MA in Politics & Economics of Contemporary Eastern & Southeastern Europe

Banking Systems in Currency Crises

The Cases of Russia and Turkey

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Abstract: The purpose of this thesis is a literary review on the role of the banking systems in the financial crisis that happened in Russia and Turkey in 1998 and 2001. The majority of the literature shows that the banking sectors in both countries had a large and similar role in the developments of the financial instabilities of both countries that led to the crises. Both were operating in an unstable, unfavorable and unsupervised environment.

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INTRODUCTION

In 1998, after more than ten years of serious economic and political instability, the economy of Russia experienced a financial crisis. The result of the crisis was that the Russian national currency, the rouble, lost more than 66% of its value in one month. The Russian economy had a negative growth of 4,5% for that year.

In 2001, the Turkish economy was also hit by a financial crisis, also after a long period of economic and political instability. The result was the same as it was for Russia. The lira, the national currency of Turkey, lost more than 30% of its value and the economy had a negative growth of 5% in that year.

The roles of the banking systems of both Russia and Turkey were important. With their actions in the years before and during the crises they increased the instability of the economies in which they were functioning. But, both the Russian and Turkish political environment of those years affected the way in which the banks could function.

The purpose of this thesis is to describe the banking sectors of the two countries, how they were functioning and what their role was in the crises of 1998 and 2001.

The thesis will analyze the factors that lead an economy to experience a financial or currency crisis. This is done with the help of a literature review of theoretical models that were developed for this purpose. The financial and political situations of Russia and Turkey will be analyzed by looking at macro economic factors such as current account balance deficits, government debts and government economic policies.

The banking systems of the two countries and their role in the crises will be explained through an analysis of some of the key indicators of the banking systems. The two crises in Russia and Turkey will then be explained with emphasis on the roles the banking systems played in them. After a description of the aftermath of the crises in both countries, the paper will continue with a comparison in between the two crises and what lead to them.

Although there are differences between the Russian and the Turkish economies, there are very large similarities in the way they both acted before the crisis. Both countries had political instability, and this did not allow a healthy and stable financial banking sector to develop. Turkish and Russian politicians used the banking systems of their countries for short term policies that were problematic for the stability of the economy. Other similarities that have been found were factors such as debt, public deficits and inflation.

These factors, in combination with a pegged exchange rate make a country to have more chance to experience a financial crisis like Russia and Turkey in 1998 and 2001.

In conclusion, banking systems and their actions are an important part of the explaining currency crises. However, their structure and their actions are determined by government policies. In the end, it is the government that has to supervise, regulate and ensure the stability of the banking sector and the economy in general.

I. FINANCIAL CRISES

1.1. Description

In their 2005 study, Chiodo and Owyang define a currency crisis as a speculative attack on the currency of a country. When investors believe that a currency is about to devaluate, they usually try to sell this currency. Because of this, the currency eventually loses its value anyway. If a country has large external debt in foreign currencies, it means that eventually it will not be able to pay off its debt because of the higher rate of exchange. This leads to the country defaulting on its public and private debt.

These types of crises usually happen to economies with their currency pegged to foreign currency (Krugman, 1979; Aschinger 2001).

A currency is pegged to another currency when the exchange rate is kept at a fixed level. This is done by the central bank, which is buying and selling its currency with its foreign currency reserves, like US dollars. By buying and selling the national currency, the central bank can control demand and supply, and therefore the price.

Literature shows that investors fear that the government will start printing money to finance its budget deficit and its public debt. This will lead to a devaluation of the currency. Because of this, they start selling the currency. At some point, the central bank will not be able to buy its national currency anymore, because they run out of foreign currency.

If the government stops buying the national currency, this allows the exchange rate to go up. This results in the currency losing its value, or to devaluate. The currency is not pegged anymore. It loses its value and the country defaults, it is not able to pay its debt.

The crises in Russia (1998) and Turkey (2001) are considered to be currency crises.

1.2. Explaining Crises

Over the years, researchers have found different models to explain why and how these crises happen. These models are grouped in three generations.

Krugman (1979) and Flood and Garber (1984) were the first to try to explain why and how these crises happened. They found that currency crises usually happen when countries have a national currency that is fixed to another currency and when they have a current account deficit. Krugman says in his article that when a country has an increasing current account deficit, investors believe that a national currency is going to lose its value. They believe that the country is going to try to pay the deficit by printing money, which is going to decrease the value of the currency. Because of this, they are selling the currency. When the investors sell their currency, the value of the currency decreases anyway. Because the exchange rate is fixed, the central bank is trying to keep the value of the currency equal. It does this by buying the national currency with foreign currency. As explained above, at some point the

central bank will not have any foreign currency left, or will have a very low reserve of foreign currency. When investors understand that the central bank is not able to keep the exchange rate pegged, they are buying foreign currency to get rid of national currency. The bank then cannot buy anymore national currency and stops doing so. The pegged exchange rate is left. The currency is now free and devaluates. Immediately after, the country defaults. Krugman believes that when a country has a fixed exchange rate, a crisis like this is going to happen anyway.

When more crises happened in the 1980's and the 1990's, researchers started to see that some crises happened immediately after other crises in other countries. The models of the first generation did not explain this. Eichengreen, Rose and Wyplosz (1997) tried to explain how different crises in different countries were connected. In their research they proved that a crisis in one country can cause the same type of crisis in other countries as well. This can happen because of very large trade relations between the countries or because the situation of their economies and their policies are the same. They also found that big changes in the prices of natural resources such as oil can lead more than one country to have a currency crisis.

The third generation of the models that try to explain the currency crises analyze the role of the banking system as well. Chang and Velasco (2001) and Krugman (1999) found in their studies that when the banking system of a country is not stable, the chances of that country having a currency crisis are higher. This is because if the banking system is not stable enough, the banks are not able to give loans to companies in the real economy. This means that the economy is not able to grow and at some point will start having the symptoms of the first and second generation models. The models of the third generation found that a currency crisis is the result of a combination of these factors:

- High debt of the country
- Low reserves of foreign currency in the central bank
- Low income of the government from tax
- Low loans of private banks to companies in the real economy
- Investors believing that the national currency will lose its value

(Chang and Velasco, 2001; Krugman, 1999)

1.3. Determinants

Most of the researchers agree with the reasons for currency crises that were found by the three generation models (Cuaresma and Slacik, 2008; Licchetta 2009). All the factors of the three generations are:

- High debt of the country,
- Large current account deficits,
- Believe that the currency will devaluate
- A banking system that is not stable

- Pegged exchange rate
- Low income of the government by taxation
- Other countries that are having a crisis as well
- Large changes in the price of natural resources.

Some researchers also found that these crises have a bigger chance to happen in countries that are developing and have a lower GDP (Licchetta, 2009). Demirguc-Kunt and Detragiache (1998) found that inflation is also very important in understanding why and how crises begin. The higher the inflation of a country, the more the currency loses its value.

There are also factors that are not economic but still are important in trying to explain currency crises. Emmerling (2004) found that politics and political instability are also important. If a country has unstable politics, there are more chances that it can have a currency crisis at some point (Chang, 2006).

When a government has not a strong support in the public of a country and is not supported in comparison to the opposition, the chances for a currency crisis are higher. This is also true when the government of a country has recently changed (Leblang and Satyanath, 2003).

If a government of a country cannot or does not want to change its economic policies when this is needed, international financial organizations and institutions like the International Monetary Fund (IMF) are more sceptical to lend money to that country. This way, the country may have problems to finance its current account deficit or its debt. (Consetti, Pesenti and Roubini, 1999).

Consetti, Pesenti and Roubini (1999) found that when a country has political instability, they are also usually having a larger current account deficit. This is one of the factors of the three generation models and can lead to a currency crisis.

So, next to the economic factors from above, these political factors are also important:

- Political instability in general,
- Small support of the government
- Recent government changes
- Governments not able to make necessary economic changes
- Governments not willing to make necessary economic changes.

When all these factors are combined, the chances of a country having a currency crisis at some point are higher than when these factors are not present.

II. THE RUSSIAN CRISIS OF 1998

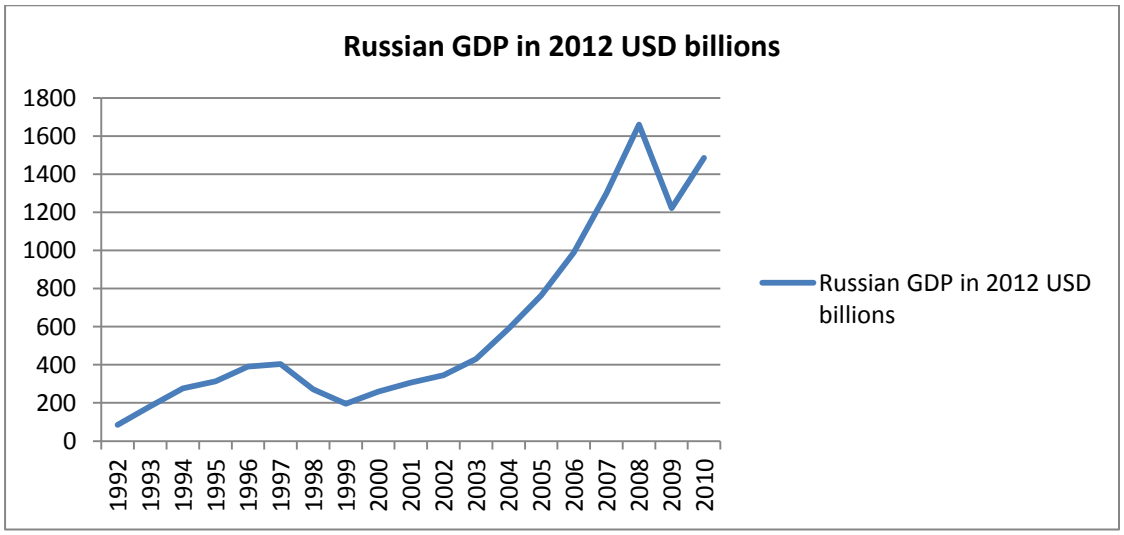
Russia

Russia is officially known as the Russian Federation. It is the officially recognized continuation of the former Soviet Union. The country has around 140 million inhabitants, of which 11 million live in the capital, Moscow, and another 5 million in Saint Petersburg, the second largest city of the country.

2.1. Brief Description of the Russian Economy

The economy of Russia is the 8th largest economy in the world (CIA World Factbook, 2010). The national currency of Russia is the rouble. The Russian economy is called a transitional economy as it moves from being a completely planned economy to a market economy. The country is a member of the World Trade Organization since 2012. Russia belongs to a group of developing economies called BRIC. This group also includes Brazil, India and China. Figure 1 shows the development of Russian gross domestic product (GDP) in 2012 USD billions from 1992 to 2010 (IMF, 2011).

