RESHAPING GLOBAL ECONOMIC GOVERNANCE AND THE ROLE OF TURKEY IN G20

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For my beloved Mina...

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1. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

2. The program of advanced study of which this thesis is part has consisted of:

i) Research Methods course during the undergraduate study

ii) Examination of several thesis guides of particular universities both in Turkey and abroad as well as a professional book on this subject.

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ABSTRACT

Beyza OKTAY   **May 2013**

Reshaping Global Economic Governance and Role of Turkey in the G20

Following the most recent global crisis, the necessity for a new structuring in which developing countries more actively participate in the processes of global governance has become a current issue. After comments made by economists, academicians and top managers of the financial sector, in order to construct a new monetary system, it became important to monitor the change and the future results of this change. Instead of an international monetary system of US dominance, how could be a governance model with China, Turkey, Brazil, India and the other G-20 countries?

In this thesis, we are going to analyse the aforementioned issue about the new international monetary system starting with the general frame of 2008 financial crisis. Then, the relative loss of US dollar's reserve money characteristics and the decline of United States' hegemonic power will be emphasized. Since it is a matter of debate, returning to a new structured gold standard will be discussed with the advantages and disadvantages. While the gold standard is going to be analysed, an empirical study on the factors influencing gold reserve levels of G-20 countries will be run in order to see which variables affect the reserve levels and to check whether the tendency is different for the G-8 and other G-20 countries. So, a comparative method will be held by the help of panel data analysis. Since it is seen as a common tendency to hold more of gold reserves as buffer stock during the crisis times and also since gold has become a very important actor in global economy with its increasing value, this analysis is very crucial with its participation in the ongoing debate. Finally, the results of the regression will be discussed together with the Turkey's role on the reconstruction of global governance.

Key words:

Global Crisis, Global Governance, International Reserves, Gold Reserves, New Monetary System, G20

KISA ÖZET

Beyza OKTAY   **Mayıs 2013**

Küresel Ekonomik Yönetişimin Yeniden Şekillendirilmesi Ve Türkiyenin G-20 İçindeki Rolü

Yaşanan son küresel krizin ardından, gelişmekte olan ülkelerin aktif katılımıyla gerçekleşecek yeni bir yapılanmanın gerekliliği yeniden gündeme geldi. Ekonomistler, akademisyenler ve finansal sektörün önde gelen yöneticileri tarafından ortaya atılan çeşitli yorumlar ve fikirlerin ardından, bu değişimin gerçekleşmesi ve gerçekleşmesi halinde ne gibi sonuçlar ortaya çıkacağı önem kazandı. Amerika Birleşik Devletlerinin dominant olduğu bir uluslararası para sistemi yerine Çin, Türkiye, Brezilya, Hindistan ve diğer G.20 ülkelerinin daha etkin olacağı bir yönetişim modeli nasıl olmalıdır?

Bu tezde, ilk olarak 2008 küresel finansal kriz hakkında genel çerçeve sunularak yukarıda bahsi geçen yeni sistemin kurulmasıyla ilgili konuya yer verilecektir. Daha sonra Amerikan dolarının rezerv para olma özelliğini göreceli olarak yitirişi ve Amerikanın hegemonik gücünün azalışına değinilecektir. Bu tartışmalar ışığında yeni bir sistemin kurulması gerekliliğine değinilerek, altın kambiyo sistemine geri dönüş tartışmaları sunulacak ve bu sistemin avantaj ve dezavantajları tartışılacaktır. Bilindiği üzere, kriz zamanlarında uluslararası rezerv seviyelerinde bir artış görüldüğü söylenegelmektedir. Aynı zamanda altın böyle zamanlarda bir emniyet stoku olarak tutulmaktadır. Altın kambiyo sisteminin yeniden gündeme gelmiş olması dolayısıyla da, G-20 ülkelerinni altın rezervlerini etkileyen faktörleri inceleyen ampirik bir çalışmaya yer verilerek, G-8 ve diğer G-20 ülkeleri üzerinden bir karşılaştırma yapılacaktır. Son kısımda regresyon sonuçları değerlendirilerek, Türkiyenin de katkısı tartışılmak suretiyle, daha iyi bir küresel yönetişim için politika önerileri geliştirilecektir.

Anahtar Kelimeler

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CI   Chinn-Ito Index

ECB   European Central Bank

EU   European Union

FED   The Federal Reserve

FDI   Foreign Direct Investment

GDP   Gross Domestic Product

G-7   Group of 7 Countries

G-8   Group of 8 Countries

G-18   Group of 18 Countries

G-20   Group of 20 Countries

IMF   International Monetary Fund

IR   International Reserves

OPEC   Organization of the Petroleum Exporting Countries

S&P   Standard and Poor's

SWF   Sovereign Wealth Fund

UK   United Kingdom

U.S.   United States

USA   United States of America

USD   United States Dollar

WBI   World Bank Indicator

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The most important acknowledgement is for my unborn baby, Mina. She is not aware yet that she has become the core of our lives and she has been affecting us that much. But still, she was the driving force for me to finish this work.

Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of the project.

CHAPTER 1

INTRODUCTION

After the latest global crisis of 2008, it is to be questioned whether the existing system is enough to keep going or there is a need for a new structured system. With this concerns, the world has come up with many debates about a new structuring of global governance by the active participation of the developing countries. New governance models are introduced but the most sounded one was the last offering a new model with China, Turkey, Brazil, India and the other G-20 countries; instead of an international monetary system of US dominance.

In his Financial Times article, Robert Zoellick, president of the World Bank, was calling for a debate on the return to the Gold Standard. He was saying that a successor is needed to what he calls the Bretton Woods II system of floating currencies that has held since the Bretton Woods fixed exchange rate regime broke down in 1971. He was also defending a system that is likely to need to involve the dollar, the euro, the yen, the pound and a renminbi (Durden, 2010).

How the world has come to this position? The answer is hiding under the stones that has shaken and be destroyed by the latest global financial crisis. The crisis initially erupted following the sharp depreciation of City Group stocks in New York Stock Exchange; and then stock prices in global markets significantly declined. After these developments, Lehman Brothers went bankrupt and finally the collapse of financial markets and the contraction of real economies followed each other. This crisis, which erupted in the USA, rapidly spread globally, especially into Europe. In the global world in which interdependence is at its peak, the flap of a butterfly's wings somewhere can

cause storms at another corner of the world (Vaitilingham, 2010). There is a general consensus throughout the world on the existence of problems pertaining to the dollar reserve system and quests are ongoing for a new global reserve currency that will replace USD (Xiang, 2009).

Financial markets and financial institutions coordinate the system and ensure the liquidity of money by directing capital to the most profitable. The operation of the modern economic system is based on continuous borrowing and lending activities. The shutdown of the financial system is likened to a traffic system without traffic lights, lanes and speed limits.[1] Malfunctioning of the financial system creates an effect on economy that is reminiscent of a cardiac arrest when all other organs become unable to get blood. In fact, the recent crisis is a consequence of the chaos experienced in the last thirty years in the international monetary system. Robert Zoellick, president of the World Bank, underlines the necessity of creating a new international monetary system by opening the gold exchange system up for discussion: "This system should consider gold as an international reference point for market expectations about inflation, deflation and future exchange rates" (Durden, 2010). It is reported that the recent financial crisis has caused an economic loss higher than the sum of the losses created by all wars of the last century.

Not just gold but also other international reserve levels tend to reflect the results of the crisis. There are various studies about the crisis times' international reserve levels (both including and excluding gold) tend to increase. Central banks' behaviour is commonly seen as precautionary reaction but also the ideas supporting the mercantilist behaviour as a reason for reserve holding captures sizable place in the literature. Reserves are

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[1] To refer to the sudden contraction in available credits in banks; terms of "credit crunch" "credit squeeze" or "credit crisis" are used.

mostly seen as a buffer stock to the crisis' effects. There are studies analysing the factors affecting the demand for the international reserves for many different sample of countries and for many different time periods. It is also one of the aim of this study to fill the gap in the analysis done before by studyind on the G-20 countries' position in reserve levels but most specifically gold reserve levels. With the help of panel regression, G-7 economies and remaining G-20 economies are focused. It is seen there are significant differences on the factors influencing the gold reserve levels of both groups. Three model is constructed with three different and unique explanatory variable groups and it is aimed to see their effects on countries' gold reserve holdings. These three groups are designed to be macro-economic variables, trade related variables and finance related variables. Both groups had their own results in the mean of significant factors influencing the explained variable.

There are both the advantages and disadvantages of returning back to the gold reserve system. But it is also obvious that there are many problems in the international monetary system after the collapse of Bretton Woods. Ineffiecnt efforts made by G-7 countries has come up with solution of the rise G-20 countries who has to participate actively in the process. This is seen as a chance for most of the developing economies and also for the world in terms of global stability. In order to fight with global imbalances which can be seen as the main reason for the global financial crisis, the role of developing surplus economies is very critical in balancing the current accounts. Furthermore, the reserves hold by surplus economies have an important role in stimulating global growth and development finance to developing economies (Velde, 2010).

Lastly as a developing economy, Turkey's position in G-20 and its specific role in implementing the policies about a new international monetary system

is another matter of interest. Turkish Foreign Minister Ahmet Davutoğu's initiatives and motivational speeches about this role is worth mentioning suggesting that G-20 is the best place to solve the global economic problems by its nature of putting the developed and developing countries together in the same picture and Turkey would be an active actor in this construction process.

CHAPTER 2

GLOBAL FINANCIAL CRISIS AND ALTERNATIVE IDEAS OF A NEW MONETARY SYSTEM

2.1   General Frame of Crisis Environment

It was the last months of 2008 when the world was introduced what is being called as the most severe financial crisis since the Great Depression of 1929-1930 (Gökay, 2008 and Helleiner, 2011). The global financial crisis initially erupted following the sharp depreciation of City Group stocks in New York Stock Exchange on 15 January. This was the first indications and afterwards stock prices in global markets significantly declined. This is followed by serious collapses while American and European banks were declaring big losses in their 2007 end of the year results (Gökay, 2008). After these developments, Lehman Brothers, which was a very old investment bank, went bankrupt; Merrill Lynch, which was a stock broking firm, has been taken over; Goldman Sachs and Morgan Stanley were trying to protect themselves from bankruptcy by seeking banking status; and finally the collapse of financial markets and the contraction of real economies followed each other. This collapse of financial markets and institutions was leading the world into a collapse of equity markets (Figure 2.1), international trade and industrial production (Justin Yifu, Justin Yifu, Volker, & World Bank., 2012).

It was again the most dramatic movement by the US government since 1930s to inject hundreds of billions of dollars into the system. This was a movement incurably made by the government in order to prevent further collapse. This crisis, which erupted in the USA, rapidly spread globally, especially into Europe. In the global world in which interdependence is at its peak, the flap of a butterfly's wings somewhere can cause storms at another corner of the world (Vaitilingham, 2011) This crisis was seen as the most

powerful financial meltdown in the post-war period which has affected major financial centres across the entire world by generating an unprecedented collapse in international trade since the 30s. This economic downturn was encircling all the regions of the globe (Helleiner, 2011).

Figure 2.1: S&P's Global Equity Indices (For selected G-20 Countries including Turkey)
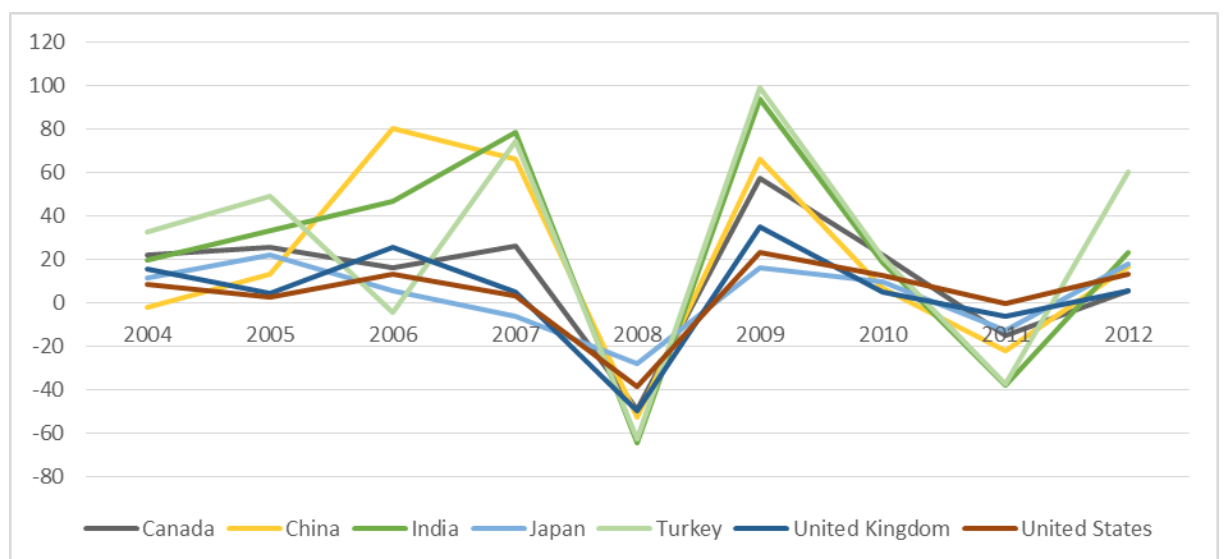
Source: World Bank, Global Economic Monitor Database

2.2. The Background of the Financial Crisis: What Happened?

Mostly the global financial crisis is linked to the US sub-prime mortgage lending. This recession was different from other cases since 1945 since it was caused by financial shocks and shrinking demand while others were mostly of anti-inflationary policies (Emmott, 2009). There were too many people who were bad credit risks and offered mortgages and it was considered as a trigger in the very beginning of the crisis period. Expectations was as if those bad credit risk people faced any trouble with payments, their houses could be sold and both parties would survive without

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problem. House prices were rising continuously at those times. People could get mortgages very easily, therefore the demand was getting greater day by day. It forces people to claim more mortgages because they thought that they were rich. This was a bubble growing gradually (Gökay, 2008).

Gökay (2008) has stated that the housing bubble had double effect on the increasing demand side. One is that Americans were very sure that their house values was rising but the second and more important reason was the push and strong operations of banks to take out new mortgages; second or maybe more.

The other important thing to mention in the case of this global crisis was complex "financial instruments". There was a mechanism which based on borrowing activities. Mortgage lender banks were not touching their own pockets but instead, they were borrowing from others and those lenders were in turn asking somewhere else to borrow. By doing so, different kinds of financial instruments were packed together and those were not the simplest. They were very complex and high risk instruments like derivatives, forward contracts, hedging activities etc… But actually there was a problem because the economy was not based on real economic activities and that was not sustainable in the long run (Gökay, 2008).

The effects has started to be seen soon after. Unfortunately between 2004 and 2006 US interest rates rose nearly 5 times and there has been a slowdown in the market which led the homeowners began to default on mortgages. Economic growth has declined; mortgage holders started to fail to meet their obligations; the investors of those mortgages started to find out that the value of their so called "mortgage backed securities" was not valuable anymore; and house prices started to shrink very fast. Default rates

on sub-prime loans reached to record levels (Timeline: Credit crunch to downturn, 2009).

