Forex Market in Turkey

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ABSTRACT

Foreign exchange market (FOREX) is the biggest volume financial market in the world. Through FOREX, one currency of a country is exchanged for another country's currency. Since it is the world's largest financial market, overall estimated daily average turnover of upwards is about $5.1 trillion. With the extend of globalization, both developing and developed countries have started to use similar policies among which financial liberalization is one of them. Financial liberalization is opening up economies to international capital flows, in particular by restructuring regulation of developing countries where controls and restrictions are either reduced or removed in order to attract international financial activities of developed countries to their own countries.

In this study, analysis was done for Turkey's position in the world; specifically, for the period before and after Capital Market Boards regulation. The new regulation creates authority to brokers. In order to compare the effect of changing legal structure on the participants of forex market, the groups of years were separated as the selected values of the year of 2012 before and after. The results of independent test were carried out. In conclusion, after the comparison of the parameters, the change in legal structure has significantly led to expansion in forex transactions.

Test results for transactions in forex market shows that EUR/USD transactions have significantly increased after the regulation. In addition, the increase in the participation of both local and foreign investors after the regulation has also found to be statistically significant.

Keywords: Forex, Forex Markets, Regulation and Legal Changes, Turkey.

ÖZ

Döviz piyasası (FOREX) dünyadaki en büyük hacme sahip finansal piyasasıdır. FOREX döviz kuru sistemi ile bir ülkenin bir para birimi başka ülkenin para birimi karşılığında değiştirilir. Genel olarak günlük ortalama cirosu yaklaşık 5,1 trilyon dolara ulaşarak, dünyanın en büyük finansal piyasasını oluşturmaktadır. Küreselleşmenin yaygınlaşması ile hem gelişmekte olan ülkeler hem de gelişmiş ülkeler benzer politikalar kullanmaya başlamıştır ki bunlardan birisi de ekonomileri uluslararası sermaye akışlarına açma sürecinde olan finansal liberalizasyon politikalarıdır. Bu politikalar özellikle gelişmekte olan ülkelerin, ya da gelişmiş ülkelerin uluslararası finansal faaliyetlerini kendi ülkelerine çekmek için finansal sistem üzerindeki kontrol ve kısıtlamaları azaltmak amacıyla uygulanmaktadır.

Bu çalışmanın içeriği Türkiye'nin dünyadaki konumu ve özellikle Sermaye Piyasası Kurulu düzenlemeleri ile öncesi ve sonrası etkilerini ve düzenlemelerini incelemektir. Değişen yasal yapının forex pazarı katılımcıları üzerindeki etkisini karşılaştırmak için, yıl grupları, 2012 yılının öncesi ve sonrasında belirlenmiş değerler olarak ayrıldı. Sonuç olarak, parametrelerin karşılaştırılmasından sonra, yasal yapıdaki değişikliklerde önemli ölçüde forex market işleminin kullanılmasına başvurulduğu gözlemlenmiştir.

Forex piyasalarındaki işlemler için uygulanan testte EURO/DOLAR işlemlerinin regülasyon sonrası önemli bir oranda artış gösterdiği gözlemlenmiştir. Piyasadaki katılımcılar için uygulanan testte ise hem yerel hem de yabancı katılımcıların regülasyon sonrası daha fazla piyasaya dahil oldukları test edilmiş ve istatistiksel olarak anlamlı bulunmuştur.

Anahtar Kelimeler: Döviz alım satımı, Döviz Alım Satım Piyasası, Yasal Düzenlemeler, Türkiye

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LIST OF ABBREVIATIONS

″	Turkish lira
€	Euro
$	US dollar
ASIC	Australian Secutiries and Investments Commission
ARS	Argentino peso
AUD	Australian dollar
BGN	Bulgarian lev
BHD	Bahraini dinar
BIS	Bank for International Settlement
BIST	Borsa Istanbul
BOP	Balance of Payments
BRL	Brazilian real
BRSA	Banking Regulation and Supervision Agency
BW	Bretton Woods
CB	Central Bank
CAD	Canadian dollar
CBRT	Central Bank of the Republic of Turkey
CFTC	Commodity Futures Trading Commission
CHF	Swiss franc
CLP	Chilean peso
CMB	Capital Markets Board
CNY	Chinese yuan (renminbi)

COP	Colombian peso
CZK	Czech koruna
DKK	Danish krone
DR	Indonesian rupiah
ECNs	Electronic Communication Networks
ESOMAR	European Society for Opinion and Marketing Research
EUR	Euro
FOREX	Foreign Exchange Market
FX	Foreign Exchange
FSA	Financial Services Authority
GBP	Pound sterling
GDP	Gross Domestic Product
HKD	Hong Kong dollar
HUF	Hungarian forint
ILS	Israeli new shekel
IMF	International Monetary Fund
INR	Indian rupee
JPY	Japon yen
KRW	Korean won
LTL	Lithuanian litas
LVL	Latvian lats
MXN	Mexican peso
MYR	Malaysian ringgit
NOK	Norwegian krone

NZD	New Zealand dollar
OTC Market	Over-the-Counter Market
OTH	other currencies
PEN	Peruvian new sol
PHP	Philippine peso
PLN	Polish zloty
RMB	renminbi; see CNY
RON	new Romanian leu
RUB	Russian rouble
SAR	Saudi riyal
SEK	Swedish krona
SGD	Singapore dollar
SPK	Capital Market Boards
THB	Thai baht
TPKKK	Protection of the Value of Turkish Currency Law
TPKKK	Law on the Protection of the Value of Turkish Currency
TRY	Turkish lira
TWD	New Taiwan dollar
UK	United Kingdom
US	United States
USD	US dollar
VOB	Derivatives Market
ZAR	South African rand

Chapter 1

INTRODUCTION

1.1 Background to the Study

FOREX, in terms of word structure, is the abbreviation of foreign exchange market. In financial terms, the foreign exchange market known also as FX or currency market, boundary-free market in which means trading of prevalence's takes place more than one country. The market comprises all aspects of purchasing, transferring and exchanging currencies at constant or determined prices (Kritzer, 2012).

As the world's largest trading market, forex market's daily trading volume, according to BIS (Bank for International Settlement) triennial report, is identified as 5,1 trillion dollars per day in April 2016 (BIS, 2016b). 1,7 trillion dollars of those daily trading is processed by individual investors. In view of the fact that NYMEX, as the largest stock market of the world, has about 22,5 billion dollars of daily trading volume, forex market's enormousness could be understood (CME Group, 2016). Most traded currency is frankly US Dollar as one should expect in the worldwide, subsequently after then Euro, Great Britain Pound, Swiss- and Japanese Yen. Those are also known as the major currencies that are considerably traded.

From 1944 to 1970, Bretton Woods systems had been used to fix the exchange rate of currencies. During World War II, 44 countries affected from the war accepted this system in order to repair the damage with fixed exchangeable measurement system. As a consequence of the system, for 26 years, currencies of 44 countries were fixed at dollar. However, in 1971 with the devaluation of dollar, United States gave up the fixation of dollar and the system collapsed which results in a crisis in world's economy. After collapse of Bretton Woods system, sustained foreign exchanges were ended and completed floating with relatively free conditions of a market characteristic. Since that time some countries decided to join forex trading while some decided to withdraw. As one of them, in 1981, the People's Bank of China permitted inevitable domestic "enterprises" due to the participation of foreign exchange trading (Dorn, 1998). During 1988, IMF quota for international trade was accepted (Chung, 2007). With the entry of European banks (especially Bundesbank in 1985), into FOREX market, the market's business volume highly increased; insomuch as in 1987, the greatest proportion of all trades all over the world were within the United Kingdom. Nowadays, many of the significant currencies are in floating rate regime. On the other hand, the floating rate has a fixed exchange rate system. However, today, there are no any serious great economy players who accurately uses fixed exchange rate system (Dominguez and Frankel, 1993).

Foreign exchange market is becoming reasonably important, for instance in the area of Emerging Market Economies. Emerging market is the economy of a country that may become developed in the future or was developed in the past, but does not meet standards to be a developed market. After the global financial crisis in 2008 and 2009, developed countries prolonged regulation on the financial speculative instruments. Therefore, this situation expansions has allowed FX trading desks initially shifting to Emerging Markets, where regulations are restraint (*Market classification - MSCI*, 2016).

The results and the volumes show that Forex markets in todays world are not only to finance international trade, but they are also income generating market for their participants.

1.2 Statement of Problem

As the largest international market of the world, analyzing Forex is critical in order to understand international trading deeply. Deep understanding of foreign exchange market is necessary to take place among the largest economies of the world. From this perspective, aim of this thesis is gaining deep understanding in foreign exchange market and analyzing Capital Market Boards regulation's positive effect on Forex Market in Turkey.

1.3 Purpose of the Study

Unlike from previous studies, this thesis aims at analyzing Turkey's position in the world; specifically, before and after Capital Market Boards regulation as the regulation creates authority on brokers. Analysis will include Capital Market Boards regulation's effect on development of the market in Turkey in terms of volume. Besides, it is going to investigate which methods investors use and under what conditions they will tend to invest in Turkey as well.

1.4 Research Questions

Study aims at identifying the answers of whether Turkey's Capital Market regulation related to foreign exchange market has an impact on currency exchange market; if there is an effect, whether it is positive or not; and effects of Turkey's Capital market regulation in scope of foreign exchange compared to other regulations in the issue across the world.

1.5 Structure of the Study

Study is developed as a descriptive study. First chapter is structured as an introductory section which includes background to the study, problem description, purpose of the study, research questions which are going to be answered at the end of study, significance of doing the study and the present section. In the second chapter, Foreign exchange market in general is described in terms of its evolution, operations on the market, advantages of the market to the world's economy in general and to national economies specifically. The third chapter contains detailed information about Turkish economy and its relation with Forex markets. The fourth chapter includes the impact of policy change on Turkish Forex Market which shows the importance of this thesis and explains developments, evolution of the legal structure of Forex market and compares Forex market in terms of its transactions, participants, volume and impact on stock brokers and financial market. Even though, it seems to be irrelevant with the issue, stock market regulations' success or failure on behalf of market development can be considered on this topic as a determinant of the equation. Fourth chapter is reserved for the main topic of the study which is effects of stock market regulation on financial market of Turkey.

Chapter 2

LITERATURE REVIEW

2.1 Foreign Exchange Market

2.1.1 History of Foreign Exchange Market

Currency trading and exchange’s history get backs to ancient times. In ancient times, currency and exchange was vital in trading as a means of buying and selling stuffs such as raw materials (Mark Cartwright, 2012). If a Greek coin remained valid more gold than an Egyptian coin due to its size or content, then a merchant could barter fewer Greek gold coins for more Egyptian ones. Its size and dimension has been developed (Mark Cartwright, 2012).

