changes when the multinational firm finance their subsidiaries in other country with different currency, they choosing the best financing way to repeat the loan by converting the interest rate to the local currency for the subsidiary (Döhring, 2008).

According to Hull (2010), firms can use SWAP as instrument to convert liability from floating interest rate into a fixed interest rate, this means if a company takes a loan from a bank with a fixed interest rate the company can use SWAP contract to convert into a variable interest rate with other firm, in other word companies make exchange benefit between each other. Also SWAP contract can enable the company to transform assets, when the firms receive an earning on a fixed interest rate the company can convert into a floating interest rate.

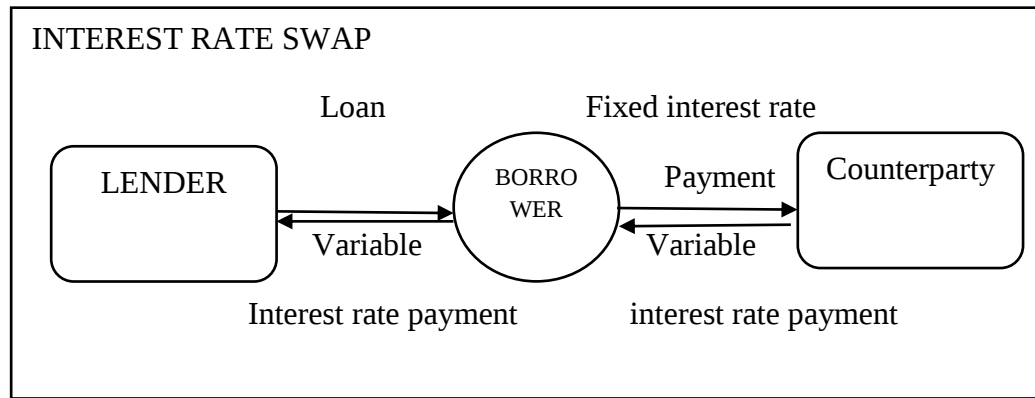


Figure 2.7: The relationship between count party and the lender in SWAP contract

Source: Available: <http://www.businessinsider.com/bubble-derivatives-otc-2010-5>

The figure above can help the reader to understand how the investor can use SWAP instrument to hedge against risk. A SWAP contract, it is an agreement between investors in order to exchange cash flow, then if the interest rate increase, then the second investor is responsible to pay the amount different for the first investor, and the first investor pays the agreed rate. Hera (2010), says if an investor want to hedge to a variable interest rate can change allocation to second investor with fixed exchange rate called (counterparty) by using interest rate SWAP. If the interest rate increase the second investor counterparty pays the different, and investor protect himself against increasing exchange rate and pays the original amount plus the cost of SWAP, when second investor become bankrupt the investor will lose the insurance risk which provided by the second investor and will still liable to the lender this argument related to (Hera, 2010).

The disadvantage that found by Hull (2010), it can be explains in the table below, how should the gap between the rates provided to AAA Corp. and BBB Corp. be unlike in fixed and floating markets?

Table 2.3: Borrowing rates that make a basis the argument between fixed and floating exchange rate.

	Fixed	Floating
AAA Corp.	4.0 %	6-month LIBOR _ 0.1 %
BBB Corp.	5.2 %	6-month LIBOR + 0.6 %

The reason of gap differentials between the two companies, because the nature of the contracts available to companies in fixed and floating markets. Which in the first company AAA the contract offered in fixed exchange rate and the maturity 5 years and the LIBOR is 0.1%, but in company BBB it provided in a floating exchange rate, when the lender have a decline in the credit worth he have chance every 6- months to increase the spread the LIBOR that set. The lender in a fixed exchange rate financing the provider doesn't have the opportunity to convert the term of the loan (Hull, 2010).

Table 2.4: The Comparisons between financial derivatives

	Futures Contract	Forwards Contract	Option Contract	Swap Contract
Meaning	Standardized contract traded in exchange market to buy or to sell the underlying assets (Stock, Currency,) in future at specified price.	It is not standardized, it is an agreement between two parties to buy or to sell the underlying assets at specific date and at agreed price in the future.	It is the most important of derivatives contract, it give the right but not the obligation for Buying-Sell the underlying assets	Its a broader contract with two parties the can exchange one cash flow for another cash flow.
Structure	Standardized	Not standardized	-	-
Counterparty Risk	Low	High	-	-
Contract size	Fixed	Depend on the contract term	-	-
Regulation	Stock Exchange	Self-Regulated	OTC/ Exchange traded market	Not traded on exchanges.
Collateral	Initial Margin Required	Not Required	-	-
Settlement	Daily	On maturity date	-	-
Guarantee	Yes (Clearing house)	No	-	-

2.5 Main Factors Affecting Corporate Decision to Hedge Foreign Currency Risk

2.5.1 Policy

Some firms the CFO in the company appoint someone foreign exchange capital market (FXCM), it is a broker responsible to make quarterly report to the finance committee about hedging strategy to make foreign exchange controls and foreign exchange performance. The FXCM meets every month with the finance committee to discuss about the position of foreign currency exchange and to approve a strategy the company choose for hedging and to put the strategy of using derivative to hedge the exposure of exchange rates also to specify the type and the value and the maturity of derivative contract (Brown, 1999).

Stulez (1996) suggests that the firms' objective of using derivative market to manage the risk in order to reduce the possibility cost that cause a financial distress or to prevent the company of undertake the investment strategy. Froot et. al. (1993), sees that the value of hedging activities is increasing when the company depend more in external financing than using self-financing, because hedging ensures company to capable for finance their investment and avoiding under investment difficulties.

2.5.2 Leverage

Berkman & Bradbury (1996) pointed out another key which determine the using of derivative instrument, the needs for derivative instrument increase when the corporate have high level of financial leverage (Berkman & Bradbury, 1996). Nguyen (2012), sees when the firms have a high level of debt, then the firms have a high level of financial leverage which increase the needs of derivative market (Nguyen, 2012).

Sivakumar and Sarkar (1993), agree with Berkman & Bradbury (1996), when the company have a high leverage, this means have a high level of credit, the hedging aids the firm to fall into financial distress (Berkman & Bradbury, 1996).

2.5.3 Liquidity and profitability

There is strong relation between liquidity and hedging. As Nguyen (2012) sees when the firms suffering from capital shortage, then firms are falling into many problems like covering the fixed expenses and paying for debt payments and fall into financial

distress (Nguyen, 2012). Scholes (1997) define liquidity as the cost of converting assets into cash immediately in short time.

2.5.4 Nature of operation

Other factor can influence the demand for using derivatives instruments to hedge against foreign exchange fluctuation, Berkman and Bradbury (1996), indicated that the nature of operation can have influence the using of derivatives instruments, the firms that are most likely to use derivative instrument to hedge against foreign currency exposure, which have subsidiaries companies in different country and using different currency useinfg in the function of export and import (Berkman and Bradbury, 1996).

2.5.5 Cost of hedging

There are variety of expenses firms pay in order to use derivate instruments such as commission charges to broker, searching information cost, and site subscription. As (Berkman and Bradbury, 1996), found that firms before making hedging contract should comparing the benefit collect and the transaction cost pay for contract.

3. FOREIGN BORROWING IN TURKISH ECONOMY

3.1 Turkish Economy

Turkey formally called as The Republic of Turkey, which has a unique place in the world. Turkey located between Asia and Europe, it is a transcontinental country, and Turkey has Anatolia from the southern Asia and East Thrace from the southern Europe. In 1960 the total population in Turkey was 28 million people, and this number continuously increasing. In 1970 the population in Turkey has been reached to 35.46 million. 1980 the population became more of 44.11 million. In 1990 rise to become 54.13 million. For the year 2000 the number of population in Turkey increased to reach 72.70 million. In 2018, the population in Turkey, it is more than 80 million. The table below shows population statistics in Turkey from the year 2007 until now.

Table 3.1: Population Statistics in Turkey (In Thousand)

Year	Population
2000	64,729
2005	68,860
2010	73,722
2015	78,741
2016	79,814
2017	80,810

Source: Türkstat (Turkish statistical institute) Available: <http://www.turkstat.gov.tr/UstMenu.do?metod=temelist>

The current population in Turkey is 82,023 millyon and equal to 1.07% of the world total population. The total land area is 769,630 km² and the population is increasing rapidly.

The table below shows the interest rate in Turkey for the period 2002 until 2017, which the central bank of republic of Turkey sets the interest rate to affects and influence the markets, and the monetary policy comitee puts the schedual of interest rate and posted on the CBRT websites.

The GNP (growth national product), it indicator has a close relation with GDP (growth domestic product), used by the country to mesure th developmenet in the country, as shows in table below the GNP in Turkey in 2000 equal to 4,228,600, increased by .39% in 2017.

Income per capita or average income calculated to measure the average income earned by person in the country. The eqaution to mesure the income per capita as follows: $\text{Income per capita} = \text{GNP} / \text{Population}$.

Table 3.2: Major economic indicators in Turkish economy for the period 2002 – 2017

Years	GNP Billion USD \$	GNP Billion TRY	Income per Capita	Unemployment %	Inflation Rate %	Interest Rate For Borrowing %	
						Borrowing	Lending
2000	4,228	2,410	6,533	7.3	68.88	-	-
2001	3,084	2,467	4,702	5.6	35.92	-	-
2002	3,580	6,087	5,392	10.8	29.7	44	51
2003	4,697	7,516	6,992	10.8	18.4	26	31
2004	5,960	8,345	8,765	10.5	9.3	18	22
2005	7,304	10,226	10,608	9.3	7.7	13.5	17.5
2006	7,905	13,360	11,338	10.2	9.7	17.5	22.5
2007	7,905	11,463	11,200	10.2	8.4	15.75	20
2008	10,930	18,582	15,284	10.7	10.1	15	17.5
2009	8,979	16,073	12,375	14.1	6.5	6.5	9
2010	10,559	16,156	14,324	12.4	6.4	1.5	9
2011	11,205	16,919	14,995	9.8	10.4	5	12.5
2012	11,587	21,321	15,322	9.2	6.2	5	9.5
2013	12,480	22,589	16,279	9.3	7.4	3.5	7.57
2014	12,112	23,498	15,589	10.1	8.2	7.5	11.25
2015	11,018	28,869	13,994	10.3	8.8	7.25	10.75
2016	10,882	32,321	16,635	10.9	8.5	7.25	8.5
2017	10,596	40,902	13,113	11.2	11.9	7.25	9.25

Source: Türkstat (Turkish statistical institute), TCMB Available:

<https://biruni.tuik.gov.tr/gosterge/?locale=en>

<http://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Core+Functions/Monetary+Policy/Central+Bank+Interest+Rates/CBRT+INTEREST+RATES+Late+Liquidity+Window>

<http://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Core+Functions/Monetary+Policy/PRICE+STABILITY+AND+INFLATION/Inflation+Targets>

3.2 Liberalization Policies and Turkish Economy Crisis in 1994 and 2001

In the late of 1970s, Turkey faced deficit in foreign debt payment, so Turkey had started to implement liberalization policy and open to capital market. In the late of 1980s the foreign trade was liberalized. In 1996, when the customs union with the European Union was established, Turkey was totally applying liberalization system. Foreign exchange trade was liberalized in 1984s. In 1989, Turkey became financially open economy market after removed all the control of capital movement and started to imply Turkish currency convertible (Arin, 1999).

When the countries have exchange rate appreciating which their currency is overvalued then the countries have less pressure to applying trade liberalization (Nicita, 2013).

According to (Eryürekli, 2017), mentioned about the decree no.32 on the protection of value of Turkish currency. The law sets and determines the regulation and principles of placement the value of the Turkish currency against the foreign currency. The Decree determines all the transactions regarding export and import whether visible or invisible transactions and capital movement, and also the Decree sets a determination on all the transaction relate to foreign exchange and instruments which traded in the foreign exchange market such as securities, other capital market instrument.

On January 2018, Turkish Council Ministers submit a decision on a protection the value of Turkish currency. The decision includes that talking a loan in foreign currency from abroad are still permitted for Turkish residents while obtaining a loan in foreign currency are restricted for Turkish Residents. The decision mentioned also about talking a foreign currency loans for Turkish Resident they must have foreign currency income.

