



Central Bank in Georgia was first established in 1919

# INFLATION REVIEW

2008

NATIONAL BANK  
OF GEORGIA



NATIONAL BANK OF GEORGIA

# INFLATION REPORT

QIII 2008

TBILISI

# TABLE OF CONTENTS

INTRODUCTION .....	4
1. CHANGES IN CONSUMER PRICES .....	6
Box 1. Effect of World Prices on the Local Market .....	9
2. INFLATION FACTORS .....	12
2.1. Labor Productivity, Wages.....	12
2.2. Monetary Aggregates .....	14
2.2.1. Broad Money .....	15
2.3. Monetary Instruments .....	15
2.4. Interbank Loans .....	18
2.5. Banking Sector.....	20
2.6. Factors Affecting the Exchange Rate .....	22
Box 2. The Lari Effective Exchange Rate.....	25
2.7. Production and Demand .....	27
2.7.1. Household and Government Consumption .....	27
2.7.2. Investments.....	28
2.8. External Trade .....	28
Box 3. Foreign Exchange Value of the US Dollar .....	30
3. INFLATION FORECAST .....	32
4. DECISIONS OF THE MONETARY POLICY COMMITTEE .....	34

## INTRODUCTION

The annual inflation rate stood at 10% in September 2008, as per the Department of Statistics of the Ministry of Economic Development of Georgia.

The annual core inflation rates also decreased in September equaling 8.1% and 7.1% for the products within the limit of two and one standard deviations, respectively.

The annual inflation rate of imported goods eased to 11.9% in September. The comparatively higher rate of price increases on imported goods is mostly explained by high inflation in major trading partners (Ukraine, Russia, Kazakhstan, Azerbaijan, Turkey, Armenia). High level of inflation in Georgia is largely determined by imported inflation from major trading partners.

Average wages considerably increased in 2008, as compared to the previous year. This was accompanied by real growth in labor productivity. However, the relatively rapid increase in wages caused the demand to significantly exceed the supply. This alerts of the inflationary pressure risk.

The size of reserve money grew by 15.7% over the first nine months of 2008. During this period, the NBG was mostly pursuing the expansionary monetary policy by means of money market interventions at the Tbilisi Interbank Currency Exchange (TIBFEX). An essential exception from this policy

was made in August, when, due to drastic changes in market conditions, demand for foreign currency sharply exceeded supply; the NBG's foreign currency interventions were aimed at reducing the monetary base during this month.

High rates of money supply reversed to decline starting from August 2008. In QIII, the size of M3 aggregate decreased by 222.2 million Lari amounting to 3965.7 million Lari. Foreign currency deposits were down by 62.6 million Lari, totaling 1708.2 million Lari by the end of September. Deposits in national currency dropped by 120.7 million Lari amounting to 1061.0 million Lari by the end of the period.

The size of the M2 aggregate decreased by 6.6% (159.6 million Lari) during the reporting period. By the end of September the annual growth rates of M3 and M2 declined to 6.9% and 17.1%, respectively.

The August war in Georgia along with the global financial crisis negatively impacted the country's growth rates and, as a consequence, significantly reduced the volumes of foreign direct investments.

In QII 2008, the country's GDP at current prices reached 4995.2 million Lari; the growth rate of GDP in real terms equaled 7.9%, which is less than the same parameter (9.3%) in QI. However, positive growth tendency has been observed virtually in all sectors of the economy.

According to the NBG's estimates, Georgia's economic growth tends towards a sensible slowdown for the nearest year and will decline in QIII to the lowest growth ratio registered over the recent years.

Starting from QIII, a substantial decline is also anticipated in the investments growth ratio. This is largely due to the August war in Georgia as well as the global financial crisis. In this context, the main obstruction to investment growth is seen in the forecasted shortfall of foreign direct investments. Potentially, the shortfall could be replenished from the large financial assistance package extended to Georgia; however this package will not be available until 2009.

The growth rate of exports kept ahead of the imports growth rate throughout the first three quarters of 2008. This tendency was particularly evident in QIII, when the rate of increase in exports goods reached 38% (compared to the respective period of the previous year) whereas imports rate stood at 14%. As a result, the trade deficit equaled 6% only.

External trade turnover was particularly low in August. During this month the annual growth rate of exports decreased to 2%; as for the imports, their volumes declined by 13%.

The Monetary Policy Committee was gradually tightening the monetary policy over the first half of 2008. The tightening discontinued in June, and starting from August the Committee reversed to gradual loosening. Such policy changes were made to address the situation in the financial sector and, overall, in the economy of the country.

Inflation forecasts, made by the NBG using different forecasting methods, made it possible to loosen the monetary policy.

In order to maintain financial stability and provide the banking system with short-term liquidity funds in August, the NBG extensively used the lending of last resort facility.

On September 2, the NBG introduced refinancing loans as a new instrument of monetary policy. The interest rate on such loans represents a new NBG policy rate. It shall play a key role in the formation of interest rates in the economy.

Amid increasing risk factors and slumping demand, banks and their clients dramatically restrained their activities during the last two months; this caused a reduction of growth rates of the volume of loans extended by the banks.

One of the major reasons of deceleration of economic growth was the reduction of loans extended to the domestic economy. To alleviate the situation it was necessary to provide additional liquidity funds to commercial banks. Therefore, in September the NBG issued a six-month loan in the amount of 150 million Lari at 13% interest.

The decisions of the Monetary Policy Committee of the NBG made it possible to avoid further aggravation of conditions faced by Georgia's financial sector. In September 2008 the banking sector was more or less stabilized.

# 1. CHANGES IN CONSUMER PRICES

The overall level of consumer prices grew by 1.3% in QIII 2008, as per the Department of Statistics of the Ministry of Economic Development of Georgia. Accordingly, in September 2008 the annual inflation rate dropped to 10.6%, as compared to 11.3% for the previous quarter. The average annual inflation rate increased by 0.8 percentage points reaching 10.5%.

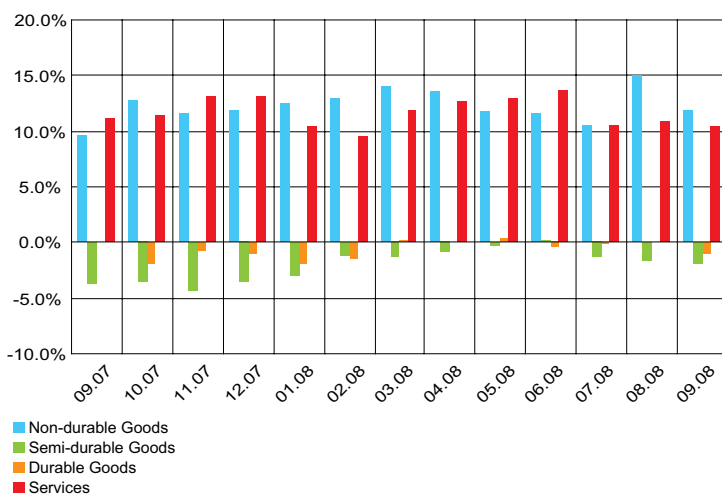
During the quarter the inflation was mainly conditioned by price increase on food products, and there are several reasons to this. Price increase on certain agricultural products was caused by the supply deficit in the market and hampered inland transportation conditions between the regions caused by the August military

situation. The prices soared in August, but partially subsided in September. Since prices are stickier to decline, rather than to increase, it is anticipated that the prices increased during the military hostilities period will gradually decline through the following months.

The annual core inflation rates also decreased in September equaling 8.1% and 7.1% for products within the limit of two and one standard deviations, respectively. As we can see, the rates are not high and fluctuate within the range of 8%.

As it was already mentioned, in September 2008, compared to the same month of the previous year, the goods prices in the consumption basket grew by 10.6%. A 3.7% reduction of prices has been recorded for "clothes", while prices of "alcoholic beverages and tobacco" decreased by 0.3%. Prices in "communications" sector grew by 4.4%. Significant price increase has been recorded for the following groups of the consumer goods basket: "food and non-alcoholic beverages" (13.6%), "household appliances" (17.3%), and "healthcare" (15.2%). Prices on the commodity group "housing, water, electricity, gas and other types of energy" grew by 7.6%. In September 2008, compared to the same month of the previous year, the most significant price increase took place in the "transport<sup>1</sup>" group (16.8%), which

GRAPH 1.1  
CHANGES IN ANNUAL INFLATION FOR GOODS AND SERVICES OF  
VARIOUS CONSUMPTION DURABILITY



<sup>1</sup> In addition to intracity bus and subway transportation prices, the average growth of transportation prices is included. These also comprise other means of transport such as intracity taxi, micro bus, and suburban and intercity transport, etc.

was mostly due to the increase in prices on intracity bus, micro-bus, and taxi transportation.

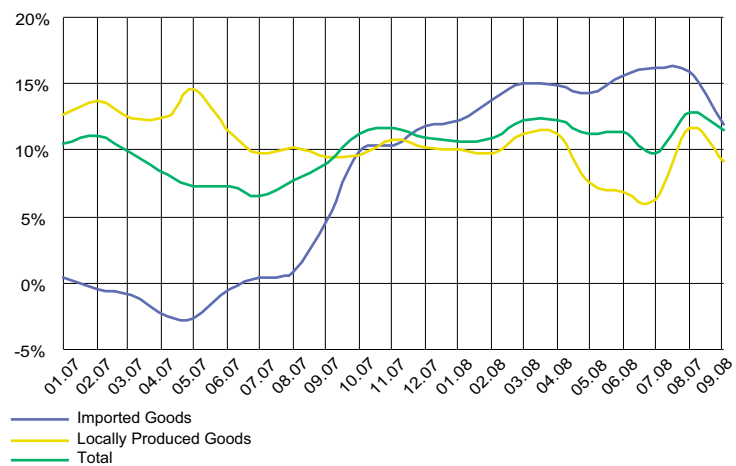
The annual inflation rate of imported goods eased to 11.9% in September. The comparatively higher rate of price increases on imported goods is mostly explained by high inflation in major trading partners (Ukraine, Russia, Kazakhstan, Azerbaijan, Turkey, and Armenia). Inflation rate of domestically produced goods reduced to 9.1%, which is mainly due to the setback in prices on agricultural products. Thus, high level of inflation in Georgia is largely determined by the imported inflation from major trading partners.

