

NATIONAL BANK OF THE REPUBLIC OF MACEDONIA



**Report
on the management of the foreign reserves
in 2009**

March 18, 2010

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1. Introduction

The National Bank of the Republic of Macedonia (hereinafter referred to as: the National Bank) manages the foreign reserves in a manner that provides adequate implementation of the monetary policy and regular execution of foreign payments on behalf of the Republic of Macedonia. The foreign reserves management is carried out in accordance with the internationally accepted standards for foreign reserves investment, where basic principles are safety, liquidity, and in those frames achieving profitability. Such an investment policy indicates investments of the foreign reserves in money market instruments and in government securities, instruments that characterize with low credit risk and high liquidity. Money and government securities markets are usually under the direct influence of the changes in the monetary policy of the both most influential central banks: the European Central Bank and the Federal Reserves. Having in mind that the National Bank invests the foreign reserves in the Euro area countries and the United States, the monetary policy the central banks from these countries conduct has significant influence on the investment of the foreign reserves.

Despite the developments on the international financial markets, in 2009 the investment strategy of the National Bank was also conditioned by the movements in the domestic economy. Namely, the higher demand on the domestic foreign exchange market and the NBRM interventions towards sale of foreign exchange, required higher level of liquid assets in the foreign reserves, while retaining the investments in safe instruments.

2. Stock and factors influencing on the foreign reserves level

At the end of 2009, the foreign reserves of the Republic of Macedonia totaled Euro 1,597.5 million, and were higher by Euro 102.6 million compared to the stock at the end of 2008 (Euro 1,494.9 million). The increase in the foreign reserves was mainly due to the inflow of funds from the issued Eurobond and from the Special Drawing Rights allocation, which compensated the drop in the foreign reserves due to interventions on the foreign exchange market.

Figure 1
Foreign reserves stock
(in millions of Euros)

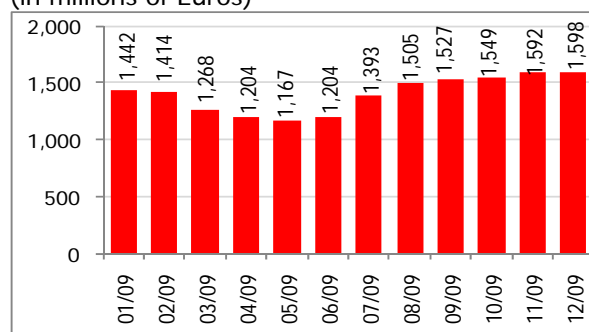
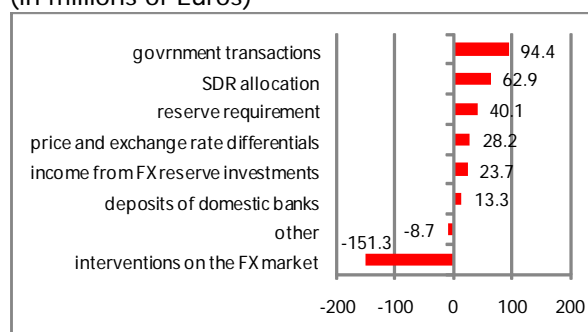


Figure 2
Factors of influence on the foreign reserves
(in millions of Euros)¹

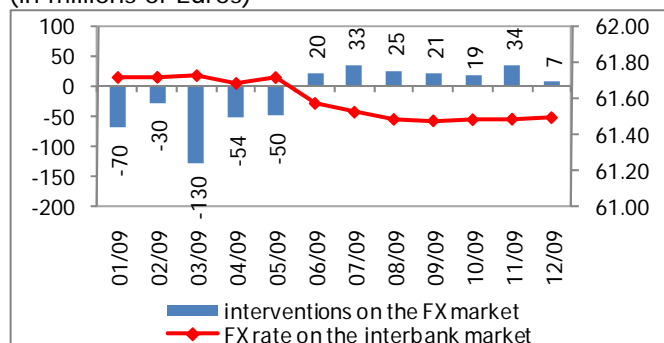


During the first half of the year, the global financial and economic crisis, which resulted in unfavorable movements in the balance of payments, caused an increase in the demand for foreign exchange on the foreign exchange market, pressures on the Denar exchange rate and

¹ The category "other" includes executions of transactions on behalf of the Government in regard to letters of credits and guarantees, changes with the deposited funds for founding insurance companies and other costs.