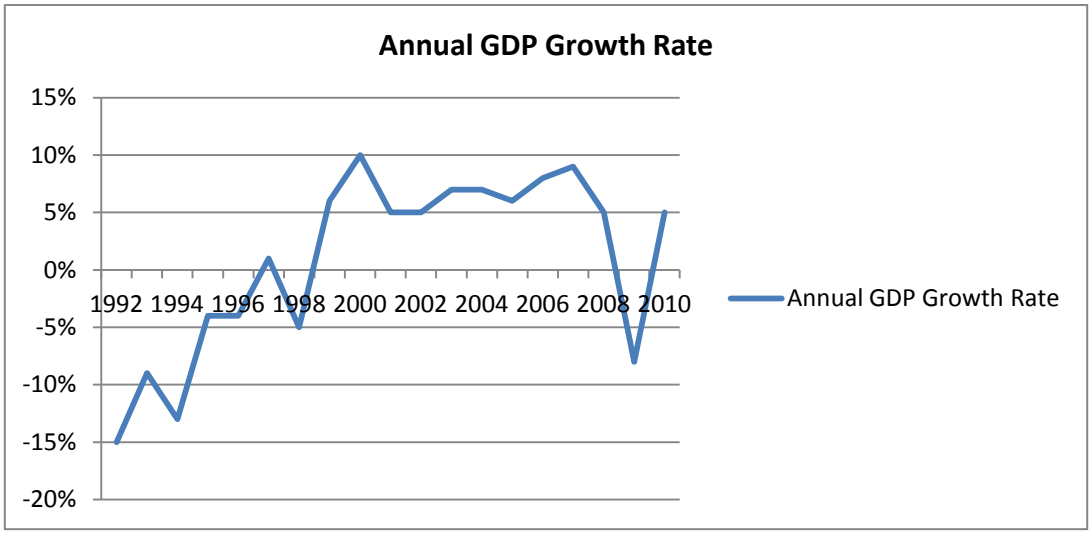
Figure 1 Russian GDP from 1992 until 2010, in 2012 USD billions



Source: IMF (2011)

Figure 2 shows the annual growth rate of the Russian economy for the period from 1992 until 2010. Since the crisis of 1998, the economy of Russia was growing every year with 5% to 10% until 2008, when the large international financial crisis happened (World bank, 2013).

Figure 2. Russian Annual GDP Growth Rate from 1992 until 2010

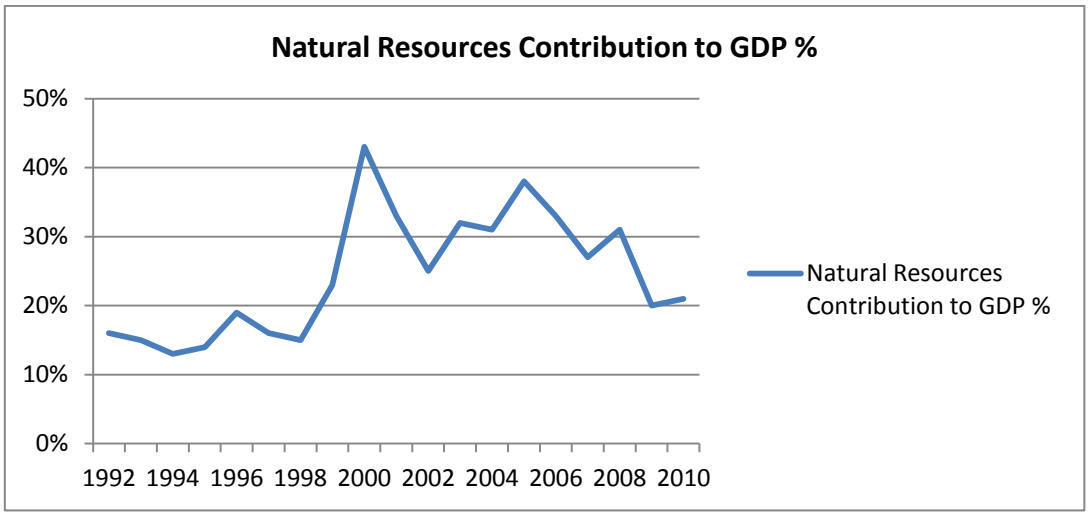


Source: World bank, 2013

A very large part of the income of the Russian state comes from natural resources such as oil and gas. Since 1992, an average of 25% of Russian gross domestic product came from natural resources. Figure 3 shows how important oil and gas are for the Russian economy. In 1999, when oil and gas had very high prices, more than 40% of the GDP of the country came from natural resources. In 1998, when the crisis happened, the prices of natural resources were very low.

Russia also has heavy industry, which produces chemicals, metals, machinery and defense equipment. (CIA World Factbook, 2013).

Figure 3 Natural Resources Contribution to GDP in percentages from 1992 to 2010.



Source: Indexmundi, 2013

2.2. Political Situation of Russia in the 1990's

The Russian Federation was founded in 1991 after the collapse of the Union of Soviet Socialist Republics, known as the USSR. From 1991 until 1999, the political situation in the country was very unstable. In the 1990's, the prime minister changed 7 times in 8 years. Only one prime minister was able to keep in government for more than 11 months (Fic and Saqib, 2006). These changes, which were made by the president of Russia B. Yeltsin, had the result that investors were slowly losing confidence in Russian politics and the economy (Chiodo and Owyang, 2002). Fic and Saqib (2006) show in their research that this political instability was a very important factor in explaining the crisis in 1998.

Not only the changes in government were important in Russian politics in the 1990's. Chiodo and Owyang (2002) and Steinherr and Klar (2005) found that Russian politicians were not able to make necessary changes to the Russian economy because there was no support in the opposition and the owners of large banks and companies. This group of owners of banks and companies are called oligarchs and they did not want any changes in the system that made them powerful. Russian politicians also had problems with collecting tax, leading to low income from taxation.

2.3. Structural Problems of the Russian Economy

When the USSR was replaced by the Russian Federation, the economy changed from a communist, planned economy to a capitalist market economy. This change was not free of problems. There was persistent macroeconomic instability, depression and an unstable political leadership (Akyuz and Rayment, 1998).

When the economy changed from being communist and planned to a market economy, the heavy industries and other organizations that were owned by the USSR were privatized. The new owners were the employees and managers of these companies (Sutela, 1999). This is called *insider ownership*, because the new owners were insiders of these companies and knew how to run them.

Most of these new owners, which are now known as *oligarchs,* did not want and were not able to organize their companies in such a way that they could improve them and make them competitive. They did not want to bring other investors to the companies from abroad or Russia itself. They also had problems with getting credit from the private banking sector. These insider owners started selling a large part of the machinery and real estate of their companies for their own gain. In general, the group was very problematic regarding necessary changes to the Russian economy in the 1990's (Akyuz and Rayment, 1998).

Because of low prices of natural resources and the problems in the Russian industrial sector, Russian GDP in 1996 was 40% lower than GDP in 1989 (World bank Database, 2013).

When the Russian Federation was founded and recognized as the continuation of the USSR, the country also took the responsibility to pay off foreign debt of the USSR. This debt was large and was a problem for the economy of the new country. After years of negotiations,

Russia and the holders of this debt agreed on the repayment in 1997 (Chiodo and Owyang, 2002).

From the founding of the new state of Russia in 1991 until 1999, the country exoerienced a current account deficit each year. This means that the country would spend more than its income. The income of the country was low because of the fall of production, low prices of natural resources that the country exports and because of low tax income. In 1994, the deficit of the current account was the highest, at 10% (Dabrowski et al, 2004).

In order to be able to pay for the current account deficit, the Russian government resolved to monetizing, which means that the central bank was used to print money. New laws in 1995 meant that this had to stop. Because of this, the Russian government had to start borrowing to pay for the deficit. The government did this by issuing bonds. These bonds were loans with a fixed interest. The Russian bonds are called GKO's and they were characterized by high interest and short maturities.

When the government started to use GKO's to finance the current account deficit, 85% of the money they raised went to this purpose. Because the maturity was short and the interest on the GKO's started to be higher, more and more of the money raised had to go to the payment of previous debt. In 1997, only 15% of the money raised with GKO's could be used by the government. The rest was used to pay the debt and the higher interest. In 1998, all the money that was raised with GKO's was used to pay off debt and interest (Sutela, 1999).

The Russian economy had a large problem with inflation. Annual inflation in 1994 was 875%, which means that the country was suffering from hyperinflation (World bank, 2013). When a country suffers from high inflation or hyperinflation, investors and the public start buying other currencies like US dollars, in order not to lose their investments and savings. When this happens, inflation becomes even worse. This was exactly the case of Russia in the 1990's (Rautava, 1995).

In order to stop this, the government tried to take measures in the second half of the 1990's. Russia had the exchange rate of its national currency to be fixed, or pegged to another currency. The currency they used was the US dollar, which is usually used in these cases (Araki, 1997). The Central Bank of Russia would buy or sell the national currency and try to keep the price of the currency between two values (Araki, 2001). The Central Bank was buying the Russian rouble whenever investors and the public were selling it. By doing this, the bank was keeping the exchange rate high. For a few years this worked. In 1996 and 1997 inflation was lower than before, at 48% and 15% respectively (World bank, 2013).

2.4. The Russian Banking System

In the 1990's, the Russian banking system was not stable. After almost 70 years of communism, the financial sector had to change in order to be able to operate in a free market economy. This change, called the transition from a planned to a market economy, was not without problems.

The communist banking system was called a monobank system, in which only one bank existed. The government used this bank, called the Gosbank, to control the financial sector of the country. The Gosbank was used to finance the industrial, agricultural and other sectors of the economy. It was also used to pay the employees.

In the 1980's, the president of the USSR, M. Gorbachev, set out to change the way the Soviet economy was working. Two more banks were created. One was called the Sberbank, where the public could deposit their savings. The other was called the Stroybank, which was used for lending money to companies in the industry, construction and agriculture (Worldbank, 2013).

In the Soviet banking system there were no financial products like in the free market systems such as checkbooks and credit cards. The savings of the public could be deposited at the savings bank (Sberbank) but with very low interest rates (Darushkin, 2013).

The new banks were controlled by the Soviet government and were owned by the Gosbank (Darushkin, 2013). When the Soviet Union collapsed and Russia was founded, the Gosbank took the role of being the Central Bank of the new country. It was now called CBR, or Central Bank of Russia. The banking sector changed into a two-tier system. One tier was the central bank, and the other were the commercial banks. The transition of the banking sector was relatively rapid. In 1992, only one year after the transition to a market economy, there were more than 1300 commercial banks operating in the country (Steinherr and Klar, 2005)

2.5. The Banking Sector of Russia before the Crisis of 1998

Following the transition from a monobank- to a two-tier system, the central bank (one tier) was now supervising and regulating the commercial banks (the other tier).