At the beginning of 1880’s J.M. Do Santo de Silva (established Banco Espirito Santo) participated and was allowed beginning to interlock in a foreign exchange trading business. Hence he has become the pioneer of Forex (Elgar, 1994). Towards the end of 1880’s gold standard had begun, but with the beginning of World War I many countries abandoned the gold standard monetary system and international trade become limited. At the time of the closing of the year 1913, nearly half of the world's foreign exchange was conducted using the Pound sterling (Misra, 2010). Forex, in modern way, has begun to shape in these years. During the 1920s, the Kleinwort family in London was known to be the leaders of the foreign exchange market by far, in addition to Japheth, Montagu & Co., and Seligman which are still known as important FX traders of modern times. With the beginning of World War II many countries got harm and 44 countries that was damaged together to accept Brandon Woods systems which permits currencies to oscillate within a range of 1% to the currencies par (Copeland, 2008). This dollar fixed exchange rate regime was ended by U. S. President Richard Nixon in 1971 with the devaluation of dollar throughout the world. Due to the ultimate insufficiencies of the Bretton Woods Accord and the European Joint Float the forex markets were compelled to close sometime during 1972 and March 1973 (Cecil Robles, 2007). After these situations, the year 1973 has become the ending of nation-state, banking-trade, controlled foreign exchange and has become the beginning of floating exchange rate regime.

2.1.2 Analysis of Forex Market

FOREX or FX is related to foreign exchange market wherein brokerage becomes unalterable and commercial banks mutually interact on timely-basis through Electronic Communication Networks (ECNs) for purchasing and transferring of currencies in the worldwide. The FOREX market carries on highest volume of financial transactions by the joint of investors and financial intermediaries which make it greatest and most lucrative financial market for potential earnings around the World (Roudgar and Esmaeil, 2012).

Five days and 24 hours’ open forex market has not only one processing center, and this characteristic makes forex market an over-the-counter (OTC) market. Trading from all over the world is responded back by financial centers like London, New York or Tokyo. Central banks’, commercial banks’, corporate banks’, hedge fons, insurance companies’, international foundations’ and individual investors’ investments make Forex market world’s most liquid market. Margins are mostly kept in custody banks. Custody bank holds in safekeeping securities including currency, stocks, bonds, commodities or precious metals; maintain currency accounts; perform foreign exchange transactions. Today, most countries in the world have custodian banks which work under government; by far, the five largest of those in the world are Citi Group, JP Morgan, UBS, and Deutsche Bank, and those accounts for %34 of all transactions (BIS, 2016b).

Forex market is mainly trading of currencies but not limited with those. In addition to currencies, in forex market, mines including golden, platen, silver; agricultural products including cotton, corn, soy bean; metals like aluminum or copper; stock and CFDs could also be processed.

2.1.3 Categories of Forex Market

The traders in FOREX market are separated into three categories in the literature (Chen, 2009):

- 1st group represents an interest in Fundamental Analysis of opinion reached by such contemplation only. It includes progressing of news, examining economic carefully and political scenarios of trading economies.
- 2nd group trades regarding with its Technical Analysis only. This is the way of predicting some price movements and future marketing trends by critically examining the history of FOREX market and the respective charts.
- 3rd group who uses both Fundamental Analysis and Technical Analysis together. Indeed, these are the professional market groups who have a business deal after analyzing the true market potential.

In order to process in forex market, traders have to invest margin initially. Margin, in terms of usage, could be separated into three (Dicks, 2004);

- **Required margin:** It is the minimum amount of money in account in order to open a position in forex market.
- **Usable margin:** After opening a position, it is the amount of money in the account that can be used. Usable margin is identified with the equation of "Residual – paid total margin + profit/loss", and changes transiently.
- **Used margin:** In order to keep the present position open, mediator company blocks certain amout of the money which is called used margin. This capital could be used only if it is checked out.

Moreover, the foreign exchange market does not figure out the existing values of different currencies, however, it arranges the current market prices as demanded against another.

2.1.4 Volume in Forex Market

According to Triennial Central Bank Survey Foreign Exchange Turnover - April 2016 report by BIS, the foreign exchange market is the most floated financial market in the world (BIS, 2016b). The liquidity is the result of large size of traders all over the world, including large banks, central banks, intuitional investors, currency speculators, corporations, governments, financial institutions and retail investors.

Table 2.1 OTC Foreign Exchange Turnover

Net-net basis[1], daily averages in April, in billions of US dollars

Instrument	2001	2004	2007	2010	2013	2016
Foreign exchange instruments	1,239	1,934	3,324	3,971	5,355	5,088
Spot transactions	386	631	1,005	1,488	2,046	1,654
Outright forwards	130	209	362	475	679	700
Foreign exchange swaps	656	954	1,714	1,759	2,239	2,383
Currency swaps	7	21	31	43	54	96
Options and other products[2]	60	119	212	207	337	254
Memo:						
Turnover at 2016 exchange rates[3]	1,381	1,884	3,123	3,665	4,915	5,088
Exchange-traded derivative[4]	12	25	77	145	145	115

[1]Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis).
[2] The category “other FX products” covers highly speculated in by using transactions and/or trades whose theoretical amount is inconstant and where separating into individual parts of plain vanilla components were impractical or impossible.
[3]Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2016 exchange rates.
[4]Sources: Euromoney Tradedata; Futures Industry Association; The Options Clearing Corporation; BIS derivatives statistics. Foreign exchange futures and options traded worldwide.
Source: BIS, 2016b

The report (Table 2.1) clarifies that the daily turnover in OTC foreign exchange is growing year to year. While the OTC FX market activity per day was 4.0 trillion dollars in 2010, it raised to 5,4 trillion dollars per day in 2013, followed by a decrease in 2016 as becoming 5.1 trillion dollars. According to BIS, 2016 report, the highest value was gained in April 2013 because of the fact of an increase in Japanese Yen against monetary policy developments.

Since 2004, daily turnover has become more than doubled with respect to several reasons; some of those are the growing importance of foreign exchange as an asset class, the increased trading activity of high-frequency traders, the emergence of retail investors; and passing to electronic world provide investors lowered transaction costs, market liquidity increase, and bring more participants from different areas to the market (Kallianiotis, 2013). In 1992, Reuters company lead to passing from getting information through phone calls to the projection of currencies to screen (Reuters, 2016)

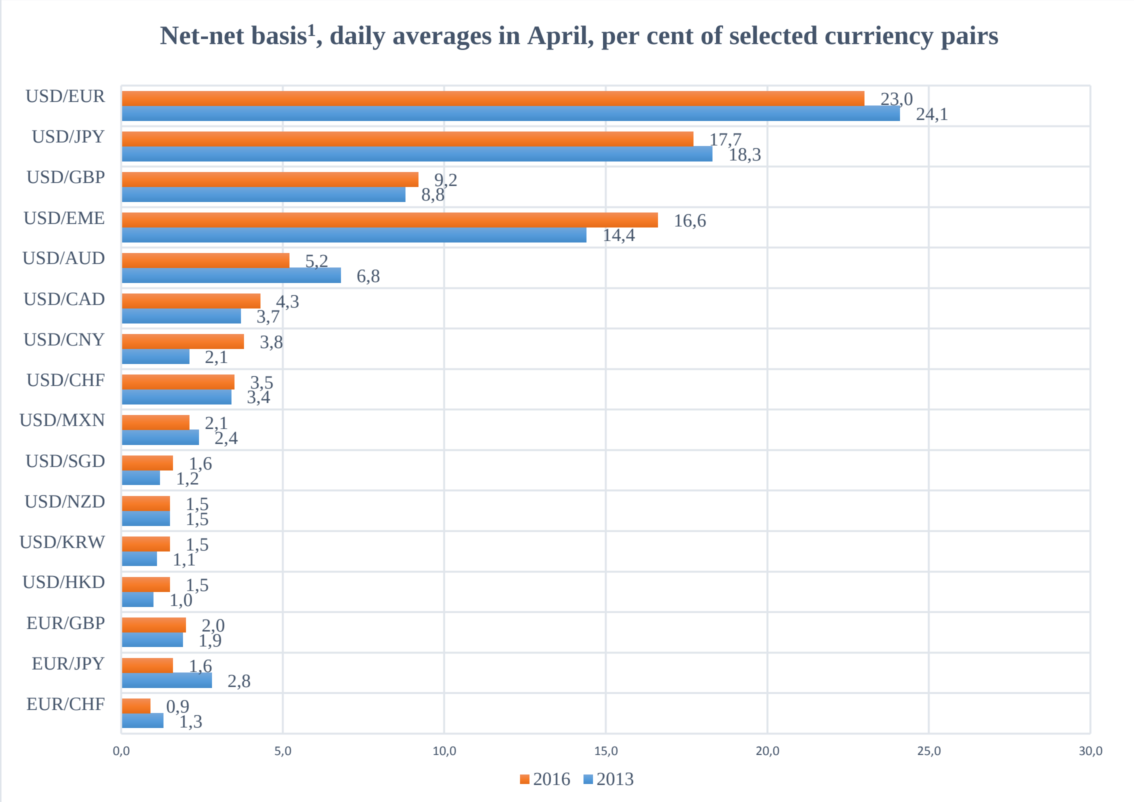
In April 2016, US dollar lead the market with %88 of all trades, and the euro, yen and Australian dollar all lost market share. Based on BIS Report, In April 2016, sales desks in five countries – the United Kingdom, the United States, Singapore, Hong Kong SAR and Japan – intermediated 77% of foreign exchange trading, up from 75% in April 2013 and 71% in April 2010 (BIS, 2016b).

After 20th century issues, Forex is a government independent market in which brokers meet directly with each other; with this feature, Forex is known as over-the-counter market. In terms of size, the biggest geographical trading center is London at most times since the beginning of floating exchange rate regime. As a result of this fact, International Monetary Fund use the London market prices while calculating the value of its special drawing rights (Communication Department Washington D.C., 2016).

The foreign exchange market has layers to access, meaning that not every investor can reach all parts of the market. Top point of the market is made up of commercial banks and securities dealers and known as Interbank market. Within the interbank market, according to volume of investment, the difference between ask and bid prices increases like that as volume of investment increase, the difference between ask and bid prices decrease. As a leader, interbank market accounts for 42% of all transactions (BIS, 2016a, 2016b). The layers go down as smaller banks, large multi-national corporations, large hedge funds, and some of the retail market makers. Additionally, pension funds, insurance companies, mutual funds and other institutional investors has been playing important role in FX markets since 2000's (Galati and Melvin, 2004). Central banks, by themselves have a significant place in forex market with their control on national currencies. Controlling money supply, inflation and interest rates mostly give them a big role in foreign exchange market.