It is noteworthy to look at the dynamics of prices on traded<sup>1</sup> and non-traded goods. The prices on non-tradables rise faster than those on tradables for the recent years. This is quite peculiar to developing countries; intensive capital inflows that were observed for the last two years resulted in the availability of additional savings among the population boosting aggregate demand. Other things being equal, higher demand leads to price acceleration, which is faster for non-tradables compared to tradables. The price formation on tradables mainly depends on the world market tendencies, whereas even the increased demand in Georgia, being the country with a small economy, is too weak to influence dominant world prices on tradables, and pressure on non-tradables is stronger. However it must be noted that, during the past two months, a higher inflation is being observed for the traded goods;

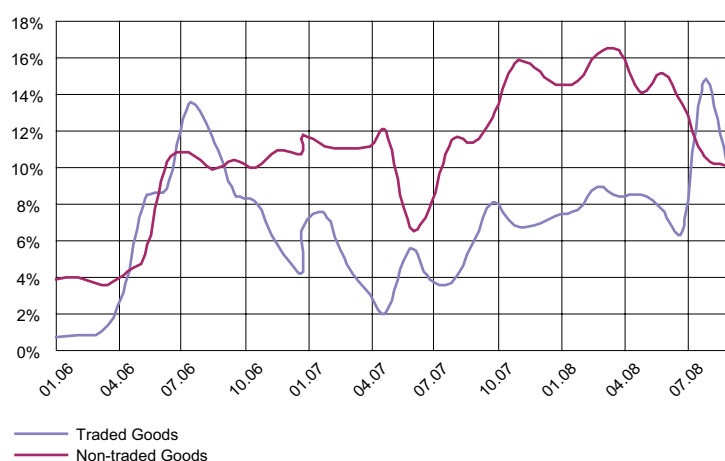
this can be explained mainly by significant price hikes on certain agricultural products during the military hostilities period.

Analysis of goods by consumption durability shows that in September 2008,

GRAPH 1.2  
ANNUAL INFLATION BASED ON LOCATION OF PRODUCTION

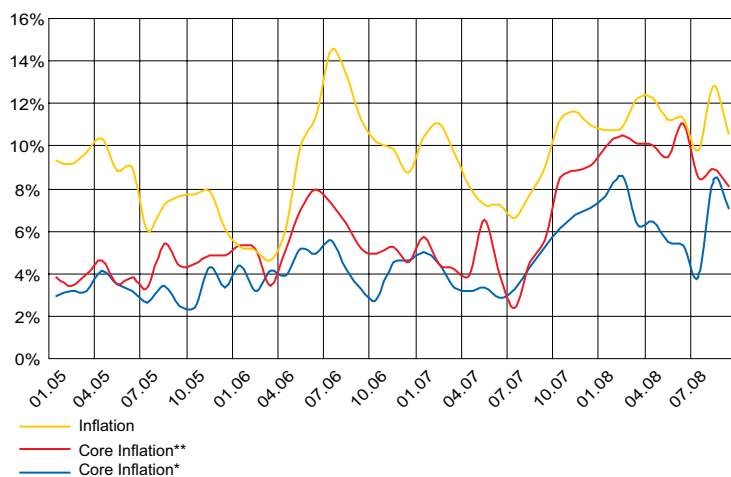


GRAPH 1.3  
INFLATION OF TRADED AND NON-TRADED GOODS



<sup>1</sup> Goods and services, which can be sold at a distance from the production location

GRAPH 1.4  
ANNUAL CPI AND CORE INFLATION (BY 282 COMPONENTS OF THE CONSUMPTION BASKET FROM DECEMBER 2006)<sup>1</sup>



as compared to the previous quarter, prices decreased on semi-durable and durable goods by 1.3% and 1.2%, respectively. Prices on services grew by 0.7% and the inflation of non-durables increased to equal 1.8%. Among goods of various consumption durability the annual inflation rate is the highest for non-durable goods (12%). The annual inflation rate of services is also high (10.5%).

From December 2005 to September 2008, the prices on non-durable goods

TABLE 1.1  
INFLATION (CPI) INDICATORS FOR VARIOUS COMPONENTS (%), THEIR SHARE IN THE CONSUMPTION BASKET (%) AND IMPACT ON CPI (%)

	2006	September 2008 /		September 2008 /		October 2007 – September 2008 /	
	December	June 2007		September 2007		October 2006 – September 2007	
	Weight	Inflation	Impact	Inflation	Impact	Inflation	Impact
Total	100.0	1.3	1.3	10.6	10.6	11.3	11.3
Food and non-alcoholic beverages	44.3	2.1	0.9	13.6	6.0	14.3	6.3
Food	43.0	2.1	0.9	13.9	5.9	14.6	6.3
Bread and Bakery Products	12.2	1.8	0.3	16.9	2.2	27.2	3.3
Meat and Meat Products	6.6	-1.1	-0.1	12.3	0.8	7.5	0.5
Fish Products	1.1	4.7	0.0	1.8	0.0	0.4	0.0
Milk, Cheese, Eggs	5.2	19.2	0.7	9.6	0.4	12.6	0.6
Oils and Fats	3.5	-0.3	0.0	19.7	0.8	38.0	1.3
Fruits, Grapes	2.3	2.0	0.1	22.4	0.9	36.1	1.3
Vegetables, Watermelons, Potatoes and Other Solanaceae	8.8	-4.4	-0.3	8.3	0.6	-10.0	-0.9
Sugar, Jam, Honey, Syrups, Chocolate, Pastry	2.7	7.9	0.2	5.8	0.1	-1.6	0.0
Other Food Products	0.6	2.9	0.0	10.7	0.1	12.8	0.1
Non-Alcoholic Beverages	1.3	1.0	0.0	3.8	0.0	3.9	0.0
Alcoholic Beverages, Tobacco	3.7	0.4	0.0	-0.3	0.0	0.2	0.0
Clothing and Footwear	5.0	-1.5	-0.1	-3.6	-0.2	-5.0	-0.2
housing, Water, Electricity, Gas, and Other Fuels	10.3	0.2	0.0	6.6	0.8	14.2	1.6
Furniture, Home Appliances and Equipment, Housing Renovation	3.7	1.5	0.1	17.3	0.6	14.2	0.5
Healthcare	8.0	1.3	0.1	15.2	1.2	12.5	1.0
Transport	9.0	0.8	0.1	16.8	1.6	17.0	1.5
Communications	4.4	-0.7	0.0	4.4	0.2	3.0	0.1
Recreation, Leisure and Culture	2.7	0.1	0.0	2.2	0.1	6.2	0.2
Education	3.5	0.0	0.0	0.0	0.0	2.2	0.1
Hotels, Cafes, Restaurants	2.4	4.0	0.1	8.5	0.2	3.4	0.1
Other Goods and Services	3.2	1.0	0.0	7.1	0.2	6.3	0.2
Non Durable Goods	68.0	1.8	1.2	12.0	8.1	12.6	8.6
Semi-Durable Goods	6.5	-1.3	-0.1	-1.8	-0.1	-1.9	-0.1
Durable Goods	1.9	-1.2	0.0	-1.1	0.0	-0.7	0.0
Services	23.6	0.7	0.2	10.5	2.6	11.7	2.8

<sup>1</sup> For the products within one standard deviation.

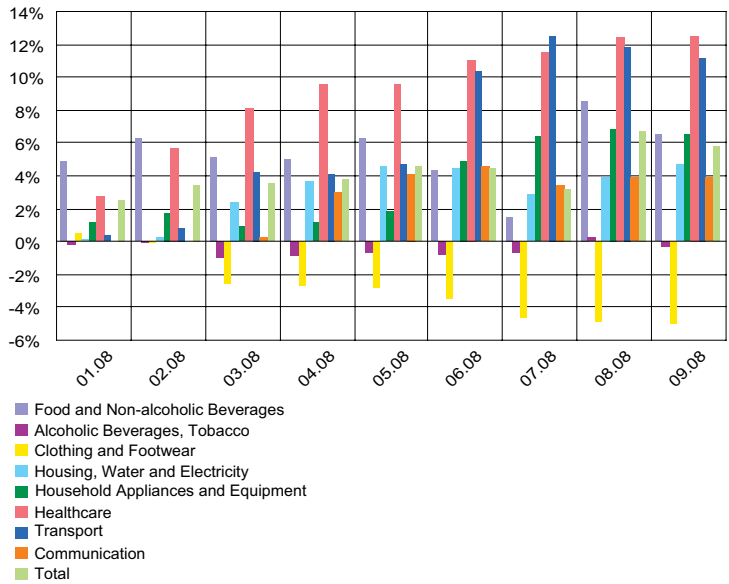
<sup>2</sup> For the products within two standard deviations.



grew by 30.7%. During the same period the prices on services increased by 29.9%. As for the semi-durable and durable goods, during the same period the prices decreased by 5.2% and 3.4%, respectively.

The high inflation rate registered in the last year was largely determined by several factors. Namely, world prices on wheat flour, sunflower oil, sugar, and oil products increased during this period. These goods comprise quite a significant share of the consumption basket. Therefore, the global price increases had a significant negative impact on the inflation rates in Georgia.