3.2.1 The currency crises in Turkey in 1994s

When the fixed exchange rate system was dominated in Turkey, and The Central Bank of republic of Turkey was under crawling peg regime for the daily adjusted purpose, Turkey in 1990s, followed International monetary Fund (IMF) for the fully

exchange of Turkish Lira. In the late of 1993s, Turkey started to adopt a flexible exchange rate regime against United States dollar as stated by (IMF) in there exchange regulations and restrictions issued in annual report every year. In this system the Central Bank can make intervention in the exchange market to prevent unfavorable exchange rate fluctuations.

In 1994s, a robust financial crises hit the Turkish Economy. Turkish lira was depreciating about 70 percent versus U.S Dollar in the first quarter of 1994. In that time there was no correction measures has been taken to find out solution. It was a policy mistake, which a local borrowing has to be maintained in order to keep the inflation in low level and to keep the reserves in a high level, in spite of this policy mistake the domestic debt instrument such Bond, notes and mortgage still in continuous (Özatay, 2007).

For the individual resident in Turkey they cannot obtain foreign currency loan from abroad therefore the banks and financial leasing companies and factoring companies, financing companies only can obtain loans from abroad (Ernst &Young, 2018).

According to (Özatay, 2007), mentioned for the reasons of the crisis are return to the current account deficit, exceed of monetary, fiscal policies and the real overvaluation of the currency.

The two reasons happened that burned the foreign currency crisis. In the half of 1993s, there were a sharply indicator for the crisis, firstly, the government cancelled the local borrowing for the reason of increased the cost of local debt, and second the rising of demand for the Central Bank assets (Özatay, 2007).

3.2.2 Turkey financial crisis in 2001

In the beginning of the century, there were imbalance and weaknesses in Turkish Economy, which return to policies and regulations put in the last two decades. In 1999, Turkey Economy met unusual recession, according to that Turkish government and with assist from the Bretton Wood Institutions (BWI) put program called exchange rate based stabilization program in order to minimize the inflation and to control the unaffordable public debt accumulation, the program worked well and public felt confident and the International Monetary Fund (IMF) officials conciliate the program.

Unfortunately, in September 2000, the economic situation required intervention from the (IMF), in order to support the program to be in progress, after a little time later the program was not sustainable and exposed to a huge attacks on the currency and exit of capital, again by advising from (IMF), a free floating exchange regime had been replaced with a currency peg (Boratav, 2003).

The main reasons behind the failing of the program was launched in order to decrease the inflation were firstly, the program faced many problem and difficulties in the banking system and public financing, in more details the Banking system was primarily depend on increasing the interest rate in order to generate revenue from deposit and T-bills.

The effect of implementation the program exchange rate-based stabilization had formed tradeoff between public and private sector, which replacing free floating regime instead of peg regime under a full capital account convertibility, and wide dollarization increase the difficulty to both public and privet sector (Boratav, 2003).

In 1980s, Turkey had implemented a stabilization-cum liberalization experiment with a military rule in order to response the dept and balance of payments in the late of 1970s. The program acquired some success and was extremely appraised which made successful convertibility from inward to outward development plan. Which result with a decreasing in inflation from 3% in 1980s to become 30% in the following two year, and the current account deficit was half from a 5% of GDP, and d the public sector borrowing requirement (PSBR) bring down from 10% of GDP to become less than 4%, the economy was relished with a growth in export with an average of 6% per year for the period between (1983-1987). Table below shows some indicator for Turkish Economy for the period 1990-2000s.

Table 3.3: Macroeconomic indicator in Turkish economy for the period 1990-2000

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GDP growth rate	9.3	0.9	6	8.0	5.5	7.2	7.0	7.5	3.1	-4.7	7.4
CPI (percent change)	60.3	66	70.1	66.1	106.3	93.7	82.3	85.7	84.6	64.9	54.9
Interest rate	51.9	109.6	97.8	90.3	150.6	136.3	143.6	119.2	115.7	96.5	37
Exchange rate	22.9	60	74.6	59.8	171.6	53.6	77.7	86.5	71.8	60.9	49.0
Public sector balance	- 7.6	- 11.3	-12.4	- 13.1	- 10.2	- 6.4	- 13.2	- 13.1	- 15.9	-25.5	-19.3
Of which primary	- 3.6	- 6.2	7.0	- 5.6	- 0.2	2.7	- 1.2	- 2.1	0.5	- 2.0	2.8
Balance											
Net debt of the	28.8	35.2	35.7	35.1	44.7	41.3	46.5	42.9	44.5	61.7	59.0
Public sector of which net domestic debt	0	0	0	9.4	12.3	20.7	20.8	24.5	41.4	39.1	0
Current account Deficit	1.7	.1	-.6	-3.6	2.2	-1.5	-1.3	-1.3	1.1	-0.9	-4.9
Gross external debt	32.6	33	34.8	36.9	50.1	45.3	47.0	51.2	55.6	57.1	00
Foreign deposits Billions of dollars	7.4	10.2	12.4	13.7	15.6	20.5	24.4	26.8	30.6	34.1	37.7
Percent of total deposits	24.9	31.9	34.9	38	47.4	47.6	44.0	42.1	42.1	41.7	43.5

Sources: IMF (2000A, 2001c), OECD (2001), Central Bank of Turkey (version issues)

3.3 International Trade and Balance of Payment

The growth in Turkey was recovered rapidly, export industry one of the fundamental key for growing. According to the World Top Export, 2018, says the total export in Turkey for the year 2017 reach to 157.1 billion which increased up to 3.5% for 2013 and for 2016 up to 10.2 %, the total population in Turkey equal to 80.8 million and the total exportation is 157.1 billion in 2017, this can be translate \$ 1,900 for every resident in Turkey.

The exports & imports in Turkey increased respectively, which the exports were 13 billion 942 million dollar and the import were 21 billion 267 million dollar (Turkish statistical institute, 2017). The table below shows the history of export and Import in Turkey for the period from 1969 to 2017.

Table 3.4: Export and Import history in Turkish economy / Billion USD

Foreign Trade-Annual exports (In Billions of \$)				Import (In Billions of \$)			
2000	277	1974	15	2000	545	1974	37
2001	313	1975	14	2001	413	1975	47
2002	360	1976	1	2002	515	1976	51
2003	472	1977	17	2003	634	1977	57
2004	631	1978	22	2004	975	1978	45
2005	734	1979	22	2005	116	1979	50
2006	855	1980	29	2006	139	1980	79
2007	107	1981	47	2007	170	1981	89
2008	132	1982	57	2008	201	1982	88
2009	102	1983	57	2009	140	1983	92
2010	113	1984	71	2010	185	1984	107
2011	134	1985	79	2011	240	1985	113
2012	152	1986	74	2012	236	1986	111
2013	151	1987	101	2013	251	1987	141
2014	157	1988	116	2014	242	1988	143
2015	143	1989	116	2015	207	1989	157
2016	142	1990	129	2016	198	1990	223
2017	157	1991	135	2017	233	1991	210

Source: Turkish Statistical Institute. <https://biruni.tuik.gov.tr/gosterge/?locale=en>

The balance of payment it is a big account to measure the inflows and outflows of money into and out to a country, the main parts of balance of payments are the current account and financial account.

The balance of payment in Turkish economy shows, the current account deficit recorded USD 2,973 million indicating a decrease of 818 million compared to June of previous year, the financial account shows the direct investment recorded net inflow of USD 951 million. The figure below explain in more details.

Table 3.5: Balance of payment in Turkey (2000-2017)

YEAR	CURRENT ACCOUNT					
	Foreign Trade Export (Annual) (US)	Foreign Trade Export (Annual) (TRY)	Foreign Trade Import (Annual) (US)	Foreign Trade Export (Annual) (TRY)	Net inflow (Outflow) USD	Net inflow (Outflow) TRY
2000	27,775	15,832	54,503	31,067	(26,728)	(15,235)
2001	31,334	25,067	41,399	33,119	(10,065)	(8,052)
2002	36,059	61,300	51,554	87,642	(15,495)	(26,342)
2003	47,253	75,605	69,340	110,944	(22,087)	(35,339)
2004	63,167	88,434	97,540	136,556	(34,373)	(48,122)
2005	73,476	102,866	116,774	163,484	(43,298)	(60,618)
2006	85,535	144,554	139,576	235,883	(54,041)	(91,329)
2007	107,272	155,544	170,063	246,591	(62,791)	(91,047)
2008	132,027	224,446	201,964	343,339	(69,937)	(118,893)
2009	102,143	182,836	140,928	252,261	(38,785)	(69,425)
2010	113,883	174,241	185,544	283,882	(71,661)	(109,641)
2011	134,907	203,710	240,842	363,671	(105,935)	(159,961)
2012	152,462	280,530	236,545	435,243	(84,083)	(154,713)
2013	151,803	274,763	251,661	455,506	(99,858)	(180,743)
2014	157,610	305,763	242,177	469,823	(84,567)	(164,060)
2015	143,862	376,918	207,207	542,882	(63,345)	(165,964)
2016	142,530	423,314	198,618	589,895	(56,088)	(166,581)
2017	157,006	606,043	233,799	902,464	(76,793)	(296,421)

Source: Turkish Statistical Institute. <https://biruni.tuik.gov.tr/gosterge/?locale=en>

Khan and Knight (1983) analyzed non-oil developing countries current account balances of developing countries 1970s where the Bretton Woods System collapsed. They summarized the reasons as follows:

- Detrition in terms of trade
- The slowdown of economic activity in industrial countries
- The sharp increase in the level of real interest rate in international credit markets particularly towards the ends of the decade, and inaduate or insufficient domestic adjustment evidenced by
- Rising fiscal deficits and appreciation of real effective exchange rates.

3.4 International Investment Position and Foreign Exchange Borrowing

The International Investment Position (IIP) is an economic financial indicator calculated at specified time each year quarterly or annually in order to compare the country position with other country position in the world. When the value of external assets abroad more than the value of liabilities to then the country positive and in safe position, but if the total liabilities more than the value of current assets the value is negative and the country in danger position (Oberzut, 2018).

The International Investment Position in Turkey, according to the report submitted by the Central Bank of the Republic of Turkey (2017), shows that the third quarter in 2017 the net International Investment Position (IIP), increased in the negative way, and the increasing was according to the changing in the exchange rate and price. The (IIP) indicator shows the liabilities raised by 2% at the end of the third quarter of 2017 comparing to second quarter in the same year, and the total external assets raised by 1.2 % and the liabilities increased 1.7 %.

Table 3.6: International Investment Position / Billion USD \$

Years	Assets	Liabilities	Net
2001	52,218	137,587	-85,369
2005	107,103	281,001	-174,624
2006	143,956	349,512	-205,556
2007	170,117	483,738	-313,621
2008	186,450	386,061	-199,611
2009	182,067	457,989	-275,922
2010	185,892	547,160	-361,268
2011	179,662	495,869	-316,207
2012	214,414	640,535	-426,121
2013	226,151	623,925	-397,774
2014	230,015	676,591	-446,576
2015	211,420	598,789	-187,369
2016	215,206	584,478	-369,272
2017	232,772	691,947	-459,175

Source: Central Bank of Republic of Turkey <http://www.tcmb.gov.tr/wps/wcm/connect/b5fa3638-ebb2-4a7d-b879-74bafcb45dd6/iip.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-b5fa3638-ebb2-4a7d-b879-74bafcb45dd6-miIc4SY>

International investment position is a monthly statistical shows at point of time the stock value of a financial receivables and liabilities of residents an economy of a resident of another country, and financial assets kept as a gold. The international investment position in Turkish economy at the end of May 2018, the external assets recorded 231.6 billion this indicating a decrease of .5 percent to the end of 2017, and the liabilities against non-residents recorded USD 632.5 billion indicating a decrease of 8.6 percent.

3.5 Literature Review on Effects of Volatility of Foreign Exchange in Turkey

There is relationship between the volatility of exchange rate and the size of foreign trade in the developed countries. Whatever positively or negatively changes, but in the same study they are mentioned the developing countries have no impact from the volatility of exchange rate (Demez & Ostaoğlu, 2012).

The effects of exchange rate volatility on the investment and growth has a massive interest for the researcher and for the policy makers. As the exchange rate volatility and uncertainty increased the profitability and investment, growth will affect as a result of this increase for both the developed and developing countries. According to a high level of exchange rate and inflation volatility, Turkey faced critical level of Instability. Exchange rate volatility have a massive effect on the growth of manufacturing company in Turkey (Demir, 2009).