The situation got worse when mortgage lenders has seen that they could not afford their loans back just by selling the houses. Investment banks were in trouble because they were the ones who was lending money to mortgage lenders and now they were facing huge losses. But the biggest problem was, as Gökay (2008) has stated in his article, that nobody was aware of the depth of bank's problems since the instruments were already complex enough…

These aforementioned issues were all the first signs of a bigger catastrophe. Then, lending has stopped suddenly since nobody trusted each other. BNP Paribas, investment bank, has stated the investors would not be able to get money because they could not value the assets in their funds. This statement has been considered as "scary" because it was one of the first signs that banks stopped lending each other. This was called as "credit crunch" which has been explained as "*a crisis caused by a sudden reduction in the availability of liquidity in the financial markets*" (Gökay, 2008). In order to deal with this position, all the governments decided to intervene by injecting money to reinvigorate the economy leading the position into even worse condition. As it is stated in the BBC News, the European Central Bank (ECB) pumped 95 billion euros and later on 108.7 billion euros has been added in a very short time. The reaction was similar from US Federal Reserve, the Bank of Canada and the Bank of Japan (Source: Timeline). As of September 2008, the stock markets crashed and became very instable. The consumers were afraid of what was coming next and therefore trying to be cautious (Global Financial Crisis – What Caused It and How the World Responded, 2012).

Some countries faced with debt condition bigger than their own GDPs like Iceland. It differed as its effects and recoveries all over the world. The suddenness and sharpness were also very noteworthy and that's why it was not easy to analyse or predict or recover (Emmott, 2009).

Still, in a report about the global financial crisis of 21st century, it has been indicated that most banking crisis of the past 25 years have arisen after fast credit growth period but it is not a must that all of the credit growth periods ends with banking crisis. In most studies, only 20% (approximately) of credit growth period have concluded by a crisis compared with banking crisis which has headed by lending growth is measured as half. Those were the ones which were together with high inflation and rapid growing real estate and asset prices. Lending standards were getting weaker and in the same report weakening of lending standards have been linked to five factors as stated below (Dell'Ariccia, Igan and Laeven, 2008):

1) The size of the credit boom was the determinant of the decline of the lending standards.
2) Rapid appreciation rate of house prices was effective since the lenders were so self-confident about their ability to liquidation and repayment in case of default.
3) The change in the market structure by the entering of large institutions was the determinant of the decline of the lending standards.
4) Banks' initiative about loan sales have driven the lending standards downward when large proportions has been sold to lenders.
5) Easy monetary conditions were also seen as one of the determinants.

Although sub-prime mortgage boom is mostly seen as the reason for the economic and financial crisis, there are many numbers of experts believing that the real reason lies on the system itself. The lack of regulation in the

financial system is a very critical necessity in order to discourage both people and institutions for corrupted lending.

Beside the actions taken by the different governments and presidents like the rescue plans for the financial institutions, Australian government stimulus package, Us government's $700 billion proposal (even though some congress members did not accept to vote for it since they did not want to help to investment bankers whom they have seen as the cause of the crisis) and later on $1 trillion federal spending and Australian government's second stimulus package; it was the most important to take action to improve the regulatory part of the financial system. Maybe the look for the construction of a better and new system (Global Financial Crisis – What Caused It and How the World Responded, 2012)

2.3. The US and Dollar Hegemony on the International Monetary System

The story of US dollar and its very crucial dominance in the global economy is a very early issue. Today the system is giving change signals from unipolarity which was dominated by US dollar and accompanied by other currencies pegged to the dollar (Bretton Woods system, 1944-1970), to multipolarity (Aizenman & NBER, 2007).

The United States' panic environment following the financial crisis was the years after a very long term of current account deficits (Posen, 2008). There are many critics about dollar and its monopoly power after the financial crisis occurred in the United States and has spread all over the world. It has damaged the US reputation and confidence. The fact is seen as the US has misused its reputation as the world leading economy and currency. External

debts have been built up and the US had no problem with this situation thanks to its recklessness. But the rest of the world did not want to continue with dollar to finance international trade and capital movements and they did not want to rely solely on US dollar no more (Tremblay, 2009).

There are some facts and numbers about the US dollar dominance. The trade of other currencies for US dollars captures 85% of foreign exchange transactions. Also the price of oil is set in dollars. It is being used as currency of all international debt securities. Finally it is mentioned that more than 60% of the foreign reserves are in dollars. (Eichengreen, 2011). Additionally there is a study showing the dollar's position as leading currency. According to this study the dollar's percentage share in total world money supply declines from 90% in 1950s to 15% nowadays. It is also mentioned that other currencies such as the Yuan, the yen or the Euro have greater share of total world money supply (Cox, 2013). As the matter of content, in the Figure 2.2, it can be obtained that the US dollar's share in official global foreign-exchange reserves are declining.

Figure 2.2: Dollar's Share of Official Global Foreign Exchange Reserves
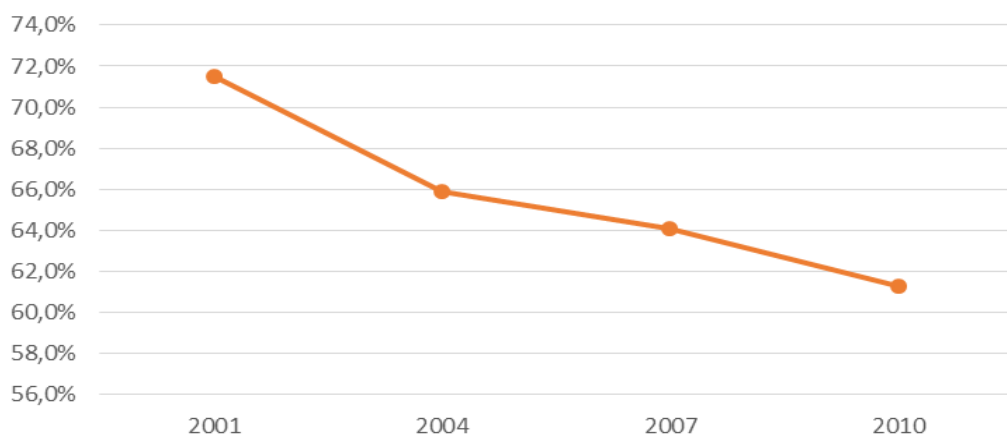
(Source: Eichengreen, 2011)

There are some rival currencies threatening the global role of US dollar. These alternative reserve currencies differ as Canadian loonie, Australian dollar, Brazilian real, Indian rupee or Chinese Yuan. All of them have some problems with being replaced as global reserve currency (Eichengreen, 2011). According to Delfeld (2012), there are three basic characteristics to be a durable reserve currency. These criteria can be listed as:

- **Full Liquidity**: It should be easy for investors to move in or out without strong changes in price. It should also widely known as reserve currency.
- **Financial and Political Stability**: It should be trusted as safe. No country with large fiscal deficits can be considered as safe haven.
- **Originated from market-oriented, clearly ruled and open economy**: This criteria is important for the investors to succeed.

As a conclusion, the obligations to meet as a reserve currency consist of inspiring the confidence, being fully convertible and high degree of liquidity (Tremblay, 2009).

Canadian and Australian bond markets are too small. Brazilian and Indians are not worried about it but India preserves capital control and this strict mechanism is preventing foreign investors to reach Indian markets; Brazil increased the tax on purchase of securities for the foreigners. China also has capital controls. These are all limits to be reserve currency (Eichengreen, 2011).

The closest substitute is Euro. It is being used by strong European economies. Also it is convertible and supported by money and capital markets. But Eurozone and European banks are facing an ongoing financial problems and is not trustful enough (Tremblay, 2009). This prevents Euro to meet criteria of being safe haven.

The other substitute is Chinese renminbi. In reality, renminbi is not seen as a close rival for dollar because of China's status as a country. China is described by Tremblay (2009) as "*totalitarian, authoritarian and repressive state regime that does not recognize basic human rights, such as freedom of expression and freedom of religion, and which crushes its linguistic and religious "minority nationalities". It is a country that imposes the death penalty, even for economic or political crimes.*" Since it is not easy for China to change these features in near future, it has no chance to lead the world economy with its currency (Tremblay, 2009). Also the problem with Yuan (even the most important one) is liquidity and convertibility. The other problem is, it is not free floating and being strictly controlled. Furthermore it is not much trustable because of its most important industries are state-owned (Delfeld, 2012).

Cox (2013) makes a point clear by referencing Dick Bove, vice president of equity research at Rafferty Capital Markets, that if the dollar would lost its role to be the most reliable currency in the future, the US would not have right to print money to pay its debts. Rather it would be forced to pay. The existence of other profitable investment opportunities is also reminded if the currency options might be varied in the future.

After the financial crisis, it was not over but continued with the second wave for quantitative easing. This actions downgraded the dollar in foreign exchange markets. Also the Europe which has been affected by the crisis that spread all over the world, had deep financial problems. Since the Europe's position has got much worse, it is seen to be the case that Euro will be weaker than before and dollar will be stronger (Eichengreen, 2011).

Finally, today is not a day of just one currencies' hegemony. Before, technology was not developed as today and it was difficult to compare prices

in different currencies. That's why it was not the case of using multi-currency by traders and bond issuers in order not to confuse their customers. Today, the situation is very different and it is possible to have more than one currency in the system (Eichengreen, 2011).

Also the rivalry of Euro and renminbi is a very big change for the dollar. The other fact about US dollar is, the danger it faces about losing its safe haven status because of its federal debt (75% of US GDP). Even if the dollar's reserve money status is not lost, it might be shared with other currencies (Eichengreen, 2011).

If a change happens through a multi polar financial system, not a single currency will shine alone very strongly in the crisis times. This is what the dollar experienced after Lehman Brothers' collapse. US companies will be affected by this kind of a change. Since they are just using dollars for all of their activities ranging from workers' payments to product sales, it will be more complicated for them to change among currencies. For example; they don't have to suffer from the cost of changing foreign-currency earnings into dollars. So American companies will face with some problems such as exchange rate risks. On the contrary, total opposite will be true for the other nation's companies since they will be able to do business with their own currencies. Also the countries which make business with the countries whose currency is in international use, will also benefit from this because they will not have to go through dollar in their transactions (Eichengreen, 2011).

Eichengreen (2011) mentioned about the new monetary world and United States' status in this new environment as:

> *"In this new monetary world, moreover, the U.S. government will not be able to finance its budget deficits so cheaply, since there will no*

longer be as big an appetite for U.S. Treasury securities on the part of foreign central banks. Nor will the U.S. be able to run such large trade and current-account deficits, since financing them will become more expensive. Narrowing the current-account deficit will require exporting more, which will mean making U.S. goods more competitive on foreign markets. That in turn means that the dollar will have to fall on foreign-exchange markets—helping U.S. exporters and hurting those companies that export to the U.S. On the other hand, the next time the U.S. has a real-estate bubble, we won't have the Chinese helping us blow it."

It is actually hard to replace a currency which has such a credibility in international trade and investment. This situation creates a gap in international issues (Tremblay, 2009).

Our starting point was the Robert Zoellick's suggestion of a new monetary system which will be developed by the active participation of developing countries' currencies. His words about the return to a gold system was also an inspiring idea also for us. That's why, our study and suggestions will heavily be on the gold reserves and gold gathering by some countries. Our thesis is that some countries trying to hold more of gold and gold will have a very important role in the future. Those people are the ones who can see it now and benefit from their actions in the future. That's why, decreasing power of US and US dollar has been focused on in this section. In the forthcoming sections, more focus will be on the new international monetary system and gold reserve situations.

2.4. The Idea of a New International Monetary System and Return to a Gold standard

There is a general consensus throughout the world on the existence of problems pertaining to the Dollar reserve system and quests are ongoing for a new global reserve currency that will replace USD (Xiang, 2009).

Financial markets and financial institutions coordinate the system and ensure the liquidity of money by directing capital to the most profitable. The operation of the modern economic system is based on continuous borrowing and lending activities. The shutdown of the financial system is likened to a traffic system without traffic lights, lanes and speed limits. Malfunctioning of the financial system creates an effect on economy that is reminiscent of a cardiac arrest when all other organs become unable to get blood. In fact, the recent crisis is a consequence of the chaos experienced in the last thirty years in the international monetary system. Robert Zoellick, president of the World Bank, underlines the necessity of creating a new international monetary system. He suggested a system with the participation of dollar, euro, yen, pound and Yuan and an open capital account (Durden, 2010).

An agreement on the multiple currency is seen to be desirable and it is been raised many times. The recommended adoption for this new international system is a gradual one instead of a sudden reform on the change in monetary system by the central banks. Since responsibility sharing is one of the most important complements of an international monetary system, the participation of several currencies can help the system to function in order. At the same time; for the system to be balances and stable, there should not be just one currency which take all the burden. The currencies should be separated as main reserve currencies and secondary reserve currencies. The size of reserves are also an important concern because of their effect on markets for price discovery, price formation and of sudden changes in reserve composition (Mandeng, 2011).

Additionally, a complete convertibility is not necessary for currency diversification since the new currencies may only gradually fulfil the reserve functions. The essential point is to meet the certain minimum conditions. Also a new and common framework should be adapted while new currencies

are being introduced to the system. Just market forces are not enough for this task. The benefits arise from this common framework can be listed as: (1) It is necessary to coordinate new currencies purchases, (2) It reduce market and balance of payments consequences corresponding to the past proposals on reserve substitution, (3) It disables probable negative externalities from first-time adoption, (4) It focusses on the deficiencies with central banks that show limited familiarity with emerging market currencies, (5) "Headline Risk" can be minimized, (6) It guides market expectations that the diversification will be gradual, (7) Lastly, it will help to stabilize exchange markets (Mandeng, 2011).

While suggesting a new international monetary system, Robert Zoellick also opened the gold exchange system up for discussion: "This system should consider gold as an international reference point for market expectations about inflation, deflation and future exchange rates" (Durden, 2010).

Various individuals and institutions reacted in different manners to Zoellick's arguments. While some of them supported this idea and a possible transformation, many others argued that such a return would not be possible. A complete return to the Bretton Woods system is seen impossible as it will cause an over-devaluation in the dollar (Melloy, 2011). According to Paul Brodsky, one of the co-managers of the QB Portfolio Management, a possible return to the gold standard will catapult the gold bullion price above $10000, which is six times higher than ruling prices.

Those who determined the economic policy have maintained the debt-based monetary system successfully since 1971, and to do this, they rendered gold insignificant, which is the only unit to compete. According to some investors, on the other hand, if the global economy fails to renew itself or politicians do not allow the expansion of money supply, it could become possible to shift

from the debt-based monetary system to a commodity-money system with a cover such as gold (Melloy, 2011). Steve Forbes estimates that the USA will adopt the gold standard in five years and thinks that such a decision could provide a solution to the country's economic and financial troubles. Through such a move, he argues that the value of the dollar can be stabilized, confidence of foreign investors in US treasury bonds can be re-established, and incautious government expenditures can be circumscribed. If the gold standard had been adopted in the past, the dollar would not have been weakened and excessive government expenditures would have been curbed. Forbes, in his speech, finally stated that politicians have a misconception that FED is capable of directing the economy through financial policies, which they should immediately get rid of. FED, just like an elephant entering a glassware shop, breaks everything it touches rather than assisting. Therefore, there is something going wrong with the dollar and people are aware of it (Dykewicz, 2011).

These comments stirred reactions from various parties. One of them emphasized on the political grounds of the issue suggesting that although what he says are nice but what is done in politics are done not necessarily because they help nations or because they are rational. If we were living in such a world, the system of the 19th Century would not have been thrown away by today's system. The previous system was abandoned for political reasons. Factors that led to the abandonment of the gold standard are the following: governments' tendency to spend above politically sustainable tax levels, the needs to finance the World War One and other wars, and the tendency to subsidize those banks that are in higher debt than available reserves (Blumen, 2011). Blumen asserted that the system would eventually change; but the reason of this change would neither be the stabilization of the dollar nor the consolidation of government finances. The system will change, because it will tragically fail in the end. According to Blumen, what

Forbes has in mind is not entirely gold money, but is a determinant of the extent the monetary policy will be tight or loose. When the current system fails, there exist two major obstacles in front of forming a new one: The first is the fact that those political actors are still present who played active roles in the abandonment of the gold standard, whereas the second one is ideology, which is a deeper obstacle. Most economists and central bankers are of the beliefs that the economy cannot grow without an increasing amount of money, the gold standard caused the Great Depression, FED determines the monetary policy and it plays a necessary and favourable function, and finally there exists a need for an ultimate credit authority in the banking system in crisis times. Therefore, the new system to come will not be more than a revised version of the current one (Blumen, 2011).