NBRM interventions by net sale of foreign exchange in the amount of Euro 313.9 million. In the second half of the year, as a result of the stabilization in the movements on the current account, as well as under the influence of the effects of the undertaken monetary policy measures, conditions on the foreign exchange market improved, supply of foreign exchange increased and enabled purchase of foreign currency by the National Bank, in the amount of Euro 162.6 million. Consequently, in 2009, the net effect of the interventions of the National Bank on the foreign exchange market equaled Euro 151.3 million towards sale of foreign exchange.

Figure 3
Interventions of the National Bank
(in millions of Euros)



The Government transactions also influenced towards increase in the foreign reserves, in the net amount of Euro 94.4 million. Namely, besides the net outflows of the Government on the basis of foreign payments, the inflow of foreign exchange based on issued Eurobond (Euro 175 million) had significant effect to the increase in the foreign reserves.

Moreover, the allocation of the Special Drawing Rights by the International Monetary Fund influenced on the increase in the foreign reserves in the amount of Euro 62.9 million (SDR 57.2 million). The allocation of the Special Drawing Rights for the Republic of Macedonia is part of the funds, in the total amount of Euro 198.8 billion, approved by the International Monetary Fund as a support to the foreign reserves of the emerging and developing countries. This measure of the International Monetary Fund was introduced in order to enable overcoming of the problems with foreign liquidity providing that certain countries faced with.

Additionally, the foreign reserves level was influenced by the following factors:

- allocated reserve requirement in foreign currency, which augmented by Euro 40.1 million;
- price changes and foreign exchange differentials which influenced towards increase in the foreign reserves by Euro 28.2 million, primarily due to the increase in the gold price²;
- income from foreign reserve investments (interest on deposits, coupons and registered price changes of the securities), which equaled Euro 23.7 million (return of 1.69% from the average level of foreign reserves);
- foreign currency deposits of the domestic banks, placed with the National Bank, which influenced towards increase in the foreign reserves by Euro 13.3 million. The possibility for placement of foreign currency deposits with the National Bank was introduced in February 2009, in order to enable limiting of the credit risk exposure and maintenance of the banks' foreign currency liquidity, in circumstances of turbulent movements on the international financial markets.

3. International financial environment

The credit crisis that commenced on the real estate market in the United States at the end of 2008 deepened into a crisis of lack of confidence in the financial institutions' liquidity and solvency. The problems from the financial sector soon transmitted to the real sector, causing a decrease in the economic activity and entry of the Euro area and the United States into recession. As a result of the lower economic activity, the unemployment rate significantly increased and reached the level of about 10% in the Euro area, as well as in the United States at the end of 2009, which simultaneously influenced towards decrease in the personal and investment consumption. Consequently, during the year, the level of the inflation rate maintained relatively low.

² In 2009, the price of gold increased by US Dollar 239 per fine ounce, i.e. by 27%.

Table 1

Macroeconomic indicators (in %)

	inflation (annually)		unemployment		growth rate of the real GDP (annually)	
	US	Euro area	US	Euro area	US	Euro area
2007	2,9	2,1	4,6	7,5	2,1	2,8
2008	3,8	3,3	5,8	7,6	0,4	0,6
2009	-0,4	0,3	9,3	9,4	-2,4	-4,0

Source: ECB, Statistical Data Warehouse

In environment of reduced economic activity and the low inflation rate, the monetary policy of the developed economies was loose. Accordingly, the Federal Reserves kept the interest rate on a record low level at 0.25% during the year, as one of the measures for boosting the economic growth. At the beginning of the year, the European Central Bank continued to decrease the main interest rate at aggressive pace, until it reached the level of 1%, and remained at that level until the end of the year. At the same time, government actions were undertaken in order to provide the banking system with necessary liquidity and to enable further stabilization of the financial markets.