3.6 Risk of Foreign Currency Exchange Borrowing At Company Level

Company Borrowing

The risk occurs from foreign exchange rate volatility has a strongly effect on the volume of the capital flows. There is an excessive relationship between the exchange rate volatility and the financial market fragility, in order to minimize this risk of financial fragility the government gives a guarantees to offer a bailout to domestic financial market users and guarantee to help the countries from the international community in case of crisis, this gives the investors the encouragement to invest and do not afraid from the full risks to make an investments, thus make the investors encourage to take a high risks, but these risks lead to a financial fragility, in case of reducing this financial fragility thee country should issue some robust supervision

and regulate a vigorous decision of the financial system. Pegged exchange rate system is a type of implicit guarantee but in the same time it is a source of moral hazard, encouraging unhedged foreign currency borrowing in order it has low risk credible in the long term, but this unhedged a foreign currency borrowing like a bomb waiting to explosion, but when applying a more flexible exchange rate is a favorable to specify the short term capital inflows and increase the country stability (Hausmann & Eichengreen, 1999).

Why some companies borrow money more than others, and why some firms take loan in the short term while others obtain loan in the long term? The necessity for the firms to preserve 'the reserve borrowing capacity' although this flexibility is not obvious in such countries that are not frictionless in the capital market and when there are more debts the increment tax advantages from the borrowing decrease and the interest tax shield become less proven. Perhaps the bankruptcy costs (that the cost the company incur according to the transaction cost and re-establish again) that decrease the profitability in the firm from borrowing, sometimes the manager avoiding a high debt in order to maintain their position and protect their jobs to stabilize their wealth (Myers, 1977).

The lending to a foreign government exceeded in 1973s and 1982s more than before the World War. This wave that occurred make breakdown of repayment the loan, this repayment crisis are due to several reasons such as the depression of international trade some time related to the government budget crisis and sometimes due to revelation of financial abuses (Sachs, 1987). The table 12 shows the borrowing indicator in Turkish Economy.

The sectoral composition of long term loans in Turkish economy for the period (2002- February 2018) as follow:

In Turkey, after 2001 financial crises, the private companies preferred to borrow from foreign capital markets more in comparison to domestic one. They prefer to get benefit very the extra ordinary liquidity in the world market during 2008-2013 period. Analyzing international investment of Turkey show how Turkish economy is sensitive to the extra ordinary foreign exchange borrowing of companies other than State's borrowing.

The phenomenon of saving or lending in foreign currency is wide spread in emerging markets and in developing countries. Governments have encouraged dollarization, which enabling their citizens to open saving accounts and allowing them to borrowing in foreign.

Some countries like Hungary or Latvia and Poland puts tightened requirement for the borrowing in foreign currency and have promote their banks to use moral suasion in order to prevent a retail foreign currency borrowing. The banks in countries required to disclose the exchange rate risk of foreign currency borrowing to their clients by the order of the authorities in the country (Özsöz et. al., 2015).

Turkey, the borrowing in foreign currency allowed for the household and businesses. Since June 2009, all households are stopped to borrow in foreign currency, while businesses enable to continuo to keep the line of credit of foreign currency open. The Central bank of republic of Turkey (CBRT) did not give any justification of stopping this practice (Rengifo et. al., 2013)

In order to minimize the systematic risk that Turkey's firms borrowing have, the government decided to regulate rules to restrict the foreign currency borrowing for some companies of smallest size started on May 2018. While force the largest borrowers to hedge against their exposure to decrease the risk of exchange rate fluctuations (Courcoulas & Kandemir, 2018).

In the fourth sections, the financial statements of specifically chosen industry have been analyzed.

Table 3.7: Sectoral Composition of Long Term Debt in Turkey (Billion USD \$)

Years	Financial	Non-Financial	Total	Change %
2002	6,894	22,316	29,211	3.19
2003	7,425	22,718	30,143	22.74
2004	10,776	26,223	36,999	37.63
2005	21,365	29,555	50,920	61.42
2006	37,632	44,565	82,197	48.30
2007	52,129	69,772	121,902	15.70
2008	51,788	89,255	141,044	(8.90)
2009	45,221	83,272	128,494	(6.88)
2010	41,166	78,488	119,655	6.02
2011	47,869	78,991	126,860	10.74
2012	56,900	83,581	140,482	11.23
2013	72,503	83,752	156,255	7.65
2014	84,421	83,781	168,203	15.71
2015	104,572	90,053	194,625	4.32
2016	105,516	97,511	203,028	9.11
2017	113,479	108,046	221,526	3.19

Source: Central Bank of Turkey (TCMB) <http://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Statistics/Balance+of+Payments+and+Related+Statistics/Outstanding+Loans+Received+from+Abroad+by+Private+Sector-/Data/>

Table 3.8: Sectoral composition of short term debt in Turkey

Year	Total borrowing (USA \$)	Change in the USA \$ %	Total borrowing (In TRY)	Change % (In TRY)
2002	62,823	0.28	35,809	
2003	80,505	0.42	63,599	0.78
2004	114,381	0.28	193,304	2.04
2005	146,972	0.15	235,155	0.22
2006	168,735	-0.05	227,792	-0.03
2007	159,752	0.31	226,848	0.00
2008	208,608	-0.09	246,157	0.09
2009	188,806	0.37	285,097	0.16
2010	259,184	0.27	381,000	0.34
2011	330,197	0.18	515,107	0.35
2012	389,677	0.29	732,593	0.42
2013	503,347	0.06	895,958	0.22
2014	533,361	-0.09	1,200,062	0.34
2015	487,440	-0.12	1,130,861	-0.06
2016	427,526	0.06	1,301,389	0.15
2017	452,680	0.28	1,720,184	0.32

Source: Central Bank of Turkey (TCMB) Available: <http://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Statistics/Balance+of+Payments+and+Related+Statistics/Short+Term+External+Debt+Statisticss>

40 companies with foreign exchange position deficit and surplus

Table 3.9: Credit rating of Turkish companies

Companies	Industry	Foreign currency position (milyon TL)
Tüpraş	Oil/Industry	-6.785
Anadolu Efes	Food	-3.578
Tofaş Oto. Fab.	Manufacturing	-2.475
Coco Cola İçecek	Food/Beverage	-1.976
Ford Otosan	Auomobile/ Manufacturing	-1.971
Erdemir	Construction	-1.779
Kardemir (D)	Construction	-1.652
Izmir Demir Çelik	Construction	-1.257
Brisa	Auromobile	-822,9
Ülker Bisküvi	Food	-728,3
Pektim	Energy	-588,3
Bagfaş	Agriculture/Chemical	-422,7
Menderes Takstil		-397,4
Gübretaş		-347,4
Anadolu Isuzu		-313,8
Turcas Petrol		-304,1
Parsan		-296,3
Karsan Otomotiv	Automobile	-254,0
Trakya Cam		-245,0
Batı Çimento		-242,8

Source: Economist Online Available: <http://www.ekonomist.com.tr/borsa/doviz-pozisyon-acigi-fazlasi-olan-40-sirket.html>

Table 3.10: Foreign exchange position deficit and surplus

Companies	Foreign currency position (milyon TL)
Vestel	680,5
Soda Sanayii	535,3
T. Tuborg	133,6
Doğan Gazetecilik	133,3
Ege Endüstri	130,9
Good-Year	79,4
Anadolu Cam	77,8
Sasa Polyster	59,4
Konya Çeminto	59,3
Kent Gıda	34,2
Çuhadaroğlu Metal	32,9
Akşansa	31,7
Alkim Kağıt	25,6
Çimsa	24,2
Akın Takstil	23,9
Tat Gıda	20,6
Derimod	20,0
Erbosan	19,9
Deva Holding	18,3
Aygaz	18,1

Source: Economist Online Available: <http://www.ekonomist.com.tr/borsa/doviz-pozisyon-acigi-fazlasi-olan-40-sirket.html>

The top 10 leading company in Turkish economy, which is the company Tüpraş took the first place according to Fortune magazine with total sales around 39.7 billion

Turkish lira (Fortune 500, 2016). The table below shows the top 10 biggest companies in Turkey.

Table 3.11: Top 10 Largest Company in Turkey / 2017

Name of the Company	The Total Sale
	(In Billions of TL)
Türkiye Petrol Rafinerileri A.Ş.	34,854
Enerji Piyasaları İşletme A.Ş.	32,97694
Omv Petrol Ofisi A.Ş.	30,790
Botaş Boru Hatları ile Petrol Taşıma A.Ş.	29,680
Türk Hava Yolları A.O.	29,468
Opet Petrolcülük A.Ş.	20,533
Bim Birleşik Mağazalar A.Ş.	20,071
Ford Otomotiv Sanayi A.Ş.	18,289
Türkiye Elektrik Ticaret Ve Taahhüt A.Ş.	16,892
Shell & Turcas Petrol A.Ş.	16,825

Source: Fortune 500 magazine. <http://www.fortuneturkey.com/fortune500>

The economist's experts advising firms that do not following foreign exchange pegs, should concern about the monetary value of profit and the cost (Oral, 2016). When the firms have net foreign currency position positive, it means the firms have foreign currency surplus, firms then generate profit from foreign exchange when the Turkish lira losses in the value and exchange rate increases, the opposite is true when the Turkish lira increase and the exchange rate decrease the firms generate exchange rate losses, vice versa, when the foreign currency position is negative, then it will be shortage of foreign currency, in this case the firms generate foreign exchange loss when the exchange rate increase, and the firms generate profit when the exchange

rate decrease. Therefore, firms can use hedging with derivative instruments against foreign exchange risks (Oral, 2016).

Özmen and Yalcın (2007) discusses financial fragilities of Turkish corporate sector to exogenous financial risks stemming mainly from global imbalances, the realization of which may lead to substantial increases in international interest rates and/or a sudden stop or reversal of capital flows especially to developing countries, by using the CBRT Risk Center and CBRT Company Accounts firm level data over the 1996-2005 period. The magnitude of the impacts of real exchange rate depreciations or interest rate increases crucially depends on the financial conditions, debt structures and inter-sectoral fragility linkages of the main sectors of an economy. In the presence of financial fragilities including a substantial liability dollarization, real exchange rate depreciations may be contractionary. The findings of this study suggest that, in spite of improvements in the leverage ratios and interest risks after the 2001 crisis, liability dollarization and short maturity structure of debt still appear to be the main sources of fragility in Turkish corporate sector against exogenous financial shocks. Small sized or low exporting firms are found to be much more prudent to liability dollarization after the crisis. The positive and recently improving correlations of liability dollarization with both firm size and export ratios may be limiting the risks when we consider the issues of ability to access to financial markets and debt-revenue currency composition consistency.

The exchange rate movements, along with globalization, deepening and widening financial markets, have become more important not only for financial institutions but also for real sector companies. Also exchange rate risk is important for non-financial companies regards to both assets and liabilities. Management of this exchange rate risk exposure has an impact on competitiveness of these companies. This paper reviews the impact level of exchange rate movements and also determination of the approaches to exchange rate risk management in the tobacco industry which has very high concentration level. It's found that the firms want to hedge against the exchange rate risk particularly in the export transactions. A significant number of firms don't use exchange rate risk management systematically. The firms prefer operational hedging much more than financial hedging. The primarily reasons of not using financial tools in the risk management are the presence of import transactions and the expectation of exchange rate increase. Finally, it's concluded that according to

ascending and descending scenarios for 3 months (exchange rates will increase or decrease %10) the firms mostly intend to use various operational hedging techniques instead of financial hedging for exchange rate risk management. (Doğanay, 2016).

Mutluay and Turaboğlu (2013) studies the effects of exchange rate fluctuations on firms. To this end, the effects of exchange rate fluctuations on the performance of publicly traded firms which are registered to Istanbul Stock Exchange (ISE) are investigated. This relationship is analyzed through regression models of both Adler and Dumas (1984) and Jorion (1990) using the data for the period between 1997 and 2007 on 55 publicly traded firms. The empirical results show that the exchange rate fluctuations affect firm's performance with some time lag. Moreover, the effect of exchange rate fluctuations on firm performance, negatively depends on the share of export in total sales. Firms with higher export share are more vulnerable to exchange rate fluctuations.

4. RISK OF COMPANY ON FOREIGN CURRENCY EXCHANGE BORROWINGS IN TURKEY CASE STUDY: CONSTRUCTION INDUSTRY IN TURKEY

The company analyzed in case study has been chosen among companies in the industries listed by the Central Bank of the Republic of Turkey (TCMB) with high risk on foreign exchange borrowing. Also, the company with highest borrowing have been analyzed. Financial statements for the last 10 years have been taken from the Borsa Istanbul (www.borsaistanbul.com). Trend analyses have been chosen in order to analyses the financial statements in the company.