GRAPH 1.5  
PRICE INCREASES, AS COMPARED TO DECEMBER 2007



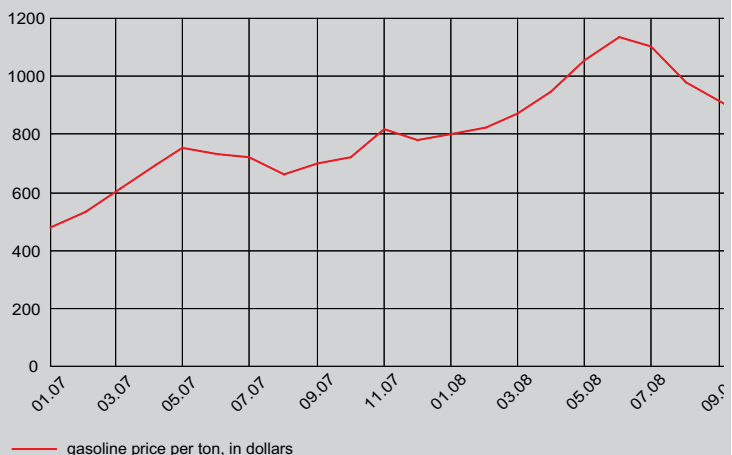
**BOX 1. EFFECT OF WORLD PRICES ON THE LOCAL MARKET**

Overall, the world commodity exchanges evidenced a downward tendency in prices during QIII 2008. In September, the average monthly price on crude oil fell to \$96.13/barrel at the Chicago Board of Trade, which is 24% lower than the price quoted in June. Beside the oil products, prices fell on wheat, sugar, and other commodity groups.

For the above-mentioned period, such a drastic decrease of prices at commodity exchanges can be mainly explained by the slowdown of economic activity due to the global financial crisis. Specifically, the global financial crisis (caused by the mortgage loan crisis in the USA) provoked realistic expectations of the

aggregate consumption decline in the US and worldwide in QIV 2008 and 2009.

GRAPH 1  
PRICES ON GASOLINE FOR 2007-2008 (USD/TON)

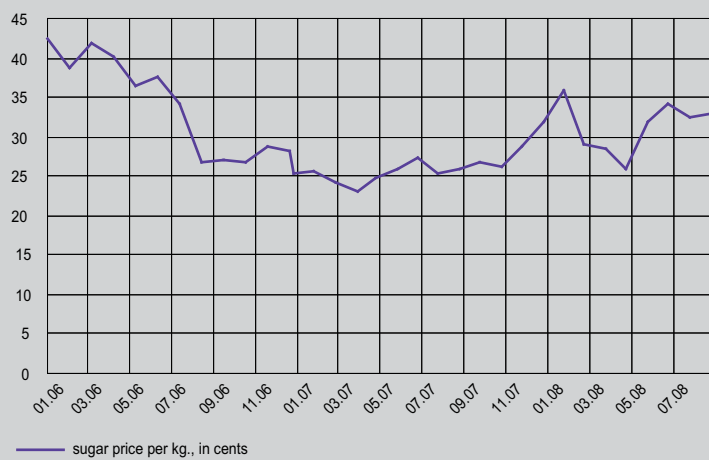


Based on the data<sup>1</sup> available to the NBG, along with the worldwide price decline on commodity groups, the prices decline is also observable in the local markets of Georgia. However, local decline rates are below those

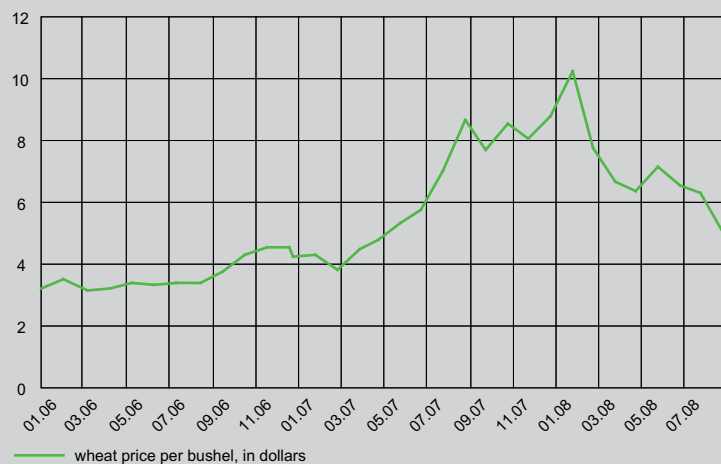
worldwide. The analysis of local and world prices shows strong correlation in gasoline prices; specifically, in terms of average monthly prices, the correlation coefficient equals 0.87%. Prices correlate the most within a one-month lag, which is why it might be assumed that one month is the period required for the world prices on oil products to carry over to the local market. Such a time lag varies depending on the commodities group, because of market specifics for commodities concerned. The correlation coefficients of local and world prices on sugar and wheat<sup>2</sup> (in terms of zero-time lag) indicate 0.66% and 0.81%, respectively; the time-lag required for strong correlation is 2-3 months for both of the commodity groups.

In case of competitive market environment for a given commodity, the time-lag, as explained above, shall not exceed the period required to import such commodity. In this sense, the more competitive is the environment, the more sensitive shall be the local price to the international price. In case of absolutely competitive environment, the degree of sensitivity of local prices on a given commodity depends on the country's tariff policy on imports, as well as on costs<sup>3</sup> not related to international prices. Those provisions of tariff policy, which envisage taxation of imports proportionate to the international prices, amplify price sensitivity, whereas the costs not related to international prices,

**GRAPH 2**  
PRICES ON SUGAR IN 2006-2008 (CENT/KG)



**GRAPH 2**  
PRICES ON WHEAT IN 2006-2008 (USD/BU)



<sup>1</sup> The NBG's data on local commodity prices rely on the information provided by the Statistics Department.

<sup>2</sup> For wheat, price comparison is made between world prices on wheat and local prices on bread.

<sup>3</sup> These costs mainly include transportation and any other costs required to prepare the imported goods for sale in the local market.

including those provisions of tariff policy which stipulate excise payments, dampen price sensitivity.

The tax code stipulates excise payments for oil products. Moreover, the cost of transportation of oil products is higher than, for instance, sugar and wheat. Imports of sugar and wheat are subject to taxation proportionate to the international prices, as envisaged in the import tariff policy. Taking into account the above-mentioned, we may assume that, other things being equal, local prices will be less sensitive for oil products rather than for sugar and wheat.

The correlation of international and local prices enables us to evaluate the competitiveness (or monopolization) of markets. For instance, in case of perfect competition in the local markets, the price shall equal marginal costs. The marginal costs, in turn, can be divided into costs related and unrelated to international price.

$$P_c = MC = \beta \cdot P^* + C,$$

where

$P_c$  - price under perfect competition in the local market;

MC – marginal costs;

$P^*$  – price in the international market;

C – all other costs required to prepare the imported goods for sale in the local market, which are not related to international prices;

$\beta$  - coefficient, which measures marginal effect of international price changes on local price. Under perfect competition, the value of this coefficient is determined by import tariff policy for a given commodity. In case of gasoline, sugar, and wheat, it equals 1.24, 1.39, and 1.39, respectively.

Using the least squares method, the equations produce the following results:

$$\hat{P}_c = 1.04 \cdot P^* + 0.23 \text{ – for gasoline;}$$

$$\hat{P}_c = 1.48 \cdot P^* + 0.27 \text{ – for sugar;}$$

$$\hat{P}_c = 1.87 \cdot P^* + 0.30 \text{ – for wheat.}$$

We can reject the hypothesis of competitive price-formation on gasoline at a 5% significance level. For wheat, such rejection can be made only at a 10% significance level, whereas we cannot reject the hypothesis for sugar at any acceptable significance level.

## 2. INFLATION FACTORS

### 2.1. LABOR PRODUCTIVITY, WAGES

The year of 2008 was earmarked by significant growth in average wages, as compared to 2007. Namely, in QII 2008 the average monthly wages per employee in the official economy increased to 552.1 Lari<sup>1</sup>, which is 57.4% higher than for the same period of 2007. The growth in the average monthly wages per employee was observable in all major sectors of the economy. Based on the sectoral

analysis, the highest growth rate was achieved in the fish catching and fishery sector, in which the average monthly wages of employees increased three times in QII 2007, as compared to the same period of the previous year. Also remarkable are the growth rates for the following sectors: healthcare and social assistance (76.3%), public administration (73.3%), agriculture (71.7%), and hotels and restaurants (64.4%). It is worthwhile to mention that the lowest positive growth rate in the average monthly wages was recorded in the construction sector (11.4%).

Significant differences in the average wages by sectors still remained in QII 2008. The highest monthly average wages were registered for the sectors of financial intermediation (1428.0 Lari) and public administration (923.6 Lari), exceeding 2.6 and 1.7 times the monthly average for the whole economy, respectively. The lowest monthly average wages were registered in the sectors of education (239.7 Lari) and healthcare and social assistance (323.2 Lari), equaling 43.4% and 58.5% of the monthly average wages for the whole economy, respectively. Wages that stand below the monthly average for the whole economy were mainly

TABLE 2.1.1  
NOMINAL MONTHLY AVERAGE WAGES OF EMPLOYEES IN QII 2008,  
COMPARED TO QII 2007 (%)

	Nominal Wages
Agriculture, Hunting, and Forestry	171.7
Fish Catching, Fishery	301.9
Mining and Quarrying	145.5
Processing Industry	140.4
Production and Distribution of Electricity, Gas and Water	141.3
Construction	118.4
Trade; Repair of Cars, Home Appliances, and Goods of Personal Consumption	162.0
Restaurants and Hotels	164.4
Transport and Communications	132.1
Financial Intermediation	151.3
Real Estate Operations, Leasing, Consumer Services	147.3
Public Administration	173.3
Education	162.8
Health Care and Social Assistance	176.3
Communal, Social and Personal Services	154.6
Total	154.7

Source: data from the current production and labor statistics.

registered for those sectors, which are largely financed by the state budget (education, healthcare and social assistance, and communal, social and personal services).