In fact, before Zoellick's suggestion to return to the gold standard as the international reference, Martin Wolf opened up for discussion the issue "Could the world go back to the gold standard" in an article published by Financial Times on November 1, 2010. He wrote that the advantage of a link to gold is that the value of money would apparently be free from government manipulations and further argued that this call for a return to the gold standard has been expressed by many people since the 1970s. Wolf wrote that the Friedman's monetarism has been abandoned for two reasons: first, it proved impossible for monetarists to agree on what money is; and, second, the relation between any given monetary aggregate and nominal income proved unstable. Therefore, if one is looking to reinstate a pre-modern monetary, gold should obviously be the place to start (Wolf, 2010).

Wolf, again in the same article, asked what a return to the gold standard might mean and answered this question arguing that a contemporary gold standard should have a direct link between money and gold. According to

this argument, "base money — the note issue, plus reserves of commercial banks at the central bank (if any such institution survives) — would be 100 per cent gold-backed. The central bank would then become a currency board in gold, with the unit of account (the dollar, say) defined in terms of a given weight of gold". According to Wolf, the second question is about the possible objections to such a system. He grouped those under three main headings: difficulties with the transition, instability, and lack of credibility. Wolf (2010), by also explaining these issues, concluded that we cannot and will not go back to the gold standard.

While some people believe that a transition to the gold standard might be possible, or at least it should be openly discussed, some others argue that such a transition would be madness. Zoellick, in his speech, did not mean an overall return to the international macroeconomic structure of the 19th Century, instead, he made a reference to gold in order just to keep ourselves distant from our confidence in the dollar's being the reserve money.

The Telegraph columnist Edmund Conway (2010) answered the question "What would a return to the Gold Standard bring about?" According to him, firstly, if there were a major domestic recession, the countries would simply have to suffer it. That is, they would have to reduce prices and to suffer the social pain that goes with deflation. This may have worked well in the 19th century, however, according to Conway (2010), this is not a condition that today's democracy (with one-man one-vote) would allow.

Second, linking a currency to a metal is an arbitrary act, which could be another cause of deflation. Conway (2010) talks about gold discoveries and argues that sudden massive discoveries of gold would pump extra inflation into the global system; and large drop-offs in gold discoveries (as there was in the late 19th century) would force governments to impose swinging pay

cuts on their populations in order to keep to the Standard. According to him, the fundamental point here is that the amount of gold in the ground is finite, whereas the capacity of humans to increase their economic output and productivity is still increasing exponentially.

The third outcome of the Gold Standard is, according to Conway, would be an end to banking as we know it. The Gold Standard was incompatible with fractional reserve banking.

Based on all these predictions, Conway (2010) suggests us not to adopt a totally different financial system and first to consider all its possible consequences. To understand the consequences, we could consider the "International Macroeconomic Trilemma". We can have any two of the following at any one time: fixed exchange rates, capital mobility and independent monetary policy.

In the following years, our path will steer to one of the corners of this triangle. Now, we are fluctuating dangerously around it. As Mervyn King insistently underlined prior to the crisis, the great problem in the global economy was that half of it was using fixed exchange system whereas the other half was using floating exchange rate system (in a sense, this had paved the way for the crisis). However, as Barry Eichengreen (2011) argued in Globalizing Capital, big conferences that impose a new financial system are more of exceptions rather than norms. Therefore, a new Bretton Woods should not be expected. The problem is not that it is impractical but that it is does not comply with today's democracy. The Eurozone appears to be an effective example of Gold Standard and Greece's hard times stem from the fact that it is anchored in the same currency as Germany. Since Greece is stuck in this structure that is reminiscent of the gold standard, it is capable of doing nothing other than devaluation. That is, if the euro fails to overcome

the current challenge, people will have no hope for going back to gold, because these two systems are quite similar.

According to Conway (2010), all systems throughout the history have first succeeded but then eventually failed. "Systems' credibility broke down, sometimes in the face of financial crises, sometimes in the face of war, sometimes because the economic superpower dynamics have shifted. What follows is a chaotic period, and then, when everyone's energy is spent and all the economic emotion cried out, we shift to another system and the cycle starts again". Therefore, if we shift now to this new system, everyone will at first believe that all problems are solved and all financial troubles are gone. This safe situation will continue until the fall of that system (Conway, 2010).

Zoellick, later, made comments in support of these opinions, and he tried to clarify that he did not mean a total return to the international macroeconomic formation of the 19th Century, instead, he wanted to underline the necessity of having gold play some role in the new international financial system. He added that he does not believe that a switch to the fixed exchange rate system is possible, and that he is not in favour of a return to the 19th Century when money supply was tied to gold (Isidore, 2010). However, there were economists/authors who thought that all these explanations of Zoellick were meant to start a new discussion.

After discussing all these approaches, the advantages and disadvantages of returning to the gold standard can be juxtaposed as follows; as Kimberly Amadeo (2012) wrote on "About.com" website.

2.4.1. Advantages and Disadvantages of Gold Standard

According to Kimberly (2012), the gold standard, along with the advantages and disadvantages, will have a clear impact upon the US economy and it will constrict the government's power to manage the economy. The Fed would no longer be able to alter the money supply by playing with interest rates in times of inflation and recession. In other words, the money supply would have to remain constant. Thus, fiscal discipline would be obligatory, the budget would be balanced, and government intervention would be limited. However, a fixed money supply that is dependent on gold reserves limits economic growth. Many businesses would not get funded for lack of capital. Furthermore, the U.S. could not unilaterally convert to a gold standard if the rest of the world did not. If it did, everyone in the world could demand that the U.S. replace their dollars with gold. The U.S., on the other hand, does not even have enough gold, at current rates, to pay off the portion of its debt owed to foreign investors. For example, even when gold hit its peak price of $1,895 an ounce in September 2011, there was not enough gold for the U.S. to pay off its debt. At that time, China, Japan and other countries own $4.7 trillion in U.S. Treasury debt. However, there was only $445 billion total in gold reserves at Fort Knox (Amadeo, 2012).

2.4.1.1.   Advantages of Gold Standard

In this content, advantages of the gold standard is summarized as:

- The benefit of a gold standard is that money is backed by a fixed asset. This provides a self-regulating and stabilizing effect on the economy.

- The government can only print as much money as its country has in gold. It also discourages government budget deficits and debt, which can't exceed the supply of gold.

- More productive nations are directly rewarded. As they export more goods, they can accumulate more gold. They can then print more money, which can be used for investing in and increasing these profitable businesses.

- The gold standard has also spurred exploration. It's why Spain and other European countries discovered the New World in the 1500s -- to get more gold and increase the country's prosperity. It also inspired the Gold Rush in California and Alaska during the 1800s.

2.4.1.2.   Disadvantages Of a Gold Standard

Besides, disadvantages of the gold standard is listed as:

- One disadvantage of a gold standard that the size and health of a country's economy is dependent upon its supply of gold, not the resourcefulness of its people and businesses. Countries without any gold are at a competitive disadvantage. However, this is an advantage to the U.S., which is the world's second largest gold mining country behind South Africa. Most U.S. gold mining occurs on federally owned lands in twelve western states, with Nevada being the primary source. Australia, Canada and many developing countries also are major gold producers. (Source: National Mining Association).

- The gold standard causes countries to become obsessed with keeping their gold, rather than improving the business climate. For example, during the Great Depression, the Federal Reserve raised interest rates to make dollars more valuable and prevent people from demanding gold. However, the Fed should have been lowering rates to stimulate the economy.

- Government actions to protect their gold reserves caused large fluctuations in the economy. In fact, between 1890 and 1905, when

the U.S. was on the gold standard, the economy suffered five major recessions for this reason.

Beside the discussions about constructing a new system, the existence of the ambiguities and fluctuations that the international monetary system has encountered after Bretton Woods is also a matter of content since it is reported that the recent financial crisis has caused an economic loss higher than the sum of the losses created by all wars of the last century. For these reasons, we need to discuss those bottlenecks.

2.4.2. Ambiguities In The International Monetary System After Bretton Woods

The Bretton Woods System, established in 1944, tied the currencies of Western European countries to fixed exchange rates against the US Dollar and the system began to fully operate after 1958. However, the system became dysfunctional as the USA had to devaluate dollar in 1971. As a result of the negotiations that had begun in 1972, the Bretton Woods System was abandoned in 1976.

On September 22, 1985; ministers of the USA, West Germany, France, England and Japan held a meeting at the Plaza Hotel in New York City with the aim of determining the policies that they were going to follow against the excessive appreciation of dollar. In this meeting, while the USA decided to close federal budget deficits; Japan promised to reform its financial sector by loosening its monetary policy and Germany decided to reduce taxes. All participant countries declared that they would intervene in their financial markets. Although the countries could not accomplish what they had promised, the dollar has depreciated against the mark and the yen.

As the dollar depreciated by 54% against the mark and the yen, these five countries met again on February 22, 1987 in Louvre, where the USA promised to tighten its financial policy and Japan promised to loosen its monetary policy in order to maintain the dollar's value. The parties decided to intervene in case the prominent currencies go beyond unaccounted margins. It could be stated that the Plaza and Louvre agreements demonstrated the importance of the role played by the dollar in the global economy for capitalist countries, the degree capital markets had been globalized and the necessity for controlling markets against tendencies of liberalization; and it strengthened the G-7 process by contributing to the practice of negotiation between developed countries.

The USA enjoys the advantage provided by the USD's status of being the global currency by having current deficit. However, this deficit has not reached to a level to circumvent the conventional positions of the other blocks of the system: Developed countries other than the USA (primarily Japan) have high levels of external surplus, which make it possible the financing of the systematic and consistent external deficits of both the US economy and developing economies (except for China and OPEC countries who have slight external surpluses). In the US economy, external deficits that rose after 1996 reached their peak in 2007. A series of crises experienced by the economies of the periphery in the period of 1998-2001 pulled down their growth rates; external surpluses replaced current deficits; and thus, it became possible to finance external liabilities escalated on the eve of the crisis.

IMF's austerity policies have paved the way for a rise in interest rates and in taxes as well as a decline in expenditures, which together caused recessions and depressions. IMF regulations suggested, and even forced, all other

developing countries to take steps towards liberalizing capital movements and making legal regulations along with reforms. As Stiglitz reminds (2010), globalization is reminiscent of a double-edged sword. Those countries with better regulated financial systems and financial surpluses have been affected by the crisis less.

2.4.3. Inefficient Efforts Of G-7 Countries vs. Increased Significance of the G-20 Countries

Globalization process is being criticised heavily. There are some part who argue that it should be rejected and some others, on the contrary, says that it is needed for sustainable growth. It is said that "no country has ever developed successfully without participating actively in the global economy" (Bergsten, 2004). A correlation between growth and globalization is also statistically approved by several of studies. Moreover, there was no study showing a connection between openness and slow growth till 2004. Countries such as China, India, Mexico and the US are the success stories in this concern. On the other hand, Africa and Brazil were two failure examples of globalization. Inside G-7, Japan and Germany has been seen as growth laggards while Japan's globalization ratio was declining and Germany's growth ratio was flat. Middle East was also one of the bad example of globalization to the contrary of its quick repairment in the first post-war decades and the rise in the oil prices. It is mostly an outcome of their lagging performance because some of the most crucial development successes has seen in the countries used globalization such as Mexico, China and Egypt (Bergsten, 2004).

Globalization is a necessary condition for sustainable growth but it is not enough since it has also costs and losers. So called Washington Consensus[2] plays an important role in this part. Still it is seen that the original Consensus was not successful to produce growth since there were some crisis and the vulnerability of countries were effecting the reform process. It is suggested that the G-20 should take an active role for the globalization process. By doing so, their effort would be crowned if they decide to seek a leader position in the governance of new world economic order.

The regulation-free nature of the global financial system, excessive deregulations and asymmetric knowledge conduced towards financial markets' high-risk and myopic behaviors. Inadequate institutional communication created disorganization in the operation of capital markets. Besides, low growth rates increased instabilities that cause inflation (Stiglitz, 2009).

As Stiglitz suggests (2010); Bernanke and Greenspan doctrines have proved inadequate. Financial markets acted incorrectly in controlling risks and directing the capital to low-cost activities. Especially those countries that have independent central banks were more unsuccessful than those with dependent ones. The reason of this is the fact that countries with autonomous central banks focused solely on the target of combating inflation and threw targets such as growth, employment and financial stability out of focus. However, the effects of the crisis were bigger than the damages of inflation. In this period, G-7 countries began to fail to overcome the

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[2] Washington Consensus was set of policies which are necessary for growth, low inflation, a viable balance of payments and equitable income distribution. The ten policies defining the Consensus are (1) fiscal discipline, (2) increased public expenditure on social services and infrastructure, (3) tax reform to broaden tax bases and reduce marginal tax rates, (4) market-determined interest rates, (5) unified and competitive exchange rates, (6) import liberalization, (7) openness to foreign direct investment, (8) privatization, (9) deregulation, and (10) secure property rights

ambiguities that emerged in the international monetary system, because while developed countries were incurring current account deficits due to global imbalances, developing countries began to have current account surpluses and to increase their dollar reserves.

Since G-7 mostly failed to make contribution to global stability and growth and G-20 may have a chance to replace G-7 in that matter. What was wrong with G-7 was mentioned as (Bergsten, 2004):

> *"First, the G-7's effort to manage a constructive adjustment of the global imbalances centred on the US current account deficit without putting excessive pressure on other individual components of the world economy (notably Europe) has achieved limited success, at least to date, in large part because the G-7 excludes countries whose participation in the necessary adjustment of exchange rates is essential… Second, it is also difficult for the G-7 to function as an impartial and thus effective arbiter in major debt cases. The creditor countries have traditionally been able to impose their views on the debtor countries, including through their voting control of the international financial institutions."*

Also when we look at the G-7 countries share of world output, trade, monetary reserves etc., we can see a clear decline year by year. G-7 countries are not able to manage the world economy in a very effective way. Still it can be an option for them not to withdraw completely but instead it can be a council for the rich countries.

The case of G-20 leadership may be very beneficial if they can construct a system which rich and poor countries can push each other to utilize constructive policies and not just hold meetings inside themselves but instead try to reach the other through media (Bergsten, 2004). If they can manage to construct this kind of steering committee with key players such as China, Korea, Argentina or Brazil, it would be very crucial for global stability. After this point, G-7 would be weak for the stability job since the key players

will be outside the group. Even the creation of G-20 in 1999 was an indicator that shows us the inefficient efforts of G-7 in dealing with the main problems of world economy (Bergsten, 2004).