The development of construction industry in Turkey started after the second war in 1945, as the fast development due to ‘Marshal aids’, this aids came from USA government and the United nation development funds given to the country, in these days the biggest construction companies were established in that time, the ‘marshal aids’ were stopped because of the (embargo), which is a legal prohibition the commerce, were enforced after the Turkish- Greece Peace war in 1973, and this was the starting of the Turkey’s economic problem. Until 1979, Turkey had a lot of economic problem due to the increasing high rate of inflation and declining natural resources, decreasing of exports and increasing imports, the country faced unpaid debts for the other countries. During this period the construction industry put in crisis, due to increased bankruptcies, unfinished job, legal claims, unemployment workers.

After the military evolution in 1980, there were lots regulations put by the military government in order to solve the country’s problem in all side, an extraordinary changes the military government started to implement a short term stability program and long term structural plan, these changes led lots of positive impact to all sectors in the country, and the construction industry sector one of them started to develop. The construction industry in 1980 to 1987, was enormously gain lots of unequalled success (Tavako & Tulumen, 2006).

The figure below shows the biggest 39 construction companies operating in Turkish industry market.

Table 4.1: The top 30 Turkish construction companies

Name
Enka Construction and Industry Inc., Istanbul
Kiska Construction corporation, Ankara
Kutlutas holding Inc., Istanbul
Ezai Turkes – Feysi Akkaya (STFA), Istanbul
Dogus Insaat ve Ticaret A. S. , Istanbul
Tekfen Construction and installation Co. Inc., Istanbul
Ata Insaat Ltd., Istanbul
Nurol Construction and Trading Inc., Istanbul
Mesa Housing Industries Co.Inc., Istanbul
Tek-Ser Construction and trade Inc., Istanbul
Soyak Construction Co. Inc.,Istanbul
Baytur Construction and contracting Co., Istanbul
Gama Endustriand tesisleri Imalat ve Montaj A.S., Ankara
Saracoglu Group, Istanbul
Koray Construction Industry and trading = Inc., Istanbul
Ozisik Construction and contracting Inc., Ankara
Pelet Construction and Trading Ltd., Istanbul
Eska Construction and Industry Ltd., Istanbul
Guris Holding Inc., Ankara
Intes Construction Industry and trade Inc., Istanbul
Yasar Ozkan Engineering and Contracting Co., Ankara
Eksioglu Eyup Ensar , Istanbul
Kayalar Construction Ltd., Istanbul
Garanti Construction Industry and trading Co., Istanbul
Mimas Engineering Construction and Trading Co., Istanbul
Mimtas Engineering Construction and Mining Inc., Istanbul
Emek Insaat ve Isleme A.S., Ankara
BIMHOL A.S., Istanbul
AEA Construction and contracting, Istanbul
ARI Construction Co., Inc., Istanbul

Source: Routledge <https://www.tandfonline.com/doi/abs/10.1080/014461990000000007>

4.1 Construction Industry and House Construction In Turkey

The chronological process of housing production in Turkey passed through several periods, these periods are 1923-1950s, 1950-1980s, 1980-2000s, 2000-current, Economic and political issues and changes affect the production process.

The period (1923-1950s): After the Turkey war of independence- slow urbanization

This period include the period of establishment of Republic of Turkey and the end of World War 2. This period witnessed the reconstruction of nation between National War and World War.

The period (1950-1980): After immigration- Fast urbanization

After 1950s, the economic faced recession during the World War 2, imposed a bad economic situation after the war, which brought changes and transformation in the housing production and the way of housing supply.

The period (1980-2000): After Neo liberalization

The economic crisis and how to find solution to those crisis were the important factors were affecting the housing production.

The period (2000-2010s): Post earthquake period, urban renewal

The global market economy has been manipulate the development of housing production in Turkey, which started since 1980s, and after 2000s has become denominated.

Housing production has been financed by national and international organizations, banks, large number of investors which invest alone or by partnership (KOCA, 2012).

4.2 Case Study: A Construction Company with High Foreign Exchange Borrowing in Turkey

4.2.1 Methodology

The company's financial risk has been analyzed via their financial statements. Trend analysis is used for the purpose of analyzing the financial statements. The main idea of using trend analysis is to the amount of money borrowing over 10 years from 2012-2017 and how it is changes and compare to the previous year. Trend analysis is

useful in order to calculate and evaluate the situation in the company. This mechanism depends on the data collected from the financial statements in order to calculate the liquidity ratios to see the ability in the company to pay its debt, Leverage ratios to evaluate a company debt level, operational efficiency ratios to measure how a company generates revenue from every investment in total assets, and to know the changing of borrowing over the 10 years, and to see changes of effective interest rate over the period, calculate debt ratio in order to measure the risk in the company over 10 years, and measure the DuPont analysis system over the period.

The main reason of conducting this research and using trend analysis is to give the reader the way and the method to make calculation to measure the level of risk in the company to be conservative of losing and affect the profitability from exchange rate fluctuation while making repayment for the borrowing. The researcher has used one of the biggest construction companies in Turkey with a high amount of borrowing for collecting data to make the analysis.

These several ratios can be used by different companies to measure and evaluate the level of risk coming from the borrowing abroad and to pay attention how to manage this risk to avoid the risk of losing.

The main objective of using trend analysis when analyzing the financial statement is to measure the managerial performance and to know the efficiency in the firm in order to know the strengths and the weaknesses in the firm and to calculate the forecasting for the future performance, which allows the analysts to make a decision related to operation and to make investment for expansion.

4.3 Analysis

ENKA is one of the largest construction companies in Turkey, founded in 1957. It is a global engineering and construction firm and the head quarter of the company works in Istanbul, ENKA provides services in different countries and has subsidiaries in the following areas:

- Engineering and construction
- Power generation
- Real estate

- Trade

In the following section analyses the financial statement for ENKA Company for 2011 – 2017:

Table 4.2: ENKA construction company balance sheet for the year (2011, 2017)

ENKA İNŞAAT VE SANAYİ A. Ş. AND ITS SUBSIDIARIES							
Consolidated Balance Sheet as of December 31, 2011,2012,2013,2014,2015,2016,2017							
The Amount expressed in Thousands of Turkish Lira (Billions of TL)							
Assets	2011	2012	2013	2014	2015	2016	2017
Current assets	1.54	1.81	2.72	3.27	2.76	3.52	2.95
Cash and cash equivalent	1.20	1.29	1.03	1.33	2.25	2.41	2.18
Financial investment	1.41	1.57	1.70	1.67	1.53	1.48	1.16
Trade receivable	0.00	0.02	0.00	0.00	0.00	0.01	0.00
Due from related parties	0.52	0.60	0.74	0.60	0.68	0.93	0.84
Inventories	0.10	0.12	0.23	0.31	0.23	0.01	0.05
Cost and estimated earning in excess of billings on uncompleted contracts	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prepaid expense				0.17	0.12	0.16	0.34
Other current assets	0.19	0.27	0.36	0.23	0.23	0.17	0.26
Total current assets	4.97	5.67	6.78	7.58	7.82	8.68	7.78
Asset held for sale	0.23	0.01	0.00	0.00	0.00	0.00	0.09
Non- current assets	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trade receivable	0.05	0.04	0.03	0.02	0.03	0.10	0.18
Financial investment	1.46	1.73	2.13	2.33	3.57	5.32	7.99
Investment properties	3.67	3.80	5.01	4.21	4.53	6.64	7.85
Property plant and equipment	3.48	3.24	3.91	3.77	4.59	5.64	6.09
Intangible assets	0.06	0.05	0.07	0.05	0.06	0.09	0.13
Good will	0.12		0.14	0.13	0.16	0.19	0.08
Other intangible assets	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Prepaid expense						0.02	0.07
deferred tax assets		0.25	0.02	0.02	0.02	0.02	0.02
Total non-current assets	8.90	9.00	11.30	10.53	12.96	18.01	22.42
Total assets	14.09	14.68	18.08	18.12	20.77	26.70	30.29
Liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Current liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Financial liabilities	0.41	0.28	0.22	0.11	0.12	0.23	0.29
Trade payable related parties	0.90	1.11	1.14	1.25	1.25	0.84	0.58
Provision for employee benefits	0.06	0.08	0.04	0.05	0.04	0.06	0.08
Other payables	0.03	0.05	0.06	0.06	0.06	0.05	0.07
Payable to employee						0.08	0.10
deferred income				0.75	0.41	0.35	0.85
Billing in excess of costs and estimated earnings	0.22	0.32	0.37	0.52	0.47	0.85	1.01
On uncompleted							

contract							
Current income tax liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provisions	0.08	0.07	0.12	0.12	0.16	0.18	0.23
Other current liabilities	0.08	0.07	0.09	0.13	0.14	0.21	0.19
Total current liabilities	0.49	0.62	0.82	0.10	0.08	0.15	0.18
Non-current liabilities	2.26	2.60	2.92	3.16	2.77	3.00	3.58
Financial liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trade payable	0.48	0.39	0.60	0.51	0.30	0.76	0.88
Other payables	0.01	0.01	0.01	0.00			0.22
Provision for employee benefits	0.05	0.05	0.06	0.06	0.07	0.08	0.07
Deferred tax liabilities	0.02	0.03	0.03	0.04	0.05	0.06	0.06
Other non-current liabilities	0.61	0.65	0.85	1.41	1.47	1.16	0.02
Total noncurrent liabilities	1.64	1.41	1.52	0.83	1.06	1.48	1.76
Total liabilities	2.81	2.53	3.08	2.87	2.95	3.54	3.01
Equity	5.07	5.13	6.00	6.02	5.72	6.54	6.59
Share premium	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Revaluation surplus	2.52	2.82	3.22	3.62	4.02	4.22	4.62
Treasury shares	0.63	0.44	1.13	1.55	2.89	4.38	5.02
Currency translation difference						-0.04	-0.10
Rational protection gain - losses	0.38	0.34	0.50	0.37	0.43	0.64	0.67
Other			0.00	0.00	0.00	0.00	0.00

reserve							
Net profit	-0.33	-0.24	-0.29	-2.22	-3.76	-3.89	-4.04
Restricted reserve	0.85	1.13	1.25	14.44	1.44	1.78	2.57
Less: reserve and accumulated profit	0.24	0.28	0.33	0.42	0.47	0.56	0.70
Non-controlling interest	4.27	4.33	5.81	6.76	9.40	12.29	13.97
Total equity	0.46	0.46	0.14	0.13	0.15	0.22	0.29
Total liabilities and equity	8.56	9.09	11.95	11.96	14.90	19.94	23.41

The balance sheet tells the reader the financial condition of a company and it is consider an important part of the financial statements. And also the balance sheet put a highlight of a company health, it gives the reader how much the company own (assets) and owes (liabilities). And the balance sheet shows how much the company have debt in the short term and in the long term.

In ENKA construction company as it show above the total loan obtained in 2011 is 885,395 and in 2012 is 671,243 and 2013 is 816,181, in 2014 is 625,073 and in 2015 422,007 and in 2016 999,487, finally in 2017 1,174,986.

The total loan obtained for ENKA Company for the period 2012 – 2017 as follows:

Table 4.3: ENKA Company borrowing for the year 2011-2017

	2011	2012	2013	2014	2015	2016	2017
Short term bank borrowing							
Turkish loan (TRY)	1,280	1,406	12,069	567	186	0	7
Foreign currency loan	47,649	34,341	64,287	13,914	17,481	85,443	151,266
Other loan from leasing	5,137	4,796	0	0	0	0	0
Plus current portion of loan term loan	351,957	240,237	141,209	100,065	101,107	149,502	141,815
Total short term loan	406,023	280,780	217,565	114,546	118,774	234,945	293,088
Long term bank borrowing							
USD (dollar)	348,733	192,198	12,991	1,410	0	0	0
Europe (EUR)	152,450	91,720	57,012	27,590	10,445	188,209	226,181
Turkey (TRY)	2,469	3,468	1,379	473	546	0	0
Japan (JPY)	229,259	189,014	154,195	202,560	171,231	243,256	260,946
Liabilities from financial leasing transactions	97,418	154,300	514,248	378,559	222,118	482,581	536,586
less: current maturities	-351,957	-240,237	-141,209	-100,056	-101,107	-149,502	-141,815
Total long term borrowing	478,372	390,463	598,616	510,536	303,233	764,544	881,898
Total borrowing	884,395	671,243	816,181	625,082	422,007	999,489	1,174,986

The table above analyze the borrowing history at ENKA Construction for the period 2011-2017, shows in 2017 the company take the highest amount of borrowing which equal 1,174,986 TL.