However, the commercial banks were not completely independent. Most of them were owned by government agencies or private groups which had great influence on the government. Almost all the banks were receiving subsidies and credits from the Central Bank of Russia.

Also, the commercial banks were used by the government to subsidize and give loans to chosen companies, usually owned by these private groups or oligarchs. The loans that the banks were giving to these companies were not paid back. This made the position of the banks very difficult (Bershkam and Rabuska, 1998).

So, while in name the system had changed, it was in many aspects similar to the system of the Soviet economy.

Commercial banks need saving deposits from the public in order to be able to give out loans to companies and individuals. The banks pay the saving depositors interest on the amount they deposit, and they are paid interest by the companies that take loans from them. But a very large problem was that more than 90% of all the saving deposits in Russia were held by the Sberbank. This means that if the commercial banks wanted to give loans to other companies, they were not able to. (Steinherr and Klar, 2005). Table 1 gives an indication of the household deposits held by the Russian commercial banks in the period from 1994 until 1998. The average for that period was 11,6%, while the EU-15 average for the same period was 115,2% (ECB, 2013).

Table 1 Russian household deposits as a percentage of GDP.

Year	**1994**	**1995**	**1996**	**1997**	**1998**
Deposits	*9,3%*	*11,1%*	*11,5%*	*12,5%*	*13,5%*

Source: International Monetary Fund, 2013

Giving loans and making profits on the interest was not only difficult, it was also dangerous. This was because the commercial laws of Russia changed continuously. These changes made it hard for the banks to know if they would get the loan back and if the companies were able to pay the high interest (Steinherr and Klar, 2005). The above factors led to commercial banks being crowded out from extending credits to the productive parts of the economy. In 1997, long-term commercial bank loans to non-financial sectors amounted not more than 1% of Russian GDP, which is extremely low (Barisitz, 2004). Table 2 gives shows the loans of Russian commercial banks to the private sector as a whole from 1994 to 1998.

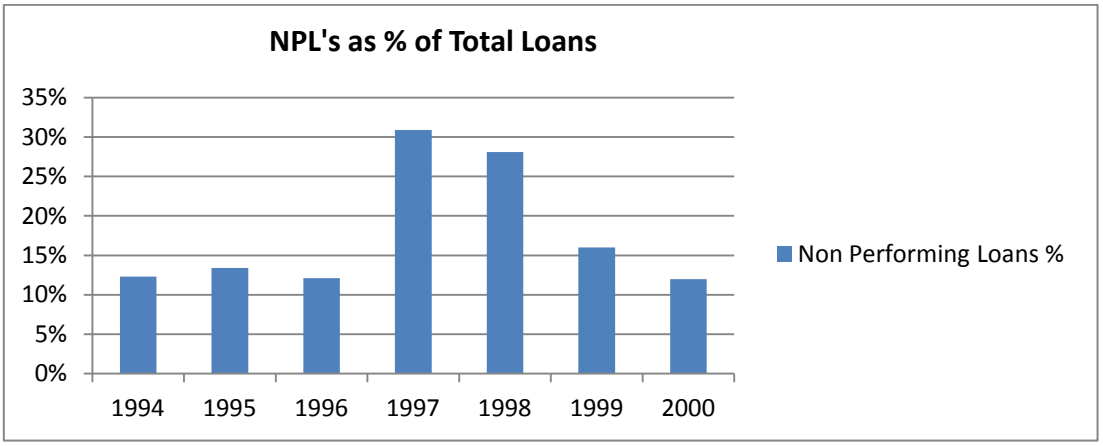
Table 2. Private sector credit as a percentage of GDP.

Year	**1994**	**1995**	**1996**	**1997**	**1998**
Privatate Sector Credit	*6,8%*	*8,3%*	*7,8%*	*9%*	*11,4%*

Source: World bank, 2013

It should be noted that private sector credit as a percentage of GDP in the EU-15 area averaged at 124% for that same period. Even for a transitional economy, the Russian average of 8% is considered low (ECB, 2013). Figure 4 shows the non-performing loans (NPL's – loans of which interest and capital have not been paid for 90 days) of the Russian banking sector as a percentage of total outstanding loans. Throughout the 1990's non-performing loans were consistently above 10% of total loans. In 1997, one third of all loans were considered NPL's, suggesting bad quality of Russian banks credit portfolio. This contributed to the fragility of the banking system (Konstandina, 2001).

Figure 4. NPL's of Russian banking sector as percentage of total gross loans.



Source: Barisitz, 2004

As such, Russian banks turned to other ways of making profit. In comparison to other banks in other countries, they were charging very high commissions on most of their banking services. Because of the instability of the economy, when they were giving loans to companies, their interest rates were high. Because they did not have saving deposits, the banks started borrowing money from abroad at a very low rate. By lending this money at high rates to Russian companies, they were able to make large profits (Zimmermann et al, 2005). But loans in Russia were in roubles and long term, while the banks borrowed money in foreign currency and with a short payback period. Later, this maturity mismatch would be a large problem (Sutela, 1999).

Other ways of making large profits were their activities on the currency market (buying and selling foreign currency) and the administration of the funds and credits the government was giving to insider companies.

A very important way of having income for the Russian commercial banks was from buying government bonds, the GKO's that were mentioned above. In 1997, 30% of the total profits of all the Russian banks that year came from trading in GKO's and the interest the government paid on those GKO's.

Table 3 shows two indicators of profitability of the Russian banking sector. The return on assets (ROA) depicts the profitability of the sector relative to its assets. In essence, ROA is used to detect the efficiency of the bank managing its assets to generate profit. Literature suggests that a ROA of at least 1,5% is acceptable for the banking sector. The return on equity (ROE) depicts the profitability of the sector relative to the sector capital. It is calculated by dividing the total earnings of the sector by its equity and shown as a percentage. Literature suggests that anything above 15% is acceptable for the banking sector. However, it should be noted that ROE is based on equity and thus dependent on the overall state of an economy and the quality of bank assets. Non-performing loans and deterioration of macro-economic indicators should be taken into consideration when using

ROE to assess the profitability of a banking sector (Berger and Bouwman, 2009; Helgilibrary, 2013).

Table 3. Russian Banking Sector ROA and ROE 1991-2001.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ROA	*0.9%*	*2.4%*	*4.3%*	*2.7%*	*3%*	*-*	*1%*	*0%*	*-1.25%*	*7.52%*
ROE	*22.6%*	*39.1%*	*51%*	*34.1%*	*60.5%*	*-*	*-*	*0*	*-13%*	*55%*

Source: CBR, 2000; Federal Reserve Bank of St. Louis, 2013; Konstandina, 2001

Taking into consideration return on assets in the years leading up to the 1998 crisis, the Russian banking sector was able to maintain its profitability by employing the activities mentioned above. The sector's return on equity was equally satisfying, although distorted by inflow of foreign capital and a rising percentage of bad quality assets (Berger and Bouwman, 2009 and Konstandina, 2001) as shown in figure 4.

Table 4 shows the liquidity of the Russian banking sector expressed in its capital adequacy ratios (CAR) from 1995 to 2000. The capital adequacy ratio shows the proportion of capital to the risk weighted assets of the sector. It is used in order to be able to determine if banks (and the banking sector in general) have enough capital to experience losses in income while still being able to operate. International agreements (Basel II and Basel III) state that the CAR must not be lower than 8% (Helgilibrary, 2013).

Table 4 Russian Banking Sector Capital Adequacy Ratio.

Year	1995	1996	1997	1998	1999	2000
CAR	*20%*	*25%*	*25%*	*23.8%*	*26.7%*	*24.9%*

Source: CBR, 1995-2000

The data in table 4 shows that Russian banks did not appear to have an insolvency problem. Even in 1998, when the crisis occurred, they were still able to remain operating and solvent (Lane, 2002).

The government started borrowing money with GKO's in 1993. In 1996, foreign investors were also allowed to buy GKO's. After two years, foreign investors owned 33% of all GKO's (Malleret, 1999). The Central Bank of Russia was supervising the buying of GKO's by the foreign investors and guaranteeing their investments. However, in 1995, after a bank crash and subsequent reforms, the CBR stopped doing this. Because the foreign investors wanted to minimize risk associated with their investment in Russian debt, they made agreements with the Russian commercial banks to be able to sell the bonds at prices that had been agreed upon in advance. In 1998, these agreements were as much as the assets the banks owned, and in some cases even more (Perotti, 1999).

While selected indicators of profitability and liquidity of the Russian banking sector for the period do not appear to be problematic, the exposure of the commercial banks to government financing instruments and foreign liabilities contributed to the instability of the sector (Lane, 2002). An additional problem was the amount of deposits in Russian banks, which had been declining steadily. As mentioned above, Russian banks started borrowing cheap capital from abroad, leading to an increase in the liabilities to assets ratio. When this ratio is above 1, banks are considered to be highly leveraged. Their assets are not financed by equity, but by debt. This means that their liquidity might be problematic. Table 3 shows the liabilities to assets ratio for the Russian banking sector from 1995 to 1998. From the table it is evident that in 1997, when the ratio was above 1, Russian banks were more vulnerable to potential liquidity problems.

Table 5. Russian Banking Sector Liabilities to Assets Ratio

Year	**1995**	**1996**	**1997**	**1998**
Liabilities/assets	*0.58*	*0.91*	*1.59*	*1.65*

Source: Konstandina, 2001.

2.6. Description of the Russian Crisis of 1998

The situation in Russian politics, the underlying instability of the Russian banking sector and the problems with inflation, GDP and the current account deficit made international and Russian investors lose confidence in the Russian economy. The investors started losing even more confidence when the crisis in Asian countries happened, in 1997.

As a result of the Asian crisis, the prices of natural gas and oil were decreasing. This had a negative effect on the GDP of the country, because oil and gas were an important part of the income of Russia.

In the beginning of 1998, the Russian government was not able to come to an agreement with the IMF. This meant that the government would not receive funds from the IMF to pay for the deficit on the current account and to pay the debt.

Seeing all this, investors started selling the Russian GKO's. They were afraid they would not get their investment back and they would not get paid the interest. The problems with the GKO's meant that the Russian banks had not enough liquidity for the real economy, because of the agreements they had made with the foreign investors as well as the large percentage of GKO's in their asset portfolios.