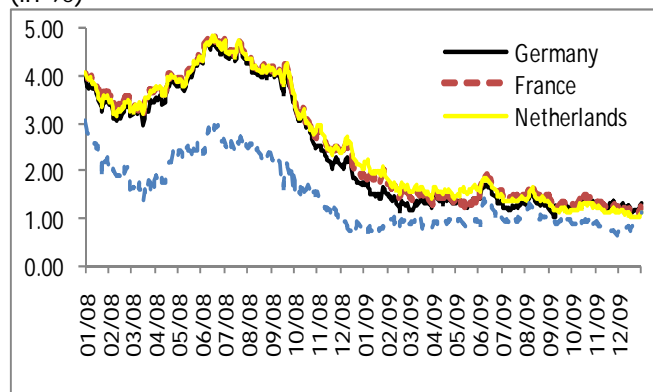
Most significant events that influenced developments on the financial markets in 2009

	Euro area	US	Internationally
January	ECB reduced the interest rate by 50 b.p to 2% "S&P" lowered the credit rating of Greece to A-, Spain to AA+ and Portugal to A+	Approved US Dollar 787 billion for boosting the economic growth	
February			
March	ECB reduced the interest rate by 50 b.p to 1.5% "S&P" lowered the credit rating of Ireland to AA+	Announced plan for financial system support, that included government purchase of "toxic assets" from balance sheets of the financial institutions FED announced plan for purchase of government bonds and agency securities	
April	ECB reduced the interest rate by 25 b.p to 1.25% "Fitch" lowered the credit rating of Ireland to AA+	FED offered 5-year loan for investors in commercial mortgage-backed securities	G-20 meeting at which it was concluded that measures for improving the financial regulations, support to the global trade and ensuring economic growth on global level should be undertaken.
May	ECB reduced the interest rate by 25 b.p to 1.00% and announced a program for purchase of covered bonds	Published results from the stress test of the banking system, which revealed need for further capitalization in the amount of US Dollar 74.6 billion	
June	ECB extended the maturity of the refinancing operations to 12 months	Government support for the car industry ("General Motors") -US Dollar 62 billion	
July	"Moody's" lowered the credit rating of Ireland to Aa1		G-8 meeting at which were approved US Dollar 20 billion for the developing countries
August		The federal "cash for clunkers" program-officially known as Car Allowance Rebate System- was approved, offering replacement of old cars for new ones	IMF allocated SDR 161.2 billion in conformity with the recommendations of G-20 meeting in April
September			IMF allocated additional SDR 21.5 billion
October	"Fitch" lowered the credit rating of Greece to A-	The unemployment rate reached 10.1%, highest level since 1983	Published data on the recovery of the Asia countries, which caused increase in the imports and exports and increase of the prices of raw materials
November	"Fitch" lowered the credit rating of Ireland to AA-		Dubai World requested financial liabilities deferral
December	The credit rating of Greece was lowered to A2 ("Moody's") and BBB+ ("Fitch", "S&P") The Austrian government nationalized Hypo Alpe Adria AG International	The "S&P" 500 reached its highest value in a 15-month period Bank of America, City group and Wells Fargo started repaying the funds they received from the Troubled Asset Relief Program	Abu Dhabi committed to help Dubai World Published record budget deficits on global level

The measures undertaken by the central banks towards decrease in the core interest rates, resulted in a decrease in the yields on the short and medium-term government securities. Simultaneously, starting from the last quarter of 2008 and at the beginning of

2009, the issuance of government securities³ increased in order to finance higher fiscal expenditures. However, despite the increase in the supply, the demand for government securities incremented, thus causing the yield from government securities to remain on low level. The higher