Table 4.4: ENKA Company effective interest rate on borrowing for the year 2011-2017

	2011	2012	2013	2014	2015	2016	2017
Turkish lira (short term)	10.05%	8.30%	13.20%	0	0	0	0
Foreign currency (short term)	5.5%	5.25%	3.78%	3.30%	3.30%	2.15%	1.04%
Turkish loan (long term)	10.05%	13.31%	0	12.34%	12.34%	0	0
Foreign currency (long term)	7.75%	5.16%	2.36%	4.59%	4.59%	2.50%	2.50%

Table 4.5: ENKA company debt ratio for the year 2011-2017

	2011	2012	2013	2014	2015	2016	2017
Debt Ratio	34.9%	36%	33%	34.9%	.27%	.24%	21%

Source: Produced

Debt ratio compare the company total debt to the total assets, it gives a general idea of the company leverage. When the debt ratio is low it means it is better for the company because the less the company use the leverage and stronger using the equity, and when debt ratio is high it means the a high risk the company should care about.

Table 4.6: DuPont System analysis for the year 2011-2017

Ratio	2011	2012	2013	2014	2015	2016	2017
Gross Profit Margin	20%	16%	17%	16%	17%	23%	26%
Operating Profit Margin	18%	13%	14%	12%	14%	18%	22%
Net Profit Margin	13%	13%	13%	12%	12%	17%	25%
Earnings Per Share (EPS)	.30	.38	,39	,40	,36	,42	,56
Return On Total Assets (ROA)	.06%	.08%	69%	70%	60%	70%	90%
Return on Common Equity (ROE)	10.2%	12.9%	11%	10.4%	8.3%	9%	11%

Dupont analysis gives an explanation of the return on equity of the company, also put the highlight on the strengths and weaknesses of the company. Dupont analysis as it shows above contains 6 elements:

Gross profit margin to measure the financial health in the company. Operating profit margin it is measure the profitability in the company. Net profit margin it is a percentage of revenue after deducting all operating expense. Earning per share it is a share of a company profit give to share holders. Return on assets it is a profitability ratio measures how much a company can make profit from it is assets. Return on equity measures how much company generate profits form each dollar of share holders equity.

Table 4.7: ENKA company vertical analysis of income statement for the year 2011-2017

	2011		2012		2013		2014		2015		2016		2017	
	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales
Revenue	8,415	100%	10,297	100%	12,459	100%	12,727	100%	12,384	100%	10,581	100%	10,567	100%
Cost of goods sold	(6,989)	83%	(8,863)	86%	(10,394)	83%	(10,687)	84%	(10,276)	83%	(8,189)	77%	(7,831)	74%
Gross profit	1,425	20%	1,433	16%	2,065	17%	2,040	16%	2,107	17%	2,392	23%	2,735	26%
Marketing, selling and administration expense	(56,496)	1%	(74,470)	1%	(74,138)	1%	(73,073)	1%	(77,830)	1%	(93,465)	1%	(69,987)	1%
General administration expense	(209,128)	3%	(219,527)	2%	(237,387)	2%	(275,673)	2%	(282,458)	2%	(357,015)	3%	(370,335)	4%
Other income from operating activities	144,724	2%	69,799	1%	115,151	1%	47,657	0%	76,235	1%	76,686	1%	153,871	1%

Table 4.7 (continue): ENKA company vertical analysis of income statement for the year 2011-2017

	2011		2012		2013		2014		2015		2016		2017	
	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales
Other expense from operating activities	(59,210)	1%	(93,898)	1%	(91,638)	1%	(148,081)	1%	(135,545)	1%	(123,126)	1%	(95,512)	1%
Operating profits	1,245	18%	1,115	13%	1,777	14%	1,590	12%	1,688	14%	1,895	18%	2,326	22%
Income from investments activities	181,026	3%	366,904	4%	212,965	2%	414,444	3%	532,119	4%	824,353	8%	1,477	14%
Expense from investment activities	(272,305)	4%	(89,686)	1%	(219,292)	2%	(87,880)	1%	(369,158)	3%	(391,409)	4%	(633,020)	6%

Table 4.7 (continue): ENKA company vertical analysis of income statement for the year 2011-2017

	2011		2012		2013		2014		2015		2016		2017	
	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales	Amount	% net of sales
Operating income before Financial income and (expens)	1,154	17%	1,392	16%	1,771	14%	1,917	15%	1,851	15%	2,328	22%	3,171	30%
Financial income	(178,199)	3%	(218,703)	2%	(325,412)	3%	85,827		85,692	3%	-		84,702	
Financial expense	(95,467)	1%	50,894	1%	47,322	0%	(98,603)		(54,733)	15%	-		(66,229)	
Current tax expense	880,821	13%	1,123	13%	(85,736)	0%	(305,176)	2%	(346,811)		(433,360)	4%	(430,138)	4%
Deferred tax expense					(88,503)	1%	(92,414)	1%	(79,750)	3%	(134,150)		(157,391)	1%
Net income	177	0%	55,381	1%	1,318	13%	1,507	12%	1,455		1,809	17%	2,602	25%

Table 4.7 (continue): ENKA company vertical analysis of income statement for the year 2011-2017

	2011		2012		2013		2014		2015		2016		2017	
	Amount	% net of	Amount	% net	Amount	% net	Amount	% net	Amount	% net	Amount	% net	Amount	% net

		sales		of sales		of sales		of sales		of sales		of sales		of sales
Profit for the year from discontinued operation	31,352	0%	50,818	1%	-	(2,430)		1,455	12%					
Attributed to:														
Non-controlling interest	849,998	12%	1,127	13%	70,456	63,704	2%	15,685	0%					
Equity holders for the parents	880,998	13%	1,178	13%	1,248	1,441	11%	1,439	12%	12%			14%	
Total	280,000,000		280,000,000		1,318	1,504	12%	1,455	12%	419,000,000			458,160,000	
Earnings per share	.030		0.38		.39	.40		.36		.42			.56	
Weighted average number of ordinary shares	280,000,000		280,000,000		280,000,000	280,000,000		280,000,000		280,000,000			280,000,000	

Analyzing ENKA Construction Company for the period (2012-2017)

Table 4.8: Analyzing ENKA Construction Company for the period 2012-2017

Ratios/Year	2012	2013	2014	2015	2016	2017
Liquidity ratio	%	%	%	%	%	%
Quick Ratio	1.95	2.07	2.21	2.57	2.59	1.94
Current Ratio	2.19	2.32	2.40	2.82	2.90	2.17
Net Working Capital	3,077	3,856	4,424	5,043	5,686	4,198
Leverage Ratio	%	%	%	%	%	%
Debt to Equity	0.56	0.50	0.50	0.38	0.33	0.28
Debt to Capital	0.07	0.06	0.05	0.03	0.05	0.05
Debt to EBITDA	0.60	0.46	1.51	0.25	0.53	0.50
Interest Coverage	5.38	3.98	3.79	4.23	4.95	6.38
Operational Efficiency Ratio	%	%	%	%	%	%
Inventory Turnover	15.76	15.55	15.98	16.03	10.17	8.82
Account Receivable Days	56	50	48	45	50.98	39.93
Account Payable Days	41	39	34	44	46.55	33.02
Total Assets Turnover	0.72	0.69	0.70	0.64	0.45	0.37

In 2012, the company liquidity ratios: Quick ratio shows the capacity in the firms to meet it is short term debt, the Quick ratio in the company is 1.95, good in which the company have low risk to meet is short term financial liabilities, the current ratio it is shows the company financial healthy to make current debt from it is current assets, the current ratio in 2012 is 2.19 the ratio mean the company have enough to meet the current debt by 2.19 times, the net working capital , when the amount is positive it is mean the firms have sufficient fund in order to pay it is current liabilities, the ratio is 3,077,852 TRY, this means the company have sufficient fund available after detecting the current liabilities.

The leverage ratio: debt to equity ratio, the company is using in order to measure the company financial leverage, and shows how much the company using debt to finance the assets relate to the equity, D/E in ENKA Company for 2012 is .56, this means the company depend more via the owners more than debt to funded operation, debt to capital ratio it measure the amount of in interest from debt to the to the amount of interest from debt and shareholders' equity, the debt to capital in ENKA Company for 2012 is .07, it is low means a lower the risk to it is stockholders, the debt to EBITDA ratio, it is measure the financial debt volume in the firms comparing to the earnings before interest, tax, depreciation and amortization, the ratio of 2012 in ENKA Company is .60, the ratio is low in order the company have a low amount of financial debt, interest coverage ratio, using in order to measure how easy the

company ability to meet the interest on outstanding debt from its profit, the ratio is 5.38, it is well because the firm makes enough money to meet its obligation and paying the interest on the borrowing.

Operational efficiency ratio: Inventory turnover ratio, it measures how many times the company sells its inventory during the period, the ratio of ENKA company in 2012, 15.76 times this means the company sells the inventory it purchased 15.76 times during the period, account receivable turnover days, it shows how many days the company takes to collect its debt from the customers, the number of days the company takes in 2012 56 days to collect their receivable from the customers, account payable turnover ratio (days), it shows how many days the company takes in order to pay to the creditors or to the suppliers, the number of days that ENKA company takes in 2012 to pay its credit to supplier is 41 days, total assets turnover ratio it calculates the amount of revenue the company generated relative to total assets, the ratio for ENKA company in 2012 is .72, it means the company generates revenue .72 times of total assets.

In 2013, the company liquidity ratios: the Quick ratio in the company is 2.07, increased in order to the increasing in short term bank borrowing which the company has more risk to meet its short term financial liabilities, the current ratio in 2013 is 2.32 the ratio means the company has enough to meet the current debt by 2.32 times, the net working capital, the amount is 3,856,215 (TRY), this means the company has sufficient fund available after deducting the current liabilities.

The leverage ratio: The debt to equity ratio, D/E in ENKA Company for 2013 is .50 is increased, because the firm is increasing the debt in 2013 compared to 2012, debt to capital ratio, the debt to capital in ENKA Company for 2013 is .06, it is decreasing in order to increase the borrowing in the firm, the debt to EBITDA ratio, the ratio of 2013 in ENKA Company is .46, the ratio is increased in order the company has a high amount of financial debt and the risk in the company increases to pay the debt, the interest coverage ratio, the ratio is 3.98 lower compared to 2012, because the firm is increasing their borrowing.

Operational efficiency ratio: Inventory turnover ratio, the ratio of ENKA company in 2013, 15.55 times this means the company sells the inventory it purchased 15.55 times during the period, account receivable turnover days, the number of days the

company take in 2013 is 50 days to collect their receivable from the customers, account payable turnover ratio (days), the number of days that ENKA company takes in 2013 to pay its credit to supplier is 39 days, total assets turnover ratio, the ratio for ENKA company in 2013 is .69, it means the company generate revenue .69 times of total assets.

In 2014, the company liquidity ratios: the Quick ratio in the company is 2.21, increased in order to the increasing in short term bank borrowing which the company have more risk to meet is short term financial liabilities, the current ratio in 2014 is 2.40 the ratio means the company have enough to meet the current debt by 2.4 times, the net working capital, the amount is 4,424,572 (TRY), this means the company have sufficient fund available after detecting the current liabilities.

The leverage ratio: The debt to equity ratio, D/E in ENKA Company for 2014 is .50 is the same as in 2013, debt to capital ratio, the debt to capital in ENKA Company for 2014 is .05, it is decreasing in order to increase the borrowing in the firm, the debt to EBITDA ratio, the ratio of 2014 in ENKA Company is 1.51, the ratio is increased in order the company have a high amount of financial debt and the risk in the company increase to pay the debt, the interest coverage ratio, the ratio is 3.79 lower comparing to 2013, because the firm increasing their borrowing but paying less interest expense.