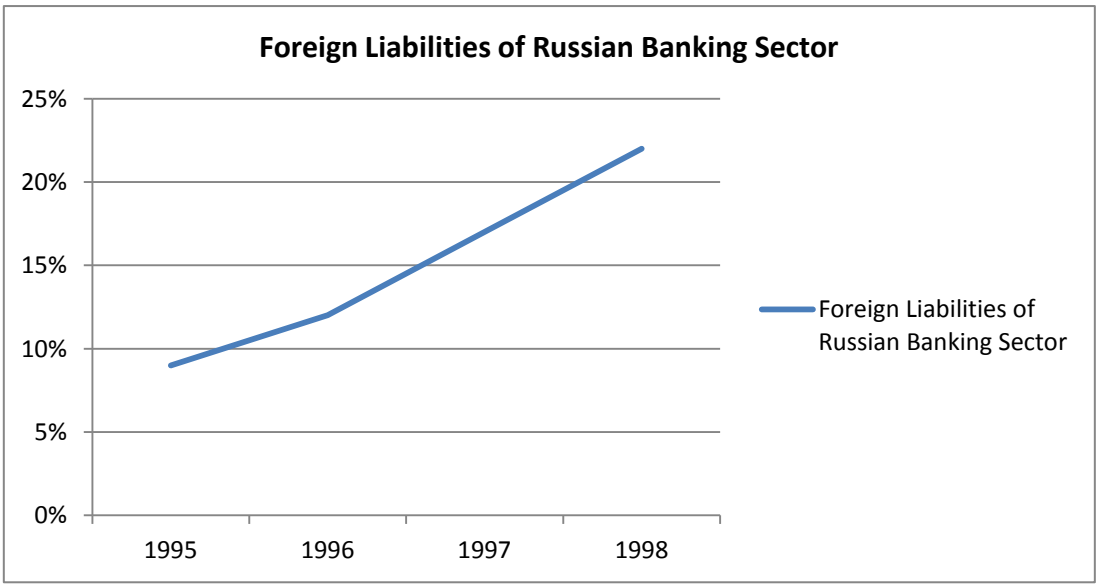
The investors, but also the public, started buying US dollars and selling their roubles, because they were afraid that the currency would lose its value. The central bank started buying the national currency and it tried to keep the exchange rate pegged. This was leading to the central bank running out of foreign currency, aggravating the commercial banks' liquidity problems.

In July 1998, more than 4 billion US dollars left the country. Russia also lost another 4 billion US dollars in income because of the falling prices in oil and natural gas caused by the Asian crisis. The government tried to take emergency measures. The parliament voted for some of the measures, but not all. This led to investors losing confidence even more. At this moment, political instability was fueled by a change of the prime minister by the president of the Federation.

On 17 August 1998, the Russian Federation defaulted and could not repay its debt. The Central Bank of Russia stopped trying to keep the exchange rate pegged. It stopped buying the national currency. Investors and the public were now selling all their roubles and this led to the rouble losing its value by more than 66% in the period of a month. The Central Bank of Russia also announced that all Russian commercial banks will stop paying the investors who had agreements with the banks. In addition, they announced that the commercial banks will stop paying their debt abroad for a certain period. Russian GDP for 1998 decreased by 4,5%.

The banks, with their high exposure to foreign liabilities; forward contracts with foreign investors and GKO's, immediately became illiquid and insolvent, despite the acceptable profitability and liquidity indicators of the banking sector in the years up until the crisis (Barisitz, 2004). Figure XX shows the share of foreign liabilities in total liabilities of the banking sector of Russia from 1995 to 1998. In 1998, 22% of banks' liabilities were foreign. In the same year, 30% of total assets of the sector were GKO's of an insolvent Russian government.

Figure 5 Foreign Liabilities of the Russian Banking Sector as Percentage of Total Liabilities.



Source: Barisitz, 2004.

2.7. The Russian Economy after the Crisis

Because of the crisis, the rouble lost 70% of its value in a period of six months (Chiodo and Owyang, 2002). Russian products were now cheaper to produce than similar foreign products. This led to the country starting to export more and import less. Products that were imported before the crisis were now being made in Russia. Because of this, the current account deficit disappeared after time. Since 1999, the current account has a suprlus, the income of the country has always been more than its spending.

In 2003, foreign debt of the Russian Federation was 25% and the foreign currency reserves went from 12 billion US dollars in 1999 to 140 billion US dollars in 2005 (Steinherr and Klar, 2005).

In the same time, the prices of oil and natural gas started to rise (Worldbank, 2013). Since these natural resources are a large part of the Russian economy this was very helpful. The Russian economy was able to grow immediately after the crisis. In 1999 the GDP of the country grew 5,4%. In 2000 this was 9%. Until the international financial crisis of 2008, the economy was growing with around 6% per year (Worldbank, 2013).

After the crisis the inflation was at low levels in comparison to the 1990's (Worldbank, 2013). This helped to bring stability in the real economy and also the banking sector (Steinherr and Klar, 2005).

2.8. The Russian Banking Sector after the Crisis

After the crisis, the government helped the Russian banking sector in a few different ways. During the crisis it announced that the banks would not pay back their foreign loans for at least 6 months. The government also tried to bring back stability and confidence in the banking system by taking saving deposits from banks with difficulties and putting them in the state owned Sberbank for security. In this way it was prevented that investors and the public would be afraid to leave their money in Russia. If they would lose confidence, they could take out all their investments and savings and cause new problems (Steinherr and Klar, 2005).

The government made a law in 2003 to insure the saving deposits for all persons. A special fund was created and all the commercial banks have to pay a small percentage to that fund, depending on the deposits they have. In this way, when a bank has problems, this fund can guarantee that the bank will not become insolvent by helping it. When the problems are so large that even the fund cannot help, the government will help (Steinherr and Klar, 2005).

Because of the greater insurance that all banks now provide to the savings of the public, individuals started depositing their savings in more banks. Before the crisis almost all saving deposits were held by the Sberbank. The commercial banks now have enough deposits to be able to give loans to the private sector and make profit by doing this. The companies in the real economy of Russia now also can get loans easier so that they can invest (Steinherr and Klarr, 2005).

The deposits by the public in the Russian commercial banks went from 10 billion US dollars before the crisis to 63 billion US dollars after the crisis (IMF and World Bank, 2003). The total deposits at the commercial banks of Russia were 93 billion US dollars in 2005.

Steinherr and Klar (2005) found that the banks were now making profit in a more secure way. They also found that the Russian commercial banks owned as much in foreign currency as was owned to them in foreign currency. Another exchange rate crisis would not be as much as a problem as it was in 1998.

III. THE TURKISH CRISIS OF 2001

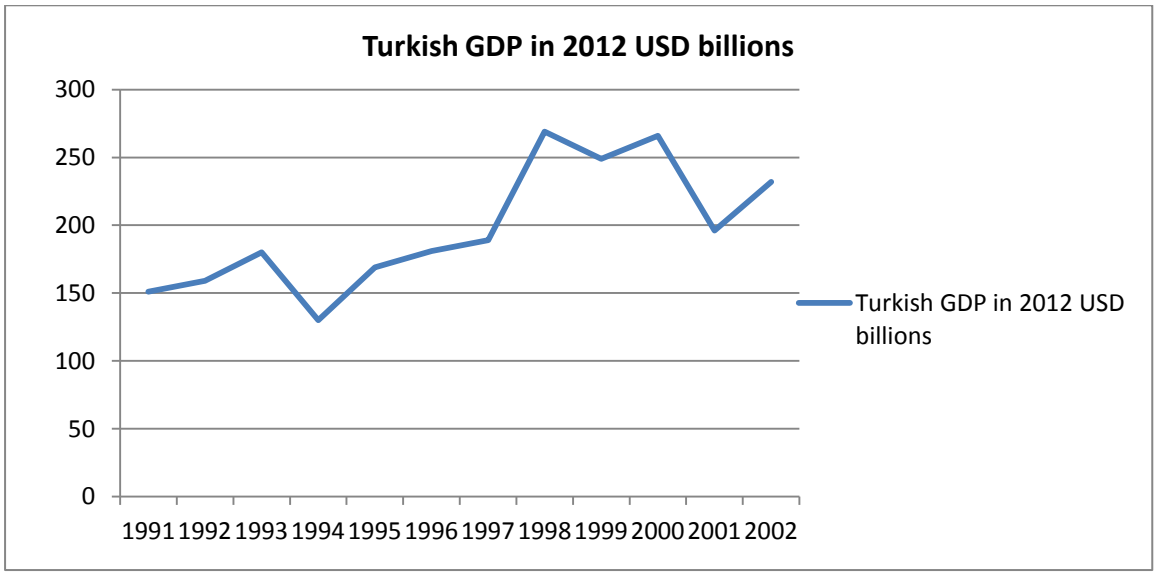
Turkey

Turkey is officially known as the Turkish Republic. The country has 74 million inhabitants, of which 14 million in the largest city, Istanbul. Istanbul is the financial center of the country. Another 5 million live in the capital, Ankara and 4 million in Izmir. The country has a young, increasing population.

3.1. Brief Description of the Turkish economy

The Turkish economy is a developing economy (IMF, 2009). The country has high growth rates, but the economy and standard of living is not as high as developed countries. The country is a member of the Organization for Economic Cooperation and Development (OECD) and has a customs agreement with the European Union. Figure 4 shows the development of the gross domestic product of Turkey in US dollars from 2004 until 2012. On average, the GDP of Turkey is growing per year 3,9% from 1990 until 2012.

Figure 6. Turkish GDP in 2012 in US dollars



Source: World bank, 2013

Turkey produces and exports food, textiles, some machinery and minerals. Industry is responsible for almost 30% of the GDP, agriculture for almost 10% and services like banking, transport and tourism for 60% (CIA World Factbook, 2013; IMF, 2009).

3.2. Political Situation of Turkey in the 1990's

The political situation of Turkey in the years before the crisis of 2001 was very unstable. In a period of 20 years, from the beginning of the 1980's until the end of the 1990's, the country had 15 different geovernments. Of these 15 geovernments, 10 governments were coalition governments, with more than one party in the government (Bredenkamp, Josefsson and Lindgren, 2008). Because of this, it was difficult for Turkish politicians to agree on economic policies that would make the economy to be more stable.

The difficulties of Turkish politics and the instable governments were a very important reason that Turkey had a continuous current account deficit. The Turkish government was trying to pay for the difference between the expenses and the income of the country by printing money, which lead to very high inflation during this period (Hristov, 2001). The government also was borrowing money from abroad with bonds to pay for the current account deficit (Yendi and Cetin, 2012). These bonds had a short maturity, just like the Russian GKO's. This means that the Turkish government had to pay back the loans in a short time.