On the spot market, according to the 2016 Triennial Survey, the most heavily traded bilateral currency pairs were USD/EUR: 23.0% USD/JPY: 17.7 % USD/GBP: 9.2% (Fig 2.1.) (BIS, 2016b).

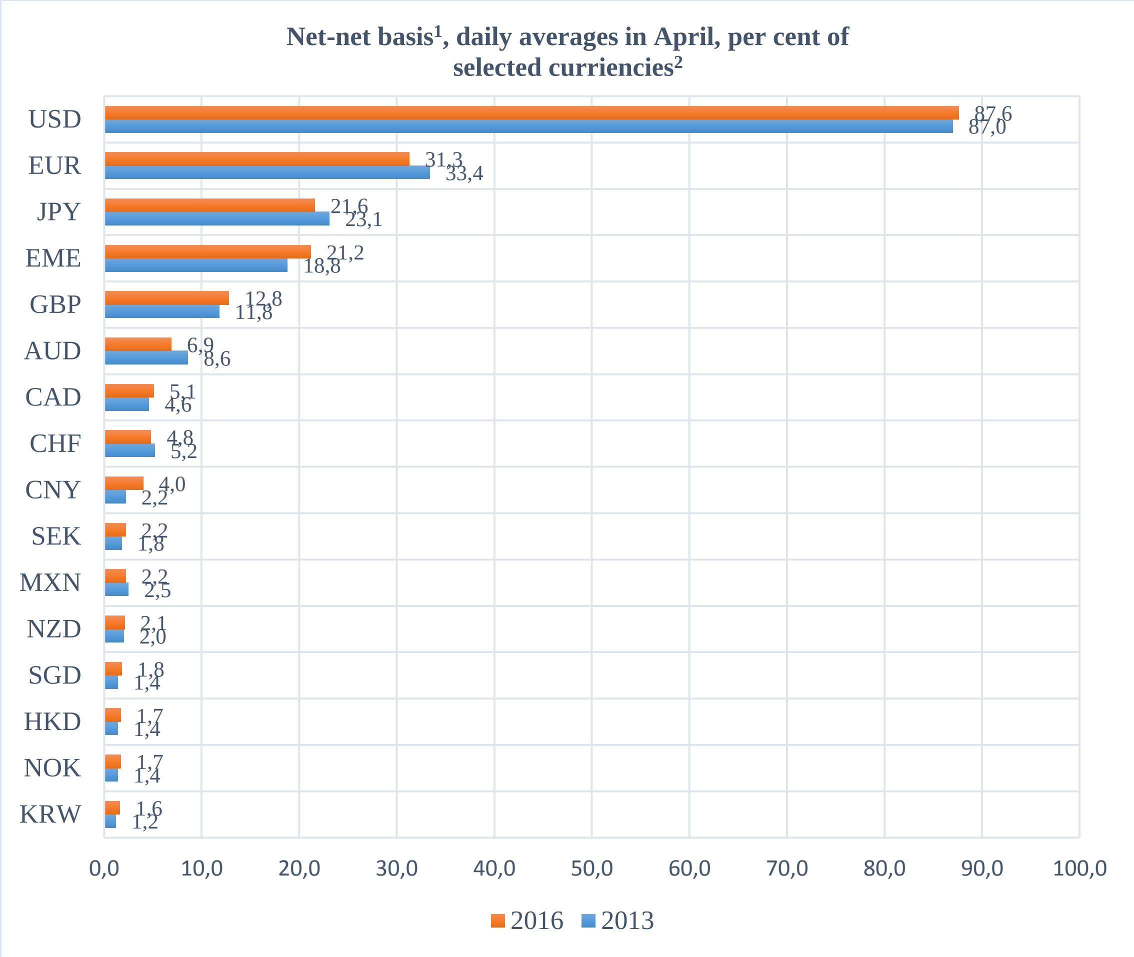
According to the Triennial Report 2016, US dollar (USD ($)) accounts for 87,6 % of all transactions, followed by Euro (EUR (€)) with 31,3 and Japanese Yen (JPY (¥)) with 21,6% (Fig 2.2.). In this list, Turkey takes place as 16th with %1.3 share of all transactions.



1Adjusted for local and cross-border inter-dealer double-counting.
EME: Emerging market currencies.
Source: BIS, 2016b

Figure 2.1: Foreign exchange market turnover by selected currency pairs.

When a social, political, or economic potentially adverse event happens that may affect the market, foreign exchange market performs risk aversion. This response of Forex market is seen when risk adverse traders liquidate their positions in possibly risky assets and shift the funds to safe haven currencies (such as US dollar) in the case of uncertainty (Lash, 2010). One of the most known example of this could be Financial Crisis in 2008.



1Adjusted for local and cross-border inter-dealer double-counting. 2As two currencies are involved in each transaction, the sum of shares in individual currencies will total 200%.
Source: BIS, 2016b

Figure 2.2: Foreign exchange market turnover by selected currencies

Foreign exchange is the only market in which processing continues for 24 hours. It starts at Sydney at Sunday nights and ends at New York at Friday nights (Garner, 2012).

2.1.5 Advantages of Forex Market

Foreign exchange market is, by far, the biggest market in the world because it offers investors several advantages, major of those are (Hansen, 2006);

- **Flexibility:** Foreign exchange market offer traders' extensive flexibility with no limitation of money on trading, with almost no regulation in markets as they are nearly independent from governments, with its time schedule as five days 24 hours working. Especially, the time schedule of Forex market provides people with regular full time jobs to participate in the market, for example at nights.
- **Trading Options:** In Forex market, traders are offered wide variety of trading options in more than a hundred currency pairs. Also, Forex traders can make forward agreements for future times in different sizes of money and trading option. Thus, in the market, large size of traders in different budget and in different appetites for risk taking can find an ideal option for themselves.
- **Liquidity:** Forex market is the most liquid market of the world; thereby, liquidity gains market an extensive amount of trading volume. With this feature, it offers to the participants to enter into or exit from the market any time they wish. The greatest liquidity occurs when operational hours in multiple time zones overlap.
- **Transaction Costs:** Forex market has lower transaction costs with regard to other markets. It is because Forex market is operated by dealers who provide a two-way quote after reserving a spread for themselves to cover the risks.

- **Leverage:** Leverage is one of the most important advantages of Forex market. The market provides traders to lever their base investment by as many as 20 to 30 times to trade in the market. It is the highest leverage among all financial markets. By this way, even though the investors move with small amounts, they end up with gaining or losing a significant amount of money. It is possible to enter into Forex market with as small as 250 US dollars.
- **Volatility:** Volatility is the measure of how much the price of currency changes over time. Volatility is another major advantage for Forex market as the changes in the price of currency provides investors to take advantage of exchange rate fluctuations. However, traders must be aware that greater volatility means greater risk potential.
- **Potential Profit Regardless of the Market Direction:** In Forex market, a short sale makes it possible to earn profit in any direction of the market by the way that in times of increasing rates, investor can earn profit by buying a currency pair and then selling it later for more than paid, and in times of falling rates, investor can earn profit by selling a currency pair and then buying it later for less than selling money.
- **Market Size:** The huge market size of Forex nearly extinguishes the possibility of manipulation of market from single bank or a trader. This advantage also brings security for Forex market investors compared to other markets.
- **Guaranteed Stops:** With buy-limit and sell-limit features, in Forex market, participants can determine at which exact price they would like to enter or exit the trade. Additionally, stop order makes to instruct the broker to exit the

trade in the case of that the price drops to a certain point; this enables traders to protect their money in risky situations.

2.1.6 The Importance of Forex Market

In the Forex market prices do not move randomly, and are made of special configurations with more or less regular intervals, and in a rather predictable. These movements are not realized on all currencies and in the same way, and, with our method we refer exclusively to a cross or currency pair, the EUR / USD (euro-dollar) are three stages at which the action Eurodollar it develops. Steps that can be found on the price history: trendy phase of stagnation and congestion break. A trend in the market is one where prices move upward or downward. The highest maximum price bars are generally consecutive, when the trend is upward; or on prices make lower lows, usually consecutive, when the trend is downward. A stagnant market is one where prices are circumscribed in a side channel (congestion or range). The congestion ruptures are the final phase of the market. Usually the breaks (breakouts) of congestions are the jump of prices between a series of bars in the congestion to another series of bars in congestion. Tears congestion represent the final stage of the market.

In any country also in Turkey, whose is dwelling in supervise business abroad or manage in financial transaction with persons or parties in other countries, there must be a mechanism for ensuring them some facilities in order to get an access on other countries’ currencies. (Roudgar and Esmaeil, 2012).

Foreign exchange market mainly aims at serving international traders and investors by allowing them exchanging one currency to another currency. For example, it allows a US company to import Japanese goods and pay Japanese Yen or it allows

Japanese companies to import US goods by paying US dollar. Therefore, the currency is a valuable facility for all nations enterprising them to engage in global markets by purchasing other countries goods or transferring them their productions and services. Indeed, it ensures a transfer of delivering some power from one economy to another (Das, 2015).

Today, Forex market has a significant place in the world economy, in which currencies are being exchanged among individual investors, financial firms or governments easily. Until recently, Forex market was specific for certain groups including commercial banks or financial institutions which have extensive wealth. Development of technology make possible to passing from getting information through telephones to getting info every moment from internet; and Forex market has become accessible for all investors (Chen, 2009).

Forex market occupies an important place in financial world. With its tremendous trading volume, it could be seen as the backbone of international trade and global investing. Although the market is free from government, circulation of currencies all over the world through trading cultivates the national finances. On the other hand, trading through currencies make place for imports and exports which enables to gain access to resources and additional demand for goods and services. Withdrawing foreign exchange market from international finance markets would make global economic growth much lesser than the present level (Lander and Preece, 2014).

2.2 Regulation in Forex Markets

Despite foreign exchange market's promises about high profits, especially during global crisis at 2000 and 2003, investors lose high money. As foreign exchange market is a boundary-free market, operations of one country affects many of others. Thus, during this and following periods, many countries have made regulations related to foreign exchange market which includes revisions on accounting standards, credit rating agencies and hedge funds as well as related to controls on market operations.

At this point, regulations on currency markets which are subject to less control than organized market had been started.

The main risk at currency market is the risk of opposing side. The risk of that, one side of traders cannot discharge the responsibility at forward and swap market, can affect the whole system. On the other hand, leverage rates include high risk as well as high profits for both individual and institutional investors. Besides, heightened volatility and information disadvantage are other risks for especially individual investors. That large part of Forex market is dominated by algorithmic- computerized trading increase currency volatility and may increase the risk of runaway losses for small investors. In addition, retail investors have a distinct disadvantage compared to professional big players at having access to information about large commercial transactions and capital flows; which make a great information asymmetry and make retail investors a disadvantageous position compared to professionals. With the results of these risks many countries lost money in scope of individual investors. Thus, many countries brought regulations in order to minimize these risks.