Operational efficiency ratio: Inventory turnover ratio, the ratio of ENKA company in 2014, 15.98 times this mean the company sell the inventory the purchased 15.98 times during the period, account receivable turnover days, the number of days the company take in 2014 is 48 days to collect their receivable from the customers, account payable turnover ratio (days), the number of days that ENKA company takes in 2014 to pay its credit to supplier is 34 days, total assets turnover ratio, the ratio for ENKA company in 2014 is .70, it means the company generate revenue .70 times of total assets.

In 2015, the company liquidity ratios: the Quick ratio in the company is 2.57, increased in order to the increasing in short term bank borrowing which the company have more risk to meet is short term financial liabilities, the current ratio in 2015 is 2.82 the ratio means the company have enough to meet the current debt by 2.82

times, the net working capital, the amount is 5,043,216 (TRY), this means the company have sufficient fund available after detecting the current liabilities.

The leverage ratio: The debt to equity ratio, D/E in ENKA Company for 2015 is .38 , it is decreased as in 2014, as the company decreased the borrowing in 2015,debt to capital ratio, the debt to capital in ENKA Company for 2015 is .03, it is decreasing in order to decreasing the borrowing in the firm, the debt to EBITDA ratio, the ratio of 2015 in ENKA Company is .25, the ratio is decreased in order the company have a low amount of financial debt and the risk in the company decrease to pay the debt, the interest coverage ratio, the ratio is 4.23 more comparing to 2014, because the firm increasing their interest expense.

Operational efficiency ratio: Inventory turnover ratio, the ratio of ENKA company in 2015, 16.03 times this mean the company sell the inventory the purchased 16.03 times during the period, account receivable turnover days, the number of days the company take in 2015 is 45 days to collect their receivable from the customs, account payable turnover ratio (days), the number of days that ENKA company takes in 2015 to pays it is credit to supplier is 44 days, total assets turnover ratio, the ratio for ENKA company in 2015 is .64, it means the company generate revenue .64 times of total assets.

In 2016, the company liquidity ratios: the Quick ratio in the company is 2.57, increased in order to the increasing in short term bank borrowing which the company have more risk to meet is short term financial liabilities, the current ratio in 2015 is 2.82 the ratio means the company have enough to meet the current debt by 2.82 times, the net working capital, the amount is 5,043,216 (TRY), this means the company have sufficient fund available after detecting the current liabilities.

The leverage ratio: The debt to equity ratio, D/E in ENKA Company for 2015 is .38 , it is decreased as in 2014, as the company decreased the borrowing in 2015,debt to capital ratio, the debt to capital in ENKA Company for 2015 is .03, it is decreasing in order to decreasing the borrowing in the firm, the debt to EBITDA ratio, the ratio of 2015 in ENKA Company is .25, the ratio is decreased in order the company have a low amount of financial debt and the risk in the company decrease to pay the debt, the interest coverage ratio, the ratio is 4.23 more comparing to 2014, because the firm increasing their interest expense.

Operational efficiency ratio: Inventory turnover ratio, the ratio of ENKA company in 2015, 16.03 times this mean the company sell the inventory the purchased 16.03 times during the period, account receivable turnover days, the number of days the company take in 2015 is 45 days to collect their receivable from the customers, account payable turnover ratio (days), the number of days that ENKA company takes in 2015 to pays it is credit to supplier is 44 days, total assets turnover ratio, the ratio for ENKA company in 2015 is .64, it means the company generate revenue .64 times of total assets.

In 2016, the company liquidity ratios: the Quick ratio in the company is 2.59, increased in order to the increasing in short term bank borrowing which the company have more risk to meet is short term financial liabilities, the current ratio in 2016 is 2.90 the ratio means the company have enough money to meet the current debt by 2.90 times, the net working capital, the amount is 5,686,286 (TRY), this means the company have sufficient fund available after detecting the current liabilities.

The leverage ratio: The debt to equity ratio, D/E in ENKA Company for 2016 is .33 , it is decreased as in 2015, as the company increased the equity in 2016, debt to capital ratio, the debt to capital in ENKA Company for 2016 is .05, it is increase in order to increasing the borrowing in the firm, the debt to EBITDA ratio, the ratio of 2016 in ENKA Company is .53, the ratio is increased in order the company have a high amount of financial debt and the risk in the company increased to pay the debt, the interest coverage ratio, the ratio is 4.95 more comparing to 2015, because the firm increasing their interest expense.

Operational efficiency ratio: Inventory turnover ratio, the ratio of ENKA company in 2016, 10.17 times this mean the company sell the inventory the purchased 10.17 times during the period, account receivable turnover days, the number of days the company take in 2016 is 50.98 days to collect their receivable from the customs, account payable turnover ratio (days), the number of days that ENKA company takes in 2016 to pays it is credit to supplier is 46.44 days, total assets turnover ratio, the ratio for ENKA company in 2016 is .45, it means the company generate revenue .45 times of total assets.

In 2017, the company liquidity ratios: the Quick ratio in the company is 1.94, decreased in order to the decreasing in total current assets which the company have

more risk to meet is short term financial liabilities, the current ratio in 2017 is 2.17 the ratio means the company have enough money to meet the current debt by 2.17 times, the net working capital, the amount is 4,198,451 (TRY), this means the company have sufficient fund available after detecting the current liabilities.

The leverage ratio: The debt to equity ratio, D/E in ENKA Company for 2017 is .28 , it is decreased as in 2016, as the company increased the equity in 2017, debt to capital ratio, the debt to capital in ENKA Company for 2017 is .05, it is the same as in 2016, the debt to EBITDA ratio, the ratio of 2017 in ENKA Company is .50, the ratio is decreased in order the company have a more amount of financial debt and the risk in the company increased to pay the debt, the interest coverage ratio, the ratio is 6.38 more comparing to 2016, because the firm increasing their borrowing and the interest expense.

Operational efficiency ratio: Inventory turnover ratio, the ratio of ENKA company in 2017, 8.82 times this mean the company sell the inventory the purchased 8.82 times during the period, account receivable turnover days, the number of days the company take in 2017 is 39.93 days to collect their receivable from the customers, account payable turnover ratio (days), the number of days that ENKA company takes in 2017 to pays it is credit to supplier is 33.02 days, total assets turnover ratio, the ratio for ENKA company in 2017 is .37, it means the company generate revenue .37 times of total assets.

4.4 Results

This analysis shows that the financial statement for 5 years data of one of the biggest construction company in Turkey names ENKA Company. The study written to give the reader the importance of managing the exchange rate volatility, and to explain the way how to avoid this risk in order to minimize the loss which affects the profitability in the company.

5. CONCLUSION

The world economy after the Bretton Woods Systems ended in 1973 has been entered to the new economic era, the flexible exchange rate system offered a high uncertainty and a high risk in the foreign exchange markets. The main conclusion of writing this research is to show the reader the importance of the choice of exchange rate regime. In order to minimize the of exchange rate volatility Turkey, a fixed exchange rate system should setting up to strengthen and empower the role of Central Bank in the country.

Since the period after 2001 financial crises in Turkey, a private companies prefer to borrowing in foreign currency, while the interest rate is low in comparison to the borrowing in local currency with a high interest rate.

Also this thesis puts a highlight on the importance of the risk when borrowing foreign exchange currency, the company losses a high amount of money, if there are a negative changes in foreign currency rates in the foreign exchange market during make a repayment the loan, but when the firms take loan in foreign currency and the domestic currency undervalued, so the company pay high amount in order to pay back the loan, but when the domestic currency is overvalued, it is make profit and increase the income.

The characteristic of economy and the inflationary history give country the choice between the fixed exchange rate and flexible exchange rate, when the country's has a long history of monetary instability, and the country's conjoined in both the capital and current account transactions with another country, it is sensible to choose fixed exchange rate.

The structure of Turkish economy is endowed from several resources from geographical to demographical, and to cultural to historical, which is return to rapidly growing industrialized country. The two major of Turkey's national income the services and industry, which equal to 87% of Turkey's national income (Ediger & Huvaz, 2006).

Construction Industry in Turkey directly responsible for a significant share of GDP. Turkey construction sectors has been at the forefront of the country's recent economic developments.

The trend analysis is used to analyses the financial statements, the purpose of used trend analysis which gives an accurate analysis based on the information on the financial statements. The trend analysis provide ratios and information, which these measures can be compare to the previous years, and these data are important to the firms which enabling the analysts department to know the level of risks in the company and therefore the decision maker takes a right decision and make accurate predictions regarding these risks and find solution how to take correct actions to avoid this risk from volatility exchange rate.

The main objective of this research is to tell the reader the fundamental ways to find out the risk on borrowing foreign exchange currency and how to find a way in order to minimize the risk. This paper explain the importance of derivative market and explain the types of instruments which it is the best way that can be used by the firms in order to protect the firm from losing and minimizing the profitability to avoid the risk of volatility the exchange rate.

The importance of discussion ENKA industry, is returns to that it is a global engineering and construction firm the head quarter in Istanbul, Enka Company one of the biggest construction industry in Turkey, and have a high amount of borrowing. While analyzing Enka construction Company found the financial leverage is less in 2017 equal 21% from it is total assets which means the company have lower level of total liabilities when compared to total assets and the situation in ENKA company lower leverage and less risky and the company have easily ability to pay off it is liabilities from it is total assets. The quick ratio in 2016 is the best year equal to 2.59, which the company can easily meet it is short term liabilities. The current ratio in 2016 is the best and the company is healthy to meet it obligation. The net working capital in 2016 is greatest year 5,686,286 it means the company have high of it is short term assets to meet it is obligation. The leverage ratio used to evaluate the company debt level. Debt to equity is less risky in 2017 the funding financing from shareholder's rather than from borrowing. Debt to capital is more risky in 2012 because the financial leverage in the company is low. Debt to EBITDA is preferable in 2015 because the firm is not in danger to repeat back it is borrowing. Interest

coverage ratio is best in 2017 which means the company is more capable to pay the interest obligation from its earnings. The operating efficiency ratio used to measure if a company uses its capital and resources efficiently. Inventory turnover is best in 2015, which means the company sells and buys its inventory 16.3 times per year. Accounts receivable per day is best in 2017, which equals 39.9 days to collect the money from sales, which the lower is better. Accounts payable per day is better in 2016 which means if the time to pay money for supplier increases, the money can use it, so number of days the company needs to pay to supplier 46 days. Total assets turnover is better in 2012 which equals to .72, because the company uses its assets efficiently in order to generate revenue.

As it shows in the table above ENKA Corporation has a high foreign exchange risk in 2017, as of raises of foreign currency borrowing. And the instability of exchange rate in Turkey affects the company's profitability, which proves the hypothesis H1 says the profitability does not change when the company applies foreign currency risk management, in order to hedge the risk on foreign currency risk on borrowing, as analyzing the financial statement of ENKA company it is mentioned that the company does not use the derivative market to avoid the risk of exchange rate change, it is suggested for ENKA corporation to use derivative instrument in order to hedge the volatility on exchange rate fluctuation which is lost the company and absolutely affects the profitability.