In QII 2008, compared to the same period of the previous year, the real growth of value-added per employee equaled 3.5% (which is 9.1% lower than analogous parameter for 2007), thus contributing to the price increase tendency in the country's economy. In terms of types of economic activity, the growth rate of labor productivity was higher in the services sector compared to the production sector. Remarkable growth was recorded in the following sectors: real estate operations, rent, and consumer services (75.8%), financial intermediation (42.5%), and restaurants and hotels (36.4%). As it was already mentioned, comparatively low growth rate was registered in the production field of the official economy (namely, in the manufacturing sector – 4.4%). For some sectors, negative growth was manifested. In this case we may point out the "other services", where in QII 2008 the value-added per employee declined almost twice, as compared to the same quarter of 2007. Also remarkable drops were registered in agriculture (24.7%), construction (7.3%), and public administration and defense (3.5%).

The real increase of labor productivity, being an indicator of supply expansion, represents by itself an important counter-inflationary factor. However, the relatively rapid increase in wages (in QII 2008, the growth rate of

average wages outpaced the growth rate of value added per employee by almost 51.2%) caused the demand to significantly exceed the supply.

This alerts of the inflationary pressure risk.

GRAPH 2.1.1  
NOMINAL MONTHLY AVERAGE WAGES OF AN EMPLOYEE BY SECTOR, QII 2008

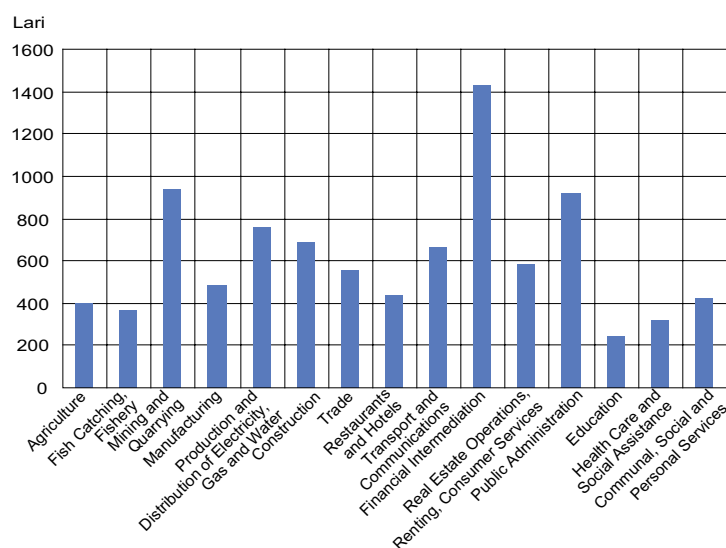


TABLE 2.1.2  
REAL VALUE ADDED PER EMPLOYEE IN QII 2008, COMPARED TO QII 2007 (%)

	Real Value Added
Agriculture	75.3
Manufacturing	104.4
Construction	92.7
Trade	114.6
Hotels and Restaurants	136.4
Transport, Communications	111.4
Financial Intermediation	142.5
Real estate Operations, Leasing and Commercial Activity	175.8
Public Administration, Defense	96.5
Education	115.7
Healthcare	102.1
Other Services	-128.9
Total	103.5

## 2.2. MONETARY AGGREGATES

During the first nine months of 2008 the reserve money increased by 235.9 million Lari (15.7%), equaling 1734.4 million Lari by the end of September. In terms of the monthly average, the reserve money increased by 153.0 million Lari (10.6%) in September 2008, as compared to December 2007.

During the first nine months the NBG was mostly pursuing expansionary monetary policy by means of money market interventions at the TIBFEX. An essential exception from this policy was made in August, when, due to drastic changes in market conditions, demand for foreign currency at the TIBFEX sharply exceeded supply; the NBG sought to reduce the monetary base during this month. The situation stabilized in September, when the foreign exchange market drew close to the equilibrium level, and the volumes of the foreign currency purchases by the NBG nearly equaled those of its sales. In aggregate, throughout the nine months

supply significantly exceeded demand at the TIBFEX. As a result, along with appreciation of the Lari exchange rate (1.5916 - 1.4060, GEL/USD), the net purchases by the NBG amounted to USD 168.2 million (circa 247.0 million Lari). In addition, as a result of currency conversions by the government, the net sales by the NBG amounted to USD 407.7 million (circa 599.0 million Lari).

During QIII 2008 the volume of government deposits decreased by 250.1 million Lari and, according to the latest September data, stood at 377.3 million Lari. In April the Government issued Eurobonds in the total amount of USD 500 million. These funds were placed in the Sustainable Development Fund and Future Generations Fund. A part of this money (circa 70 million Lari) was repatriated by the end of the accounting period and accumulated on the government deposits.

The NBG relied on auctions of Certificates of Deposit as a main instrument of the monetary policy. In the accounting period the total amount of liquidity absorbed by means of this instrument from the money market amounted to 1761.7 million Lari. The CDs worth 1989.4 million Lari were repaid during the same period. As a result, the net amount of money withdrawn by means of the CDs from the system amounted to 233.5 million Lari. On the one hand, intensive use of Certificates of Deposit contributes to development of short-term securities market and improves liquidity management by commercial banks. On the other hand, it plays an important role in meeting monetary policy goals.

Attempting to mitigate the impact of the August military activities and to maintain financial stability, the NBG used the lending of last resort facility, in order to provide the banking system

TABLE 2.2.1  
DYNAMICS OF THE RESERVE MONEY  
AVERAGE MONTHLY DATA, 2008

	01.08	02.08	03.08	04.08	05.08	06.08	07.08	08.08	09.08
Reserve money	1420749	1413282	1447780	1533334	1572458	1572458	1618715	1605961	1595511
Money in circulation	1217136	1199674	1244064	1334405	1360751	1360751	1402286	1470569	1408946
Deposits of Bank	203613	213607	203716	198929	211707	211707	216429	135392	186565
Balances on corresponding accounts	203473	213548	203657	198870	211654	211654	216405	135392	186565

TABLE 2.2.2  
DYNAMICS OF THE RESERVE MONEY  
END OF MONTH DATA, 2008

	01.08	02.08	03.08	04.08	05.08	06.08	07.08	08.08	09.08
Reserve money	1338939	1392331	1413540	1522132	1508768	1600239	1672181	1536234	1734450
Money in circulation	1184525	1225042	1287123	1391544	1348253	1413237	1468171	1439132	1399208
Deposits of Bank	154414	167289	126418	130588	160515	187002	204010	97102	335242
Balances on corresponding accounts	154355	167231	126359	130529	160456	187002	204010	97102	335242

with short-term liquidity funds. The NBG suspended money withdrawal through the CDs and launched 7-day refinancing loans. Regarding the lending of last resort facility, 38.14 million Lari was extended and 23.34 million Lari was repaid in the same month. The use of the same facility in September amounted to 121.6 million Lari, of which 14.8 million Lari was repaid.

As a result of the above-mentioned monetary flows, the monetary base expanded by 134.1 million Lari during the accounting period. The volume of cash in circulation decreased by 14.0 million Lari to equal 1399.2 million Lari. The volume of balances on the corresponding accounts of commercial banks in the NBG increased by 148.2 million Lari to equal 335.2 million.

### 2.2.1. BROAD MONEY

Starting from August 2008 high growth rates of the money aggregates reversed. The M3 aggregate decreased by 222.2 million Lari to equal 3965.7 million Lari in the accounting period. The foreign currency denominated deposits decreased by 62.6 million Lari during the period amounting to 1708.2 million Lari by the end of September. The deposits denominated in the national currency decreased by 120.7 million Lari to equal 1061.0 million Lari by the end of the period.

During the accounting period the M2 aggregate was reduced by 6.6% (159.6 million Lari), which, along with the decrease of deposits denominated in national currency, was conditioned by the decrease of the volume of cash outside of banks.

By the end of September, the annual growth rates of broad money aggregates,

M3 and M2, stood at 6.9% and 17.1%, respectively.

### 2.3. MONETARY INSTRUMENTS

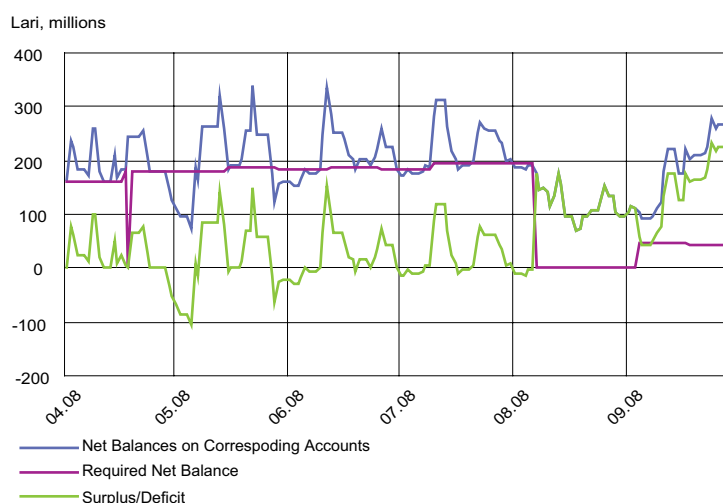
The priorities of the NBG's monetary policy essentially changed during QIII 2008. Taking into account the downward trend of the inflation forecasts, the NBG reduced the reserve requirements and introduced the refinancing loans instrument to avoid a slump in the money mass in August.