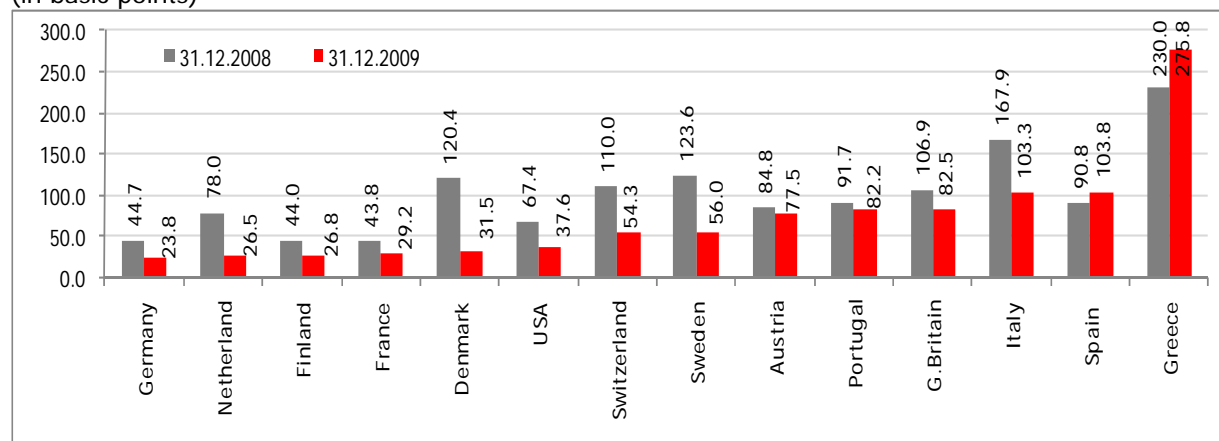
Figure 4
Developments of two-year government securities yields (in %)



Source: Bloomberg

However, within the Euro area, the government securities yields significantly differ depending on the investors' perceptions for credit risk exposure. Namely, risk of larger exposure was perceived relative to the countries which faced credit ratings downgrading in 2009, where the indebtedness was high, or where large-scale arrangements for financial sector support resulted in deterioration of the fiscal position of the country. Also, higher risk was perceived relative to the countries with higher exposure of the financial sector to Central and Eastern European countries.

Figure 5
Credit default swaps⁴ on 5-year government bonds (in basic points)



Source: Bloomberg

As a result, demand shifted toward securities issued by countries with better macroeconomic performances and sustainable fiscal position. In that regard, the investors preferred the United States, Germany, France, Finland and the Netherlands as most attractive,

³ The issuance of the government securities in the Euro area and USA augmented by 12% and 25%, respectively.

⁴ Credit default swaps (CDS) are credit derivatives for hedging the credit risk in case the bond issuer goes into default. The CDS buyer (protection buyer) is obliged to make payments (insurance premium) for the credit risk protection, while the CDS seller (protection seller) is obliged to make the payoff of the bond, in case the bond issuer goes into default. The increase in CDS is an indicator for higher risk that the bond issuer will not be able to fulfil the obligations at the maturity of the bonds.

which can be perceived through the low level of yields (Figure 4) and the low credit default swaps of the government securities issued by these countries (Figure 5).

4. Foreign reserves investment

4.1 Investment strategy determinants for 2009

At the end of 2008, the National Bank set forth a strategy for investment of the foreign reserves in 2009. In the process of preparation of the investment strategy, the performances in the previous year were firstly analyzed, by analyzing the developments on the international financial markets, which escalated exactly in the last quarter of 2008. Additionally, the investment strategy was adjusted to the movements on the domestic foreign exchange market, which indicated to a need of larger interventions with a sale of foreign exchange and maintenance of high level of liquid assets within the foreign reserves. Hence, in 2009 it was decided that more conservative investment strategy should be applied, the primary objectives of which are:

- providing *liquidity* of the foreign reserves, primarily for accomplishing the operating targets of the monetary policy;
- *safety* of the invested funds due to maintenance of the foreign reserves value and
- enabling maximum *profitability* of the long-term investments, having in mind the safety and the liquidity of the investments.