REFERENCES

- Aliber, Rz.** (2017). 'The Firm under Pegged and Floating Exchange Rates'. *The Scandinavian Journal of Economics*, pp . 30, 78(2), 309–322.<https://www.jstor.org/stable/3439932>
- Antoci V.** (2015). 'Managing transaction exposure in MNCs'. *Helsinki Metropolia University of Applied Sciences*.
<https://www.theseus.fi/bitstream/handle/10024/104281/Vitalie%20Antoci%20-%20Transaction%20Exposure.pdf?sequence=1>
- Arin T.** (1999), 'Financial Markets and Globalization in Turkey'. *University of Istanbul, Faculty of Economics*, Vol. 1.
<http://meea.sites.luc.edu/volume1/arin.pdf>
- Aristotelous, K.** (2001). 'Exchange-rate volatility, exchange-rate regime, and trade, volume: evidence from the UK–US export function (1889–1999)'. *Economics Letters* 72, 87–94.
<https://www.sciencedirect.com/science/article/pii/S0165176501004141>
- Arteta, C. and G. Hale** (2008). 'Sovereign Debt Crises and Credit to the Private Sector'. *Journal of International Economics*, Vol.74, pp.53-69.
- Bahmani-Oskooee M. & Aftab M.** (2017). 'On the asymmetric effects of exchange rate volatility on trade flows: New evidence from US-Malaysia trade at the industry level'. *Economic Modelling*, VOL. 63, PP.86–103.
<https://www.sciencedirect.com/science/article/pii/S0264999317302201>
- Bale C. G.** (1961). 'On the Exchange Risk Involved in Borrowing Abroad'. *Canadian Economics Association*, Vol. 27, No. 1 pp. 97-100.
https://scholar.google.com.tr/scholar?hl=en&as_sdt=0%2C5&q=On+the+Exchange+Risk+Involved+in+Borrowing+Abroad&btnG=
- Bearce D. H.** (2008). 'Not Complements, but Substitutes: Fixed Exchange Rate Commitments, Central Bank Independence, and External Currency Stability'. *International Studies Quarterly*, Vol. 52, No. 4, pp. 807-824.
https://www.jstor.org/stable/29734265?seq=1#page_scan_tab_contents
- Beckmann E & Stix H** (2014). 'Foreign currency borrowing and knowledge about exchange risk'. *Journal of Economic Behavior & Organization*, Vol. 112, pp(1-16).
<https://www.sciencedirect.com/science/article/pii/S016726811400328X>
- Berkman H. & Bradbury M. E.** (1996). 'Empirical Evidence on the Corporate Use of Derivatives'. *Wiley on behalf of the Financial Management Association International*, Vol. 25, No. 2, pp. 5-13.
https://scholar.google.com.tr/scholar?q=Empirical+Evidence+on+the+Corporate+Use+of+Derivatives&hl=en&as_sdt=0&as_vis=1&oi=scholar&sa=X&ved=0ahUKEwjK_4ipvK_ZAhVBLFAKHcSsAJoQgQMIJTAA

- Bodie Z., Kane A. & Marcus A.** (2014). 'Investment'. *McGraw-Hill Education*.
<https://www.mheducation.com/highered/product/investments-bodie-kane/0077861671.html>
- Bofinger P.** (2003). 'Managed Floating as a Monetary Policy Strategy'. University of Würzburg.
<https://link.springer.com/article/10.1023%2FB%3AECOP.0000012258.15614.d8>
- Boratav K. & Aküz Y.** (2003). 'The Making of the Turkish Financial Crisis'. *World Development*, Vol. 31, No. 9, pp. 1549–1566.
<https://www.sciencedirect.com/science/article/pii/S0305750X03001086>
- Bordo M.** (1993). 'The Gold Standard, Bretton Woods and other Monetary Regimes: A historical Appraisal'. *National Bureau of economic research*,
<http://www.nber.org/papers/w4310.pdf>
- Bordo M.** (2003). 'Exchange rate regime choice in historical perspective'. *International Monetary Fund*.
<https://www.imf.org/external/pubs/ft/wp/2003/wp03160.pdf>
- Brinkmann E. J. & Rabinovitch R.** (1995). 'Regional Limitations on the Hedging Effectiveness of Natural Gas Futures'. *International Association for Energy Economics*, Vol. 16, No. 3, pp. 113-124.
<http://www.jstor.org/stable/41322608>
- Brown G. W.** (1999). 'Managing Foreign Exchange Risk with Derivatives'. *The University of North Carolina at Chapel Hill*.
<https://www.sciencedirect.com/science/article/pii/S0304405X01000496>
- Chang R.** (1999). 'Financial Fragility and the Exchange Rate Regime'. *Federal Reserve Bank of Atlanta, Atlanta, Georgia 30303, New York*.
<https://www.sciencedirect.com/science/article/pii/S0022053199926212>
- Courcoulas C. & Kandemir A.** (2018). 'Turkey's Bill for Debt-Fueled Economic Growth Starts to Fall Due'. *Bloomberg*.
<https://www.bloomberg.com/news/articles/2018-03-29/turkey-s-bill-for-debt-fueled-economic-growth-starts-to-fall-due>
- Demez S. & Ustaoglu M.** (2012). 'Exchange-Rate Volatility's Impact on Turkey's Exports: An Empirical Analyze for 1992-2010'. *Istanbul University, Istanbul*, 34452, Turkey.
<https://www.sciencedirect.com/science/article/pii/S1877042812009019?via%3Dihub>
- Demir F.** (2009). 'Exchange Rate Volatility and Employment Growth in Developing Countries: Evidence from Turkey'. *University of Oklahoma, Oklahoma, USA*, Vol. 38, No. 8, pp. 1127–1140.
<https://www.sciencedirect.com/search?qs=Exchange-Rate+Volatility%E2%80%99s+Impact+on+Turkey%E2%80%99s+Exports%3A+An+Empirical+Analyze+for+1992-2010+&authors=&pub=&volume=&issue=&page=&origin=home&zone=qSearch>
- Dierinck B.** (2012). 'Determinants of the Gold Price'. *Masterproef voorgedragen tot het bekomen van de graad van*.
https://lib.ugent.be/fulltxt/RUG01/001/893/290/RUG01-001893290_2012_0001_AC.pdf
- Doganay, Murat** (2016). 'Döviz Kuru Riski Yönetimine Sektörel Bir Yaklaşım'. *International Journal of Cultural and Social Studies*. Vol.2.ISSN 2458-9381. <http://dergipark.gov.tr/download/article-file/253529>

- Döhring B.** (2008). 'Hedging and Invoicing Strategies to Reduce Exchange Rate Exposure: Euro-Area Expansion'. *Economic and Financial Affairs*, B-1049 Brussels, Belgium. <https://www.google.com.tr/search?q=Hedging+and+Invoicing+Strategies+to+Reduce+Exchange+Rate+Exposure%3A+EuroArea+Expansion&oq=Hedging+and+Invoicing+Strategies+to+Reduce+Exchange+Rate+Exposure%3A+Euro-Area+Expansion&aqs=chrome..69i57.681j0j4&sourceid=chrome&ie=UTF-8>
- E r y ü r e k l i.** (2017). 'Decree NO. 32 on the protection of the value of Turkish currency'. *Official Gazette*. <https://www.eryurekli.com/legislation/decreed-no32-protection-value-turkish-currency/>
- Ediger V. & Huvaz O.** (2006). 'Examining the sectoral energy use in Turkish economy. (1980–2000) with the help of decomposition analysis'. *Energy conversation and management*. https://ac.els-cdn.com/S0196890405001408/1-s2.0-S0196890405001408-main.pdf?_tid=ef3972ae-f363-429a-971d-c789d2ef760a&acdnat=1533575079_80fd31a701af34e5e64bae1d8ebc5945
- Eichengreen B.** (2008). 'Globalization Capital : a history of the international monetary system'. *Princeton University Press princeton and oxford*. http://library.aceondo.net/ebooks/HISTORY/Globalizing_Capital_A_History_of_the_International_Monetary_System_Second_Edition_.pdf
- Ernst and Young** (2018). 'Turkey takes action to protect value of Turkish currency'. <http://www.ey.com/gl/en/services/tax/international-tax/alert--turkey-takes-action-to-protect-value-of-turkish-currency>
- Feng, X.** (2007). 'Corporate Hedging of Currency Exchange Risk'. *University of Twente*, 32. <http://gen.lib.rus.ec/scimag/index.php?s=Corporate+Hedging+of+Currency+Exchange+Risk&journalid=&v=&i=&p=&redirect=1>
- Fischer S.** (2008). 'Mundell-Fleming Lecture: Exchange Rate Systems, Surveillance, and Advice'. *Palgrave Macmillan Journals on behalf of the International Monetary Fund*, pp. 367-383. <https://www.imf.org/External/Pubs/FT/staffp/2008/03/fischer.htm>
- Fisher S.** (2001). 'Exchange Rate Regimes: Is the Bipolar View Correct?'. *Journal of Economic Perspectives*. Volume 15, Number 2, Pages 3–24. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.153.4753&rep=rep1&type=pdf>
- Frankel J. & Wei S.** (2008). 'Estimation of De Facto Exchange Rate Regimes: Synthesis of the Techniques for Inferring Flexibility and Basket Weights'. *national bureau of economic research*, Vol. 55, No. 3, pp. 384-416. <http://www.nber.org/papers/w14016>
- Froot K. A. & Scharfstein D. S. & Stein J. C.,** (1993). 'Risk Management: Coordinating Corporate Investment and Financing Policies'. *The Journal of Finance*, Vol. Xlviii, No. 5. <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.1993.tb05123.x/full>

- Gitman L. J. & Zutter C. I.** (2010). 'Principles of Managerial Finance'. *Pearson*, p. 310.
https://www.google.com.tr/search?ei=HXSJWt2HKI_MwQKM3pCYCg&q=principles+of+managerial+finance&oq=Principles+of+Managerial+Finance%E2%80%99&gs_l=psy-ab.1.0.0i22i10i30k1j0i22i30k1l8.160307.160307.0.168862.1.1.0.0.0.235.235.2-1.1.0....0...1c.1.64.psy-ab..0.1.233....0.e1kjDI_2in4
- Goldberg S.R. & Drogdt E.L.** (2008). 'Managing Foreign Exchange Risk'. *Wiley InterScience*, DOI 10.1002/jcaf.20373. www.interscience.wiley.com
- Hausmann R. & Eichengreen B.** (1999). 'Exchange Rates and Financial Fragility'. *National Bureau of Economic Research*.
<http://www.nber.org/papers/w7418>
- Hera R.** (2010). 'Forget About Housing, The Real Cause of the Crisis was OTC Derivatives'. <http://www.businessinsider.com/bubble-derivatives-otc-2010-5>
- Hermalin B. Et. Al.** (1999). 'Risks to Lenders and Borrowers in International Capital Markets'. *National Bureau of Economic Research*.
<http://www.nber.org/chapters/c9802.pdf>
- Herrmalin Be. & Rose Ak.** (1999), 'Risks to Lenders and Borrowers in International Capital Markets'. *University of Chicago Press*, (p. 363 - 420). <http://www.nber.org/chapters/c9802>
- Hull J. C.** (2012). 'Options, Futures, and Other Derivatives'. *University of Toronto*.
<https://shamit8.files.wordpress.com/2014/11/options-futures-and-other-derivatives-8th-john.pdf>
- Kaldor N.** (1966). 'Marginal Productivity and the Macro-Economic Theories of Distribution: Comment on Samuelson and Modigliani'. *The Review of Economic Studies Ltd.* Vol. 33, No. 4, pp. 309-319.
<http://piketty.pse.ens.fr/files/Kaldor1966.pdf>
- Kamil H.** (2012). 'How Do Exchange Rate Regimes Affect Firms' Incentives to Hedge Currency Risk? Micro Evidence for Latin America', *Ulric Erickson von Allmen*, WP/12/69.
<https://www.imf.org/external/pubs/ft/wp/2012/wp1269.pdf>
- Karadam D. Y.** (2014). 'The Real Exchange Rate and Economic Growth'. *a thesis submitted to the graduate school of social sciences of middle east technical university*, PP.92.
<http://etd.lib.metu.edu.tr/upload/12617711/index.pdf>
- Kasilingam R.** (2012). 'Financial Derivatives'. *Pondicherry University*, pp. 155.
<https://www.imf.org/external/bopage/pdf/98-1-20.pdf>
- Keloharju M. & Mervi N.** (2008). 'Why Do Firms Raise Foreign Currency Denominated Debt? Evidence from Finland. European Financial Management'. <https://onlinelibrary.wiley.com/doi/pdf/10.1111/1468-036X.00167>
- Keynes J. M.** (2009). 'A Tract on Monetary Reform'. *Amhert, New York* 14228-2197. <https://www.amazon.com/Tract-Monetary-Reform-Maynard-Keynes/dp/1607960818>
- Keynes M.** (1924). 'A Tract on Monetary Reform'. *Macmillan Co. of Canada, LTD., TORONTO*.
<http://www.columbia.edu/~ram15/cema2000.html#preeminence>