3.3. Structural Problems of the Turkish Economy

In 1991, 1994 and 1998, the Turkish economy was hit by financial crises. Most researchers agree that these crises were because of high inflation, public debt that Turkey was not able to pay back, structural problems of the economy and a growth rate that was not stable.

The Turkish economy during the 1990's was very unstable. Periods of growth were quickly followed by periods of decline. The main reason for this instability of the economy can be found in the political situation of the country and the countries surrounding it. Turkey is located very close to the Middle East. Wars and international embargoes in the area had both negative and positive effects on the economy of the country in the early 1990's. While initially the Turkish economy had problems because of the instability of the region, with compensations from abroad, the economy started to grow in 1992.

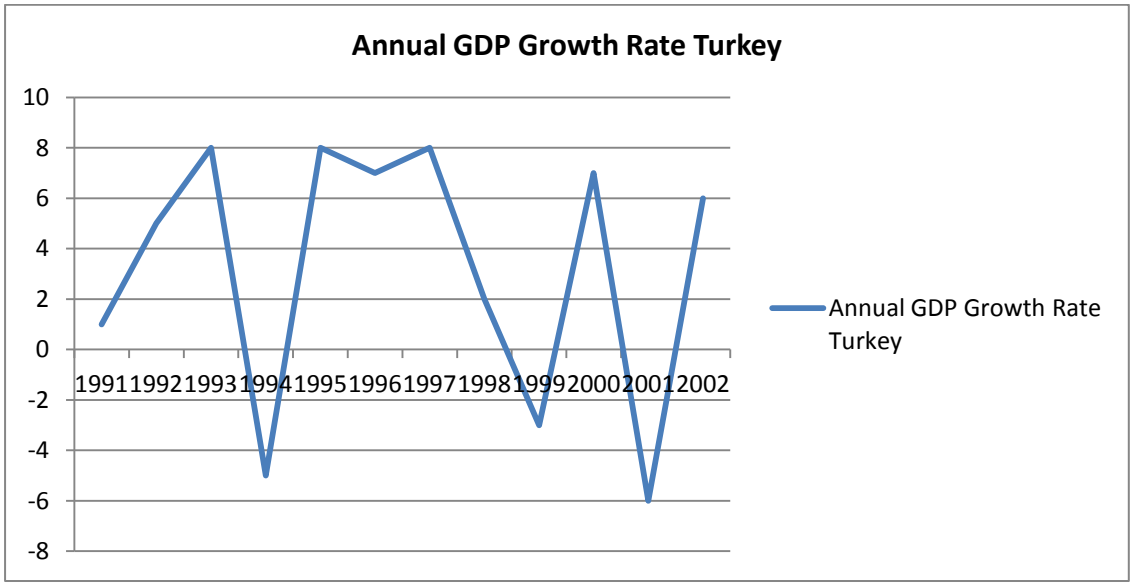
Because of government policies such as funding state owned companies, making the public sector larger and increasing the salaries of state employees with borrowed money, Turkey was having an economic boom. It was cheaper to import goods, so production and exports slowed down. Because Turkey was growing, the government could borrow at lower rates.

With the government using borrowed money, interest rates started to increase. This, in combination with inflation and a current account deficit, lead to a crisis in 1994.

Because of this government economic policy and the higher interest rates, the Turkish private sector had difficulties in borrowing money from the commercial banks in order to finance productivity and growth.

Conkar, Keskin and Kayahan (2009) also found that these crises were because of political instability and some problems in the banking sector. These problems were the fact that the Turkish banking system was not supervised as it should by the central bank of Turkey. Also, the commercial bank did not have enough saving deposits to provide loans to the real economy. Because of this, the companies in the real economy were having difficulties. The productivity of Turkey was not stable.

Figure 7. Annual GDP Growth Rate of Turkey



Source: World bank, 2013

A very serious problem of the Turkish economy was the current account deficit and the debt that the Turkish government was making in order to pay for it. Van Rijckeghem (2004) found that Turkish debt was 29% of gross national product in 1990, but until 2002 it had grown to 80% of GNP.

The primary balance of Turkey was positive during most of the 1990's. But the Turkish government was creating debt by:

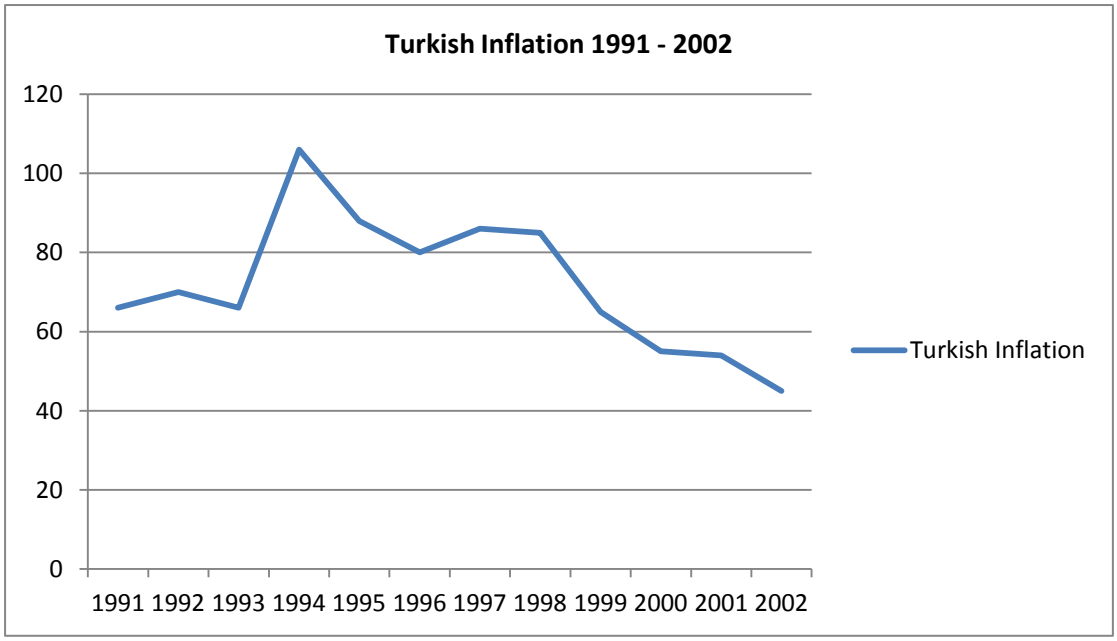
- Giving high subsidies to companies that were owned by the state
- Giving high subsidies to a large number of state institutions
- Having high health expenditures and social security expenditures
- Giving high subsidies to agriculture
- Low tax revenue because of high taxes and small tax base
- Recapitalizing banks that failed because of low state supervision

This high spending of the government leads to an economic growth that made it cheaper for the Turkish government to borrow from abroad. Steadily the debt of the country was increasing.

During the 1990s, Turkey had continuous economic instability. A very important problem of the Turkish economy since the 1970's is inflation. Kibritcioglu (2004) found that most

researchers believe that Turkey has high inflation because of the high public sector deficits the country has. Turkish governments are trying to close the deficits by printing money, which leads to the currency losing value. These researchers also found that because the financial markets of Turkey are not efficient, the interest rates are high. This leads to higher inflation as well (Kibritcioglu, 2004). All these problems led to inflation in the 1990's being high, at some point even reaching above 80% (IMF, 2013). Another very important reason of high inflation in Turkey is the very high inflow of foreign capital to the country whenever the economy is doing good. Figure 6 shows the inflation rate of Turkey from 1990 to 2002 (Source: World bank, 2013)

Figure 8. Inflation



Source: World bank (2013)

3.4. The Turkish Banking System

The Turkish banking sector in the 1970's was not working as a free market banking system. State banks were the most important banks in the sector and commercial banks did not play a large role. The state banks were used to provide funds and subsidies to selected sectors of the Turkish economy, similar to the situation in Russia before the crisis of 1998. Just like in Russia, this led to the crowding out of Turkish commercial banks. The banks were not able to make profit by lending to the private sector (Bank of Greece, 2012).

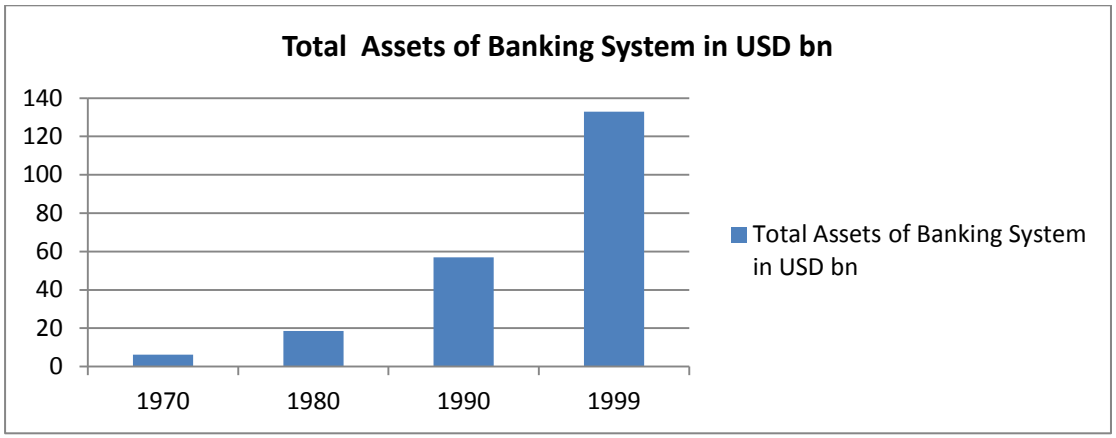
In essence, while the Turkish economy was nominally a free market economy, in reality it could be considered as being planned. The financial policies of Turkey were made by the government in five year plans. The banking system was an instrument for the implementation of these policies.

In the late 1970's the economy of Turkey and the banking sector had problems because of an oil crisis in the Middle East and the devaluation of the turkish national currency (Bank of Greece, 2012)

This leads to liberalization of the banking sector in 1980. That year, the government decided to allow the interest rate to float freely. Banks with weak management were closed or merged with other banks (Atici and Gursoy, 2011). According to the Banking Regulation and Supervision Agency of Turkey (2001), since 1980, directed credit policies as mentioned above were abolished. Deposits, interest rates and exchange rates were liberalized.

Figure 9 shows the substantial growth of the Turkish banking sector after the 1980 reforms. This rapid growth can directly be attributed to the liberalization mentioned above. The reforms of the Turkish economy led to economic expansion and thus banks were able to reduce portfolio asset risks. The ongoing liberalization also allowed the commercial banks to obtain cheap capital from abroad, which they did because of high Turkish interest rates. In addition, because of the crowding out effect, the banks could now easily turn to the foreign exchange market. Also, they turned to the highly profitable Turkish government debt instruments, as well as charging high commissions on their financial services (BRSA, 2011). All these activities led to the growth of the banking system.