2.2.1 Purpose of Regulations

The importance of regulating for FOREX market especially for retail side of the market was perceived by governments especially after financial crisis. There are many different countries and states in the world having different view of FOREX market. That’s why to centralize foreign exchange of the country, to channel foreign exchange for public benefit, to monitor capital outflows and to stabilize the value of currencies, regulations are must (Banco Central do Brasil, 2013; Bhutan, 2013).

2.2.2 Benefits of Regulations

The world’s biggest financial market is FOREX. The importance of regulations was mainly understood after financial crisis happened thus; governments consider FOREX market regulations seriously. There are a lot of brokerages and some of being regulated and some of not. Many traders can’t find the best brokerage since they are not aware of the importance of favorable financial regulations and end up with disappointment due to unregulated authorization. Understanding foreign exchange regulation is a must since it provides certain level of protection. Many customers who consult brokerages being regulated would be safe and insure their funds (Investopedia Staff, 2010b).

2.2.3 Experience of Regulations Around the World

Many FOREX market regulations have been brought up in many different countries based on requirements and experiences of governments.

In USA, for the ten most widely used currency (Euro, Australian Dollar, Denmark Krone, English Sterling, Sweden Krone, Swiss Francs, Japan Yen, Canadian Dollar, Norwegian Kroner, New Island Dollar) 100:1 leverage rate was used and for other currencies 25:1 leverage rate was used. Yet, Commodity Futures Trading

Commission (CFTC) published a new regulation related to individual investors and institutional investors of foreign exchange in January 2010. With this regulation, individual and institutional investors who operate on US Futures Exchange were obliged to enroll CFTC's registry system. Obligation was valid for retail foreign exchange dealers, introducing brokers, commodity pool operators, commodity trading advisors and associated persons. Regulation has brought 10:1 leverage rate for individual investors. According to some US economists, this leverage rate may force many traders to get out of the arena or sneak away to offshore forex providers despite its less risky situation (CFTC Editors, 2014).

In US, in addition to CFTC system, in July 2010, after 'The Dodd-Frank Wall Street Reforms and Consumer Protection Act came into action, The Consumer Financial Protection Bureau was established. Aim of the CFPT mainly is to protect consumer rights in many financial field including foreign exchange. The institutions impact was understood with 'Submit a Complaint' section created at 2011. Complaints which were taken in five subjects including mortgage, credit cards, bank accounts, consumer credit or student credit are directed to related companies by CFPT. Until 2012, inspection was started for %72 of all companies related to complaints (Investopedia Staff, 2010a) .

On the other hand, in England, Financial Services Authority (FSA) brought new regulations into force in which maximum leverage rate for operations is removed. Yet, with the regulation, obligation of following institutional and individual investors' investments in separate accounts for audited entities has been brought. In this way, as investments are followed from two separate accounts, they are protected from the risks that institutions face with. Besides, operations conducted by institutions authorized by FSA have been protected through Financial Services Compensation Scheme (FCA Editors, 2016).

In 2006, Uganda Forex Bureaus and Money Remittance made a foreign exchange market regulation. In scope of the regulation, institutions and supervising persons were obliged to have license to transact business as a forex bureau; the increased usage of formal funds transfer systems was encouraged through the facilitation of foreign exchange transfers (Bank of Uganda, 2006).

In Japan, regulations are controlled by Financial Services Agency. Japan is the latest country to prohibit its citizens from opening Forex trading accounts with brokers outside of Japan. The regulation has been developed at 2011. Until 2011, many brokers supported forex trading from Japan; yet, with the regulation, working with brokers in different regulatory jurisdictions outside of Japan is prohibited. Besides, leverage rate is limited with 25:1. After the regulation FSA published a list includes Forex brokers that have significant business from Japan; and opened a website in Japanese which was prohibited providing Japanese support from outsiders (Archer, 2007).

Japanese FSA forced Australian Secutiries and Investments Commission (ASIC) and brokers to comply to those new rules, even if it means to let clients go in a very short time span, like it happened in the USA. American brokers get almost the 40% of their revenue from Japanese clients, so those new rules forced a huge setback for the economy forcing them to accept only US citizen as clients.

Similar regulations have taken place in many countries across the world including The Kingdom of Bhutan at 2013 (Bhutan, 2013), in India at 2008, in Brazil at 2013 (Banco Central do Brasil, 2013) and at Philippines (Pilipinas, 2016).

Lastly, Bank of International Settlements, which is known as Central Bank of the Central Banks since 1974, published a global code including a set of principles in the aim of providing a common set of guidelines to promote integrity and effective functioning of the Forex market. "*It is intended to promote a robust, fair, liquid, open, and appropriately transparent market in which a diverse set of Market Participants, supported by resilient infrastructure, are able to confidently and effectively transact at competitive prices that reflect available market information and in a manner, that conforms to acceptable standards of behavior*." (BIS, 2016a,page 15).

Code which is developed by partnership of 21 Central Banks from 16 jurisdictions, select six principles as the baseline: ethics, governance, information sharing, execution, risk management and compliance and confirmation and settlement processes. The Global Code is not obliged to the market participants but they are waited to be engaged in the Code.

Chapter 3

TURKISH ECONOMY and FOREX MARKETS

3.1 Turkish Economy: From Past to Today

With the extend of globalization, both developing and developed countries have started to use similar policies. One policy is financial liberalization policies which is the process of opening up economies to international capital flows, in particular by the re-regulation of developing countries by removing or reducing controls and restrictions on the financial system to attract international financial activities of developed countries to their own countries (Durgun, 2007).

Today's Turkish economic policies and political structure were built in the beginning of 1940's within the consideration of process of globalization. Before the year 1980, ups and downs in oil prices were considered in Turkish economy since the demand in foreign exchange was also increased. After the time of dissolution of the Ottoman Empire, and establishment of Turkish Republic, Turkey had experienced rough times in their economy by means that difficulties in finding external funding. Thus, Turkish authorities applied to World Bank and International Monetary Fund (IMF) for external resources and followed financial liberalization policies with decision of 24th of January 1980. These decisions were completed in three phases. The first of these was the release of goods and services trade; the second was domestic financial liberalization provided by the removal of restrictions on interest rates; and the third was the removal of all restrictions on capital movements.

With these decisions, Turkish economic policy was transferred from import-oriented to export-oriented, both nominal value in US dollars and export volume in terms of volume doubled. Besides, the private sector started to strengthen due to providing funding sources through the banking sector. On the other hand, while the economy's contribution to agriculture has continued to decline over the years, the weight of the service sector in the economy has become more pronounced (Durgun, 2007; Gündoğdu, 2016; Tüleykan and Bayramoğlu, 2016).

Although Turkish economy was expanded between 1984 and 1989, ending of the war between Iran and Iraq and Gulf crisis in 1990 affected Turkish economy in a negative way due to loss of two important markets. Moreover, the constriction in global economic activity also caused an increase in risk perception which had a negative effect on exchange rate, credit demand and public debt (Türkiye Cumhuriyeti Merkez Bankası, 2002; Gündoğdu, 2016).

Because of the increase in central government budget deficit and inadequate exchange rate policy, a crisis happened in 1994. Although the government ruled restricted economic policies, the regulations could not save the situation because of early elections. Turkish economy conflicted with increased budget expanses and after all, next government became a long coalition negotiation followed by Anayol government. Due to these political uncertainty, IMF kept their hands-off Turkey and Turkey was struggled with a huge economic crisis. The banking sector contracted in real terms due to this crisis and the size of assets in the sector fell from 44% levels of gross domestic product (GDP) in 1990 to 30% of level. Even the Turkey’s economy was growing from the year 1995, political uncertainty and August 17th earthquake had a major negative effect on economy (Şahin, 1998; Altan and Güzel, 2015; Gündoğdu, 2016).

In 1999, coalition government made a deal with IMF to continue their stand-by meetings as considering the regulations by Medium-Term Program. In 2000, new three-party coalition government applied Inflation Reduction Program in other words "Fighting Against Inflation Program" which contained financing policies including tight monetary and exchange rate policies and structural transformations in the banking sector. Until the end of 2002, it was aimed to reduce inflation to single-digit figures, lower real interest rates and thus creating a stable macroeconomic environment that would improve the long-term growth potential of the country. Domestic financial crisis occurred in November 2000 because of high amount of capital outflow, rising concerns in stock market and short currency position of banking sector. Followed by 2000, in February 2001 crisis experienced due to shortage in liquidity (Türkiye Cumhuriyeti Merkez Bankası, 2002; Kiracı, 2011; Gündoğdu, 2016).

Transition to a "Strong Economy Program" was applied in 2001 to stabilize the economy. Many regulations had been involved in this program such as public finance and income policies. With the new regulations, macro-economic stability was established. Between 2002 and 2007, Turkish economy grew about 6.9% on annual basis. By the first quarter of 2008, this value became 6.6% overall 25 quarters of economic growth which was resulted with the longest uninterrupted period in Turkey's economic history (Gündoğdu, 2016).

Even Turkey’s economy was affected by global crisis in 2008, it was still growing about 9% annually between 2010 and 2011 through the increase in capital flow in global market. The growth decreased to 3% between 2012 and 2013. One cause is argued to be due to new regulations to control global liquidity by Banking Regulation and Supervision Agency (BRSA) and Central Bank of the Republic of Turkey (CBRT) (Türkiye Cumhuriyeti Merkez Bankası, 2002; Kilinç Savrul *et al.*, 2013; Gündoğdu, 2016).

In a period when many countries' economies were shrinking due to the global financial crisis, following the economic slowdown in 2008 and the contraction in 2009, Turkish economy caught up with growth rates of 9.2% and 8.5% in 2010 and 2011, respectively. The average GDP growth rate in the period 2002-2014 was 4.9% and 5.4% in 2010-2014.. In the first nine months of 2015, growth rate of 3.4% was reached. Within this scope, GDP per capita, which was US $ 3,449 in 2002, reached US $ 10,404 in 2014 (TÜİK, 2016).

As a consequence of the economic reforms fulfilled in few years, especially the volume and structure of foreign trade has altered significantly. In 2015, Turkey's trade volume reached US $ 351 billion and exports were US $ 144 billion. The main target for the year 2023, the centenary of the founding of the Republic of Turkey, is to raise the exports to the level of US $ 500 billion (TÜİK, 2016).

Based on the Medium-Term Program (2016-2018), Turkey is expected to catch up with 4.5% in 2016 and 5% in 2018 (TÜİK, 2016).