In conformity with the objectives assigned in such a manner, the following priorities of the investment strategy for 2009 were determined:

- Maintenance of the foreign reserves' currency structure dominated by the Euro, which is conditioned by the applied strategy of targeting the Denar exchange rate relative to the Euro;
- Investing of the foreign reserves in government securities, instruments of the international financial institutions and central banks' instruments, having one of the two highest short-term credit ratings given by at least two internationally recognized rating agencies;
- Active management of two portfolios:
 - Liquidity portfolio*, the basic purpose of which is satisfying the liquidity needs for conducting interventions on the foreign exchange market and for timely execution of foreign payments on behalf of the Government.
 - Investment portfolio*, which provides stable income and maintenance of the foreign reserves value by investing of the funds on a longer-term basis.
- Maintenance of separate portfolio, in accordance with the maturity structure of the foreign currency deposits placed by the domestic banks with the National Bank.

The developments on the international financial markets in the last period emphasized the significance of the risk management. Therefore, the National Bank continued applying the determined risk management framework, which is an integral part of the Rules for the management of the foreign reserves. In that regard, the following investment limits were set in order to address the different types of risks:

Credit risk	<ul style="list-style-type: none"> - investment in countries, financial institutions and instruments with high credit rating according to "Standard&Poors", "Moody's" and "Fitch"; - investments diversification through determining: <ul style="list-style-type: none"> quantitative limits by countries; quantitative limits by institutions and by transactions; quantitative limits by types of securities;
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Liquidity risk	- maintenance of readily available liquid assets; - investing the foreign reserves in liquid securities, issued in large amount and meet the criteria for low bid/ask spread.
Currency risk	- major share of the Euro in the foreign reserves' structure, having in mind the monetary strategy of targeting the Denar exchange rate against Euro; - quantitative limits of the other currencies in the foreign reserves' structure; - maintenance of constant quantity of gold.
Interest rate risk	- Maintenance of nine month target modified duration for the investment portfolio in Euro and eight months target modified duration for the investment portfolio in US Dollars, as a criterion for limiting the interest rate risk exposure.

During 2009 compliance of the foreign reserves investments with the assigned investment limitations and with the Rules for management of the foreign reserves was constantly monitored. That way, depending on the current market conditions, it was ensured timely recognition of potential deviations from the envisaged frames and necessity of undertaking activities in order to fulfill the defined investment strategy priorities.

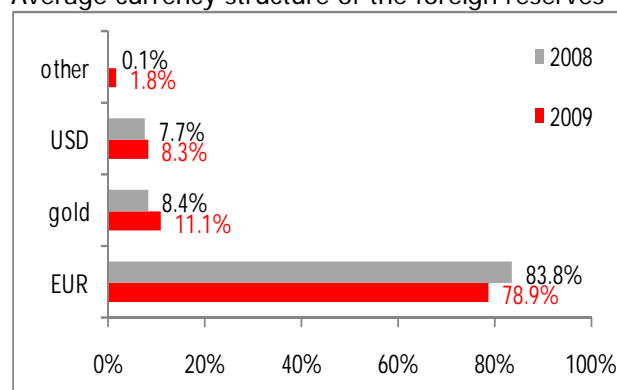
4.2 Implementation of the investment strategy

Currency structure

Having in mind the priorities of the investment strategy, from the aspect of the foreign reserves' currency structure, the largest share accounted for the Euro, the average share of which equaled 78.9%.

In comparison with 2008, the relative share of the Euro in the foreign reserves registered moderate decrease of 4.9 percentage points, as a result of the interventions on the domestic foreign exchange market, rise in the value of gold and the inflow of funds based on allocation of the Special Drawing Rights. Hence, the relative share of gold and other currencies⁵, which include the Special Drawing Rights, went up by 2.7 percentage points and 1.7 percentage points, respectively. The relative share of the US Dollar in the

Figure 6
Average currency structure of the foreign reserves



foreign reserves' currency structure registered slight growth by 0.6 percentage points.