Figure 9. Total Assets of Turkish Banking System in USD bn.



Source: Banks Association of Turkey (2001)

3.5. The Financial Sector of Turkey before the Crisis of 2001

The reform efforts seemed to be effective leading to the growth of the Turkish banking sector and its importance in the economy of the country. Turkish banks profited from the developments associated with the liberalization efforts of the government. Table 4 shows selected indicators of the Turkish banking system profitability for the period from 1980 until 2004.

Table 6. Return on Asset and Return of Equity for the Turkish Banking Sector.

Year	1980	1983	1986	1990	1993	1996	1999	2000	2001
ROA	*1.03%*	*1.10%*	*2.12%*	*2.88%*	*2.88%*	*4.20%*	*-3.13%*	*0.23%*	*-3.54%*
ROE	*68.2%*	*28.9%*	*79.1%*	*19.8%*	*74.6%*	*107%*	*-*	*4%*	*17%*

Sources: Banks Association of Turkey (2001) and St. Louis Federal Reserve Bank (2000).

Table 7 shows the liquidity of the Turkish banking sector expressed through the capital adequacy ratio for the period from 1998 to 2002. As mentioned before, a CAR of at least 8% is considered to be acceptable according to Basel II and Basel III. Turkish banks complied in the years leading up to the crisis. In 1999 and 2000 however, their ability to absorb a crisis was lowered.

Table 7. Capital Adequacy Ratio of the Turkish Banking Sector.

Year	1998	1999	2000	2001	2002
CAR	13%	8.2%	9.3%	20.8%	25.3%

Source: BRSA (2011)

These three indicators show that in the period leading up to the crisis, Turkish banks were able to maintain their profitability through the activities described above, as well as their liquidity. Despite these figures however, in the years leading to the 2001 crisis the banking system could be characterized as being weak. As mentioned, their profitability was not derived from sound financial intermediary services such as accepting deposits and channeling those into loans towards productive sectors of the economy. Table 8 shows household deposits of the financial sector as a percentage of GDP for the period from 1995 to 2001. Note that although the percentage is larger than it was for Russia in the same period, it was still low in comparison to the European average at that time.

Table 8. Household deposits as percentage of GDP.

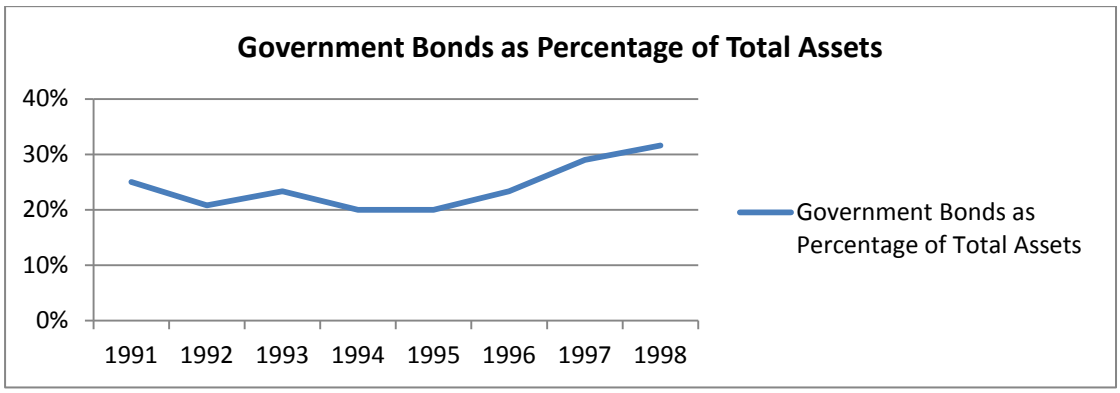
Year	1995	1996	1997	1998	1999	2000	2001
Deposits	21%	24%	25%	20%	26%	28%	32%

Source: International Monetary Fund, 2013

The asset portfolio of the sector as a whole consisted in large part of high yield government bonds . The Turkish government was eager to borrow from the commercial banks because of very low tax revenues and income leading to persistent current account deficits (Salih Ikiz, 2012).

As a result, the profits of banks were in large part dependent on government bonds. In 1998, 33% of total assets were government debt instruments. In 2000, more than 50% of banks assets were Turkish government bonds. These were financed with short-term borrowing from local depositors and investors from Turkey and abroad. The quality of these assets was directly related to the macro economic performance of Turkey and the expectations of national debt sustainability (Brinke, 2013). The unfavorable macro economic conditions of the Turkish economy lowered these expectations. Figure X2 shows the increase of government debt as a percentage of total assets of the sector from 1991 to 1998.

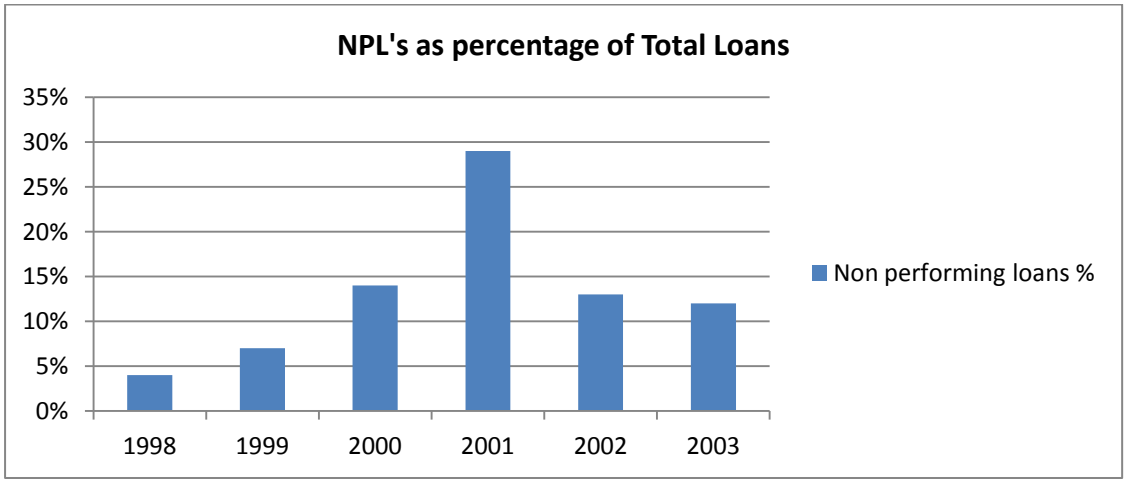
Figure 10. Government Bonds as a Percentage of Total Assets, 1991-1998.



Source: Bank Association of Turkey (2001)

In addition to being exposed to high yield, high risk government debt, the percentage of NPL's also was showing a growing tendency. Figure 11 shows NPL's as a percentage of total gross loans for the period 1998 to 2003.

Figure 11. NPL's as a Percentage of Total Sector Loans 1998-2003.



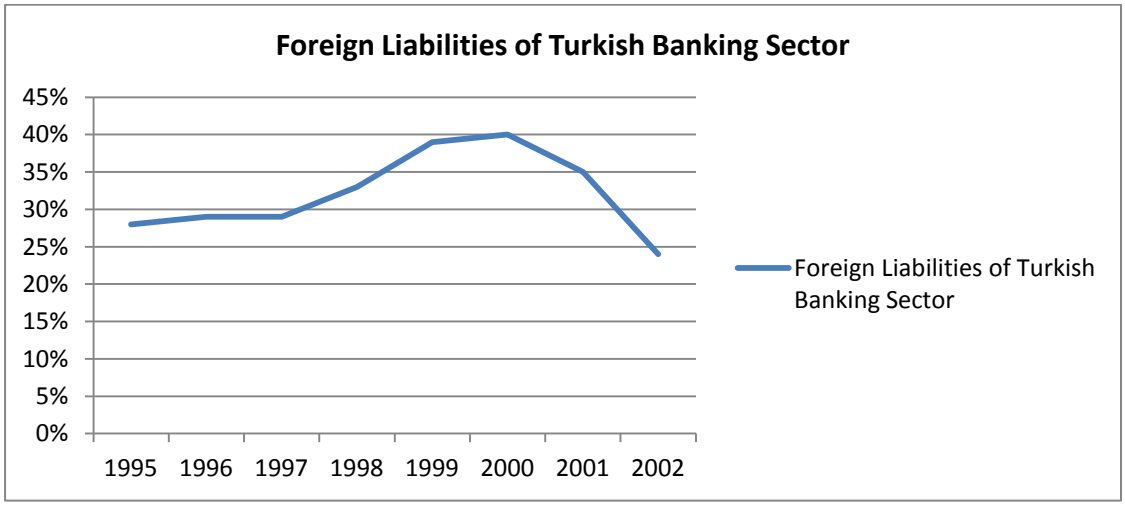
Source: Banks Association of Turkey (2001)

In essence, while liquidity and profitability indicators were acceptable, the quality of the assets of the Turkish banks was questionable. Asset portfolio quality was also negatively affected by the maturity mismatch of the foreign liabilities of the banks. The Turkish banks

were increasingly not able to borrow long-term in Turkish liras, while their loans to companies and the government debt assets were of a longer payback terms.

A very important factor in assessing the stability of the Turkish banking system was its high exposure to foreign liabilities. According to Akyuz and Boratav (2003), in 2000, the very high exposure to foreign liabilities posed substantial risks for the sector. Brinke (2013) notes that these positions in foreign currencies were not hedged, posing a large threat to the liquidity of banks in case of a currency crisis.

Figure 12. Foreign liabilities as a percentage of total liabilities.



Source: International Monetary Fund, 2013.

As a result of the above factors, the Turkish financial sector could be characterized as being weak. Besides these problems, Ozutku (2003) found that the banking sector of Turkey also had the following problems:

- Dominance of state banks
- Lack of transparency in the sector
- Problematic and insufficient control by the central bank

(Ozutku, 2003)

3.6. Description of the Turkish crisis of 2001

After an earthquake during the end of the 1990's and the panic that followed, investors started losing their confidence in the Turkish economy. In 1998, the Turkish government and the IMF made a program to stabilize the economy. The main point of this program was to try to reduce the current account deficit, the debt and the inflation of the country.

To stop inflation and the devaluation of the national currency, the central bank of Turkey decided to implement a crawling pegged exchange rate with a pre-announced exit date. With a currency that was not devaluating, but rather floating within a gradually widening

range, the economy would be more stable. In this way Turkey would be able to address its macroeconomic issues and eventually increase investors confidence in the Turkish economy (Bredenkamp, Josefsson and Lindren, 2008). The program prohibited the Turkish Central Bank of printing money to finance any current account deficits. In case of deficits, capital and liquidity would be obtained through the markets.