3.1.1 GDP Per Capita Development

The economic growth rate or rate of growth of an individual country is measured by the gross domestic product (GDP), and therefore GDP becomes an essential element in effecting investors' opinion about the value of a currency (Cofnas, 2015). Thus, high GDP growth means that economy is good, nation is moving forward and there is a tendency on reliance of products as a driver of economic growth. On the other hand, when GDP is falling, high inflation and interest rates are expected. Overall GDP includes agriculture, industry, construction, trade, transport and storage and other services (Günay, 2016).

Figure 3.1 shows GDP per capita (in US dollar currency) of Turkey between the years of 2008 and 2015. It is clearly shown in the figure that there are ups and downs in GDP per capita within years (World Bank Group, 2016a). Though Turkey has achieved high growths within the same period (2007 – 2016). Per capita income in $US is 9.125 $US in 2015 which is lower than per capita income in $US in 2008.

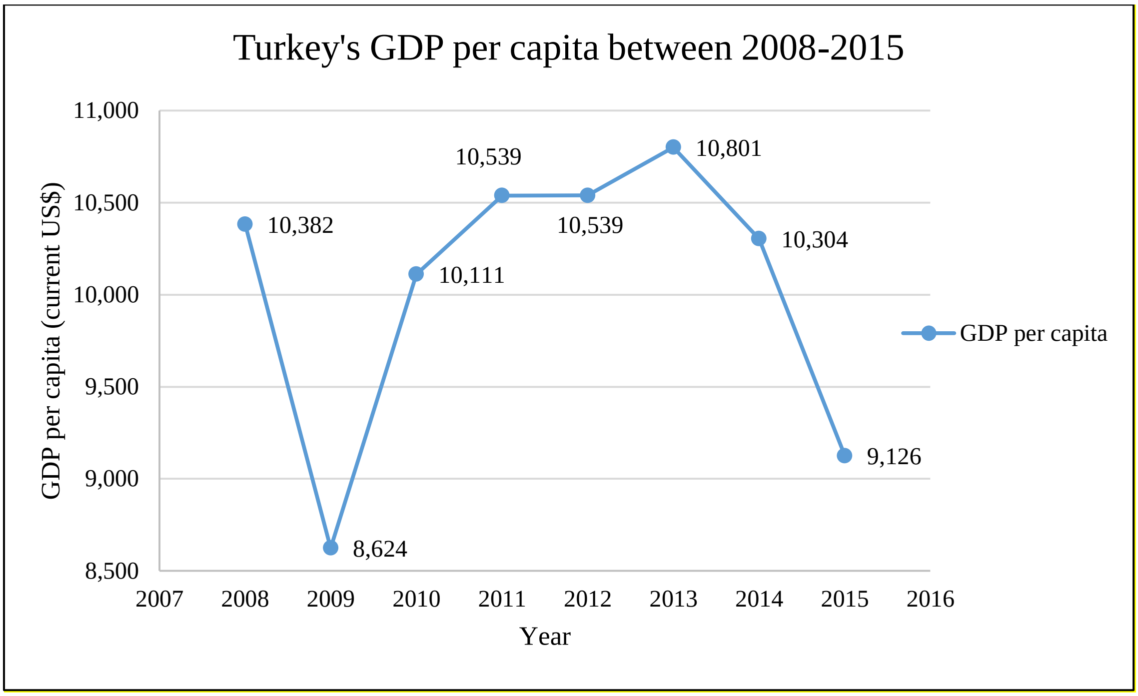


Figure 3.1: Turkey’s GDP per capita between the years of 2008-2015 (current US$). Source: World Bank Group, 2016a.

Figure 3.2 shows Turkey's GDP per capita growth in percentage between 2008 and 2015. As it can be seen clearly, there are ups and downs within years but most importantly, after negative growth especially in 2009 the value gets its higher value in 2010 as 7,5% GDP per capita growth. In 2015 the value is lowered to 2,463% (World Bank Group, 2016a, 2016b).

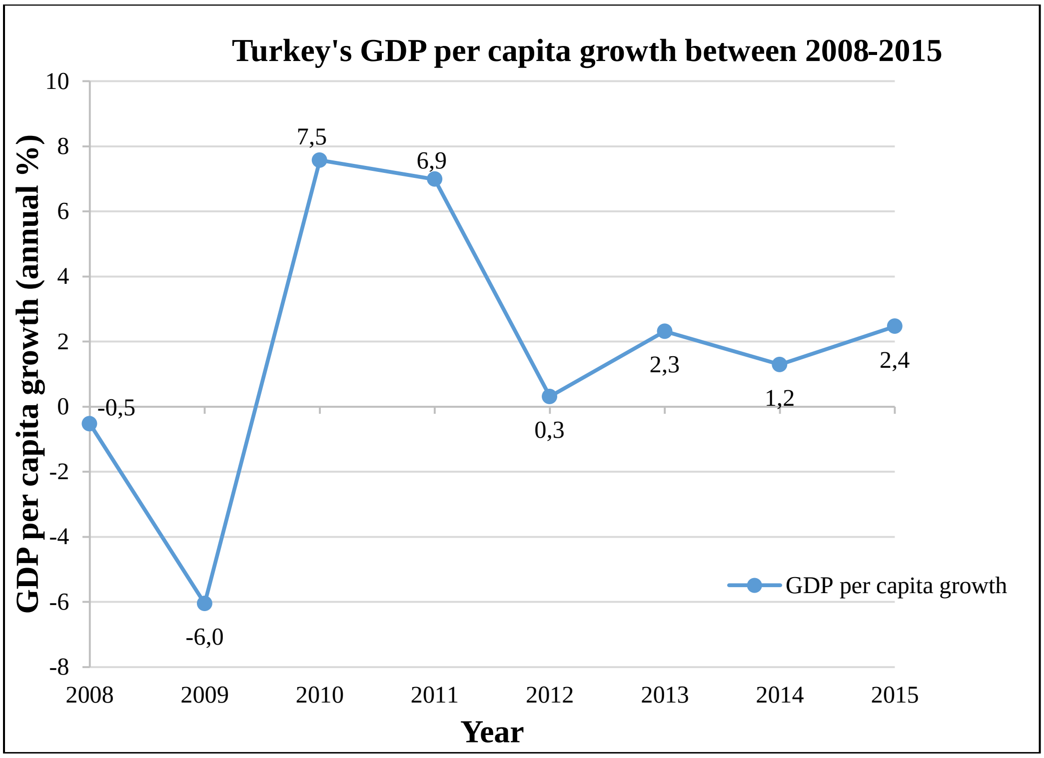


Figure 3.2: Annual percentage growth rate of GDP per capita based on constant local currency in Turkey within the years of 2008-2015.
Source: World Bank Group, 2016a.

3.1.2 Sectoral Developments

Based on a report prepared by Republic of Turkey Ministry of Finance in 2015, the share of the agricultural sector in employment has decreased over the years due to the change in the composition of agricultural subsidies and the increase in the level of labor force in Turkey since 2000. Although the share of agricultural employment rose relatively in 2008-2011 due to the decrease in agricultural external opportunities and the rise in food prices, it has started to decrease again from the beginning of 2012. In 2015, the share of the agricultural sector in total employment was 22,0 percent. Correspondingly to the developing countries, the share of services and industrial sector in economy increases while the share of agriculture sector decreases in Turkey. Figure 3.3 indicates the share of sectors in employment in 2015 (Maliye Bakanlığı, 2015; Akyol, 2016).

In the Turkish economy, which grew by 4.0% in 2015, the agricultural sector grew by 7.6% due to the favorable climatic conditions, while the services sector grew by 4.8% and the industrial sector by 3.3% (TOBB, 2015).

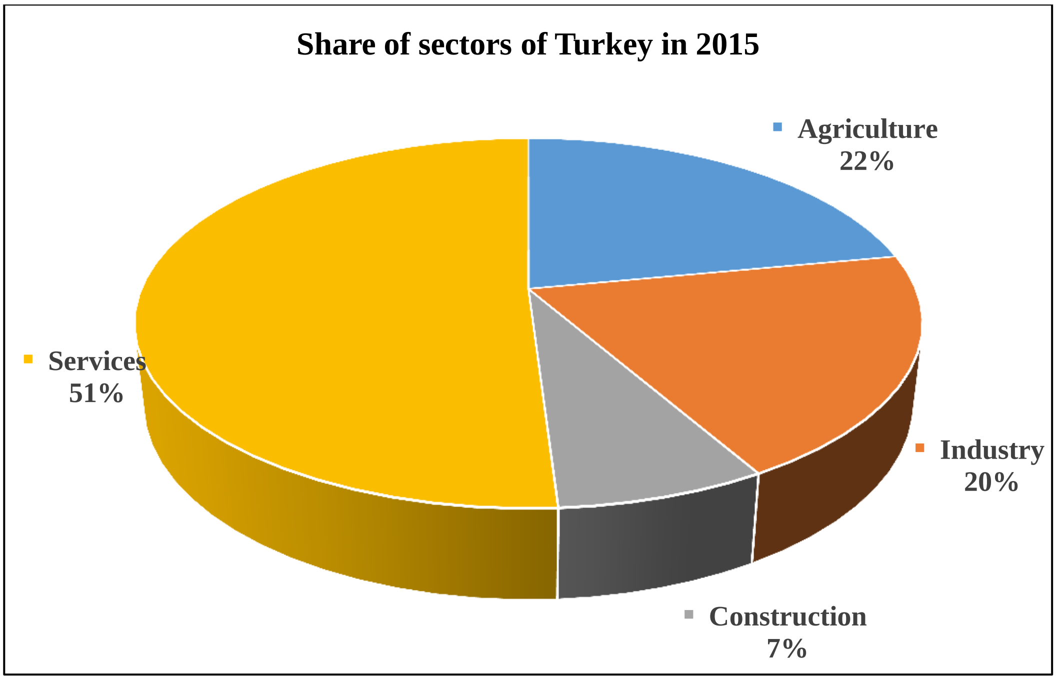


Figure 3.3: The share of sectors in employment in 2015
Source: Maliye Bakanlığı, 2015.

3.1.3 Banking Sector

The banking sector supports macroeconomic stability with its strong capital structure and asset quality which can be indicated by the twice-value of legal limit and the decreased and almost fixed lending rate of loans whereas there is a trend in decreased capital adequacy ratio. In addition, the macroeconomic effects of the BRSA and the overall loan-to-credit ratios, which have fallen due to the effects of the policy measures, have changed significantly in favor of the loans extended to the corporate sector. Stress tests in the sector, target capital adequacy ratios, high response ratios and limitations on profit margins are determined in terms of poly values and are applied efficiently (Maliye Bakanlığı, 2015).