The foreign reserves' currency structure, besides being conditioned by the monetary strategy, is additionally adjusted in accordance with the currency structure of the external debt of the Republic of Macedonia and the currency structure of the realized imports. That way, the determining the foreign reserves' currency structure enables management with the currency risk in a wider sense, having in mind the foreign liabilities of the Republic of Macedonia.

From the aspect of the exposure to currency risk, the dominant share of the Euro in the currency structure limits to great extent the risk of fluctuation of foreign reserves value as result of the exchange rate changes. Namely, given the de facto fixed exchange rate of the

⁵ In 2009, the amount of the other currencies in the foreign reserves was maintained at sufficient level for ensuring current liquidity in the payments to abroad. Other currencies include" Australian Dollar, Canadian Dollar, Swiss Frank, Danish Krone, Norwegian Krone, Pound Sterling, Japanese Yen, Swedish Krona and the Special Drawing Rights.

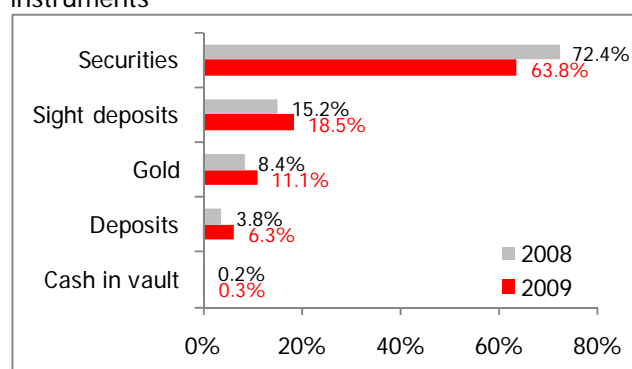
Denar relative to the Euro, the part of the foreign reserves maintained in Euro is not exposed to currency risk. The exposure to currency risk relative to the US Dollar, gold and other currencies is controlled by maintaining certain amounts in compliance with the quantitative limits determined in the currency risk management framework.

The National Bank additionally measures the currency risk exposure also through the application of the Value at Risk concept⁶. According to the "Value at Risk" concept, on December 31, 2009 the exposure of the foreign reserves to currency risk equals Euro 19.8 million. The largest portion of the currency risk exposure, 71% arises from the fluctuations of the gold price, while the changes in the value of the US Dollar and the Special Drawing Rights in respect to Euro in the total currency risk exposure of the foreign reserves participated with 19% and 10%, respectively.

Liquidity

Besides the maintenance of the dominant share of the Euro in the foreign reserves structure in 2009, the structure of the instruments the foreign reserves were invested in was adequately adjusted as well. In order to ensure sufficient liquid funds for interventions on the foreign exchange market, the average share of the short-term liquid assets in the foreign reserves, maintained as sight deposits with foreign central banks, augmented from 15.2% in 2008 to 18.5% in 2009.

Figure 7
Average structure of the foreign reserves by instruments



Besides the maintenance of the readily available liquid funds, the National Bank preserved the high share of the securities as well. The investments in securities were mainly in government securities, for which there was a high demand and that are traded on liquid secondary markets. The bid-ask spread of the government securities maintained on a relatively low level, which indicated possibility for fast conversion, if needed, into most liquid assets at minimum costs.

The average share of the securities in the foreign reserves structure by instruments equaled 63.8%, and in comparison with 2008 (72.4%), it reduced moderately, having in mind that in the first half of the year the foreign reserves liquidity was supplemented with funds from the due securities.

The increase in the available liquid assets in the total foreign reserves was additionally supported by the rise in the average share of the short-term deposits from 3.8% in 2008 to 6.3% in 2009. This category encompasses the deposits with the foreign central banks with maturity of up to one month.