The growth rate of the volume of loans issued by commercial banks still remained

TABLE 2.2.1.1  
MONTHLY CHANGES IN MONETARY AGGREGATES  
END OF MONTH DATA, 2008

	01.08	02.08	03.08	04.08	05.08	06.08	07.08	08.08	09.08
<b>Broad money /M3/</b>	3981686	3951402	4026932	4278872	4155079	4187900	4321265	3887149	3965657
Monetary mass /M2/	2018547	2071878	2258946	2358767	2316461	2417078	2507358	2269819	2257449
Cash outside the banking sector	1038612	1072474	1122923	1219459	1186454	1235407	1290945	1245779	1196489
Lari in circulation	1184525	1225042	1287123	1391544	1348253	1413237	1468171	1439132	1399208
Deposits in national currency	979935	999404	1136024	1139308	1130008	1181671	1216413	1024040	1060961
Deposits in foreign currency	1963139	1879524	1767985	1920106	1838618	1770822	1813907	1617331	1708208

GRAPH 2.3.1  
NET BALANCES ON LARI CORRESPONDING ACCOUNTS OF BANKS, REQUIRED NET BALANCE AND SURPLUS/DEFICIT OF LIQUIDITY



high in July (the annual growth rate equalled 51.8%). However, demand for the NBG's overnight loans and short-term interbank loans (intensively used by the banks to fill the liquidity shortage in QII) somewhat slowed down on the grounds of a comparatively reduced pressure of the liquidity deficit in the banking system, as compared to QII. The NBG continued pursuing the existing policy of controlling the inflation process and absorbing liquidity. It may be said that the monetary policy did not undergo essential changes in July.

The August war conditioned drastic changes in the NBG's policy. Having been previously facing liquidity surplus, the banking system encountered an acute liquidity deficit in August. Subsequently, the NBG's policy direction changed from absorption to supply of liquidity to the banking system. Taking into account the growing demand for liquidity, increasing business risks, and the threat of recession in the banking and overall economic activity, the NBG decided to embark upon loosening of the monetary policy. Limits and interest rates on the securities at the 91-day CD auctions have been significantly reduced. Also, the NBG lowered the interest rates on overnight loans and the lending of last resort facility (from 20% to 13%). On September 2 the NBG introduced a new monetary policy rate (for refinancing loans) of 11%, which was shortly reduced to 10%.

To maintain financial stability and provide the banking system with short-term liquidity funds in August, the NBG extensively used lending of last resort facility.

Prior to the August military hostilities, the 7-day CD auctions were held on

a weekly basis. Placements were quite dynamic, compared to QII<sup>1</sup>, reaching 284.7 million Lari at 11.7% weighted average interest rate. After August 8, only one auction for 7-day CDs was held (on August 26) with the placement value of 3.8 million Lari at 10.3% weighted average interest rate. Starting from the beginning of September, emission of 7-day CDs discontinued. As for the 91-day CDs, the auctions were held on a weekly basis in QIII, except for August 27, when there was no demand on these assets. From early July through August 8, the total volume of 91-day CDs reached 62 million Lari at 19% weighted average interest rate, while starting from August 8 through the end of September, the placement of the CDs equaled 83.9 million Lari at 14% weighted average interest rate. In percentage, the volume of 91-day CDs placed in QIII is less by 11.1%, compared to QII<sup>2</sup>. Such high demand, which remained even after the launch of the military hostilities, can be explained by the fact that the commercial banks preferred to invest in the CDs, despite the decline of the interest rate on this asset. The reason to this may be in the increasing risks in the economy.

The circumstances described above are clearly seen in the analysis of the money withdrawn by means of the CDs and the loans extended to commercial banks in QIII. If on June 30, 2008, gross and net withdrawals amounted to 180.1 million Lari, by August 7-10 the withdrawals (both gross and net) amounted to 233.5 million Lari, but decreased shortly, and by September 30, the money mass withdrawn by means of CDs amounted to 143 million Lari, while the net withdrawal

<sup>1</sup> In total, in QII, 2008, the placement value of 7-day CDs equaled 283 million Lari at 11.4% weighted average interest rate.

<sup>2</sup> In QII 2008, the placement value of 91-day Certificates of Deposits equaled 164.1 million Lari at 17.8% weighted average interest rate.



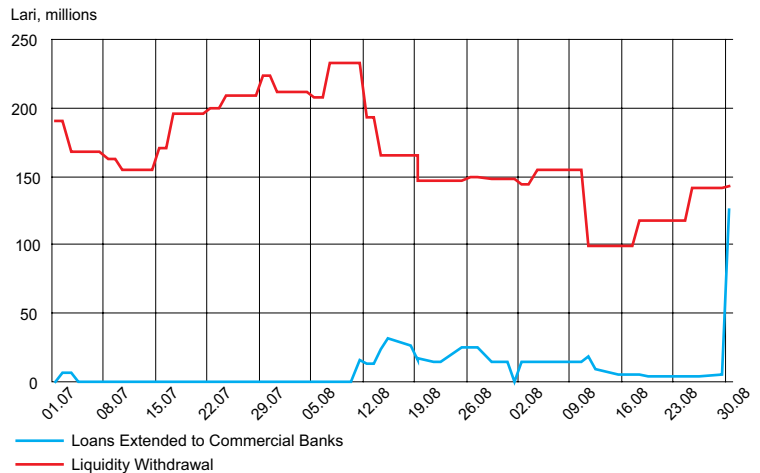
amounted to 17.6 million Lari (the difference between the gross and the net represents the loans extended to commercial banks in the amount of 125.5 million Lari).

As of the dynamics of loans extended by the NBG to banks, their volume in QIII never exceeded gross withdrawals. By June 30, the loans extended to the banks equaled zero, on August 11 they increased to 15.3 million Lari, and on September 19 – decreased to 3.9 million Lari after certain fluctuations. However, on September 30, the NBG loans sharply rebounded to the mark of 125.5 million Lari.

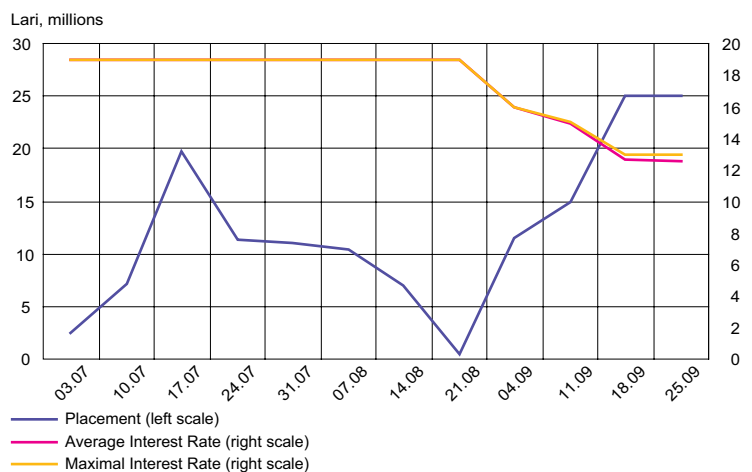
Refinancing loans represent a new instrument of the monetary policy introduced by the NBG on September 2. These loans may be received with collateral, such as the CDs of the NBG, government’s Treasury Notes, Treasury Bills of the Ministry of Finance, and foreign currency. Unlike the overnight loans, the maturity period of the refinancing loans is 7 days. The interest rate on the refinancing loans is represented by the NBG’s new monetary policy rate, which is why it shall play a key role in the process of formation of interest rates in the economy. Moreover, refinancing loans should aid the commercial banks to manage their liquidity. It should be noted that, amid the financial crisis, the demand for the refinancing loans was moderate in September. Specifically, only one bank received the loan amounting to 11.5 million Lari at 10.3% weighted average interest rate.

The demand for the overnight loans drastically decreased in July, including only two loans which totaled

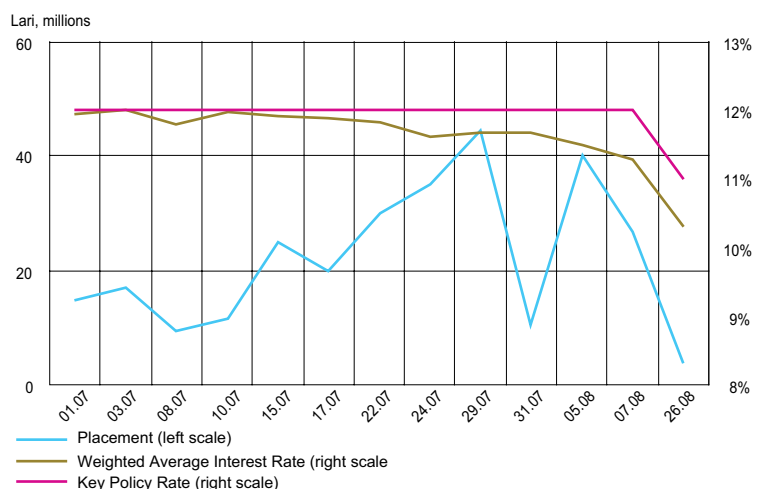
**GRAPH 2.3.2**  
**LIQUIDITY WITHDRAWALS AND LOANS EXTENDED TO COMMERCIAL BANKS BY THE NBG (IN MILLION LARI)**  
QIII, 2008



**GRAPH 2.3.3**  
**PLACEMENT OF THE 91-DAY CDs, AND MAXIMAL AND MINIMAL WEIGHTED AVERAGE INTEREST RATES**  
QIII, 2008



**GRAPH 2.3.4**  
**PLACEMENT OF THE 7-DAY CDS, KEY POLICY RATE, AND WEIGHTED AVERAGE INTEREST RATE**  
July-August, 2008



12 million Lari<sup>1</sup>. This speaks of the improved liquidity management by the banks in this period. Because of certain panic caused by the military hostilities, there emerged a certain demand for the overnight loans. 6 loans were extended in August totaling 29.5 million Lari. In August-September the interest rate on the overnight loans was reduced from 20% to 13%. However, none of the banks requested these loans in September, which may speak of the banks' conservative approach to the crediting of economy.