Despite the exchange rate and interest volatility in the first months of 2015, the banking sector continued to grow and maintain its asset quality while maintaining its strong liquidity ratios and capital structure. One of the most important indicators of the banking sector, its total assets increased by 23% in the first seven months of the year compared to the same period of the previous year and amounted to approximately 2.3 trillion TL (Table 3.1) (Maliye Bakanlığı, 2015).

Table 3.1: Banking Sector Basic Data

Million ″	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015, July**
Total assets	834.014	1.006.667	1.217.695	1.370.690	1.732.401	1.994.329	2.274.486
Equity capital	110.887	134.542	144.646	181.940	193.724	232.007	244.506
General deposit	514.620	617.037	695.496	772.217	945.770	1.052.693	1.219.235
Total credits	392.621	525.851	682.893	794.756	1.047.410	1.240.708	1.428.606
Net profit for the period	20.182	22.116	19.844	23.523	24.664	24.610	15.352
Capital adequacy ratio	20,6	19,0	16,6	17,9	15,3	16,3	15,1

3.1.4 Balance of Payments

Balance of payments (BOP) is a statistical statement that contains economic transactions between a country's stationary factors in another word residents such as Central Government, monetary authority, banks, other sector, and nonresidents in a specific time period (TCMB, 2016). In Turkey, the current account deficit, which was $46.5 billion at the end of 2014, decreased to $45 billion in 12 months on July 2015 which directly affects BOP in a positive way (Maliye Bakanlığı, 2015).

3.1.5 International Trade

The concept of foreign trade generally means the opening and integration of an international market into an international market. In order for a country to be open to the outside it must be open to entry and exit of trade and capital flows. Depending on the rate of influence of countries on globalization, the outward openness can change. In general, it has been found that the countries in which the global economy is opened are more developed than those in the countries with the closed economy. This means that the more open to outside the country, the higher the financial development rate is. The globalization of trade in the globalization process means that any restrictions on foreign trade will be removed. With the majority of international trade being between developed countries, the pace and direction of trade has not changed since 1980. Following the cold war, changes in the development of trade have been experienced, such as the transition to the market economy, the reduction of the transaction costs and the rapid increase of the world population (Akyol, 2016).

Table 3.2 shows Turkish foreign trade between years of 2008-2015.

Table 3.2: Foreign trade by years, 2008-2015

	Exports		**Imports**		**Balance of foreign trade**	**Volume of foreign trade**	**Proportion of imports covered by exports (%)**
	Value	**Change**	**Value**	**Change**	**Value**	**Value**	
Years		**(%)**		**(%)**			
2008	132.027	23,1	201.963	18,8	-69.936	333.990	65,4
2009	102.142	-22,6	140.928	-30,2	-38.785	243.071	72,5
2010	113.883	11,5	185.544	31,7	-71.661	299.427	61,4
2011	134.906	18,5	240.841	29,8	-105.934	375.748	56,0
2012	152.461	13,0	236.545	-1,8	-84.083	389.006	64,5
2013	151.802	-0,4	251.661	6,4	-99.858	403.463	60,3
2014	157.610	3,8	242.177	-3,8	-84.566	399.787	65,1
2015	143.838	-8,7	207.234	-14,4	-63.395	351.073	69,4

Value: Million US $
TurkStat, Foreign Trade Statistics, November 2016
Source: TÜİK, 2016.

3.1.6 Portfolio Investment

Portfolio investment can be defined as the investment on securities, basically bills, equites and money market instruments of public and private foundation. Through portfolio investment, resident corporate funds from international capital markets without an effective voice can be managed. Portfolio investor only provides capital to the enterprise (TCMB, 2016).

Table 3.3: Development in financial account

	Financial Account	Direct Investment	Portfolio Investment	Other Investment
2001	1.633	-2.855	4.479	2.703
2002	-1.384	-939	551	-7.149
2003	-3.065	-1.222	-2.498	-3.392
2004	-13.360	-2.005	-8.048	-4.131
2005	-19.485	-8.967	-13.457	-14.908
2006	-32.064	-19.261	-7.415	-11.502
2007	-37.272	-19.941	-833	-24.530
2008	-37.520	-17.302	5.014	-24.174
2009	-9.087	-7.032	-227	-1.940
2010	-45.131	-7.617	-16.083	-34.240
2011	-66.132	-13.812	-22.204	-28.303
2012	-48.935	-9.179	-41.012	-19.558
2013	-62.296	-8.757	-23.988	-39.462
2014	-42.062	-5.476	-20.104	-16.014
2015	-22.977	-11.972	15.719	-14.893

Negative (-) inflow of funds to the country
Positive (+) outflow of funds from the country
*Million $US

The operating assets are intended to be used permanently in the building activity or related to investments and financial receivables in the medium / long-term granted by the company to third parties. Portfolio investment records the transactions between residents and non-residents whose purpose bonds or minority shares (ie not finnalizzate acquisition of control) of equity business packages. As it has noted an increase in activity (or decrease of liabilities), compiler country determines deflected capital and then is recorded in the debt; the opposite is the case for an increase in liabilities (reduction of activity).

3.2 Forex Market in Turkey

Especially in the last period of the Ottoman Empire and in the foundation years of the Republic of Turkey, the Turkish economy showed an open outward and dependent economic outlook. The main reason for the external openness in the economy is that it had an economic infrastructure that was in need of imported resources at an extreme level. The first step in the effort to place market-oriented policies in the process of financial liberalization has been taken with changes in the exchange rate regime. As of May 1981, the CBRT started to set up daily exchange rates. With the amendment made in 1983 and Decree No. 28, CBRT has been given the authority to determine its own exchange rates at the banks. In 1986 the CBRT established the Interbank Money Market and in 1988 the Foreign Exchange and Effective Markets were established. The efforts to liberalize capital movements in Turkey were initiated in connection with the economic and financial reforms carried out in the 1980s and were completed in 1989. With the decision no. 32 made in TPKKK in 1989, restrictions on foreign currency were abolished, national currency convertible and capital movements fully liberalized Effective and foreign exchange transactions have made great progress since this date. Despite the fact that in Turkey for many years there has been effective and foreign exchange trading within and outside the borders of the country, a legal regulation on the operations to be carried out for these activities was made in 2011 (Altan and Güzel, 2015).

Forex trading get into the Turkish market legally in August 2011, and it has become under the legislation of Capital Markets Board of Turkey (CMB) with the Official Journal (no 28038)'s publication of the notification. In 2011, with the regulation prepared by CMB, compulsory service types of intermediary firms, specialties of processes related to the trading, and other issues have become affiliated to legislation; and intermediary firms sustaining necessary conditions have started to be given Capital Markets Board of Turkey license. Since this regulation with legislation, investor rights have been protected by state guarantee (SPK, 2011).

By October 2015, size of FOREX trading in Turkey reached 1 trillion dollars. When the number of investors with every day increasing, size is considered, it could be anticipated that FOREX market has become much more developed in terms of size in Turkey. As in other countries, in Turkey, 5 days 24 hours processing is present; but, as a result of time difference, processes which begin at Sunday night continues until Friday night 23 pm (Bolat, 2016).

Chapter 4

IMPACT OF POLICY CHANGE IN TURKISH FOREX MARKET VIA INDEPENDENT TEST ANALYSIS

4.1 Developments in the Forex Market in General

In the last period of Ottoman Emperor and beginning of Turkish Republic, Turkish economy was outward oriented and dependent because of excessive necessity for imported goods (Şahin, 1998).

In 1923, İzmir Economic Congress was arranged in order to solve economic problems and at the end of Congress, it was decided that government is included in economic decisions and economic policy was directed to national and liberal perspective. It was the first economic policy of Turkish Republic (Hafızoğulları, 2000).

In 1929, Turkey was affected from Great Depression like other countries. In 1930, as the first steps of protection in economy 'Protection of the Value of Turkish Currency Law' (TPKKK) was arranged. With the effects of Great Depression, Turkey followed protectionist economy policies until the end of 1970's.

Turkey, had been performed inward oriented economic policies dependent on strict rules; but, after 1980's, with the rising of globalization around the world, turned its economic direction into outward, market centered economic system (Kilinç Savrul *et* *al.*, 2013). In 1981, Turkish Central Bank has begun daily currency adjustments. With the regulation of TPKKK and enactment number 28 in 1983, banks as well as Central Bank were authorized with assigning their own currency adjustments. In 1986 Interbank Money Market and in 1988 FOREX was established within the scope of Central Bank. In 1989, with regulations in TPKKK, limitations on foreign exchange were removed, Turkish currency reached convertibility and capital movements has been totally become liberal (Başbakanlık Mevzuatı Geliştirme ve Yayın Genel Müdürlüğü, 2016; Piyasalar Genel Müdürlüğü, 2016). From this point to the date 2011, FOREX operations had been got into the Turkish market but they have not a legal base.

Table 4.1 shows geographical distribution of OTC foreign exchange turnover prepared by BIS. 2016 data indicates April data. United Kingdom has the priority within the years of 2001 and 2016, followed by United States, Japan and Singapore. In 2016, Turkey is at 23rd position in countries distribution by means of OTC foreign exchange turnover (BIS, 2016a, 2016b).

Table 4.1: Distribution of OTC foreign exchange turnover of some countries.

	2001		2004		2007		2010		2013		2016	
Country	**Sum**	**%**	**Sum**	**%**	**Sum**	**%**	**Sum**	**%**	**Sum**	**%**	**Sum**	**%**
Japan	153	9,0	207	8,0	250	5,8	312	6,2	374	5,6	**399**	**6,1**
Singapore	104	6,1	134	5,1	242	5,6	266	5,3	383	5,7	**517**	**7,9**
Turkey	**1**	**0,1**	**3**	**0,1**	**4**	**0,1**	**17**	**0,3**	**27**	**0,4**	**22**	**0,3**
United Kingdom	542	31,8	835	32,0	1.48	34,6	1.85	36,7	2.72	40,8	**2.40**	**36,9**
United States	273	16,0	499	19,1	745	17,4	904	17,9	1.26	18,9	**1.27**	**19,5**

Note: Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. The data for the Netherlands are not fully comparable over time due to reporting improvements in 2013. Adjusted for local inter-dealer double-counting (ie "net-gross" basis). Net-gross basis, daily averages in April, in billions of US dollars (sum) and percentages.
Source: BIS, 2016b.

4.2 Evolution of the Legal Structure of Forex Market

After turning economic system into outward market centered, Turkish individual and organizational investors got started operations on Forex market. Initial Forex companies of Turkey opened their office at Grand Bazaar. In a short term, many individuals, even those with no knowledge about the system, were included in the system as investors through provided information about simplicity of operations and high profit rates. However, provided information was not enough to get high profits by using system in favor of investor (Büberkökü, 2014). Thus, in that period, many Turkish investors who entered into market with insufficient knowledge have lost a lot. Capital Market Boards (SPK) and Undersecretaries of Treasury tried to solve the conflict in scope of their authority. There was no law related to investors victimhood which put investors in difficult positions (Altan and Güzel, 2015).