Following the Asian financial crisis in 1997, the G-20 was formed in 1999.[3] As a result, G-20 countries started to be included in the process more actively. G-20 countries, which constitute nearly 85% of the global economic magnitude, play important roles in making institutional reforms in the global system and developing new approaches. The EU has the largest share (26%) of the economic magnitude created globally; which is followed by the USA (23%), China and Japan (9%), and Germany (5%). In this ranking, the shares of the EU and the USA are notably high. For this reason, any kind of speculative news coming from these geographies has the capacity to positively or negatively influence the markets. G-20 countries dwell on institutional reforms not only to attain demand equilibrium but also to stimulate growth. Whereas China will need to provide more social services as it shifted its focus from export industries to new local businesses, the USA will have to deal with structural expenditures and bubbling debts, which will pressure the growth. The USA and China might agree upon steps that would support each other in order to enhance growth and define a route aimed at

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[3] In G-20; G-7 countries (the USA, Japan, Germany, England, France, Italy and Canada) are the members along with Turkey, Argentina, Australia, Brazil, China, Indonesia, India, Russia, Mexico, South Korea, South Afrcia, Saudia Arabia, and as an institution, the European Union. The country with the highest population in G-20 is China (1 billion 341 million); followed by India (1 billion 215,9 million), the USA (310,2 million), Indonesia (234,5 million), Brazil (193,1 million), Russia (140,3 million), Japan (127,3 million), Mexico (108,6 million), Germany (81,6 million), Turkey (71,4 million), France (62,9 million), England (62,2 million), Italy (60,2 million), South Africa (49,9 million), South Korea (48,9 million), Argentina (40,5 million), Canada (34,0 million) and Saudi Arabia (26,1 million). Australia (22,2 million) has the lowest population among G-20 countries. As of 2010, the USA has the highest national income (14 trillion 624,1 billion dollars) among G-20 countries.

strengthening the Yuan. Zoellick, moreover, suggested that prominent economies, especially the G-7, need to abandon monetary interventions. G-20 can come up with various norms to guide the instrument that developing countries need in order to cope with short-term hot money flows. Zoellick also talked about the obligation for G-20 countries to support growth by focusing on supply-side bottlenecks in developing countries. Finally, in compliance with the common consensus on the dollar reserve system, he suggested that G-20 should finalize this program with a plan to construct a common currency that is reflecting the emerging economic conditions. This new system will most probably comprise dollar, euro, yen, pound and yuan and an open capital account.

In order to fight with global imbalances, which we see as the core reason for all the disasters faced in the world economy today, balancing of current accounts is recommended as a direct solution. The current account balance as a percent of GDP is a sign of international competitiveness for a country. Since surplus countries depends heavily on exports revenues with high saving ratings but weak domestic demand, they could increase service productivity and strengthen domestic consumption so that their imports increase. As it can be seen directly from Figure 2.3, these countries can be listed as Saudi Arabia, Germany, Russia, China, South Korea, Japan and Indonesia inside G-20. Deficit countries, on the other hand, depend heavily on imports, have a low saving rates and high personal consumption (% of disposable income), could encourage exports and reduce domestic consumption (Velde, 2010).

Figure 2.3: Current Account Balance of G-20 Countries (%GDP) as of 2011
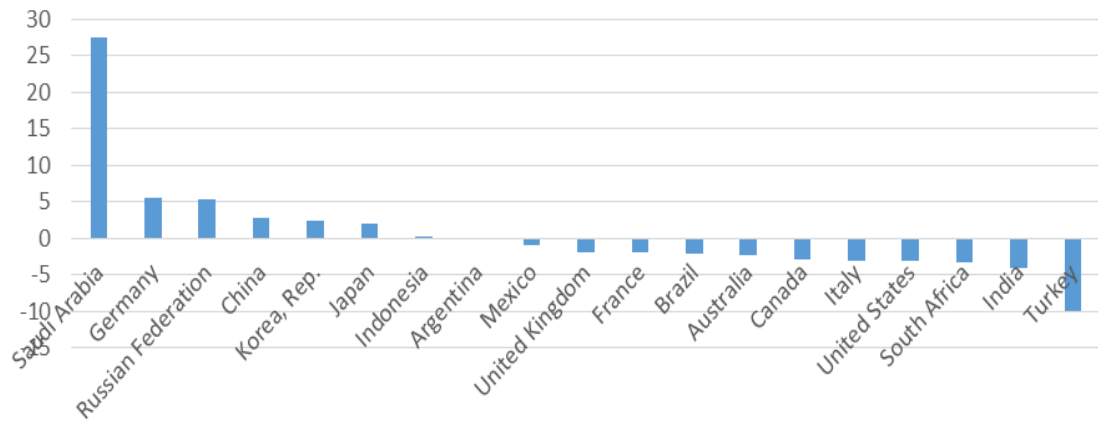
Source: World Development Indicators

Furthermore, international reserves hold by surplus economies have an important role in stimulating global growth and development finance to developing economies. From figure 2.4, it can depicted that China, Japan, Saudi Arabia, United States and Russian Federation are the first five countries holding the largest reserves inside G-20. Asian countries are holding reserves against the impacts of another economic crisis as an insurance. This causes global imbalances again, so this position should be reversed and reserves should be used for development. This is possible by using the reserves as global investments (Velde, 2010).

Figure 2.4: Total Reserves of G-20 Countries as of 2011 (including gold)
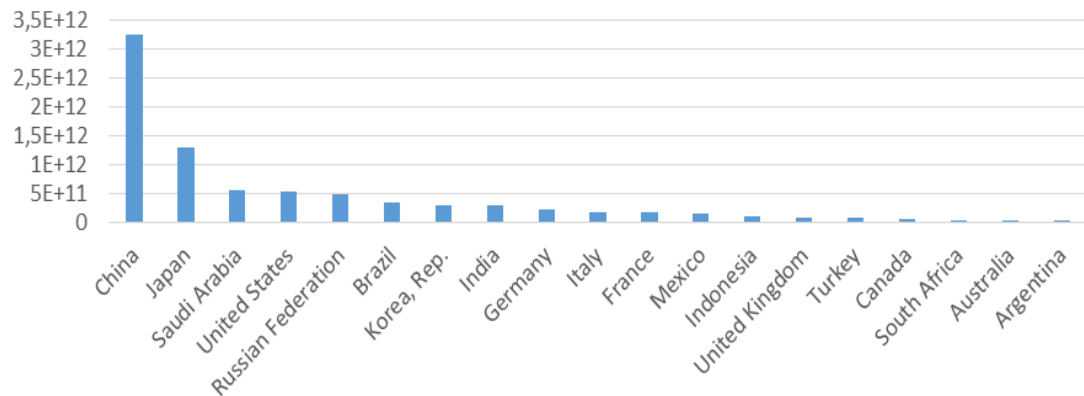
Source: World Development Indicators

International reserves can also be used to establish Sovereign Wealth Funds (SWFs). SWFs can be hold by the countries which has current account surpluses. That's why Asia is the top region in SWF investment, not surprisingly. EU and US are following the Asia (Velde, 2010). Again it is not surprising that the ratio of reserves to GDP is relatively high in many countries with SWFs. However, reserves are relatively lower in some countries, such as the countries in the Gulf area like Saudi Arabia, Kuwait, Oman, and United Arab Emirates, with SWFs of longer duration (Aizenman and Glick, 2008). According to Velde (2010), new and existing vehicles for SWFs may help channel global finance from surplus countries to the countries where returns on investment are utmost, or it could be directed to areas where increased liquidity is needed the most for systematic reasons.

CHAPTER 3

INTERNATIONAL RESERVE AND GOLD RESERVE SITUATION

3.1.   Common Tend to Increase Reserves – IR Hoarding

The global imbalances has been in the heart of this era after emerging markets' hoarding of international reserve levels. The accumulation is considered as a contribution to a "saving glut" and resulted with global imbalances. The increase in the reserve levels has been seen mostly in East Asian economies (as international reserves/GDP ratio). While industrial economies' international reserve/GDP ratio was stable, develong economies were showing the most dramatic increases in this very same ratio (Aizenman, 2007).

The fraction of reserve holdings to national output is found to be more than doubled in 9-10 years (1999-2008). China, in specific, tripled its reserves (Delatte and Fouquau, 2010). Aizenman (2005) specified the reasons for that accumulation in East Asia as self-insurance for sudden stops and deleveraging crisis; protective fiscal demand by countries with inelastic monetary spending, sovereign risk, volatile and limited tax capacity; and a modern incarnation of mercantilism. If an economy is described with its volatile output, inelastic demand for monetary spending, high tax collection costs and sovereign risk may want to increase its international reserves and at the same time, its external debt. Aizenman (2005) says that, *external debt allows the country to smooth consumption when output is volatile. International reserves that are beyond the reach of creditors would allow such a country to smooth consumption in the event that adverse shocks trigger a default on foreign debt.*

In most of the empirical studies, East Asian financial crisis is seen as the core reason in the international reserve hoarding and this increase has been sticked together to financial integration of developing economies. International reserve holding helps when the output level falls in the sudden stops. When the financial integration and hoarding of international reserves are sticked together, it is being possible to see a new and most up-to-date version of mercantilism which links the international reserve hoarding to export competitiveness. Until this point it was mostly about precautionary approach but there are enough number of studies saying that central banks hold international reserves for mercantilist and precautionary motives. While the mercantilist focuses on defending export competitiveness, the precautionary focuses on protecting from balance of payment instability (Delatte and Fouquau, 2010).

In the literature, international reserves are seen to be buffer stock in crisis times. Buffer stock model predicts that reserves should be negatively correlated with exchange rate flexibility but it is not the case in the trend we have seen today. So buffer stock model is not a very good indicator to explain the latest changes in reserve levels. Also it is seen that as the financial integration of developing economies increased, they happened to be more open to "hot money" which can be considered as volatile. Most observers viewed East Asian countries as being less vulnerable to the risks associated with hot money than Latin American countries. But, 1997–8 crisis subjected East Asian economies to some hidden vulnerabilities (Aizenman, 2005). Increase in the reserve levels has been seen as an improvement to stability of the emerging countries in the time of exposure to great financial integration. Those countries chose not to reduce their financial integration, instead, they decided to defend their exposure to financial instability by increasing their reserve levels. It has been questioned by Aizenman (2007), why those countries has chosen to invest more on increasing the hoarding

international reserves and not to invest more on reducing external exposure (when we consider the ratio of international reserve/external debt ratio).

Aizenman explained the situation with rapid trade integration which is an unavoidable result coming from financial integration. He mentioned that (2007):

> "...Trade integration facilitates capital flights via trade misinvoicing, thus increasing the costs of enforcing financial repression, and forcing countries to tolerate greater financial integration. Hence, countries that opted for financial repression as a constrained optimal solution to the public finance problem facing low income countries [i.e., raising taxes at low costs], may find that deeper trade integration increases the costs of monitoring and enforcing financial integration to levels that justify financial opening."

Still it is a reality that a country chooses to hold reserves if its benefits are higher than the opportunity cost of reserve holding. In order to understand those forementioned benefits, we need to understand precautionary and mercantilist approaches really well.

Since financial integration caused emerging economies to be exposed to volatile capital flows and instable balance of payment, they became more vulnerable in crisis times. So they had to wear a shield in order to protect themselves. This shield was the extra liquidity coming from holding excessive amount of reserves. This leads us to precautionary approach and the adequate ratio of international reserves (proposed by Alan Greenspan) saying that a country should hold international reserves to smooth its position in case of sudden stop if this country is associated with large short term debt and an open capital account (Delatte and Fouquau, 2010) .

Additionally, mercantilist view says that central banks increase their international reserve levels to manage their real exchange rate in order to promote export competitiveness. Since many economies are trying to

manage their exchange rate, they tend to hold reserves. As Delatte and Fouquau mentioned (2010) central banks in large exporters countries have increased their reserve stock in a very aggressive amounts in order to limit their currencies' appreciation against a falling dollar. The governments have purchased large amounts of dollars to prevent it from falling against their currencies in order to defend their competitiveness. Reserves stockpiling is still supposed to be a major factor of the recent global imbalances.

But for mercantilist approach accumulation of reserves are remaining of industrial policy which imposes negative externalities on trading partners (Aizenman, 2005).   There are tests in the literature about the relative importance of both precautionary and mercantilist approaches in international reserve holding in emerging economies. They found that variables which were related to mercantilist concerns had low influence on the dependent variable. On the other side, the results are consistent with the precautionary demand for the reserves because it is seen that the international reserve holdings has been increased in the areas which are affected mostly in the crisis times (Aizenman, 2005).

The Korea and China experiences are given as examples of those sudden accumulation of reserves. In Korean case, the numbers are happened as an external short term debt/GDP ratio which has increased from 7.5% (2004) to 20% (2008) and overall external debt/GDP ratio which has increased from 23% to 50% in the same period and this has happened without a change in IR/GDP ratio. Actually if a good external debt management policy does not exist, it is dangerous to just rely on increasing level of international reserves as a shield. This is a common issue in emerging economies. Especially after 2008-09 financial crisis, hoarding of international reserves has been seen as expensive and less efficient action if the economy did not have an aggressive external debt management policy. Also to lay a tax on external borrowings is

considered as a mechanism to decrease reserve levels (Aizenman, 2009). Also there is the moral hazard side of the issue. It can be divided as micro and macro moral hazard which are explained to be as (Aizenman, 2007):

> *"The macro moral hazard: international reserves may be the target of opportunistic spending in regimes characterized by political instability and limited monitoring.*
> *...*
> *The micro moral hazard exists where international reserves subsidize risk taking.*
> *...*
> *In addition, there are fiscal costs, including the direct opportunity cost in the form of the marginal product of public capital and/or the cost of external borrowing, and the quasi costs of sterilization."*

As a suggestion if there would be slower demand from developed countries, export-led growth would be much less than before in emerging economies. So they would be interested in domestic goals and accepting more flexible exchange rates. This might have reduced the international reserve demands (Delatte and Fouquau, 2010).

In the next section, the position of G-20 countries in terms of both international reserves and gold reserves will be presented by the actual numbers. Some comparisons may be possible between countries reserve holding levels.

3.2. International and Gold Reserve Position of G-20

International reserve holdings and gold reserve holdings data are selected from the World Bank's indicator list. Both data are in current US dollars and calculated for the year of 2011.

Due to the availability, the gold holding levels are calculated with the difference between the data of "total reserves minus gold" and "total reserves including gold". It is indicated by the World Bank that "total reserves excluding gold" comprise special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities (Source : http://data.worldbank.org/indicator/FI.RES.XGLD.CD).

Table 3.1: "Total Reserves Minus Gold" Ranking of G-20 Countries (2011)

Ranking	Country Name	Total Reserves
1	China	3,20279E+12
2	Japan	1,25817E+12
3	Saudi Arabia	5,40677E+11
4	Russian Federation	4,53948E+11
5	Brazil	3,50356E+11
6	Korea, Rep.	3,04255E+11
7	India	2,71285E+11
8	Mexico	1,43991E+11
9	United States	1,36912E+11
10	Indonesia	1,06539E+11
11	United Kingdom	79272313250
12	Turkey	78322384557
13	Germany	66928149354
14	Canada	65652141599
15	Italy	49185199802
16	France	48611516661
17	Argentina	43226839533
18	Australia	42783369933
19	South Africa	42595178722

Source: World Development Indicators

Figure 3.1 : "Total Reserves Excluding Gold" Position of G-20 Countries (2011, current US$)
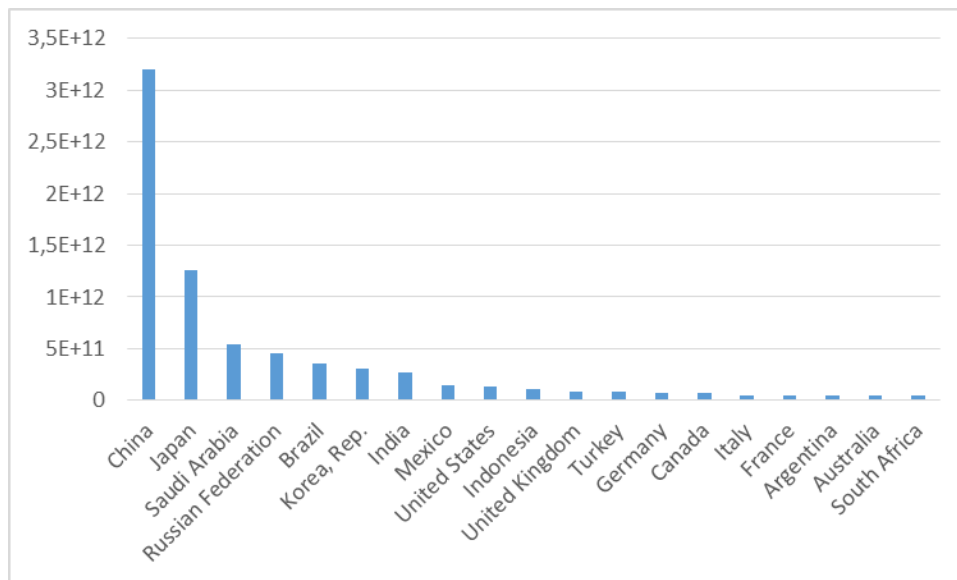
Source: World Development Indicators

According to the Figure 3.1, two Asian countries, China and Japan are in the first and second place in total reserve level among G-20 countries while Saudi Arabia, Russia and Brazil are following them. Turkey is seen in the 12th place after United Kingdom. South Afrcia is seen as the country holding the least reserves but the last five countries (Italy, France, Argentina, Australia and South Africa) present similar results in terms of reserve numbers among G-20 countries.