## 2.4. INTERBANK LOANS

Based on commercial banks' data, in QIII 2008 the total volume of the national currency denominated loans extended in the interbank market equaled 1547 million Lari, which indicates a substantial reduction, compared to QI and QII, when these loans amounted to 2964 million Lari and 2048 million Lari, respectively.

In comparison with the previous quarter, there was a slight increase in the Euro-denominated deals (from 2162 million Lari to 2318 million Lari), and a reduction in the US Dollar denominated deals (from 579 million Lari to 498 million Lari).

The largest volumes of deals denominated in the national and foreign currency were registered in July equaling 613 million Lari, 953 million Euro, and 244 million US dollars. The August war negatively impacted the interbank market activities. Particular slackening of the market was registered in August,

followed by a recovery in September. For the Lari-denominated deals, the volumes stood at 322 million in August and 612 million in September. For the Euro-denominated deals, the volumes stood at 730 million in August and 635 million in September. As for the US dollar-denominated deals, the volumes stood at 130 million in August and 123 million in September. The largest share of the August deals in the Lari and the US dollars was registered prior to August 8.

Short-term deals dominated in the interbank market, e.g. the overnight and 7-day loans denominated in Lari comprised 91.8% of the total volume of loans, while the share of loans issued for one transaction day stood at 85.6%. A similar observation applies to the loans issued in the Euro and the US dollars, the shares of which stand at 93% and 54.5%, respectively.

During the quarter under review, the interest rates on the Lari-denominated loan resources of the interbank market tended to decrease in line with the changes of the NBG's monetary policy rate. Namely, the weighted average annual interest rate on the Lari-denominated loans issued for one transaction day equaled 9%, while the same parameter for the previous quarter equaled 13.4%. At the same time, the same parameter for the period from July 1 through August 7 equaled 9.4%, while it was only 8.8% for the period from August 8 through September 30. As of the 7-day Lari-denominated loans, the weighted average annual interest rate

<sup>1</sup> In QII, 2008, the total volume of overnight loans borrowed by commercial banks amounted to 2 284.7 million Lari, while in QI, the volume of such loans equaled 1064.1 million Lari.

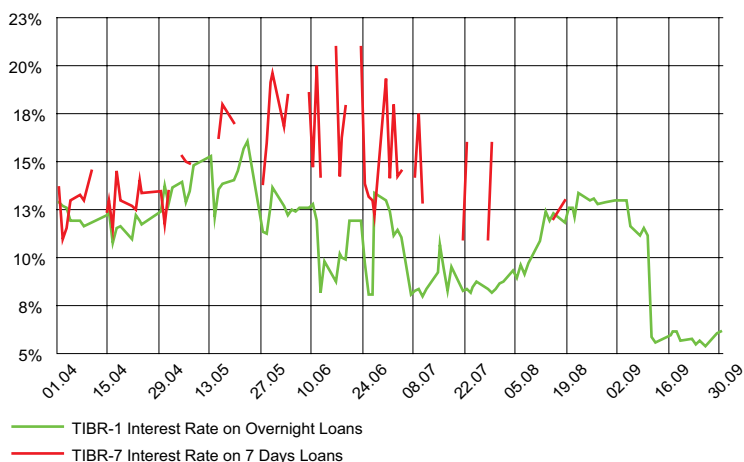
equaled 13.5%<sup>1</sup> in QIII, while the same parameter for the previous quarter stood at 15.2%.

The 7-day loans denominated in the national currency were rarely extended in the accounting quarter. The total volume of these loans extended during this period amounted to 61.4 million Lari, as compared to 179 million Lari for the previous quarter. The number of such deals significantly decreased in August-September, when mostly no deals were concluded for the 7-day loans. To the contrary, the deals for the 1-day interbank loans were concluded almost every day. However, the total volume of the 1-day Lari-denominated loans reduced by 46% in QIII compared to the previous quarter. High volatility of the TIBR-1 was observed in QIII. Namely, the rate was particularly high during August 11 through September 10 and dropped back afterwards.

When comparing the 7-day interbank loan interest rates to the 7-day CD interest rates, the rates on the interbank loans are higher. This is due to the fact that, as a rule, revenues received by commercial banks from the CDs are more profitable than those received from the interbank loans. The advantage of the CDs is that they carry a lower risk factor. Beside this, the interbank lending requires a larger amount of bank capital. It is anticipated that the spread between the NBG's monetary policy rate and the interbank rate on the 7-day loans will narrow against the background of the introduction of refinancing loans. However, scarcity of deals concluded in September in both markets does not provide sufficient ground for a reliable analysis yet. As

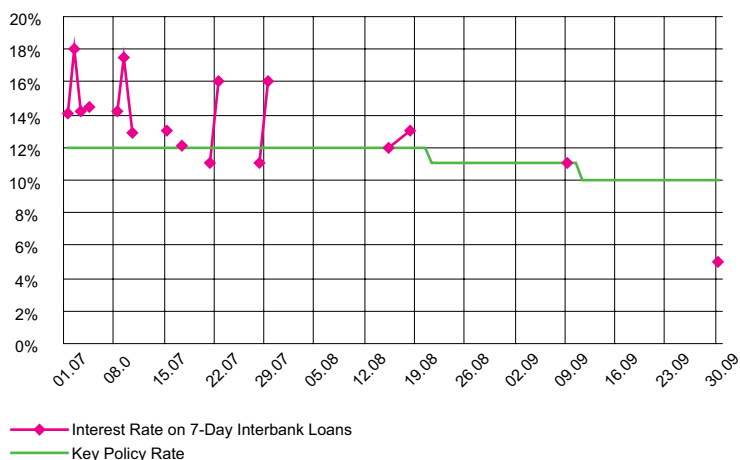
for the 3-month interbank loans, only three deals were concluded in QIII 2008 (namely, on September 11-12), in the total amount of 12.8 million Lari. The interest rate on all the three loans equaled 15%. The weighted average interest rate on the 3-month CDs placed on September 11 was also set at 15%.

GRAPH 2.4.1  
TBILISI INTERBANK RATE ON SHORT-TERM LOANS DENOMINATED IN LARI\*  
01.07.2008 – 30.09.2008



\* Note: empty curve segments correspond to the banking days on which there were no deals for the given loans.

GRAPH 2.4.2  
INTEREST RATE ON 7-DAY INTERBANK LOANS AND THE KEY POLICY RATE



<sup>1</sup> For the period from July 1 through August 7, this parameter equaled 14.3%, and 8.8% for the period from August 8 through September 30.

## 2.5. BANKING SECTOR

The growth tendency continued in the country's banking sector. The credit portfolio of the sector amounted to 867.4 million Lari, which is 18.7% more than the same parameter as of December 31, 2007. The total volume of loans extended by commercial banks to the country's economy

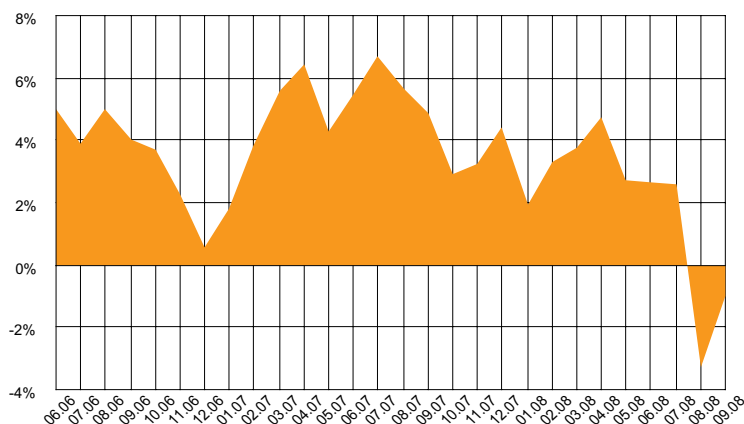
equaled 5503.6 million Lari. However, the increase in the risk factor, emerged due to the August military hostilities, significantly reduced the activity of both banks and their clients, leading to deceleration of the growth rate of the total volume of loans during the last two months.

It is remarkable that the volumes of the long-term loans extended by the commercial banks increased by 2.2%. The share of such loans in the overall loans extended to the economy stands at circa 70.5%, which is close to the mark corresponding to the beginning of the year. In recent period the share of long-term loans in the total lending has been gradually growing. Such a growth can be explained, on the one hand, by the diversification of long-term lending facilities introduced by the commercial banks (such as mortgage finance, automobile loans and similar types of lending) and, on the other hand, by the existing demand on the part of business entities. As a reaction to the August war, the commercial banks reduced the lending portfolio, which primarily affected short-term loans.