Safety

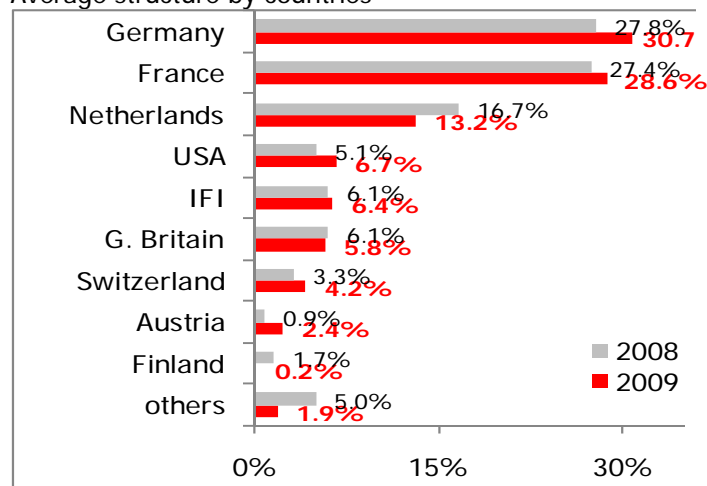
The escalation of the financial crisis in the last quarter of 2008 caused surge of credit ratings downgrades by the rating agencies, and influenced the National Bank to sustain high level of safety of the invested assets during 2009. The countries where the foreign reserves were invested did not faced significant changes in the credit ratings, although the criteria for the credit risk evaluation were tightened.

Namely, the largest portion of

⁶ Value at risk indicates the possible maximum change in the value of foreign reserves (with 99% probability), that may occur as a result of prices and exchange rates volatility, over 10 day period. Value at risk for a certain date is calculate on basis on historical data on prices and the exchange rates movements within one-year period, backwards, relative to the calculation date.

the investments were allocated to Germany, France, the Netherlands, the United States and the Great Britain, which were rated AAA/Aaa according to the rating agencies "Standard and Poors", "Moody's" and "Fitch". Additionally, these countries were evaluated by the market participants as countries with the highest credibility regarding the applied macroeconomic policies, and this can be observed from the credit default swaps on their government bonds.

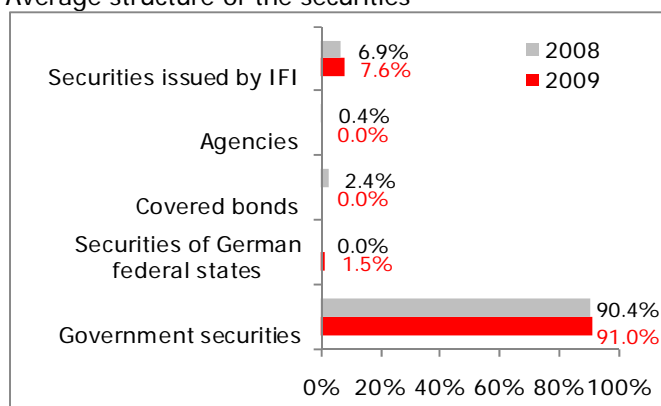
Figure 8
Average structure by countries



Besides the credit ratings, in the investment of the foreign reserves, special attention was paid to the diversification. Namely, in order to ensure optimal distribution of the credit risk, the foreign reserves were invested in compliance with the determined quantitative limits by countries, institutions and instruments.

The structure of the instruments in which the foreign reserves were invested was also adjusted to the requirements for investments safety, with the short-term liquid assets and deposits being placed in the central banks of the countries with the highest credit-rating.

Figure 9
Average structure of the securities



The investments in securities, as dominant instrument the foreign reserves were invested in, were additionally adjusted in order to provide safety of the investments. In that regard, the largest portion (91%) was invested in government securities.

Due to the perceptions for higher credit risk with the Agencies and the collateralized bonds, these securities were not part of the securities spectrum the foreign reserves were invested in 2009.

On the other hand, in line with the market perceptions for the solid credit position of Germany, certain part (1.5%) of the foreign reserves was invested in securities issued by the economically most developed federal states of Germany. The investments in securities issued by the international financial institutions (the Bank for International Settlements and the European Investment Bank), also provided high degree of safety, so the relative share of this investments moderately increased from 6.9% in 2008 to 7.6% in 2009.