Figure 3.1 is consistent with the fact of international reserve hoarding of especially some Asian economies (specifically China) after the Asian financial crisis. It was a given fact that some economies such as China, Japan, Korea, Malaysia and Taiwan, have started to accumulate reserves at an increasing rate. After the event of Asian crisis, the ratios of reserve holding increases have been seen as 262%, 133%, 107%, 124% and 126% respectively by the aforenamed countries (Cheung and Ito, 2009).

Holding more of international reserves is generally considered as a positive indicator since it is thought as a tool to decrease vulnerabilities. It is easy to understand the reserve stocks in an economy with external surpluses. The country may be able to put aside some of its money since it earns more than it consumes (Akat, 2013). This is the case that can be easily seen in economies like China, Saudi Arabia, Russia, etc.

Table 3.2: "Gold Reserves" Ranking of G-20 Countries (2011)

Ranking	Country Name	Gold Reserves
1	United States	4,00355E+11
2	Germany	1,67176E+11
3	Italy	1,20687E+11
4	France	1,19879E+11
5	China	51885590000
6	Russian Federation	43462028000
7	Japan	37666336007
8	India	27454041539
9	Saudi Arabia	15894382700
10	United Kingdom	15271725000
11	Turkey	9614873827
12	South Africa	6153089000
13	Mexico	5217316829
14	Australia	3930665271
15	Indonesia	3597850000
16	Argentina	3038969568
17	Korea, Rep.	2679588406
18	Brazil	1654183991
19	Canada	166879000

Source: World Development Indicators

Gold reserve holdings data can be retrieved from the Table 3.2. The data are in current US dollars and calculated for the year of 2011 as the difference between the data of "total reserves minus gold" and "total reserves including gold".

The extent of "total reserves" given by the World Bank is holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component is valued at year-end prices. (Source: http://data.worldbank.org/indicator/FI.RES.TOTL.CD).

Figure 3.2: "Gold Reserves" Position of G-20 Countries (2011, current US$)
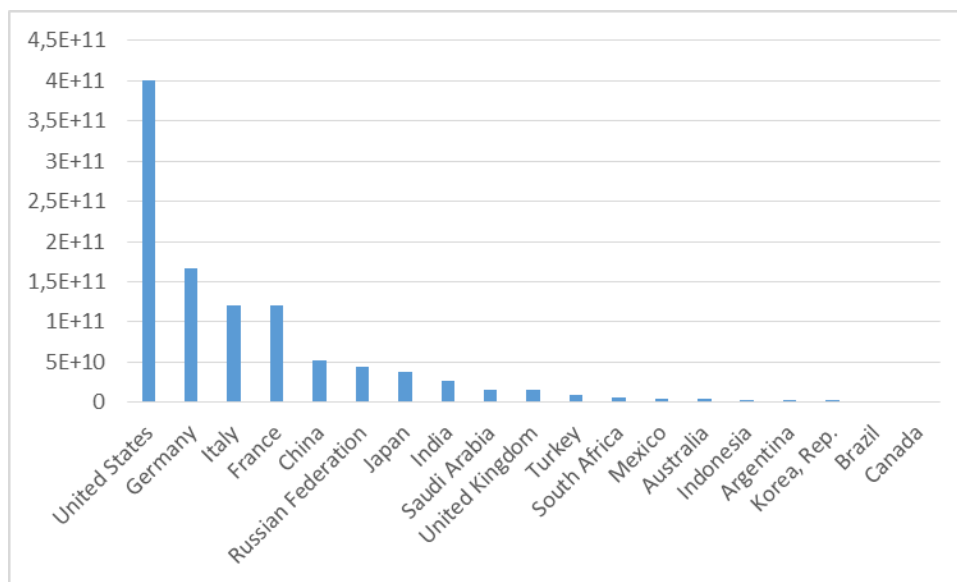
Source: World Development Indicators

According to Figure 3.2, US is seen in the leader position in gold reserves holding among G-20 countries. Germany, Italy and France can be considered as followers with close gold reserve amounts. Turkey is in the 11th place among G-20 countries in terms of gold holdings.

After the Gold Standard system, even if the gold is not monetary equivalent any more, central banks continue to hold gold as reserve currency. One of the reason is the remaining golds from the Gold standard times and the other reason may be the value of gold since it is a rare metal (Eğilmez, 2012).

It is not surprising that the gold holding levels are the most in developed countries' central banks. The reason is again the Gold Standard system used before. These developed countries hold gold as the collateral for the money they issued and after the Gold Standard, they continues to hold gold reserves. On the other hand, since the monetarization occured later in developing countries, their gold reserves are relatively lower than the developed economies. Developing economies are tend to hold foreign exchange reserves instead of gold. China's position in gold holdings is somehow different since China wants to diversify its reserve composition in recent years (Eğilmez, 2012).

So, if we set China aside, we can conclude that developing countries prefers to hold more of foreign exchange reserves while developed countries prefers gold reserves. Since the currencies of developing economies do not have reserve money characteristics, they can not be used in world trade. For this reason, they hold other reserve currencies such as dollar and euro in order to use in times of crisis. International investments can be seen much in developing countries that holds more of foreign reserves since these economies are considered as low risk. This can be the reason laying under the urge to compete for holding more reserves.

From the developed economies' perspective, it is under their initiative to print money whenever necessary since their currencies are either reserve money or at least the money that can be easily used in world trade. They do not need to stock those currencies because of this reason (Eğilmez, 2012).

CHAPTER 4

EMPIRICAL STUDY ON THE FACTORS INFLUENCING GOLD RESERVE LEVELS

4.1. The Aim of Study

Gold holdings and gold positions of central banks remain its importance and also its debatable position. As far as we have experienced, even in times of a global recession after the latest financial crisis of 2008, the price of gold has been affected reversely by appreciation. It is a common acceptance that, *at times of global turbulence, gold has retained the attractiveness of offering a potential hedge* (Aizenman, Inoue and NBER, 2012).

In this chapter of the thesis, the focus will be solely on the factors influencing the selected G-20 countries' central bank's gold reserve holding levels during 1990-2011 which include also the crisis period. A model will be constructed based upon existing similar empirical analysis but with unique country, time and independent variable set. With the help of those analysis, individual independent variables that are expected to affect gold reserve levels will be decided. The unique model will be constructed on the data for the G-18[4] countries and G-7[5] countries. The results of the regression analysis will be presented comparative with the results found in the literature. On the other hand, another comparison with G-18 and G-7 countries will be discussed according to the results of the regression analysis.

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[4] Due to data availability, we excluded Russian Federation and European Union from the G-20 countries and the analysis has been run with 18 countries.
[5] Similarly, we excluded Russian Federation from the G-8 countries and the analysis has been run with 7 countries.

4.2. Methodology and Data Selection

In this section of the thesis, an empirical framework to study the effects of selected determinants on gold reserve levels is set up. A panel regression is used based on the studies done in the literature, specifically by Cheung and Ito (2009) and partly by Aizenman and Kenta (2012).

Our model is consisted of three groups of explanatory variables, namely macro-economic variables, trade related variables, and finance related variables. The explained variable is determined as the gold reserve levels of central banks.

Gold reserve levels are calculated as the difference between total reserve levels excluding gold and total reserve levels including gold. World Bank defined its total reserve (including gold reserves) calculation as:

> "*Total reserves comprise holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component of these reserves is valued at year-end (December 31) London prices. Data are in current U.S. dollars.*"

(Source: The World Bank Indicators, http://data.worldbank.org/indicator/FI.RES.XGLD.CD)

The macro economic variables are selected as gross domestic product (GDP), GDP per capita and population. Trade related variables are imports of goods and services, exports of goods and services, fuel imports and energy imports. Last group of our determinant variables were determined as the financial related variables namely, net foreign direct investment (FDI) liabilities, financial openness index, current account balance and private capital flows.

Gold reserve level is denoted by $R_{i,t}$ which is a notation for economy i's gold reserve levels at time t. Macro-economic variables are denoted by $X_{i,t}$ ($=x_{i,k,t}$; $k = 1,...,N_x$ }), trade related variables are denoted by $Y_{i,t}(=y_{i,k,t}$; $k = 1,...,N_y$ }) and the finance related variables are denoted by $Z_{i,t}(= z_{i,k,t}$; $k = 1,...,N_z$ }). The list of variables, the definitions of the given variables and the sources are given in Table 4.1.

Table 4.1: Definitions and Sources of the Variables Used

Variables	Definitions	Sources
1. Dependent Variables		
goldreservesc_s	Gold Reserves (current USD)	WBI
2. Variables in "X" - "Macro-Economic Variables		
Gdpcurrentusd	GDP (current USD)	WBI
Gdppercapita	Per Capita GDP (current USD)	WBI
Population	Population	WBI
3. Variables in "Y" - "Trade Related Variables		
importsofgood_r	Imports of Goods and Services (%of GDP)	WBI
exportsofgood_p	Exports of Goods and Services (%of GDP)	WBI
fuelimportsof_s	Fuel Imports (% of Merchandise Imports)	WBI
energyimports_e	Energy Imports, Net (% of Energy Use)	WBI
4. Variables in "Z" - "Finance Related Variables		
privatecapita_p	Private Capital Flows, Total (% of GDP)	WBI
netfdiliabili_p	Foreign Direct Investment, Net Inflows (% of GDP)	WBI
financialopen_o	Financial Openness Index	CII
currentaccoun_p	Current Account Balance (%GDP)	WBI

NOTE: WBI is a code indicating the "World Bank Indicators" and CI is a code for "Chinn-Ito Index"

The effects of independent variables on gold reserve levels are studied using the following equations:

(1) $R_i = c + a \cdot X_i + \varepsilon_i$

(2) $R_i = c + a \cdot X_i + \beta \cdot Y_i + \varepsilon_i$

(3) $R_i = c + a \cdot X_i + \beta \cdot Y_i + \delta \cdot Z_i + \varepsilon_i$

a, β and δ are coefficient vectors while c is the constant term and ε_i is the error term.

Model 1 describes the effect of macro economic variables on gold reserve levels. In the 2nd model, trade related variables are included in the analysis and finally in the 3rd model, financial related variables are also included and the final model is determined to specify the overall effect of all the independent variables on the gold reserve levels.

Our data sample is divided into two groups as G-7 and other G-18 countries where G-7 countries are listed as USA, Japan, Germany, United Kingdom (UK), France, Italy and Canada; and other G-18 countries are listed as Argentina, Austria, Brazil, China, Indonesia, South Africa, South Korea, India, Mexico, Saudi Arabia and Turkey.

The year span is determined to be 1990-2011 period for the analysis. Stata 12 package program is used in the panel data analysis of the factors influencing gold reserve levels.

4.3. Literature Review

The increase in the gold reserve positions of key economies is an ongoing and crucial debate. Some economies have a tendency to make gold stocks

either openly or in strict confidence. The numbers given in the literature about the gold reserve holdings of central banks are corroborative in this content. The Russia is one of the important example with its gold reserve levels increased by 400% after the Czar Nicholas and the Bolshevik leaders until today. As of 2012 first five countries in terms of gold reserve holdings are listed as USA, Germany, Italy, France and China by the World Gold Council (Source: World Gold Council Official Website, World Official Gold Holdings, International Financial Statistics, February 2012). Kazakhstan's gold moves, Germany's recall for its gold reserves abroad, Mexico's and Tailand's action to buy gold are all worth to take attention. Gold is considered as a very strong competitor to the euro and dollar for being the second biggest reserve instrument.

While the gold is gaining that much importance, the factors that are influencing the gold reserve levels are not clear enough to explain situation. There is also little consensus in the literature on what factors affects the countries' gold holdings. Most of the studies are related with the international reserve levels in general. Our model is constructed based on this fact and is started with the literature review of the studies made about the factors influencing the international reserve levels. Then, the model distinguished itself by concentrating on the gold reserve levels of G-20 countries.

It is concluded in the Cheung and Ito's (2009) study that the essentials of holding international reserves differs from transaction demand, precautionary motives, collateral asset arguments and mercantilist behaviour. In their study, they focused mainly on the effect of Asian financial crisis and constructed a cross-country empirical analysis to determine the factors influencing the international reserve holding. With the four groups of determinants (Traditional macro variables, financial variables, institutional variables and dummy variables), it is concluded that the demand for

international reserves is different for developed and developing countries and also different for diversed time periods. On the contrary to the general acceptance, it is also seen that the economies such as China, Japan and Korea are not holding excessive amount of reserves. The study could not end up with consistent determinants for the international reserve holdings for all the periods taken. The reason for that is interpreted with the help of the globalization process and the growing importance of capital account transactions. Also the occurance of important crisis is another factor affecting the changing environment of the determinants and the demand of international reserves (Cheung and Ito, 2009).

Another research by Aizenman and Lee (2005) is concluded with the support of the idea that precautionary demand is more important in international reserve hoarding behaviour than the mercantilist view.

Also another comparison is made between the small island economies and emerging market economies, and questioned whether reserves are too low in the small island economies or is it too high in the emerging market economies by the study of Mwase (2012). It is briefly mentioned that the economies with relatively high import shares tend to hold more reserves since the vulnerability to current account shocks can be considered as an important determinant. Also, their findings about the small island economies is consistent with the fact that the economies with fixed exchange rate regime hold much reserves as buffer stock. They also found differences in cross-country analysis showing different preferences in distribution of reserve holdings (Mwase, 2012).

Most of the studies in the literature agrees on some independent variable groups as factors of reserve holdings. These can be summarized as current account and capital account vulnerabilities, exchange rate regime,

opportunity cost, economic size, crisis experienced and also the quality of institutions.

The study about the factors explaining the depletion of international reserves is held by Aizenman and Sun (2009) for the period between July 2008 and February 2009. They have analysed the countries listed in FTSE and MSCI's emerging market list with the explanatory variables of three groups which are trade related, namely trade openness, country's oil export share, primary products/export ratio, historic export volatility; financial market related, namely financial openness, historic exchange rate volatility, short term external debt relative to country's GDP; and control variables, namely previous year's GDP and per capita GDP. The mothod used is cross-section analysis. In this study, the reserve level determination is again mentioned as a complex situation. The results reached can be listed as the countries with the internalized exposures to trade shocks before crisis period, used their reserves as a buffer stock in the first crisis phase. Also it is mentioned as "*for countries that refrained from a sizable depletion of their IR during the first crisis phase, financial factors account more than trade factors in explaining their initial level of IR/GDP. Our results indicate that the adjustment of Emerging Markets was constrained more by their fear of losing international reserves than by their fear of floating.*" (Aizenman and Sun, 2009)

Another empirical analysis about the foreign reserve levels is made by Olokoyo, Osabuohien and Salami (2009). Their analysis is specifically based on the foreign reserve and some macroeconometric variables in Nigeria in the period of 1970 and 2007 with annual datas. The explanatory variables are determined as economic size (GDP), trade, level of capital inflows, exchange rate and inflation. Their findings confirms the factors like GDP, level of trade openness, foreign capital inflow and inflation are significant in explaining the foreign reserve level in Nigeria. Also the positive signs of GDP

and trade openness is considered as consistent with the precautionary view of reserve holdings. On the contrary, the negative sign of the level of foreign capital inflow and inflation were not the expected results with the results expected (Olokoyo, Osabuohien, & Salami, 2009).