Before SPK regulation, meaning 2000-2011 period, Turkish investors operate on market via foreign stock brokers. This situation occasionally had been left Turkish investors in a difficult position. After increasing number of Turkish investors in Forex market and their problems resulted from foreign stock brokers made Turkish CMB apply regulation in law which identifies foreign exchange processes as capital market operation (SPK, 2011). In the law, leveraged buying and selling is identified as buying and selling processes of currency, commodity, precious metals and other determined wealth electronically in leveraged way. Leverage rate is determined as maximum of 100:1. Additionally, processing orders from investors, redirection of orders from investors to other institutions, publicity of Forex services are dependent on SPK surveillance (SPK, 2013).

In Turkey, Forex operations are controlled by CMB since 31th August 2011. Compared to other countries and despite of the political, economic and sociological problems experienced in Turkey, FOREX Market participated as a new tool in the Turkish financial market and reached a significant economic size in a short time. The realized transaction volume has reached 5.2 trillion. In the last two years, intermediary institutions have provided a return of over 500 million from leverage transactions. However, despite the legal regulations on the system and its functioning, there is no uniformity in terms of registration and reporting, and there are different applications on the basis of intermediary institutions at the relevant points (Altan and Güzel, 2015).

In 2016, SPK has made a new regulation on Forex operations (Başbakanlık Mevzuatı Geliştirme ve Yayın Genel Müdürlüğü, 2016). With the new regulation, limitation for using 100:1 leverage rate has changed from no limit to 20.000 TL or currency which corresponds to this value as warranty limit. On the other hand, professional investors defined as those starting with 20.000 TL or more, can use 100:1 leverage in exchange of TL, US dollar and Euro; other than these currencies, leverage rate has changed as 50:1. Additionally, investors whose starting investment is below 20.000 TL can use 50:1 in exchange of TL, US dollar and Euro, but 25:1 in other prices. However, investors can increase their leverage rate by increasing starting warranty; and if they get their money out of the market as below 20.000 TL left, their leverage rate decrease. But decreasing of leverage rate is valid just in the case of that they take it. If they lose it through processes, leverage rate stays still. From this regulation, investors need to process at least 6 days and 50 operations in a demo account in order to enter into market. Besides, it is not going to be allowed that stock brokers make the investors promote to make processes by using tools like loss returning (Bolat, 2016).

4.3 Transactions in Forex Markets

Processes operated on Forex market could be separated into four; spot transaction, financial futures, swap transaction and Forex options (Değertekin, 2010).

- **Spot transactions:** The process of exchanging two currencies on present quotation. Processes carry two days' value.
- **Financial futures:** The process of exchanging two currencies on a present quotation for some future time. Processes carry more than two days' value.
- **Swap transaction:** Both sides of transaction make a negotiation for a certain period of time to change different currencies and/or interest rate.
- **Forex options:** Option processes are getting buying rights and selling responsibilities for a future time on agreed quotation. It is mainly used as a means of precaution from quotation risk.

National banks of each country keep the daily monetary exchange rate within the limits in order to use the fixing time and exchange rate to evaluate behavior of their national currency. Fixed exchange rates provide the real value of equilibrium in the market.

Since 1973, with the beginning of floating exchange rate regime in Forex market, there is no only exchange rate for investors; instead, the market offers a number of different prices depending on what bank or investor is trading and in which place. Electronic Broking Services (EBS) and Thomson Reuters are the main tools for major trading exchanges (Lien, 2016).

In the market, each currency is traded by exchanging with another; thus, Forex market includes a number of currency pairs. Each pair is noted as XXXYYY or XXX/YYY according to ISO 4217 international three-letter code; meaning that each three letter represents a currency and each six represents a pair of them. For example, in the case that dollar is the base currency (it is mostly used as base currency because of dominance of United States) and Euro is the counter currency, code would be 'USDEUR' (BIS, 2013). The factors affecting XXX will affect both XXXYYY and XXXZZZ. This causes positive currency correlation between XXXYYY and XXXZZZ.

Speculation is the process of buying assets that are expected to increase and selling assets that are expected to decrease in price; by this way, investor gains profit. Speculation include risks as predictions are depended on several factors like balance of international payments, payments of foreign borrowings and possible support from financial institutions like International Money Fund. While amatory speculators prefer to process in spot delivery market, professional speculators prefer forward exchange markets as it is charge free (Değer, 2015).

Table 4.2 shows OTC foreign exchange turnover by currency pair. It is clearly shown in the table that the ratio between USD dollar and other currencies were increased from 2007 to 2010 as a result of the crisis in 2008. During the crisis, the value of equities across the world fell, while the US dollar was gaining strength (Table 4.2).

Table 4.2: OTC foreign exchange turnover by currency pair.
Net-net basis,[1] daily averages in April, in billions of US dollars and percentages

Currency	**2001**		**2004**		**2007**		**2010**		**2013**		**2016**	
pair	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
USD/EUR	372	30.0	541	28.0	892	26.8	1,908	27.7	1,292	24.1	1,173	23.0
USD/JPY	250	20.2	328	17.0	438	13.2	567	14.3	980	18.3	902	17.7
USD/GBP	129	10.4	259	13.4	384	11.6	360	9.1	473	8.8	470	9.2
USD/AUD	51	4.1	107	5.5	185	5.6	248	6.3	364	6.8	266	5.2
USD/CAD	54	4.3	77	4.0	126	3.8	182	4.6	200	3.7	218	4.3
USD/CNY	-	-	-	-	-	-	31	0.8	113	2.1	192	3.8
USD/CHF	59	4.8	83	4.3	151	4.5	166	4.2	184	3.4	180	3.5
USD/MXN	-	-	-	-	-	-	-	-	128	2.4	105	2.1
USD/SGD	-	-	-	-	-	-	-	-	65	1.2	81	1.6
USD/NZD	-	-	-	-	-	-	-	-	82	1.5	78	1.5
USD/KRW	-	-	-	-	-	-	58	1.5	60	1.1	78	1.5
USD/HKD	-	-	-	-	-	-	85	2.1	69	1.3	77	1.5
USD/SEK	-	-	-	-	57	1.7	45	1.1	55	1.0	66	1.3
USD/TRY	-	-	-	-	-	-	-	-	63	1.2	63	1.2
USD/INR	-	-	-	-	-	-	36	0.9	50	0.9	56	1.1
USD/RUB	-	-	-	-	-	-	-	-	79	1.5	53	1.0
USD/NOK	-	-	-	-	-	-	-	-	49	0.9	48	0.9
USD/BRL	-	-	-	-	-	-	25	0.6	48	0.9	45	0.9
USD/ZAR	-	-	-	-	-	-	24	0.6	51	1.0	41	0.8
USD/TWD	-	-	-	-	-	-	-	-	22	0.4	31	0.6

USD/PLN	-	-	-	-	-	-	-	-	22	0.4	19	0.4
USD/OTH	199	16.0	307	15.9	612	18.4	445	11.2	213	4.0	213	4.2

[1] Adjusted for local and cross-border inter-dealer double-counting (ie "net-net" basis).
Source: BIS, 2016B.

The year groups between 2001-2011 and 2011-2016 were considered and independent test was performed in order to understand whether is a significant difference between groups due to changing of the *Legal Structure of Forex Market.* Table 4.3 shows the results of independent test which was also determined via SPSS 21.0. The following table 4.3 also represents the significant values as a name of Sig (2-tailed) which means if the two condition Means are statistically different. Meanwhile, Levene's test also determines if the two conditions have about the same or different amounts of variability between scores.

Table 4.3: The Comparisons of Transaction in forex market

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
USD/GBP CHANGE	Equal variances assumed	2.987	.159	1.544	4	.198	2.125
	Equal variances not assumed			2.271	3.272	.100	2.125
USD/AUD CHANGE	Equal variances assumed	.153	.716	-.738	4	.502	-.625
	Equal variances not assumed			-.677	1.711	.578	-.625
USD/CAD CHANGE	Equal variances assumed	.051	.832	.546	4	.614	.175
	Equal variances not assumed			.504	1.730	.671	.175

USD/EUR CHANGE	Equal variances assumed	.410	.557	4.288	4	**.013***	4.575
	Equal variances not assumed			5.254	3.576	**.009****	4.575
USD/JPY CHANGE	Equal variances assumed	4.207	.110	-.777	4	.481	-1.825
	Equal variances not assumed			-1.148	3.213	.329	-1.825

*The results were considered significant if the p value was below 0.05
** The results were considered significant if the p value was below 0.01

According to results there is a only significance difference between "USD/EUR CHANGE" which is defined by the change based on *Legal Structure of Forex Market* regarding the changing of legal structure after in 2011 ($p<0,05$). The groups of year were considered, as it is shown in the table, 2001-2011 and 2011-2016. Although, the results of alteration on USD may be not prone to interpret the changes on Turkish lira, the mean values of USD/EUR changes shows that the alteration of legal structure has an effect on the units.

In Turkey, foreign exchange market is operated on currency, commodity prices and precious metals. According to data of BIST and VOB, financial market volume in total increased by 29% between 2011-2015 period. (TSPB, 2015). In scope of currency, volume of the market increased by 220%; in terms of commodity prices, volume has decreased by 45%.

4.4 Participants of the Forex Market

In Turkish Forex market, according to 2015 data of TSPB, foreign investors keep 62% of public shares. While domestic investors' operation volume increased to 85,114 by 61%, foreign investors' market volume increased to 141,206 by 62%. From 2014 to 2015 total investor number decrease by 1,5%. According to TSPB, the reasons behind is domestic investors' were affected by the increase in the dollar which affected the transaction volume negatively. In 2014-2015 period, domestic investors number decrease by 15.895 and foreign investors decrease by 160 (Table 4.4) (MKK, 2015).