The stabilization program by the government and the IMF had a positive beginning. The interest rates dropped sharply and the budget improved considerably, with a primary surplus of 2,8% of GDP (Akyuz and Boratav, 2002).

The lower interest rates were paired by large capital inflows. The central bank of Turkey was now also able to borrow capital from abroad, creating foreign currency reservers of approximately 23 USD billion. This, together with the borrowing of the government from international markets instead of Turkish banks led to even lower interest rates, contributing to growth of the economy.

Despite the improving macroeconomic indicators, investors, Turkish residents living abroad and in Turkey itself were still reluctant to convert their assets held in foreign currencies to the national currency. Also, more than 80% of the capital inflows were in the form of international bond issues by the government, short-term bank credits from abroad and long-term bank credits in Turkey (Akyuz and Boratav, 2002). As a result, the Turkish commercial banks were exposed to foreign exchange risk.

The improving economy led to higher imports, while exports remained steady. This deficit in the trade balance of Turkey led to a high current account deficit, which reached 5% in 2000. In October 2000, the exposure of some banks to currency mismatches as described above and subsequent liquidity problems led to higher interest rates. This, in combination with severe political instability, an unexpected increase in inflation and a demand for liquidity led to a large capital exit in November. The banking system of Turkey tried to close its open position caused by the exit of their foreign creditors by selling their local currency. This lead to even more liquidity problems, especially for banks that had bought Turkish government bonds with borrowed capital from abroad.

However, the central bank provided with the necessary liquidity. In addition, the IMF and Turkey came to an agreement for new assistance in exchange for spending cuts, restructuring of the banking sector and privatizations. Because of this, capital outflows stopped and the economy was back on pre-crisis within a few months.

Despite the initial stabilization, Turkish government bonds were extremely short termed with high yields. This led to an increase in the interest rates of Turkey, causing again liquidity problems for the banking sector. Even though the commercial banks had liquidity problems, they were still buying Turkish government bonds as well. In order to pay for these, they were borrowing from abroad, increasing their exposure to both foreign exchange risk as well as Turkish government bonds risk.

Because of the increase in the interests rates, foreign investors started losing confidence in the Turkish economy. The Turkish banks needed foreign currency to close their open

positions. As a result, the central bank was running out of foreign currency fast (Conkar, Keskin and Kayahan, 2009).

Because of these liquidity problems of the banks, the economy almost completely stopped and no payment flows were made. The banks were not able to pay Turkish government bonds anymore.

The Turkish central bank sold more than 5 billion US dollars to keep the Turkish national currency pegged, but at some point could not keep the exchange rate fixed anymore. In February 2001, a speculative attack on the Turkish lira leads to the central bank stopping the buying of the national currency with its foreign exchange reserves. Within a day, the Turkish lira devaluated with more than 30% (Miller, 2006). The results were that inflation and interest rates started increasing again. The debt of Turkey almost doubled (Conkar, Keskin and Kayahan, 2009).

3.7. The Turkish Economy after the Crisis

Because of the crisis, the national currency of Turkey devaluated in a short time period with more than 30% and Turkey had decrease in its GDP of 5%.

Since the crisis, the economy of Turkey is more stable than it was before. It has positive growth rates every year from 2002 until 2012, with the exception of 2008, when the international financial crisis happened.

According to the World bank, government debt as a percentage of gross domestic product has decreased from 74% in 2002 to 39% in 2011.

The current account deficit of Turkey has decreased as well. In 2002, the deficit was 10%, and went as low as 0,6% in 2005. Only in 2008 did it reach 6,7% again, also because of the international crisis in that year.

(Kibricioglu, 2004; Invest in Turkey, 2013)

3.8. The Turkish Banking Sector after the Crisis

Before the crisis, in 2000, 79 banks were active in Turkey. After the crisis of 2001, there were 54 banks left (Conkar, Keskin and Kayahan, 2009). Around 20 banks were seriously affected by the crisis. The banking sector was recapitalized and restructured.

This restructuring was done by the Banking Regulation and Supervisory Agency of Turkey (BRSA), in cooperation with the IMF. The main points of the restructuring are the financial and operational restructuring of the banking sector and further improvement of banking regulation and supervision. The Turkish government implemented the Basel II agreement in the country to ensure efficiency and competition in the banking sector would be improved (Cunningham, 2011).

The Turkish government recapitalized banks and the state owned banks were restructured. Banks that were weak were taken over by more stable banks. The supervision of the BRSA made the sector more efficient and competitive (Aras, 2010).

The government also changed its policies in taxation and started being more responsible with funding the public sector. The private sector was now given more priority (Bank of Greece, 2008). This means that the banks can now operate and make profit without exposing themselves to foreign exchange risks and government bonds.

The better stability in the Turkish economy and the banking sector of the country led to banks from abroad wanting to start investing in the Turkish banking sector. After a few years, foreign banks were almost 30% of the total sector, providing more stability (Bank of Greece, 2008).

IV. COMPARISON

The crises in Turkey and Russia were both currency crises in which the banking sectors of the two countries played an important role. These crises are also called twin crises (Ari and Dagtekin, 2007).

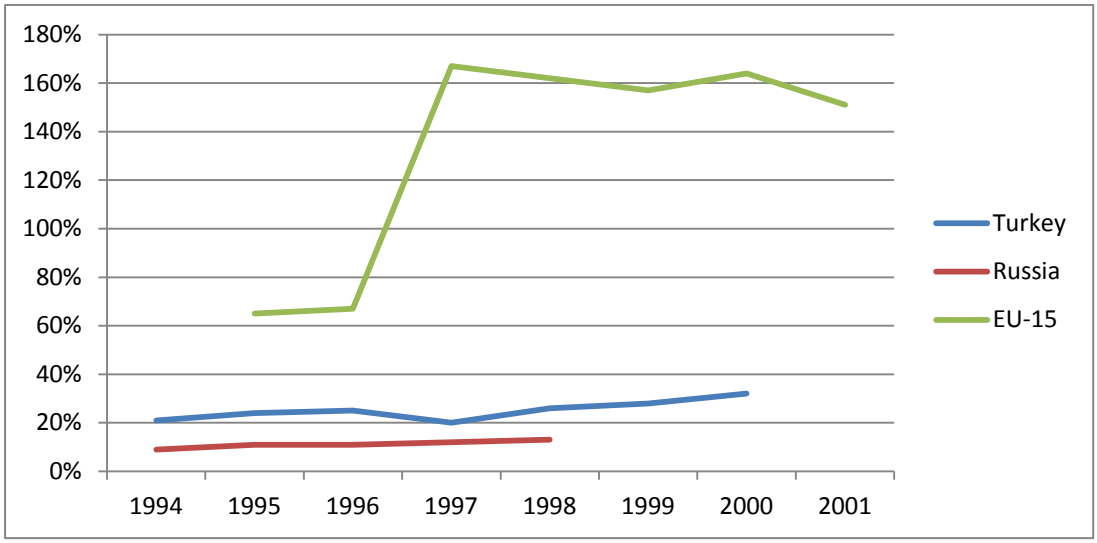
According to the mentioned model developed by Krugman (1979), several factors explain the occurrence of currency crises. These factors include the existence of large current account deficits financed by monetization of central banks and high national debt. Both Russia and Turkey experienced those problems. In order to improve their macroeconomic indicators and stabilize their economies, both countries implemented pegged and fixed current exchange rates. Their central banks were used to maintain the exchange rate of their currencies within a pre-specified value range compared to another currency or a basket of currencies. According to Krugman, this inevitably leads to a currency crisis. Investors and creditors tend to withdraw from an economy when they believe the peg is no longer sustainable, usually because the central bank is not able or willing to sustain the peg with its foreign currency reserves. In both countries, this is exactly what happened.

The second generation explanatory models include the factors of contagion and external shocks in their attempt to understand currency crises (Eichengreen, Rose and Wyplosz, 1997). For the case of Russia, the current account deficit was for a large part explained by the significant fall of the prices of natural resources that were responsible for up to 15% to 20% of its GDP. The fall in the prices of gas and oil were primarily caused by the Asian crisis the years before. The crisis in Turkey does not appear to have been caused by any external event having occurred in the period immediately before 2001, although it could be argued that investors were more cautious because of other crises such as the Russian one.

In Turkey, the third generation of explanatory models would probably be more applicable (Ari and Dagtekin, 2007). This is also true for Russia. The third generation model as developed by Chang and Velasco (2001) and Krugman (1999) encompasses the role of the instability of the banking system into explaining the occurrence of a currency crisis.

The similarities between the Russian and Turkish bankings sectors before the crises of 1998 and 2001 are large. In both countries, prior to the occurrence of their respective crises, their ROE, ROA and CAR show that the banks in both countries appear to be profitable and solvent. However, their profitability was not achieved through intermediary activities. Household deposits were very low in comparison to countries with a more healthy banking sector. Figure 13 shows household deposits in percentages of GDP for Russia, Turkey and the EU-15 from 1994 to 2001.

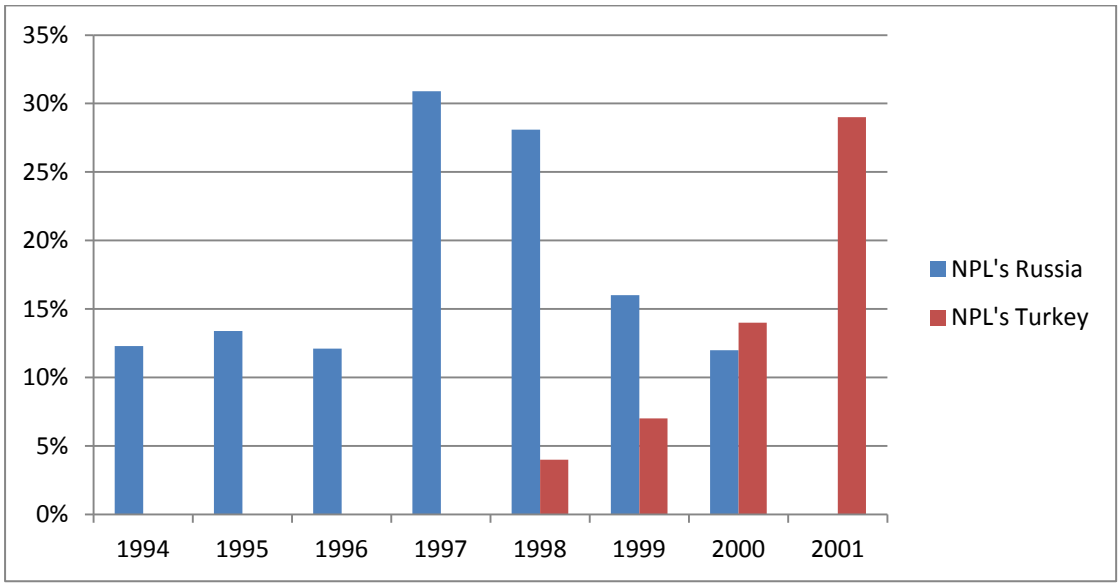
Figure 13. Household deposits in the financial sectors of Turkey, Russia and EU-15.