Further empirical studies are done about 10 Asian economies for the period of 1980 to 2004 with annual data in order to analyze the demand for international reserves. The explanatory variables were per capita GDP in log, average propensity to import, Exchange rate volatility, volatility of international reserve holding and financial openness. Panel based regression for these variables is run by Cheung and Qian (2007). The results were telling that beside the psychological reasons, it is good to hold more reserves in order to decrease vulnerabilities to speculative attacks and also to enhance growth (Cheung & Qian, 2007).

Lastly, it is worth mentioning that the most inspirational empirical study for our thesis was a cross-country analysis of international reserves with the data of more than 100 economies for the period of 1975-2004 that measures the effects of selected explanatory variable groups on hoarding of international reserves. The explanatory variables were divided into four groups as traditional macro variables, financial variables, institutional variables and dummy variables. The authors explained traditional macro variables as propensity to import, volatiility of real export receipts, international reserve volatility, opportunity cost of holding reserves, real per capita GDP and population. Financial variables are explained as the money supply, external debts and capital flows while institutional variables are listed as corruption, political stability and capital controls. The authors also added dummy variables as exchange rate regime, geographic, crisis and interaction variables. The analysis is made by using cross-section analysis (Cheung & Ito, 2009). A comparison is made between developed and developing

countries and it is seen that the determinats of international reserve levels are very different for the both groups. Also the results are changing over time since they have cut the whole period into three sub periods. Also it is another finding that developing countries hold higher levels of reserves than developed countries. But their results was not consistent with the general acceptance that East Asian countries are hoarding very high levels of reserves (Cheung & Ito, 2009).

According to the gold reserve holding, it is mentioned in a study that there is a general tendency to under report the gold positions of economies. Since central banks prefers safe portfolios with stable valuations, it can be an understandable managerial issue. By the close investigation of 1979-2009 period, gold can be considered as hedge and safe haven for European stock markets and the US. But the frame is different for the emerging economies. Gold was seen as safe for the developed economies in the ultimate difficulties of the 2008 global financial crisis. The managerial decisions about the gold positions at crisis times is explained as (Baur & McDermott, 2009):

> *"Not reporting the market value of gold as part of the international reserve position may be a working solution for a central bank wishing to maintain a sizeable gold position, while minimizing the criticism that may occur at times when the price of gold declines. Similar incentives apply when the central bank is concerned that capital gains associated with gold appreciation may be taxed by the fiscal authority, whereas capital losses associated with Gold depreciation would be viewed as reflecting portfolio mismanagement. In either case, the central bank is exposed."*

With the light of all those aforementioned literature, unique explanatory variables for our empirical study has been decided and aimed to analyze the effects of those variables not for the international reserve levels but instead, gold reserve levels of selected G-20 countries since our biggest interest is on gold holdings of economies.

4.4. Results and Comments

In this section, the estimation results for the effects of selected explanatory variables on gold reserve holdings of both G-7 and G-18 countries are presented. The descriptive statistics and regression results are provided by the contruction of 3 models related to the inclusion of macro-economic variables, trade related variables and finance related variables respectively.

4.4.1. The Analysis of G-7 Countries

The estimation results are presented for G-7 countries with 22 years period (1990-2011), 13 variables and 154 observations. For briefness, only significant estimates will be reported in the estimation results.

Firstly, the analysis of Model 1, which is used for the effects of only macro-economic variables, is constructed for the G-7 countries. The descriptive statistics are shown in the Table 4.2. The analyses are started by checking the means and standard deviations for cross-sectional time-series data in order to see the variations between and within countries. The results were as expected. The variables we have entered in the analysis are showing different results such as gold reserves vary more between countries than within countries. We can also see the number of observations as 154, number of countries with observations as 7 (G-7 countries) and average number of time periods for each country as 22 years which is between 1990 and 2011.

All of our three models are tested both for fixed and random effects. After getting the results, the Hausman Test to choose between a random effect

and fixed effect is processed. According to the outcome of Hausman Test, estimation results for G-7 countries are taken form.

Table 4.2: Descriptive Statistics Results (G-7, Model 1)

Variable		Mean	Standard Deviation	Minimum	Maximum	Observations
Gold Reserves	overall	4,46E+10	6,16E+10	4,55E+07	4,00E+11	N=154
	between		4,89E+10	1,08E+09	1,44E+11	n=7
	within		4,16E+10	-2,74E+10	3,01E+11	T=22
GDP (current USD)	overall	3,30E+12	3,26E+12	5,64E+11	1,50E+13	N=154
	between		3,24E+12	9,11E+11	1,02E+13	n=7
	within		1,25E+12	-1,13E+12	8,11E+12	T=22
GDP per capita	overall	30512,55	8609,856	16997,94	50345,43	N=154
	between		3697,763	25662,51	35501,67	n=7
	within		7895,12	18048,82	52092,43	T=22
Population	overall	1,00E+08	7,98E+07	2,78E+07	3,12E+08	N=154
	between		8,56E+07	3,10E+07	2,82E+08	n=7
	within		7249521	6,74E+07	1,29E+08	T=22

According to the results from the Table 4.5; two macro-economic variables, "GDP" and "population" are found to be significant for the G-7 countries in the first model. The result for the GDP per capita is found to be insignificant in explaining our dependent variable gold reserve levels of countries. They explain 61% of variations in gold reserve levels of G-7 countries. The signs of coefficient estimates are showing that gold reserve levels are increasing as the GDP level of a country rises; but population is showing reverse relation with the reserve level since as the population of a country increases, gold reserve level is decreasing.

Secondly, the analysis of Model 2, which is used for the effects of both macro-economic variables and trade related variables, is constructed for the G-7 countries. The descriptive statistics are shown in the Table 4.3.

Table 4.3: Descriptive Statistics Results (G-7, Model 2)

Variable		Mean	Standard Deviation	Minimum	Maximum	Observations
Imports of Goods&Services	overall	23,80964	9,001596	6,866705	45,1801	N=154
	between		8,716162	10,55362	33,62701	n=7
	within		3,935061	14,15718	37,51866	T=22
Exports of Goods&Services	overall	24,21191	10,18662	9,00296	50,14548	N=154
	between		9,791963	10,75518	35,78515	n=7
	within		4,587492	12,00532	40,15893	T=22
Fuel Imports	overall	11,31207	6,354562	2,492373	35,09595	N=154
	between		5,544122	6,47279	22,70012	n=7
	within		3,723173	4,015017	23,7079	T=22
Energy Imports	overall	34,36233	45,25901	-59,6677	89,62365	N=154
	between		48,04931	-49,4525	82,90444	n=7
	within		7,518465	10,52338	68,66661	T=22

In the second model for the G-7 countries, we included trade-related variables and run the same analysis as we have done in the first model. There was no problem with the results in analysis of the variations between and within countries.

According to the 2nd Model's estimation results, two macro-economic variables are found to be significant. "GDP" is again significant but in this analysis "GDP per capita" enters significantly instead of population. Since trade related variables are also included in the regression in the 2nd Model,

two additional independent variables are seen to be significant in explaining gold reserve levels. These variables are "imports of goods and services" and "energy imports", both with positive signs. After inclusion of trade related variables into the model, the explanatory variables started to explain 73% of variations in gold reserve levels of G-7 countries. It was 61% in the previous model. The signs of coefficient estimates are showing that both significant trade related variables are moving together with the gold reserve levels.

Thirdly, the analysis of Model 3, which is used for the effects of all the independent variable groups, is constructed for the G-7 countries. The descriptive statistics are shown in the Table 4.4.

Table 4.4: Descriptive Statistics Results (G-7, Model 3)

Variable		Mean	Standard Deviation	Minimum	Maximum	Observations
Private Capital Flows	overall	0,07336	3,755965	-10,25906	19,60354	N=154
	between		1,274569	-1,547089	2,2045	n=7
	within		3,564508	-10,40955	19,45304	T=22
Net FDI Liabilities	overall	1,78273	2,175976	-1,079597	11,13684	N=154
	between		1,279102	0,1335981	3,94964	n=7
	within		1,823	-1,981026	11,57575	T=22
Financial Openness Index	overall	2,36450	0,3983711	0,1583053	2,45573	N=154
	between		0,1370275	2,166508	2,45573	n=7
	within		0,377492	0,3562989	2,653724	T=22
Current Account Balance	overall	-0,1765	2,72913	-6,013132	7,484883	N=154
	between		2,086445	-3,139988	2,816545	n=7
	within		1,921562	-3,86587	5,341041	T=22

In the third model for the G-7 countries, we included finance-related variables into the regression and run the estimation for the effects of overall independent variables.

According to the 3rd Model's estimation results, not a different result is extracted from 2nd Model in terms of macro-economic variables and trade related variables. Also the signs are the same as the previous regression. Additionally, "net FDI liabilities" is found to be the only significant finance-related variable in explaining the gold reserve levels for G-7 countries with a negative sign. Neither current account balance, nor private capital flows is found to be significant. Financial openness index is also not a good indicator for explaining the reserve level. The overall regression result is showing us that the explanatory variables explains 75% of variations in gold reserve levels of G-7 countries. It was 61% and 73% respectively.

Table 4.5: Estimation Results for G-7 Countries

	Variables	1st Model	2nd Model	3rd Model
Macro Economic Variables	GDP	0,0297 [0,0045]	0,0255 [0,0038]	0,0242 [0,0040]
	GDP per capita	....	-1348534 [546215,5]	-1008093 [589616,7]
	Population	-591,6093 [163,4585]	....	....
Trade Related Variables	Imports of Goods and Services		4,88E+09 [1,47E+09]	5,86E+09 [2,88E+09]
	Exports of Goods and Services		....	....
	Fuel Imports		....	....
	Energy Imports		3,88E+08 [7,37E+07]	3,49E+08 [7,84E+07]
Finance Related Variables	Net FDI Liabilities			-3,59E+09 [1,45E+09]
	Financial Openness Index			....
	Current Account Balance			....
	Private Capital Flows			....
	Constant	3,24E+10 [1,75E+10]	-7,70E+10 [2,06E+10]	-6,95E+10 [2,51E+10]
	# of Observations	154	154	154
	R-Square	0,61	0,73	0,75

4.4.2. The Analysis of Other G-20 Countries

The estimation results are presented for other G-20 countries with 22 years period (1990-2011), 13 variables and 242 observations. As it is done in the previous analysis for the G-7 contries, only significant estimates will be reported in the estimation results for brevity.

The same procedure is followed again. Firstly, the analysis of Model 1, which is used for the effects of only macro-economic variables, is constructed for the other selected G-20 countries. The descriptive statistics are shown in the Table 4.6. The statistics which can be listed as the means and standard deviations are found to be as expected. The number of observations are seen as 242, number of countries with observations as 11 (other G-20 countries except Russia and European Union). The average number of time periods for each country is got to be 22 years which is between the periods of 1990-2011.

All of our three models are tested both for fixed and random effects. After getting the results, the Hausman Test to choose between a random effect and fixed effect is processed. According to the outcome of Hausman Test, estimation results for other selected G-20 countries are taken form.

Table 4.6: Descriptive Statistics Results (other G-20, Model 1)

Variable		Mean	Standard Deviation	Minimum	Maximum	Observations
Gold Reserves	overall	3,13E+09	6,05E+09	2488500	5,19E+10	N=242
	between		3,60E+09	3,22E+08	1,21E+10	n=11
	within		4,98E+09	-5,50E+09	4,29E+10	T=22
GDP (current USD)	overall	5,92E+11	8,38E+11	-1,159348	7,32E+12	N=242
	between		5,62E+11	-0,6469644	2,07E+12	n=11
	within		6,44E+11	-1,12E+12	5,84E+12	T=22
GDP per capita	overall	3,20E+10	1,20E+11	306,1686	7,75E+11	N=242
	between		1,06E+11	634,4692	3,52E+11	n=11
	within		6,52E+10	-1,89E+11	4,55E+11	T=22
Population	overall	2,70E+08	4,28E+08	2256,731	1,34E+09	N=242
	between		4,46E+08	5263,523	1,26E+09	n=11
	within		3,93E+07	8,36E+07	4,51E+08	T=22

According to the results from the Table 4.9; two macro-economic variables, "GDP" and "population" are found to be significant for the other G-20 countries in the first model. GDP per capita is again found to be insignificant in explaining our dependent variable gold reserve levels of countries. It can be thought that this situation may cause some multicollinearity since GDP per capita include both population and GDP in its formula.

Two significant variables explain just 33% of variations in gold reserve levels of other G-20 countries according to R-square results. The signs of coefficient estimates are showing that gold reserve levels are increasing as the GDP level of a country rises; but population is showing reverse relation

with the reserve level since as the population of a country increases, gold reserve level is decreasing.

Secondly, the analysis of Model 2, which is used for the effects of both macro-economic variables and trade related variables, is constructed for the other G-20 countries. The descriptive statistics are shown in the Table 4.7. The same analysis is run and there was not any problem with the results in analysis of the variations between and within countries.

Table 4.7: Descriptive Statistics Results (other G-20, Model 2)

Variable		Mean	Standard Deviation	Minimum	Maximum	Observations	
Imports of Goods&Services	overall	9,90E+07	5,99E+08	-9,86E+08	5,67E+09	N=242	
	between		3,28E+08	10,62925	1,09E+09	n=11	
	within		5,11E+08	-1,98E+09	4,68E+09	T=22	
Exports of Goods&Services	overall	24,59293	11,43007	5,363939	67,78293	N=242	N=154
	between		9,678299	11,03099	44,29137	n=11	n=7
	within		6,71857	-14,3345	48,08449	T=22	T=22
Fuel Imports	overall	5816306	1,85E+07	0,002742	7,36E+07	N=242	N=154
	between		1,93E+07	0,2072326	6,40E+07	n=11	n=7
	within		1781420	-4032666	1,55E+07	T=22	T=22
Energy Imports	overall	-47,5515	115,331	-569,1887	86,14187	N=242	
	between		115,9907	-360,9813	81,84078	n=11	
	within		31,93332	-255,7589	95,7829	T=22	

According to the 2nd Model's estimation results in Table 4.9, two macro-economic variables are found to be significant. "GDP" and "population" again

enter significantly. In the second model, the sign for population is positive contradicted to first model. From trade related variables, just "energy imports" is seen to be negatively significant in explaining gold reserve levels. After inclusion of trade related variables into the model, the explanatory variables started to explain 69% of variations in gold reserve levels of other G-20 countries compared to 33% in the previous model.

Thirdly, the analysis of Model 3, which is used for the effects of all the independent variable groups, is constructed for the selected G-20 countries. In the third model, finance-related variables are added into the regression and the estimation is run for the effects of overall independent variables. The descriptive statistics are shown in the Table 4.8.