Table 4.4: Equity Investors Values (Million TRY)(TSPB, 2013; MKK, 2015)

Equity Investors Values (Million ″TRY)

Categories	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2015/2014 ratio (%)**
Local	**40.591**	**55.829**	**52.860**	**72.676**	**73.034**	**89.699**	**85.114**	**-5.1**
Funds	1.717	2.678	2.782	4.711	5.292	6.728	8.784	30.5
Co-funding	259	282	428	438	502	690	991	43.6
Corporate	11.470	17.673	17.213	26.487	26.943	34.478	28.198	-18.2
Individual	24.505	32.587	29.959	37.731	36.950	43.538	43.668	0.3
Others	2.641	2.609	2.477	3.308	3.346	4.265	3.473	-18.5
Foreign	**83.696**	**109.581**	**86.851**	**140.529**	**122.219**	**159.243**	**141.206**	**-11.3**
Funds	59.576	75.977	61.096	98.354	86.988	111.572	88.511	-20.6
Corporate	23.667	33.187	25.400	41.700	34.717	47.141	51.993	10.2
Individual	441	406	346	462	500	526	703	33.5
Others	12	11	9	13	14	3	0	-100.0
TOTAL	**124.288**	**165.409**	**139.710**	**213.205**	**195.253**	**248.941**	**226.320**	**-9.0**

In order to compare the effect of changing legal structure on the participants of forex market, the groups of years were separated as it was considered before. Table 4.5 shows the results of independent test which was also carried out via SPSS 21.0. The following table 4.5 also represents the significant values as a name of Sig (2-tailed) which means if the two condition Means are statistically different. Meanwhile, Levene’s test also determines if the two conditions have about the same or different amounts of variability between scores.

Table 4.5: The Comparisons of participants of Forex

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Local	Equal variances assumed	.400	.555	-4.734	5	**.005****	-30.37075
	Equal variances not assumed			-4.785	4,622	**.006****	-30.37075
Foreign	Equal variances assumed	.043	.844	-4.216	5	**.008****	-47.42325
	Equal variances not assumed			-4.265	4,633	**.009****	-47.42325

*The results were considered significant if the p value was below 0.05
** The results were considered significant if the p value was below 0.01

According to results both of the local and foreign participants have a significance positive difference regarding the changing of legal structure after in 2011 ($p<0.01$). Therefore, the forex market has an obviously augmentation due to the alteration. Moreover, all kind of participants tend to attend the forex market more than before ($p<0.01$).

By the end of 2015, 4.150 individual investors who have investment above 1 million TL corresponds to 57% of all individual investor portfolio. Average portfolio value of these investors is 6 million TL. 238.901 investors with portfolio value above 10.000 TL corresponds to 98% of whole system.

4.5 Impact of Regulation and Legal Changes

After SPK authorization in Forex market in 2011, insecure environment decreased in large rate. Investors have reached the opportunity to operate freely in a market in which regulations and control is applied by government. From 2011 to 2015 investment rates increase by 20 %, and operation volume carried out by domestic investors surpass 5 billion TL (TSPB, 2016). In addition to operation volume, in these three years, investors' number increase by 46,6%. According to researches of European Society for Opinion and Marketing Research (ESOMAR), Turkish investors get most of their knowledge in the issue from individual dialogues; on the other hand, using other types of information sources and active usage of internet is very low level (BDO Accountants & Advisors, 2016). This shows that Turkish investors specified their decisions through discussions and advices. Yet, this situation is abused for misdirection of investors through using positive scenarios, misleading 'pink' marketing information, extremely optimistic advertising campaigns and affects many investors to wrong ways (Altan and Güzel, 2015). SPK, has taken a step toward this problem with the regulation in 2016.

4.5.1 Impact on Stock Brokers

After regulation of SPK in 2011, Forex is publicized as an operation which is made just by stock brokers (SPK, 2013). Operations carried by stock brokers are identified in three categories as order delivery mediation, operation mediation and portfolio mediation. Stock brokers who make order delivery mediation are authorized to deliver investor orders to a competent company. Operation mediation includes, delivering buying and selling orders related to capital market instruments to the competent company. Lastly portfolio mediation, in addition to operation mediation, actualize investors' buying and selling orders as the competent company. Forex market's widest effects are seen on stock brokers. By 2016, number of stock brokers in Turkey's Forex market increase to 40. Besides, operation volume increased from 333,036.5 in 2011 to 17,005,395.873 in 2015. On the other hand, leveraged operations total income increased from 15.3 million in 2011 to 398 million in 2016/3 (Table 4.8.) (TSPB, 2016).

Amongst stock brokers, İş Yatırım Menkul Değerler (4.784.169.395) and Ak Yatırım Menkul Değerler (1.385.282.125) lead the Turkish Forex market. İş Yatırım which is the association of İş Bank, is by far at the leader position. Banks, across the World, mainly dominates Forex market. While stock brokers are getting highest benefit as one third of all mediation processes from Forex trading, it is not reflected on their employment rates. In 5 years, total working personnel increase from 5100 to 6697.

Table 4.6 Forex trading size of stock brokerage in Turkey within years 2011 to 2016.

Forex Trading Size (″TRY)	**2011/12**	**2012/12**	**2013/12**	**2014/12**	**2015/12**	**2016/09**
Number of stock brokerage	6	20	29	35	38	43
Local Investors	**332.774.978.006**	**2.281.871.537.405**	**4.699.681.471.135**	**7.636.319.590.539**	**16.972.002.417.604**	**15.386.303.334.416**
Individuals	215.359.958.167	1.221.752.557.787	2.623.916.294.392	3.825.647.268.790	8.950.012.713.541	7.863.940.953.194
Corporation	117.415.019.839	1.059.210.743.270	2.044.717.298.713	3.741.754.909.719	8.000.486.836.654	7.481.149.938.493
Institutional Investor		908.236.348	31.047.878.030	68.917.412.030	21.502.867.409	41.212.442.729
Foreign Investors	**261.587.483**	**79.400.427.207**	**256.006.610.079**	**56.815.826.804**	**33.393.492.853**	**38.337.747.777**
Individuals	261.587.483	11.105.865.361	140.975.816.446	19.574.489.401	17.196.702.622	13.780.975.732
Corporation		68.294.561.846	115.030.793.633	37.241.337.403	16.196.790.231	24.556.772.045
Institutional Investor						
TOTAL	**333.036.565.490**	**2.361.271.964.612**	**4.955.688.081.214**	**7.693.135.417.343**	**17.005.395.910.457**	**15.424.641.082.193**
TOTAL MARKET	**329.591.492.164**	**2.361.200.429.889**	**4.953.309.735.130**	**7.693.135.417.345**	**17.005.395.910.457**	**15.424.641.082.193**

Source: TSPB,2016

4.5.2 Impact on Financial Market

Financial market in Turkey has begun to become active. In 2011 initial Forex attempts, in 2012 regulations about encouragements and starting of option processes, in 2013 union of all stock markets, in 2014 negative economic progress are just a few reasons for financial waves. In these years which carried huge risk factor, Turkish investors acted with deliberation in financial market. This situation affected Forex market as well.

However, when examining all progress, with leverage rate and high operation volume, Forex has passed İstanbul Stock Market (BIST) and Option Stock Market (VIOB) by reaching 5,2 Billion TL in 2014. Moreover, this number surpass 17 Billion in 2015. According to data of Turkey Capital Markets Union, in 2012 66% of total processes of financial market operated on Forex, in 2013 80% and in 2014 84%.

Forex market is flexible market compared to BIST; it has not any time limit. It is the most liquid market in the world, and it has leverage advantage. There is no commission fees taken from investors where BIST applied commission fees to investors. It is not possible to make any speculation or manipulation in Forex market. However, BIST required a well market trailing and the choice of the right share can be difficult for investors.

This progress reflects extensive contribution of Forex trading to Turkey's Financial Markets. However, operation volume by itself may mislead in terms of profits of Forex market. This huge operation volume results from 100:1 leverage (Table 4.9.) (Altan and Güzel, 2015).

Contrary to huge operation volume, researchers claim that Forex market offers a low profit rates. Market operations which is mainly based on prediction, success rate is seen as 5%; meaning that 95% of carried operations brings deficiency to the investors. (Meydan,2009) Yet, despite the risks, Forex contribute largely to development of Turkish Lira (TL) and increase its position in international trading. While, before regulation of SPK, Turkey take 19th place in usage of TL in foreign exchange; by 2013, it increased to 16th after Norwegian Kroner and Singapore Dollar.

Table 4.7: Comparison of VIOB, BIST and Forex Total Income 2011-2014

Period of time (year/month)	**VIOB**	**BIST**	**FOREX**
2011/1	120.743,4	229.353,0	-
2011/2	104.904,0	187.489,9	-
2011/3	109.594,3	151.392,0	-
2011/4	104.557,5	126.641,0	-
2012/1	109.926,3	164.595,5	138.652,9
2012/2	100.842,4	154.055,2	684.526,0
2012/3	85.428,6	125.784,5	542.093,0
2012/4	107.735,3	177.543,7	662.963,4
2013/1	101.350,7	207.552,2	947.145,0
2013/2	129.764,8	216.387,8	1.086.920,3
2013/3	92.905,9	196.428,6	1.281.186,5
2013/4	90.164,5	194.290,5	1.640.436,2
2014/1	98.867,0	194.636,4	1.555.513,6
2014/2	106.606,3	213.843,6	1.676.199,8
2014/3	108.928,7	209.748,2	1.941.986,1

Chapter 5

CONCLUSION

Despite the political, economic and social negativities across the world, Forex market has been attended Turkish financial market as a new tool and has gained an essential way in economy in a short span. Total volume of market reached to 5,2 billion TL in 2015. On the other hand, brokers gained more than 500 million TL through Forex market during 2014-2015 period.

SPK made two different regulations in scope of Forex market. In the first regulation, aim was establishing a control mechanism for Forex traders and protecting investors from suffering with large amount of losses. After the regulation, in high respect, these problems were decreased. Investors' number and business volume have gradually increased from 2011 to 2015.The impact of the regulation has been tested with a difference of means test. Results show that EUR/USD transactions have increased after the regulation. This increased was tested and found to be statically significant. Participants have been also tested and results show that both local and foreign participants tend to attend the forex market more than before the regulation. In this period, even though it seems to be a success in general, individual investors had continued to have problems. Online maintained advertising and marketing campaigns' misdirected content related to the market made many insufficient investors in terms of education lost large amounts. Rising complaints related to the issue to SPK has brought a new regulation.

In the scope of regulation, which has taken place in January 2016, leverage rates are rearranged, limitations are put in order to get into the market, internship period before getting into the real market is obligated. This regulation aims preventing insufficient investors to get into market and have large losses.

Forex market is flexible market compared to BIST; it has not any time limit. It is the most liquid market in the world, and it has leverage advantage. There is no commission fees taken from investors where BIST applied commission fees to investors. It is not possible to make any speculation or manipulation in Forex market. However, BIST required a well market trailing and the choice of the right share can be difficult for investors.

The results and the volume show that Forex market in today's world are not only to finance international trade, but they are also income generating market for their participants.

When compared to other regulations across the world in scope of Forex market, it could be said that Turkey falls behind. It may result from Turkey's getting into market later than other countries. Yet, although it runs behind other countries like US or Japan in terms of regulations, it is near to reach other countries in terms of business volume in Forex market.

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