Sources: IMF (2013) and ECB (2013).

A relatively high percentage of non-performing loans was also indicative for the weakness of both banking sectors before the crises of 1998 and 2001. Figure 14 shows NPL's as a percentage of total gross loans for Russia and Turkey from 1994 to 2001.

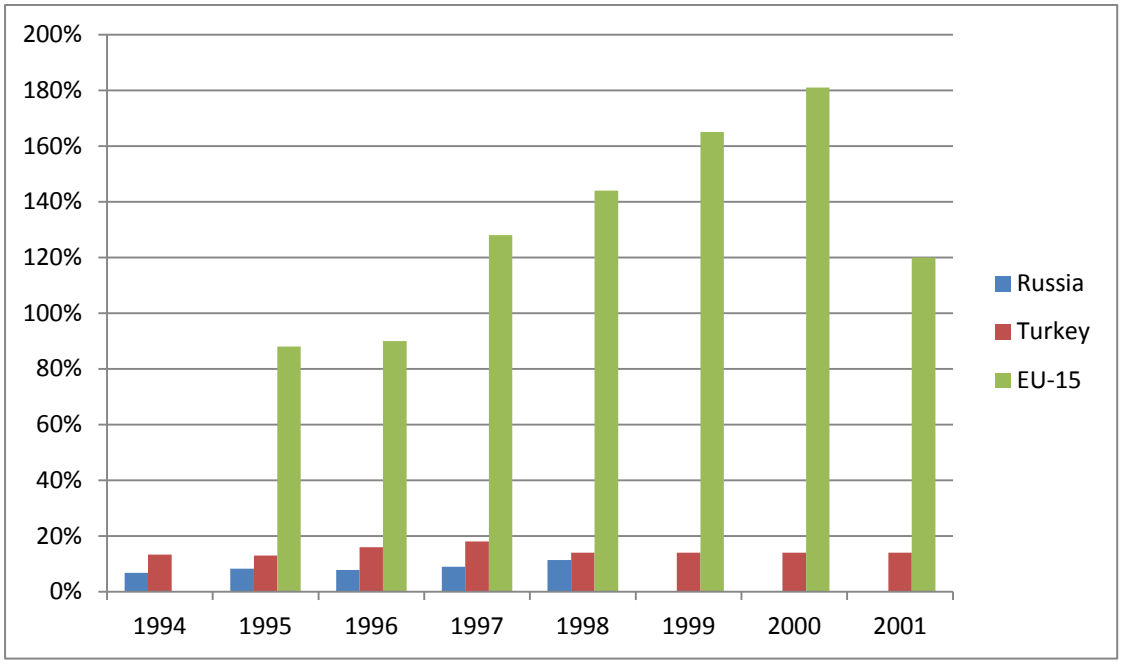
Figure 14. NPL's as a percentage of total gross loans of the banking sectors of Turkey and Russia



Sources: Banks Association of Turkey (2001) and Barisitz (2004)

The inability of the banking sectors in both countries to fulfill their intermediary role in their respective economies reflects in the very low percentages (of GDP) of loans to the private sector. Figure 15 depicts private sector credit for Russia, Turkey and the EU-15 for the period from 1994 to 2001.

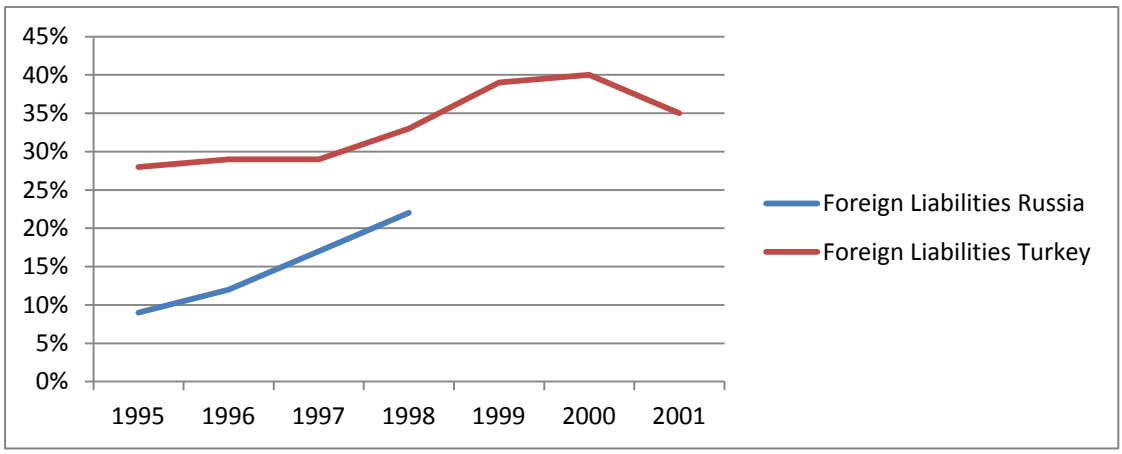
Figure 15. Private sector credit for Russia, Turkey and EU-15.



Sources: International Monetary Fund (2013), World bank (2013) and ECB (2013)

As a result of the crowding out effect in both Russia and Turkey, the banks in both countries were forced to seek profitability in other activities. In Russia, the banks turned to GKO's and the foreign currency and capital markets. Similar behavior was observed in Turkey, were the banks were involved in high yield government debt instruments, the foreign exchange market and the large scale borrowing of capital from abroad. Their exposure to government debt and foreign exchange risk made the banking sectors of the two countries even weaker, since both countries suffered from macroeconomic instabilities and most importantly, both countries had their currencies pegged. Figure 16 shows foreign liabilities of the two banking sectors as a percentage of their total liabilities. Before the occurrence of both crises foreign liabilities increased rapidly.

Figure 16. Foreign liabilities as a percentage of total liabilities for Russia and Turkey.



Sources: International Monetary Fund (2013) and Barisitz (2004)

In Russia, the banking sector was being used by the government to finance insider industries and organizations. In large part because of this, the percentage of NPL's was extremely high throughout the decade preceding the crisis. The rest of the private sector was excluded from making loans because of very high interest rates. In addition, deposits in Russian commercial banks were extremely low. Almost 80% of savings were deposited at the Sberbank, leaving the rest of the sector without much needed capital. As such, the banks turned to borrowing on foreign exchange markets, to high yield GKO's, to the foreign exchange market and to forward contracts with underlying Russian government debt instruments. This was encouraged by a loose supervisory role of the Russian Central Bank. Although the profitability and the liquidity of the Russian banks appeared to be in order, the quality of their asset portfolio was insufficient. In addition, the banks were highly exposed to foreign exchange risks and maturity mismatches.

When the crisis occurred, the banks went immediately insolvent as they were faced with their exposure to GKO's, their forward contracts and their foreign liabilities.

In Turkey, the banks played an equally, if not more important role in the occurrence of the crisis. As mentioned above, the Turkish banks were crowded out and kept away from intermediary banking activities, turning to alternative ways of creating profits. These included government debt, foreign liabilities exposure and foreign exchange market activities. Liberalization of the sector in the early 1980's and 1990's and a lack of sufficient supervision led to problems regarding the sector stability.

As was the case in Russia a few years earlier, the quality of the sector asset portfolio was dubious. More than 50% of total assets of the sector was comprised of government high risk bonds. In addition, the Turkish banks were largely exposed to foreign exchange risk. Risky and unsound behavior of a number of banks actually triggered the crisis in Turkey, leading to massive capital exit creating severe liquidity problems for the banks themselves and eventually leading to the government abandoning the pegged exchange rate regime.

In both countries the following similar banking sector characteristics are observed in the years leading up to the occurrence of a crisis:

- Crowding out effect, not allowing commercial banks to fulfill their intermediary role
- High exposure to government issued debt with high yields and short maturities
- High exposure to foreign liabilities
- High interest rates
- Bad quality of portfolio assets

V. CONCLUSION

The review of the literature on the crises in Turkey and Russia show that the two countries had similar problems in their economies, their politics and the banking systems.

The banking systems of both countries were not allowed by the economical and political structure of the two countries to perform in the way they should.

In short, the role of the banking system is:

- To accept savings deposits from the public and to raise capital from investors
- Use the deposits and capital to make loans to companies in the real economy so that these companies and the economy can grow.
- Provide financial services such as payments between companies and individuals

In a healthy banking system, the central bank of that country makes sure that the economy of a country remains stable and growing (Encyclopedia Britannica, 2013). It does this by supervising the commercial banks of the banking system, by regulating the interest rates and the money supply of the country. In order to provide stability to the economy, the central bank has to be independent from the government.

In both Russia and Turkey, the central banks were not independent from the government. The commercial banks were used by the governments to finance their deficit and their debt which led to problems to the banking sector itself and the economy.

In Russia, the government did not provide a sound political and economic framework to operate in. Commercial banks were not allowed to fulfill their intermediary activities because of lack of access to deposits and crowding out in private sector lending. As a result, the banking system turned to government debt and exposed itself to foreign exchange risk by borrowing from abroad. The subsequent instability played a large role in the currency crisis of 1998.

In Turkey, the government had an almost similar policy regarding the banks of the country. Because the Turkish government was subsidizing companies and sectors, the banks were crowded out and as such had to resort to similar ways of operating. Eventually, the instability of the system actually triggered the crisis in 2001.

Both banking systems played an important role in the two crises. However, the banking sectors of Russia and Turkey are only partially to blame. The systems were left unsupervised by central banks that were only in name independent. Russia and Turkey relied on their commercial banks for public debt financing. The commercial banks in turn financed their investments in government debt by borrowing large amounts of capital in foreign currency. This, in combination with the determinants described through the use of the three generation models, led to an unsustainable situation.

Because of the crises, the political systems in both countries understood the reasons that led to them. They both changed their policies regarding deficits and debt, but they also made

their central banks more independent. The laws and regulations changed and the central bank supervises and regulates the banking sectors of both countries.

Have a stable banking sectors helps the economy to grow in a real way, and not based on borrowing money from abroad and subsidizing companies or sectors.

Since the crisis in 1998 and 2001, Turkey and Russia have a more healthy banking system an they are both growing continuously, with the exception of 2008 when the financial crisis happened.

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