Table 4.8: Descriptive Statistics Results (other G-20, Model 3)

Variable		Mean	Standard Deviation	Minimum	Maximum	Observations	
Private Capital	overall	2,249839	2,91752	-10,78084	15,41286	N=242	
Flows	between		1,254004	0,3962423	4,298549	n=11	
	within		2,660154	-8,92724	15,15946	T=22	
Net FDI	overall	1,855685	1,807938	-3,53555	9,678341	N=242	N=154
Liabilities	between		0,9503066	0,6071336	3,728556	n=11	n=7
	within		1,56341	-4,236582	9,440056	T=22	T=22
Financial	overall	2,003076	6,215781	-1,85564	27,44088	N=242	N=154
Openness	between		6,362138	-1,254297	20,8702	n=11	n=7
Index	within		1,298522	-5,502021	8,573758	T=22	T=22
Current	overall	1,414777	7,064466	-20,94578	28,53815	N=242	
Account	between		5,169021	-4,421269	14,29606	n=11	
Balance	within		5,051345	-25,84066	23,64327	T=22	

According to the 3rd Model's estimation results, not a different result is extracted from 2nd Model in terms of macro-economic variables. The only difference is the sign of the "population" which is seen as negative again as in the first model. For the trade related variables, "exports of goods and services" enters significantly in the third regression with again "energy imports" as in the second analysis. "Energy Imports" gets positive sign in this part. Additionally, three finance related variables are found to be significant in explaining the gold reserve levels in the third model which are "financial openness index", "current account balance" and "private capital flows". First two variables are seen with a negative sign while "private capital flows" is seen to effect the reserve levels positively. Just the "net FDI liabilities" is not a good indicator in explaining the gold reserve levels. The overall regression result is showing us that the explanatory variables explains 59% of variations in gold reserve levels of selected G-20 countries. The best R-square value is seen in the second model with the value of 69%.

Table 4.9: Estimation Results for other G-20 Countries

	Variables	1st Model	2nd Model	3rd Model
Macro Economic Variables	GDP	1,140498 [0,1792]	0,00524 [0,0003]	1,28029 [0,1779]
	GDP per capita	....	....	....
	Population	-2,127391 [1,01015]	3,622067 [0,5986]	-4,746578 [1,2356]
Trade Related Variables	Imports of Goods and Services		....	....
	Exports of Goods and Services		....	0,0275194 [0,01229]
	Fuel Imports		....	....
	Energy Imports		-8121370 [2038056]	0,0150571 [0,00287]
Finance Related Variables	Net FDI Liabilities			....
	Financial Openness Index			-0,184767 [0,09524]
	Current Account Balance			-0,05908 [0,0211]
	Private Capital Flows			0,053239 [0,023515]
	Constant	29,77925 [15,12882]	-2,30E+09 [5,51E+08]	74,36585 [19,45]
	# of Observations	242	242	242
	R-Square	0,33	0,69	0,59

4.4.3. Comparison Between G-7 and other G-20 Countries

The empirical model for the determinants of gold reserve levels have shown different results for the two sample groups. While GDP in terms of current US dollar is the only significant variable in both of the sample groups for all three models; other macro economic, trade related and finance related variables differs according to sample country groups.

In Table 4.7, only the significant results are shown for three models and two sample groups. The distinction between positive and negative sign coefficients are made with the help of bold and italic characters. The significant variables with a positive sign is shown with bold and italic characters while the other style is the significant variables with a negative sign.

Table 4.10: The Comparison between G-7 and G-20 Countries

	Model 1	Model 2	Model 3
G-7 Economies	*GDP* Population	*GDP* GDP per capita *Imports of goods and services* *Energy imports*	*GDP* GDP per capita *Imports of goods and services* *Energy imports* *Net FDI liabilities*
Other G-20 Economies	*GDP* Population	*GDP* *Population* Energy imports	*GDP* Population *Exports of goods and services* *Energy imports* Financial Openness Index Current Account Balance *Private Capital Flows*

For the first model which the selected macro economic variables are considered, the results are the same for G-7 and other G-20 countries group.

GDP is effecting the gold reserve levels significantly with a positive sign while population is the second significant independent variable in explaining the gold reserve levels of selected countries by its negative sign. In the literature, it is possible to see examples of both situation. Some studies have findings of positive impacts of GDP on reserve levels (Fang-Yuan & Jun-Guo, 2013), while some others support the negative impacts of GDP (Cheung & Ito, 2009) on reserve levels depending on their empirical studies. But from the results, it can be clearly seen that, when a country's GDP is getting higher, also its gold reserve levels are increasing. There is a positive correlation between the two while population variable gives the expected sign as negative according to the size effect theory in the literature.

For the second model which the trade related variables are included with again the macro economic, the results differs for G-7 and other G-20 countries group. GDP again enters as significant for both country group. But population is not significant anymore for the G-7 countries in explaining the gold reserve levels while for the other selected G-20 countries, it is included in the results with a positive sign. In terms of trade related variables, "imports of goods and services" and "energy imports" are positively significant for G-7 countries while for other G-20 countries, just the "energy imports" is significant with a negative sign. Those variables are selected because of their importance since most of the countries in the analysis are energy (and especially fuel) importers.

As far as the results show, when just the two groups of variables are considered, more developed (G-7) countries tend to hold more reserves with respect to their imports. For the other selected G-20 countries, gold reserve holdings are decreasing as their energy imports rises. Actually, it can be understandable that the propensity to import is positively correlated with the reserve levels. When an increase is seen in the propensity to import,

marginal cost of balance of payment adjustments decreases. So the demand for reserves are also diminishes. The situation is not always as it is used to be when the subject is developing countries.

In the third model, third independent variable group is included in the model, namely "finance related variables". This last model can be considered as the final and overall model for our anlysis since all three groups of variables are included. The comparison and conclusion will be done according to this model. In the overall model, again some differences can easily be seen for G-7 and other G-20 countries. The most important difference is in the finance related variable side. Just "net FDI liabilities" is significant for the G-7 countries while three finance related variables enter significantly in the analysis of other G-20 countries namely "financial openness index", "current account balance" and "private capital flows". It is impossible to see "net FDI liabilities" as significant for other G-20 countries. So, the finance related variables are completely different for the two selected groups.

In conclusion, it is found that the population is not important in advanced economies while it is seen significant in other countries. This is an important indicator showing the shift from advanced economies to emerging economies after the financial crisis. In the other G-20 countries group which consists of emerging economies, the overpopulation is a proxy for growing markets and rapidly increasing demand.

For G-7 countries which consists of advanced economies, imports of goods and services gives positive results while for other G-20 countries exports of goods and services is positively significant. This shows that G-7 countries produce less and they mostly use the other economies' productions and savings. This situation is actually a contradiction. When the exports of goods and services of emerging countries increases, the gold reserves are also

increeasing. It means that those economies are healthier than the advanced economies.

Within the context of finance related variables, it can be easily depicted that net FDI liabilities are positively significant for G-7 economies while for other G-20 economies, there is a positive relation between gold holdings and private capital flows. When a country has much of an external debt, it can be considered as risky since it is open to external shocks. So according to precautionary motivation, this mentioned country should hold more reserves. It is commonly said that economies with high level of exposure to external financing, should hold high levels of reserve.

This comment is mostly true for developing countries with inefficient financial sectors that makes them vulnerable to the side effects of capital reversals. In our case, it is relevant for G-7 economies. The result is very consistent with the structural characters of advanced and emerging economies. Advanced G-7 countries became economies that give foreign capital instead of taking from others. That's why, as their net FDI liabilites increase, also gold reserve holdings increase. On the contrary, private capital flows are important for emerging countries because their economies became dependent to this. Consequently, private capital flows are significant for their economies' flow.

It is generally accepted that, when there is a capital inflow, economy growth is rising and when there is an outflow, it destroys the economy and may cause a crisis. Private capital flows[6] are important in that sense. If a sudden

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[6] *"Private capital flows consist of net foreign direct investment and portfolio investment. Foreign direct investment is net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. The FDI included here is total net, that is, net FDI in the reporting economy from foreign sources less net FDI by the reporting economy to the rest of the world. Portfolio investment excludes*

stop in inflows of capital occurs, the situation can get very hard for the economy but in the literature the international reserve accumulation is not seen as the best insurance against sudden stops (Cheung & Ito, 2009). Also it is mentioned that emerging economies hold more reserves in order to secure FDI inflows from the core country (i.e. the US) and to guarantee importation of financial intermediaries from abroad. That's why, it is not surprising for the countries other than G-7 to have a positive correlation between their private capital flows and reserve holdings levels.

Current account balance results can also be seen as expected with its negative significance. When current account balance increases, gold reserve holdings decreases. As the economies give current account deficits, they also spend from the gold reserves they hold. Ultimately, this situation turns into a crisis. Lastly, for financial openness, it is depicted that, when countries financial systems begin to open more to foreign world, their motivation for gold diminishes.

Those can be considered as the differences between G-7 and G-20 countries. For the similarities, GDP levels can be counted in the first place. For both groups of countries, there is a positive relation between GDP levels and gold reserve holdings. It is an expected result that, when the economy grows, an increase in the need for gold reserves is also seen.

Furthermore, energy import is sensitive to gold reserve holdings of central banks. This shows that the dependence for energy is important for both groups. When energy dependence increases, gold reserves are also increases.

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liabilities constituting foreign authorities' reserves and covers transactions in equity securities

CHAPTER 5

DISCUSSIONS OF THE TURKEY'S ROLE IN THE NEW INTERNATIONAL MONETARY SYSTEM AND CONCLUSIONS

5.1. Turkey's Share in the Global Gold Reserves

According to the report published by the World Gold Council, top 25 countries possess the following amounts of gold reserves as of February 2012:

Table 5.1: Selected Countries' Gold Reserves

Ranking	Countries	Reserves	Ranking	Countries	Reserves
1	United	8133,5	14	Portugal	382,5
2	Germany	3396,3	15	Venezuela	372,9
3	IMF	2814,1	16	Saudi Arabia	322,9
4	Italy	2451,8	17	United	310,3
5	France	2435,4	18	Lebanon	286,8
6	China	1054,1	19	Spain	281,6
7	Switzerland	1040,1	20	Austria	280,0
8	Russia	883,3	21	Belgium	227,5
9	Japan	765,2	22	Turkey	179,1
10	Netherlands	612,5	23	Algeria	173,6
11	India	557,7	24	Philippines	162,8
12	ECB	502,1	25	Thailand	152,4
13	Taiwan	422,4			

and debt securities." Source: World Bank Indicators

Countries' total reserves for the period of 1990-2000 show Chinese domination rather than a US one, unlike the gold reserves. Before 2004, Japanese reserves were higher than Chinese reserves, but after 2004, a significant rise in Chinese reserves is notable. Since these data demonstrate total amounts of reserves, they include countries' gold reserves.

Table 5.2: Turkey's Share of Global Gold Reserves

Years	World ($)	Turkey ($)	Share of Global Reserves
2000 (4th Quarter)	291.715,14	1.026,09	0,3517%
2001 (4th Quarter)	291.412,31	1.032,13	0,3542%
2002 (4th Quarter)	361.818,57	1.296,04	0,3582%
2003 (4th Quarter)	426.350,97	1.553,79	0,3644%
2004 (4th Quarter)	438.948,03	1.626,02	0,3704%
2005 (4th Quarter)	507.042,69	1.914,94	0,3777%
2006 (4th Quarter)	617.191,81	2.359,15	0,3822%
2007 (4th Quarter)	800.683,30	3.112,24	0,3887%
2008 (4th Quarter)	835.155,00	3.246,62	0,3887%
2009 (4th Quarter)	1.062.540,19	4.059,44	0,3821%
2010 (4th Quarter)	1.387.759,59	5.246,48	0,3781%
2011 (4th Quarter)	1.522.079,48	9.614,87	0,6317%

5.2. Turkey's Position within G-20

Despite the fact that Turkey accounts for 1.1% of the global GDP, it ranks third, after Argentina and China, among G-20 countries in terms of growth

with a growth rate of 8.5%, based on the data of the third quarter of 2011. Turkey ranks 11th in terms of population and 13th in terms of per capita income. Turkey will have the term presidency of G-20 in 2015, following Mexico (2012), Russia (2013) and Australia (2014). In the G-20 Foreign Ministers Summit, held in February 2012 in Los Cabos, the role that G-20 is supposed to play in overcoming obstacles in front of solving global problems and in achieving a more effective global governance was discussed. Moreover, other important issues were also addressed such as problems in the Middle East, economic crises, environmental problems and poverty. Turkish Foreign Minister Ahmet Davutoğlu, in his speech at the opening session of the summit, emphasized on the increased importance of G-20 after the Cold War and suggested that institutions in the global system need to be reformed and new approaches need to be developed in the near future. He also pointed to the direct link between the political system and economic growth; stating that economic issues lead up to a much wider area of responsibility that comprises political matters. By touching upon the support that Turkey has been providing to the Least Developed Countries and stating that Turkey has promised to provide aid to these countries amounting to 200 million USD every year as part of the Istanbul Action Plan; he suggested that a common mechanism should be formed with the aim of bringing together G-20 countries and the Least Developed Countries. Davutoğlu, who also pointed to the environmental problems in his speech, underlined the necessity to raise global awareness in this regard (Republic of turkey Ministry of Foreign Affairs, 2012). Turkey, which is the 16th largest economy of the world and the 6th largest one in Europe, sees G-20, which brings developed and developing countries together, as the most appropriate platform in addressing international financial and economic problems and attaining the coordination of global attempts to solve the economic crisis.

5.3. Conclusions

It is still being observed that the effects of the global financial crisis are clearly felt and people try to take measures, come up with new ideas and present much more marginal reform proposals accordingly. Although hearing such reform attempts from someone in a prominent position in the global economy spurs multifarious reactions, it nevertheless propelled everyone to think and discuss for attaining the best. In this respect, while some think that a return to the gold exchange system would be possible, some others believe that such a change could never be the case. As it is discussed so far, there exists a global consensus on the existence of problems regarding the dollar reserve system and quests are ongoing for a new global reserve money system to replace the USD.

In this study, all these different opinions, solution proposals as well as the potential outcomes or damages that the gold exchange system would bring about to the global economic system are addressed. The course that will be taken by this debate started clearly by Zoellick is uncertain, however, it is clear that the system we have now has come to an end. This uncertain situation that the international monetary system encountered following the Bretton Woods is discussed, and various opinions about the possibility of a return to the gold standard is presented.

Then, by analysing the available gold reserves on the globe, the distribution of these reserves are addressed. Accordingly a tendency in gold reserves to grow; not only globally but also at the scale of individual countries is observed. Although Turkey is among these countries, its foreign exchange reserves are still very much above its gold reserves. In conclusion, whether as a part of a new exchange system or not, the rise in countries' confidence

in gold is quite visible. This can be easily inferred from the amounts of reserves they hold in gold.

In this content, in order to see the factors influencing the gold holding decisions of selected G-20 countries, a panel data empirical analysis is run. In consistency with the literature, the results has come up differently among G-7 and other G-20 countries. In all the three models used, different results is seen for both country groups. "GDP" was the only significant variable in explaining gold reserve holdings of central banks in all models for both groups. The results were as expected since the advanced economies in G-7 and emerging economies in ther G-20 countries has different structural characteristics.