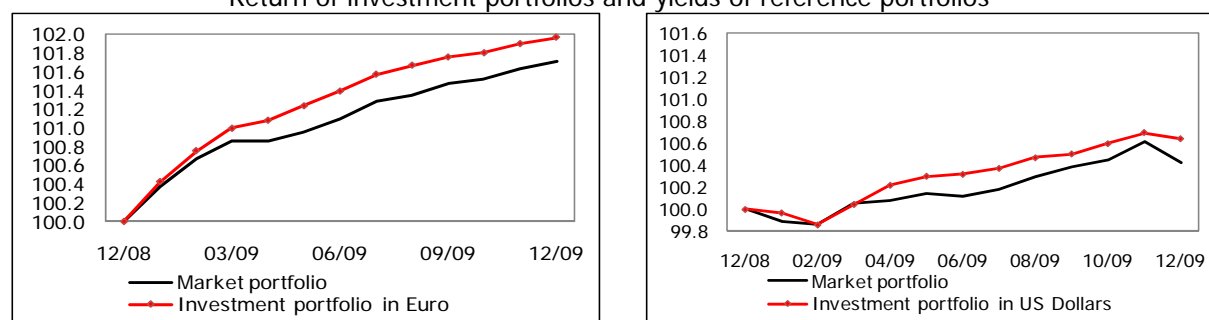
Exposure to interest rate risk

From the aspect of the exposure to the interest rate risk, in 2009 the National Bank invested in securities which ensured low exposure of the foreign reserves value to the changes in the yields. The target modified duration, as a criterion for interest rate risk management, maintained at the level of nine, i.e. eight months for the investment portfolio in Euro and in US Dollars, respectively. The decision on maintaining short target modified duration came out from the increased volatility and uncertainty on the financial markets as main attributes for the government securities price changes. The relatively short modified duration enabled flexibility in the foreign reserves management in circumstances of market yields changes.

Beside the maintenance of the target modified duration of individual portfolios, the National Bank additionally monitored, on a monthly basis, "value at risk" regarding the fluctuations of the prices of the instruments. As of December 31, 2009, the exposure of the foreign reserves to the price changes assessed with the "value at risk" equaled Euro 1.53 million, i.e. Euro 1.38 million and Euro 0.15 million, for the investment portfolio in Euro and US Dollars, respectively.

In conformity with the set criteria for interest rate risk management, the investments in securities were concentrated on the short part of the yield curve, which was also preferred by the other market participants. Despite the historically low level of yields, the applied investment strategy enabled appropriate profitability. The rates of return of the investment portfolio in Euros and US Dollars equaled 1.97% and 0.64%, respectively and were in line with the yields of the benchmark market indices.

Figure 10

Return of investment portfolios and yields of reference portfolios⁷

Source: NBRM and Merrill Lynch.

5. Summary

At the end of 2009, the foreign reserves of the Republic of Macedonia totaled Euro 1,597.5 million, which is an increase of Euro 102.6 million compared to the end of 2008. Analyzed by the dynamics in the first half of the year the foreign reserves registered a significant downward trend, as a result of the need for intervention on the foreign exchange market in order to enable stability of the Denar exchange rate. In the second half of the year, the inflow of funds from the issued Eurobond, the new SDR allocation and the purchase of foreign exchange on the foreign exchange market, enabled compensation and increase of the foreign reserves on annual basis.

The fluctuations of the level of the foreign reserves in 2009 imposed the need for more active management and to increase the foreign reserves liquidity. Simultaneously by investing in government securities that were perceived by the market perceptions as the safest and most liquid instruments on the international financial markets, safety of the foreign reserves was provided.

The escalation of the financial crisis caused increased demand for safe and liquid instruments, which resulted in maintenance of the government securities yields at low level. In such conditions, the National Bank continued to apply conservative investment strategy in the foreign reserves management and attained an income of Euro 23.7 million.

⁷ Indices set by Merrill Lynch, which include specific financial instruments in definite relation.