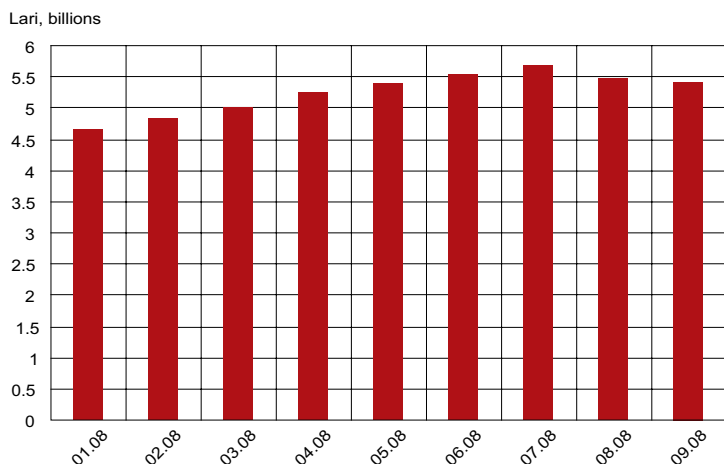
During the accounting period the volume of lending to legal persons dropped by 6.6%. It must be noted that the share of lending to legal persons gradually began to decrease starting from May and equaled 58% presently, as compared to 66% in the beginning of the year.

During the nine months of the current year the growth rate of lending in the national currency equaled 23.3%. As a result, the loan dollarization ratio decreased to 67.3%, compared to the beginning of the year. It must be noted, however, that the lowest dollarization rate was registered in June (64.7%), and the downtrend reversed upwards thereafter. The largest share of the

GRAPH 2.5.1  
GROWTH RATE OF TOTAL VOLUME OF LOANS



GRAPH 2.5.2  
TOTAL VOLUME OF LOANS (BILLIONS OF LARI)



lending to the economy is still in the foreign currency. The volume of loans extended in foreign currency in the current year increased by 32.1% (USD 2.683 million).

As of September 30, 2008, the share of overdue loans increased by 75%. Such a sharp increase fell mostly within August-September. By the end of September, the share of overdue loans equaled 2.9% of the total volume of loans.

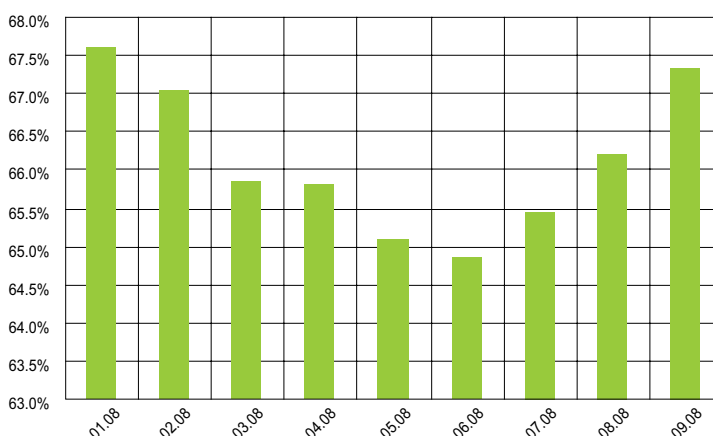
During the accounting period interest rates on loans increased by 0.6 percentage points and the weighted average interest rate equaled 22.4%. Particular rate increase was registered for loans in foreign currency surging by 1.5 percentage points, while the interest rate on loans in national currency decreased by 0.3 percentage points.

**Deposit Liabilities** decreased by 183.3 million Lari during the accounting period, and by the end of September amounted to 2769.2 million Lari, according to the data expressed in the national currency. However, the volume of deposit liabilities increased, taking into consideration the exchange rate volatilities of the national currency against the foreign currency. In particular, the foreign currency denominated deposits decreased by USD 33.0 million (2.6%) amounting to USD 1216 million. For the same period, the national currency denominated deposits decreased by 120.7 million (10.2%) amounting to 1.061 million. Such a reduction in the deposit volumes was conditioned by the August war. In August the national currency denominated deposits decreased by 192.4 million Lari, while the foreign currency denominated deposits

TABLE 2.5.1  
LOANS ISSUED BY COMMERCIAL BANKS (MILLION LARI)

	12.07	01.08	02.08	03.08	04.08	05.08	06.08	07.08	08.08	09.08
Liabilities of the Economy towards Commercial Banks	4636	4732	4882	5068	5303	5451	5594	5741	5566	5504
In National Currency	1458	1535	1612	1734	1819	1915	1975	1983	1880	1797
In Foreign Currency	3178	3197	3269	3334	3484	3537	3619	3758	3686	3706
Term Loans	4505	4571	4714	4903	5125	5280	5438	5571	5370	5272
Short-term Loans	1334	1348	1420	1532	1595	1638	1641	1596	1460	1390
Long-term Loans	3171	3223	3294	3371	3531	3642	3797	3975	3910	3882
Term Loans to Legal Persons	3050	3072	3140	3236	3339	3372	3426	3395	3245	3201
Term Loans on Physical Persons	1455	1499	1574	1667	1786	1909	2011	2176	2124	2070

GRAPH 2.5.3  
DOLLARIZATION OF LOANS



GRAPH 2.5.4  
GROWTH RATE OF DEPOSITS

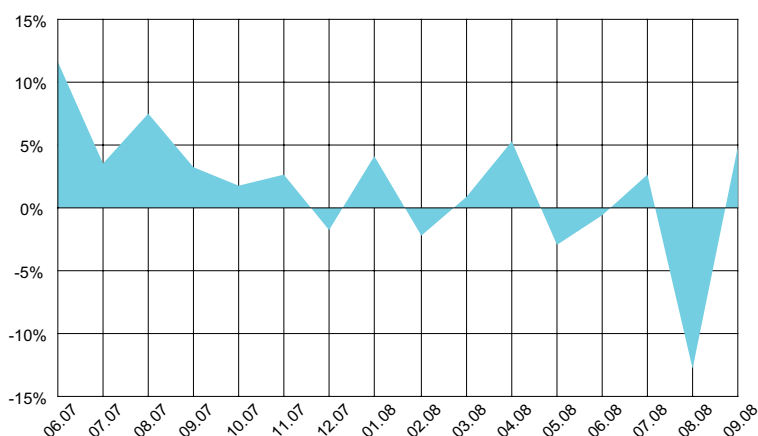
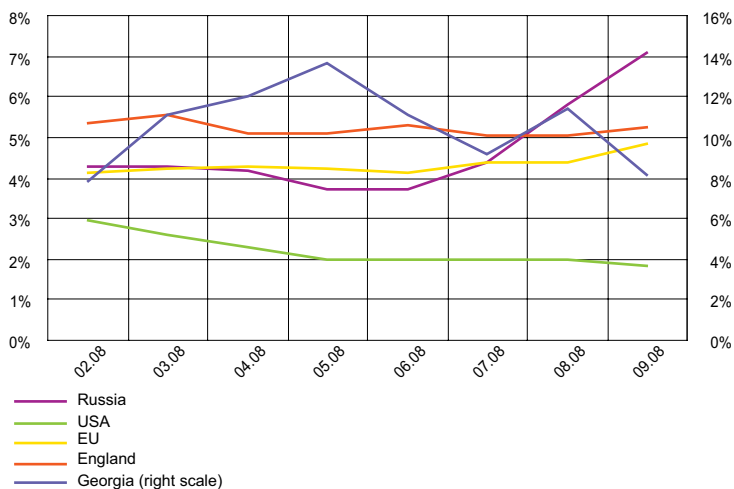


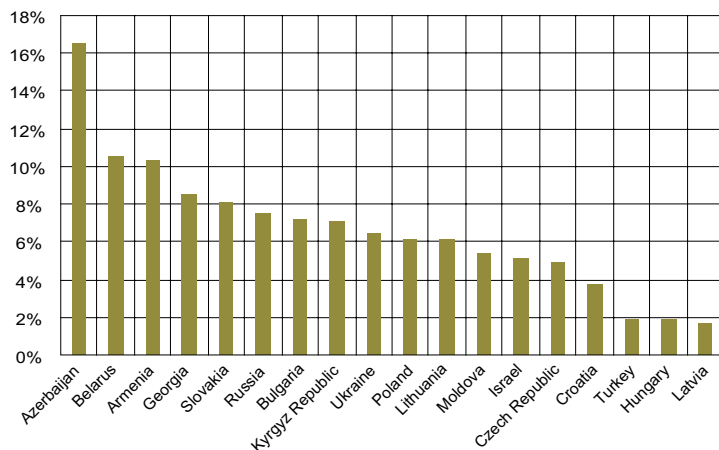
TABLE 2.5.2  
DEPOSITS AT COMMERCIAL BANKS (MILLIONS OF LARI)

	12.07	01.08	02.08	03.08	04.08	05.08	06.08	07.08	08.08	09.08
<b>Deposit Liabilities, Total</b>	<b>2829</b>	<b>2943</b>	<b>2879</b>	<b>2904</b>	<b>3059</b>	<b>2969</b>	<b>2952</b>	<b>3030</b>	<b>2641</b>	<b>2769</b>
<b>Legal Persons</b>	<b>1536</b>	<b>1618</b>	<b>1499</b>	<b>1508</b>	<b>1614</b>	<b>1538</b>	<b>1466</b>	<b>1513</b>	<b>1384</b>	<b>1502</b>
National currency	766	770	758	846	830	832	863	884	770	805
Foreign Currency	770	847	741	662	783	706	603	629	615	697
<b>Physical Persons</b>	<b>1292</b>	<b>1325</b>	<b>1380</b>	<b>1396</b>	<b>1446</b>	<b>1431</b>	<b>1487</b>	<b>1517</b>	<b>1257</b>	<b>1267</b>
National currency	214	210	241	290	309	298	319	332	254	256
Foreign Currency	1078	1116	1139	1106	1137	1133	1168	1185	1003	1011

GRAPH.2.6.1  
INTERBANK INTEREST RATES  
(monthly average)



GRAPH.2.6.2  
REAL GDP GROWTH, CIS AND CENTRAL AND EAST  
EUROPEAN COUNTRIES  
QII, 2008



decreased by USD 141.2 million. The situation recovered close to the end of August and throughout September, and the uptrend that existed before August resumed. The annual growth rate of deposit liabilities of the banking sector equaled 0.5% in September, as expressed in national currency.