According to their gold reserve reactions for imports and exports of goods and services, advanced economies are less productive than the emerging countries and they use other economies productions. Also with this outcome, it can be said that emerging countries are healthier than advanced countries since they trust on their own productions.
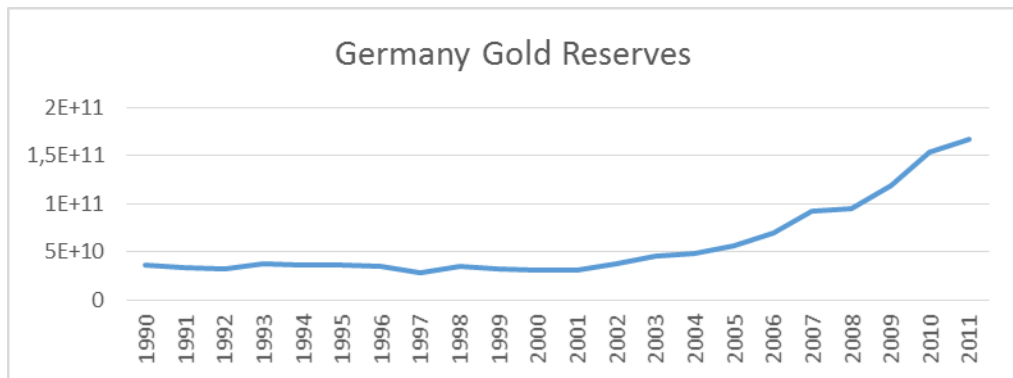
Also both groups are dependent to energy imports. There is strong positive relation with energy dependence and gold holdings. The other important thing to mention is that advanced economies became more of a supplier for the foreign capital, not demander. Additionally, private capital flows are important for emerging economies since their economies become dependent to those flows. Lastly it was another outcome that current account balance has positive relation with gold reserve holdings because of emerging countries deficit position is leading them to spend also from their gold reserves.
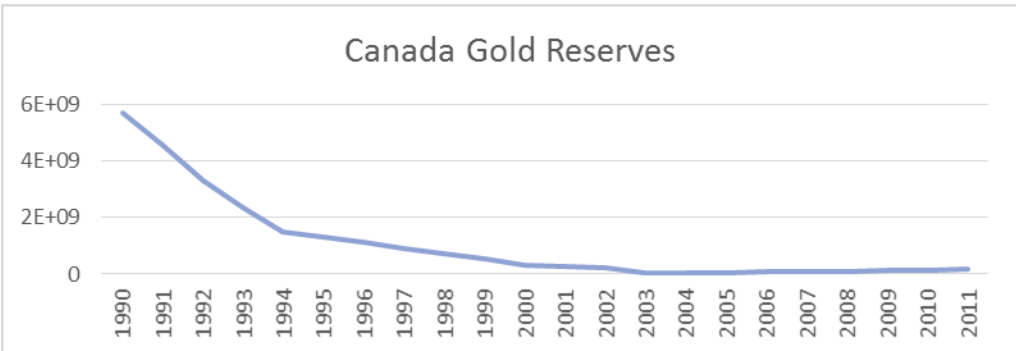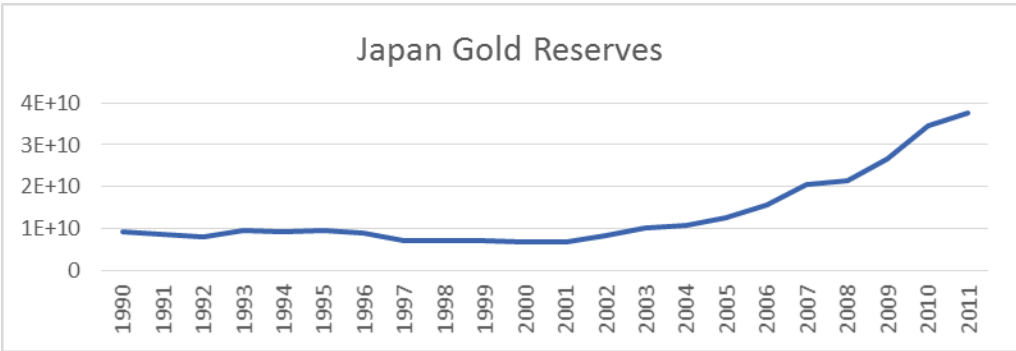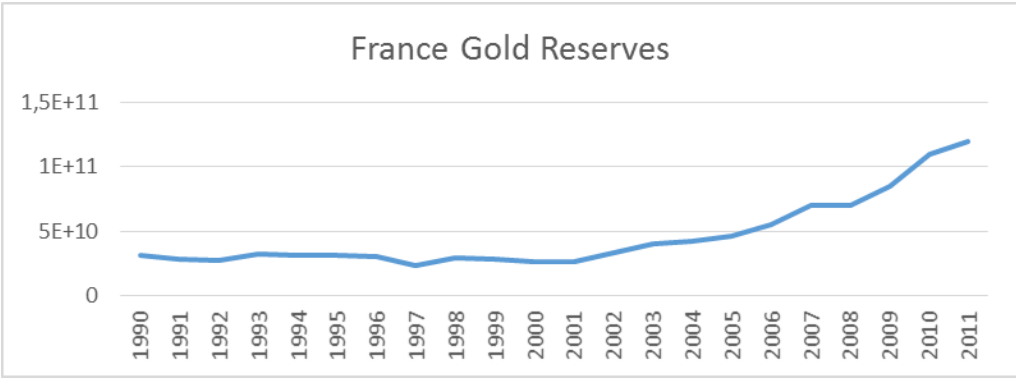
In addition to this empirical study, time series change of the gold reserve holdings of central banks of G-20 countries are examined and fixed effect is observed in majority of the graphs. This shows the consistency of the model constructed (Appendix).
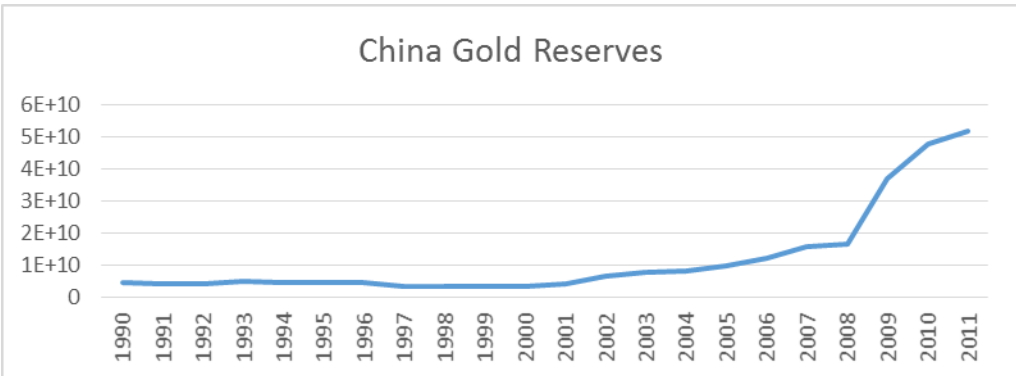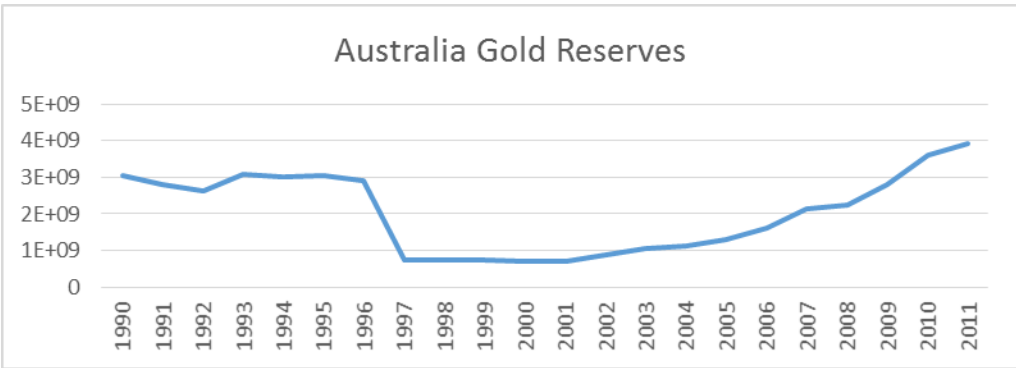
Last but not least, such gravitation towards gold and significant rises in gold prices render gold as the biggest candidate that a newly introduced system to be considered. Turkey continues to contribute to global governance reforms by actively participating in the works of G-20 at every level.
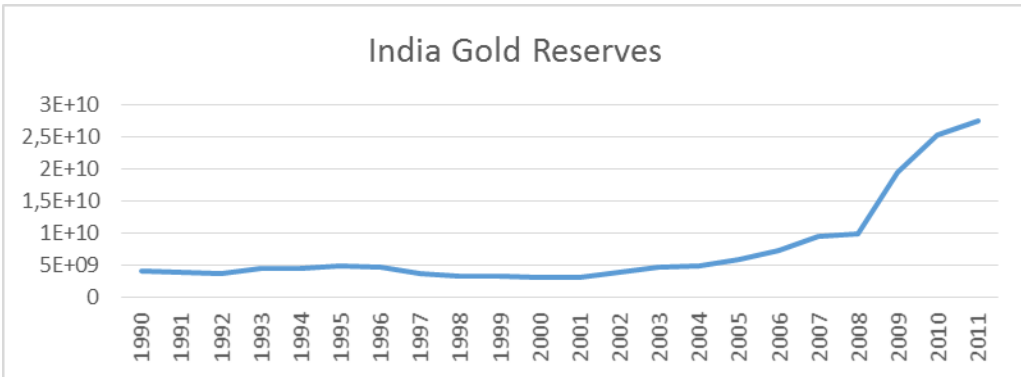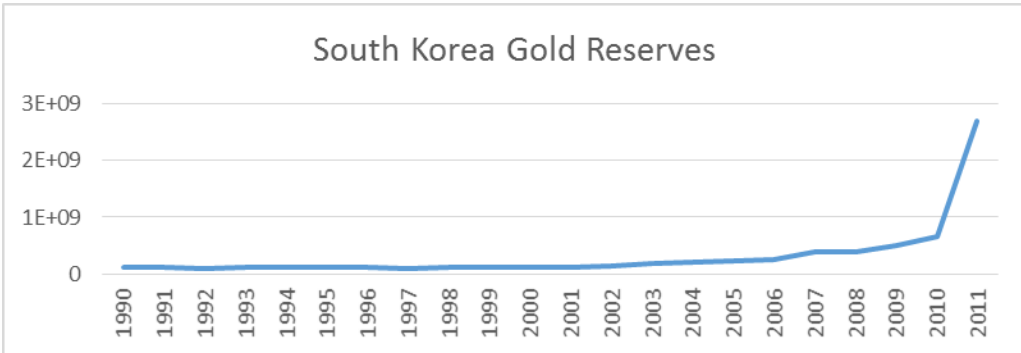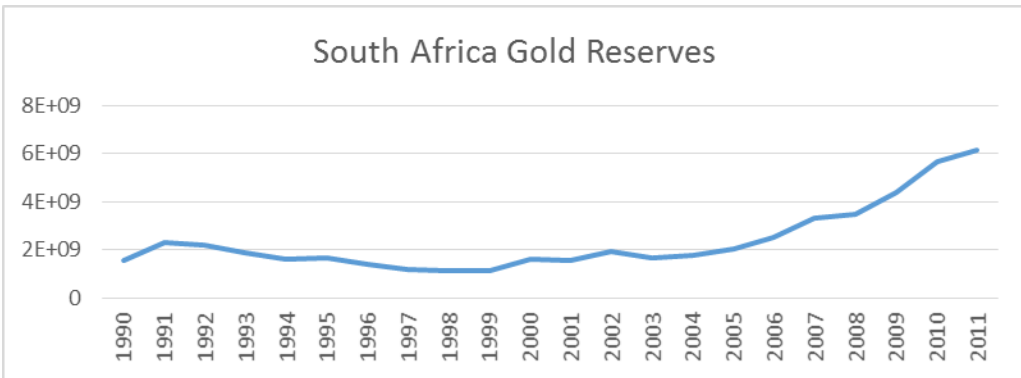
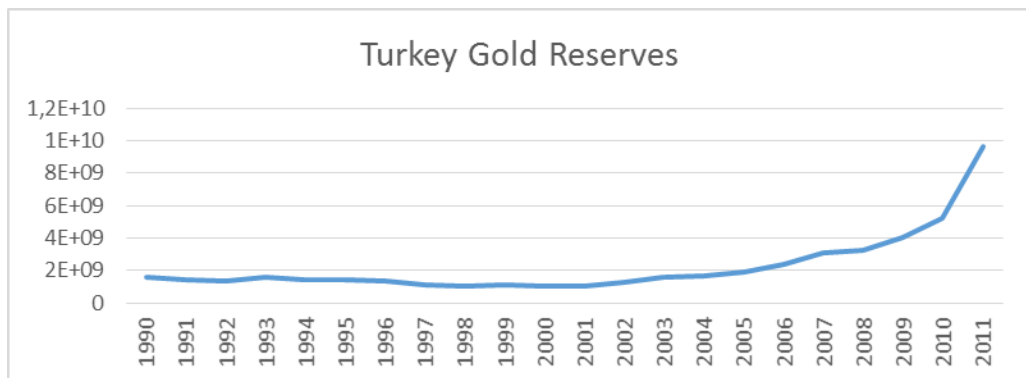# APPENDIX

GOLD RESERVE GRAPHS OF SELECTED G-20 COUNTRIES

USA Gold Reserves

Germany Gold Reserves

UK Gold Reserves

France Gold Reserves

Italy Gold Reserves

Japan Gold Reserves

Canada Gold Reserves

Argentina Gold Reserves

Australia Gold Reserves

Brazil Gold Reserves

China Gold Reserves

Indonesia Gold Reserves

South Africa Gold Reserves

South Korea Gold Reserves

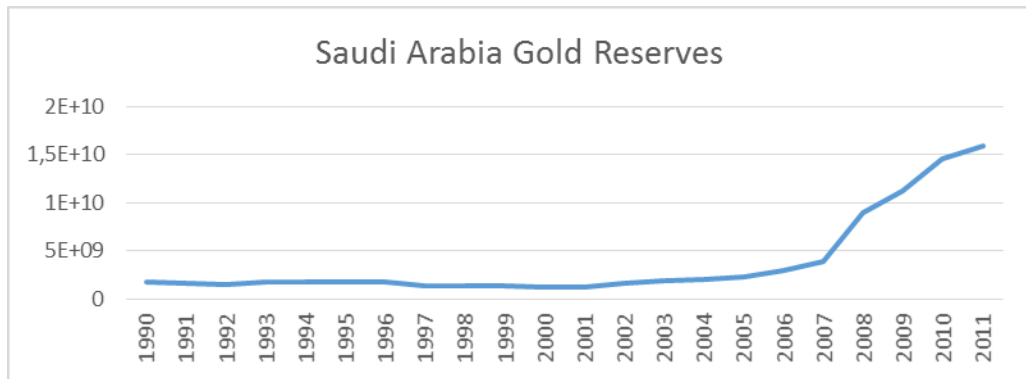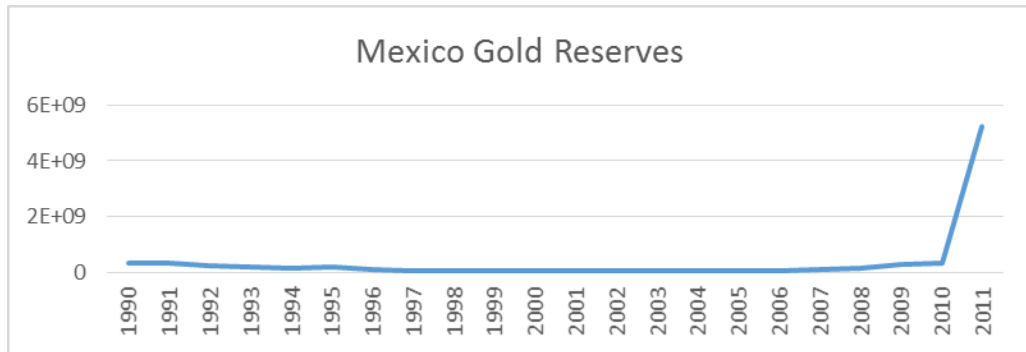India Gold Reserves

Mexico Gold Reserves

Saudi Arabia Gold Reserves

Turkey Gold Reserves

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