- Kingston B.** (2006). 'The Mexican Peso Crisis: Exchange Rate Policy and Financial System Management'. *Department of Economics Carleton University*. <https://carleton.ca/economics/wp-content/uploads/he-kingston-brian.pdf>
- Koca D.** (2012). 'Remapping Contemporary Housing Production in Turkey: A Case Study on Housing Patterns and Marketing Strategies'. *The Graduate School of Natural and Applied Sciences of Middle East Technical University*. <https://etd.lib.metu.edu.tr/upload/12614423/index.pdf>
- Krugman P.** (1993). 'The Exchange Rate, International trade, Balance of Payment', *H.C. Coombs Centre for Financial Studies, Kirribilli*. <https://www.rba.gov.au/publications/confs/1993/pdf/conf-vol-1993.pdf>
- Krugman P.** (2012). 'Exchange Rates'. *The concise encyclopedia of economics*. <http://www.econlib.org/library/Enc1/ExchangeRates.html#>
- Labonte M.** (2004). 'Fixed Exchange Rates, Floating Exchange Rates, and Currency Boards: What Have We Learned?' *Congressional Research Service*. <https://digital.library.unt.edu/ark:/67531/metadc822348/>
- Maryos M.** (2007). 'The emergence of the Classical Gold Standard', *Economic History Society Annual Conference*, (P.4). http://admin.nber.org/xsearch?q=The+emergence+of+the+Classical+Gold+Standard&whichsearch=ftpub&restrict_papers=yes&fullresults=1&datafilter=&b=search+again
- Mckinnon R.** (1989). 'An International gold standard without gold'. *Cato Journal*, Vol. 8, No. 2. <https://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2011/9/cj8n2-6.pdf>
- Morgan J. P.** (2013). 'Derivatives and Risk Management made simple'. *National Association of Pension Funds Limited*. <https://www.jpmmorgan.com/jpmpdf/1320663533358.pdf>
- Mundell R.** (2000), 'Currency Areas, Exchange Rate Systems and International Monetary Reform', *Journal of Applied Economics*, Vol. III, No. 2, 217-256. <http://www20.iadb.org/intal/catalogo/pe/2010/04384.pdf>
- Myers S. C.** (1977) 'Determinants of Corporate Borrowing'. *Journal of Financial Economics*, 5, 147-175. <http://booksc.org/s/?q=10.1016%2F0304-405x%2877%2990015-0&t=0>
- Naidu G. N. & Shin T. S.** (1961). 'Effectiveness of Currency Futures Market in Hedging Foreign Exchange Risk'. *Springer*, Vol. 21, No. 4, pp. 5-16. <http://www.jstor.org/stable/40227609>
- Nance D.N. , Smith C. W. , Smithson C.W.** (1993), 'On The Determininant of Corporate Hedging'. *The Journal of Finance*, vol.48, No.1, 267-284. https://scholar.google.com.tr/scholar?hl=en&as_sdt=0%2C5&q=On+The+Determinant+of+Corporate+Hedging&btnG=
- Nguyen M.** (2012). 'Using Financial Derivatives to Hedge Against Currency Risk'. *Arcada University of Applied Sciences*. https://scholar.google.com.tr/scholar?hl=en&as_sdt=0%2C5&q=Using+Financial+Derivatives+to+Hedge+Against+Currency+Risk&btnG=
- Nicita A.** (2013), 'Exchange rates, international trade and trade policies'. *International Economics*, 135-136, 47-61. http://unctad.org/en/PublicationsLibrary/itcctab57_en.pdf

- Niepmann F. & Schmidt-Eisenlohr T** (2017). 'Foreign Currency Loans and Credit Risk: Evidence from U.S. Banks', (p.4). https://217ad3f7-a-62cb3a1a-sites.googlegroups.com/site/timschmidteisenlohr/risk.pdf?attachauth=ANoY7cqOdDR8jDj-X0OKd5x3uBSPcteqkh7eeXbpU-LzdT7-3zIZbUUfWGexRcQ9kHCAA_N2zCRTOj-5GAqfusS-1GvRNBhgfnMmXGGFqIxc_a2oQY_bK-FgD-rsNtxjXzcEJQBZ01I-dxmn3MBPCpp1P26mSzErkfiV7w0jj5tUyEhrBBVMzFqrZjcROwNtWWD-hLxXMD9bQn6wngyc8cV8HtJTRDU1A%3D%3D&attredirects=0
- Niepmann F. & Schmidt-Eisenlohr T.** (2017). 'Foreign Currency Loans and Credit Risk:Evidence from U.S. Banks. Constitution Avenue NW, Washington, D.C. 20551, USA. https://217ad3f7-a-62cb3a1a-sites.googlegroups.com/site/timschmidteisenlohr/risk.pdf?attachauth=ANoY7crZWueCc9Gi4Uf8tpBIqvuzugUN08l6t2NCF4rW6ACDwyMh_48gMXJorxZE7nRWNZAW9-vU4f4SmdU3jHq--1KJT1Tmm7EvdaE375G7ItsKJchrmCD19PwC-99deTBcAP2XPFuf9PPDqBW338pQwjN9blGtDOEsMA77kavHBZ9Ogdat4U9JiyCIV37xg2ERVIEpMCn2lL6vLRL64O5Uo4dJzO8UKg%3D%3D&attredirects=0
- Oberzut R.** (2018). 'International Investment Position Statistics'. *Eurostat information*. <http://ec.europa.eu/eurostat/statistics-explained/pdfscache/44015.pdf>
- Obstfeld M. & Rogoff K.** (1995). 'The Mirage of Fixed Exchange Rate'. *National Bureau of Economic Research*.<http://www.nber.org/papers/w5191>
- Obstfeld M. & Shambaugh J. C. & Taylor A. M.** (2005). 'The Trilemma in History: Tradeoffs among Exchange Rates, Monetary Policies, and Capital Mobility'.*The MIT Press*, Vol. 87, No. 3, pp. 423-438.<http://www.nber.org/papers/w10396>
- Ontario & Ottawa** (2006). 'The Mexican Peso Crisis: Exchange Rate Policy and Financial System Management'. *Department of Economics Carleton University*. <https://carleton.ca/economics/wp-content/uploads/he-kingston-brian.pdf>
- Oral C.** (2016). '40 companies with foreign exchange position deficit and surplus'. *Economist Online*.<http://www.ekonomist.com.tr/borsa/doviz-pozisyon-acigi-fazlasi-olan-40-sirket.html>
- Özmen, E. and Cihan Yalçın.** (2007) Küresel Finansal Riskler Karşısında Türkiye'de Reel Sektörün Finansal Yapısı ve Borç Dolarizasyonu. Araştırma ve Para Politikası Genel Müdürlüğü Çalışma Tebliği. No.07/06. <http://www.tcmb.gov.tr/wps/wcm/connect/de3ade1c-8a57-4787-b8a8-18af2a20dc34/WP0706.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-de3ade1c-8a57-4787-b8a8-18af2a20dc34-m3fw5Pe>
- Özsöz E., Et. Al.** (2015). 'Foreign Currency Lending and Banking System Stability: New Evidence from Turkey'. *Central Bank Review*, Vol. 15), pp.1-29. <http://www.tcmb.gov.tr/wps/wcm/connect/03612cb1-68f0-4f29-8235-3776c1773acf/May15-1.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-03612cb1-68f0-4f29-8235-3776c1773acf-m3fB70A>

- Prati A. & Schindler M. & Valenzuela P.** (2012). 'Who benefits from capital account liberalization? Evidence from firm-level credit ratings data'. *Journal of International Money and Finance*. Vol. pp.1649–1673. <http://booksc.org/s/?q=10.1016%2Fj.jimonfin.2012.03.005&t=0>
- Reinhart C.M. & Rogoff K.S.** (2004), 'The Modern History of Exchange Rate Arrangements: A Reinterpretation', *Oxford University Press*, pp. 1-48. <http://booksc.org/s/?q=10.2307%2F139401&t=0>
- Rengifo E. Et. Al.**, (2013). 'Bank Regulation in Dollarized Economies: The Case of Turkey'. *Int. J. Financial Stud*, 1, 137-153; doi: 10.3390/ijfs1040137 <http://www.mdpi.com/2227-7072/1/4/137>
- Rosenberg B.R. & Tirpák T.** (2008). 'Determinants of Foreign CurrencyBorrowing in the New Member State of the EU '. *International Monetary Fund*, https://scholar.google.com.tr/scholar?hl=en&as_sdt=0%2C5&q=Determinants+of+Foreign+CurrencyBorrowing+in+the+New+Member+State+of+the+EU+&btnG=
- Sachs J.** (1987). 'How Sovereign Debt Has Worked'. *University of Chicago Press*, pp 39 - 106). <http://www.nber.org/chapters/c8987.pdf>
- Scholes M. S.** (1997). 'The future of hedge funds'. *Journal of financial transformation*. <http://www.edge-fund.com/Scho.pdf>
- Sener T.** (1998). 'Objectives of hedging and optimal hedge ratios:US vs Japanese investors'. *Journal of Multinational Financial Management*, Vol.8 ,pp. 137–153. <https://www.sciencedirect.com/science/article/pii/S1042444X98000243>.
Accession date:
- Sivakumar , A . & Sarkar , R.** (1993) "Corporate Hedging for Foreign Exchange Risk in India". <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.615.5946&rep=rep1&type=pdf>
- Soenen L. A.** (1979). 'Foreign Exchange Exposure Management'. Springer, Vol. 19, No.2, pp. 31-38. <http://www.jstor.org/stable/40227445>
- Stephens J. J.** (2001). 'Managing Currency Risk Using Financial Derivatives'. John Willy & Sons, Ltd., UK & Ireland pp. 61-64. https://books.google.com.tr/books?hl=en&lr=&id=Gbor-8WC8dIC&oi=fnd&pg=PR5&dq=Managing+Currency+Risk+Using+Financial+Derivatives&ots=aD4iqlvrUO&sig=sxGXegGHLIDVKLi_xD5Khbqd5Q&redir_esc=y#v=onepage&q=Managing%20Currency%20Risk%20Using%20Financial%20Derivatives&f=false
- Stulz, R.,** (1984). 'Optimal Hedging Policies'. *Journal of Financial and Quantitative Analysis*, PP.20, 391-405. <https://www.cambridge.org/core/journals/journal-of-financial-and-quantitative-analysis/article/optimal-hedgingpolicies/9412EBAC9BC155D701E79F87949C96D1>
- Tavakoli A. & Tulumen S. C.** (2006). 'Construction industry in Turkey'. *Routledge*, ,8, 77-87. <https://www.tandfonline.com/doi/abs/10.1080/014461990000000007>
- Tobin J.** (1978). 'A Proposal for International Monetary Reform'. *Palgrave Macmillan Journals*, Vol. 4, No. ¾, pp. 153-159. <http://www.jstor.org/stable/20642317>

- Watson D. & Head A.** (2007). 'Corporate Finance Principles and Practice'. Financial Times, Pearson Education. <https://www.amazon.com/Corporate-Finance-Principles-Denzil-Watson/dp/0273762745>
- Wilmott P.** (2000). 'The Theory and Practice of Financial Engineering'. 2th edition, Cambridge, USA. https://mif.nes.ru/mif_files/files/courses/derivatives-2017.pdf
- Workman D.** (2018). 'Turkey Top 10 export'. *World Top Export*. <http://www.worldstopexports.com/turkeys-top-10-exports/>



RESUME



Name Surname: Mohammad Al-Ali

Address: ESENYURT, ISTANBUL, 02 March 1987

Email: [Muhammad.alali@outlook.com](mailto:Mohammad.alali@outlook.com)

EDUCATION

- **Bachelor** : 2009, Al-Yarmouk University, Economics an administration, Accounting and Finance
- **Master** : 2018, Istanbul Aydin University, Department of Business Administration, Master of Business Administration Program

PROFESSIONAL EXPERIENCE

Michel Sindaha & Co, Jordan

Position: External Auditor

2014 – 2015

Prepare Financial Reports (Balance Sheet, Income Statement, Retained Earning, Cash flows) to management

Plans financial audits by understanding organization objectives, structure, policies, processes, internal controls, and external regulations; identifying risk areas, preparing audit scope and objectives, preparing audit programs Perform tests of internal controls to ensure effectiveness

Talal Abu Ghazaleh, Saudi Arabia

Position: External Auditor

2011 - 2012

Plans financial audits by understanding organization objectives, structure, policies, processes, internal controls, and external regulations; identifying risk areas, preparing audit scope and objectives, preparing audit programs Perform tests of internal controls to ensure effectiveness Prepare and present to management reports on audit findings, which might include material misstatements of financial information or severe control deficiencies, and provide recommendations on improving these shortcomings in the future

Technical System Factory, Saudi Arabia

2010 - 2011

Position: Chief Accountant

- Recording, controlling, and reconciling trade accounts payable and accounts receivable.
 - Preparing staff salaries and providing staff payroll information.
- Calculate Interest Loans

PRESENTATION ON THE THESIS

DOÇ. DR. Zelha ALTINKAYA, PROF. DR. AKIN MARŞAP, DOÇ. DR. ABDULLAH
KHADİR DABBAĞOĞLU. RISK OF COMPANY ON FOREIGN CURRENCY
EXCHANGE BORROWING