During the first nine months of 2008, the deposit dollarization ratio continued to decline due to the decreasing growth rate of deposits denominated in both national and foreign currency. As a result, the ratio declined by 3.7 percentage points to equal 61.7% by the end of September. By the end of July the deposit dollarization ratio declined further to reach the mark of 59.9%.

During the current year the interest rates on deposits increased (by 1.1 percentage points) mainly due to the rates on foreign currency denominated deposits, the latter increasing by 1.1 percentage points to 9.3%. As for the national currency denominated deposits, the interest rate thereon were down by 0.8 percentage points. Compared to September 2007, the interest rates increased by 1.5% percentage points.

## 2.6 FACTORS AFFECTING THE EXCHANGE RATE

The main objective of the National Bank of Georgia is to ensure price stability. Accordingly, in order to maintain exchange rate stability, the NBG intervenes on both sides at the TIBFEX within the limits not jeopardizing the NBG's main objective.

The exchange rate is determined by demand and supply. Foreign capital inflows represent one of the most important factors affecting supply. Subsequently, it is critical to analyze these factors and compare them with the corresponding parameters of other countries determining the inflow of investment funds. These factors include market interest rates and the growth rate of economy.

High interest rate is an additional incentive for foreign capital inflows; whereas the country's economic growth is the main factor that preconditions high returns on investments.

During the first quarter of 2008 Georgia had one of the highest rates of economic growth among other developing countries. The growth rate of the real GDP of Georgia reached 12.4% in 2007, while, according to the data for the first two quarters of 2008, the same parameter equaled 8.5%

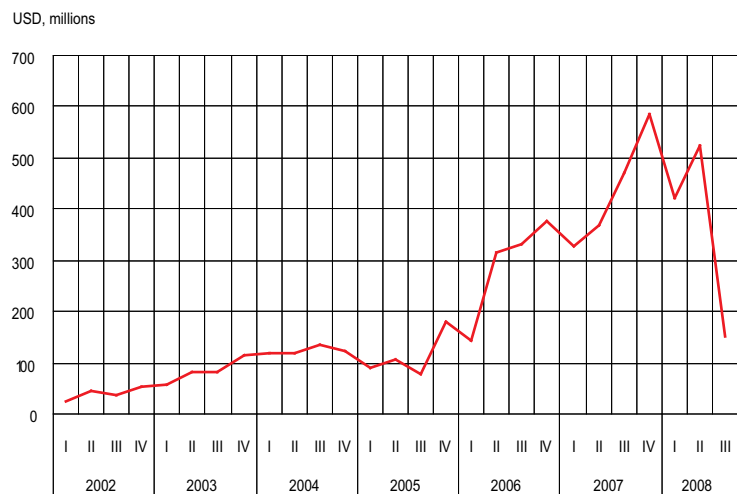
Rapidly developing countries are characterized by attracting large volumes of foreign capital. Georgia maintained quite high growth rates in the recent years, which makes it attractive for investment activities.

The Russian aggression, along with the global financial crisis, negatively impacted the country's economic growth leading to a significant drop of FDIs.

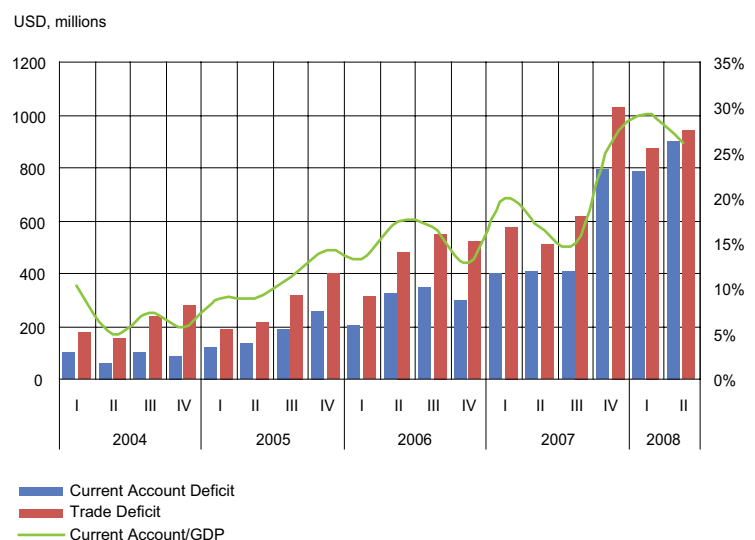
In 2007 the volume of FDIs amounted to 1.75 billion USD. During QI 2008 the volumes stood at

944 million USD, which is 36% higher than in the analogous period of 2007. However, in QIII the volume of FDIs will probably be within the range of 150 million USD.

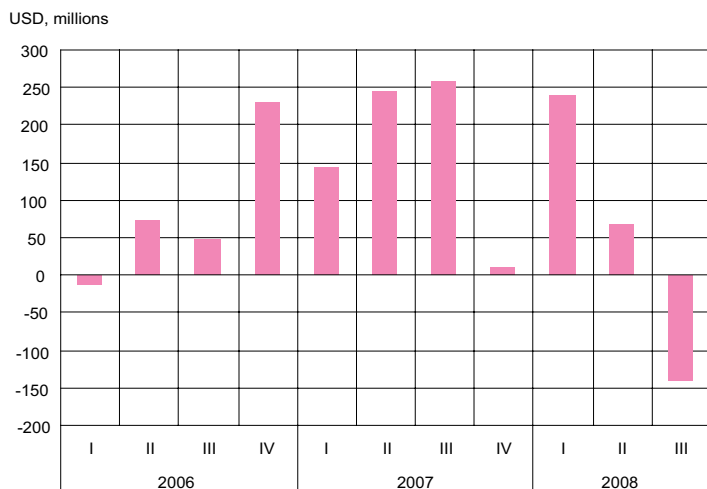
GRAPH.2.6.3  
FOREIGN DIRECT INVESTMENTS INFLOW IN GEORGIA



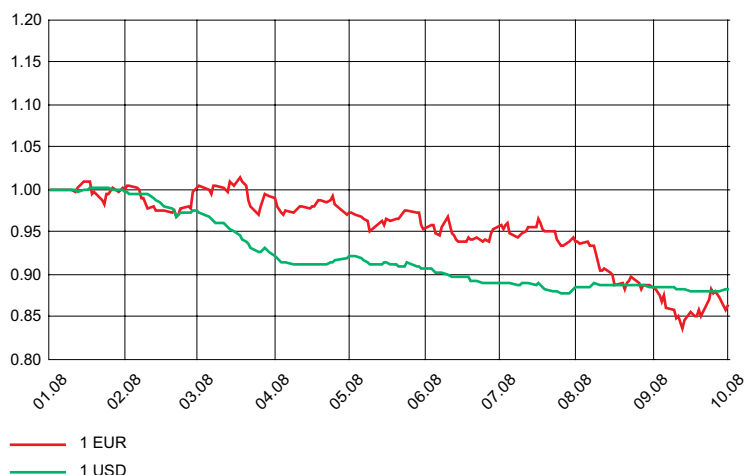
GRAPH.2.6.4  
CURRENT ACCOUNT DEFICIT AS PERCENTAGE OF GDP



GRAPH.2.6.5  
NET PURCHASES OF THE NBG AT TIBFEX



GRAPH.2.6.6  
DYNAMICS OF THE NIMINAL EFFECTIVE EXCHANGE RATE OF LARI



The current account deficit exceeded 2 billion USD in 2007. In QI 2008 it reached 1.7 billion USD and will be likely to exceed 3 billion USD by the end of the year.

The current account deficit with respect to the GDP increased to approximately 30%, compared to 5% in 2004. Such a worsening is largely due to the foreign trade deficit fueled by a rapid growth of investment volumes, which, in turn, represent a source of financing of the current account deficit.

During the past several years the NBG was intervening at the TIBFEX with the purpose of purchasing foreign currency for the most part. The volumes of such interventions were increasing with time. This policy was pursued by the NBG in order to maintain stability of the exchange rate. It became clear after August that the Lari exchange rate depreciation was needed to find a new equilibrium point. However, against the background of the Russian aggression an immediate depreciation would have led to deplorable consequences, which conditioned the necessity to maintain the exchange rate close to the existing level for a certain period. As a result, the NBG's interventions at the TIBFEX mainly assumed the form of foreign currency sales.



## BOX 2. THE LARI EFFECTIVE EXCHANGE RATE

The effective exchange rate represents an important indicator of competitiveness of a country's economy. The nominal effective exchange rate (NEER) reflects a change in the value of a domestic currency with respect to the currencies of major trading partners. Subsequently, the NEER plays important role in measuring exchange rate fluctuations and their effect on the terms of trade. It must be noted that the country's global competitiveness also depends, apart from the exchange rate, on the price changes both within the country and in the economies of partner countries. Dynamics of the real effective exchange rate (REER) reflect the change in the Lari exchange rate by taking into account changes in the ratio of the CPIs in Georgia and its major trading partners. REER is an extensively used measure of a country's competitiveness at the international level. A higher REER means a real appreciation of a domestic currency and weakening of a country's competitiveness.

The NBG uses two different methodologies to calculate the effective exchange rate. In general, the Lari effective exchange rates are defined as a weighted geometric average of the Lari exchange rate against the currencies of major trading partners:

$$NEER = \prod_{i=1}^N (e_{i, Lari})^{w_i}$$

$$REER = \prod_{i=1}^N \left[ \frac{d_{Lari} e_{i, Lari}}{d_i} \right]^{w_i},$$

where

$e_{i, Lari}$  – is the nominal exchange rate of

an  $i^{\text{th}}$  trading partner's currency against the Lari;

$d_{Lari}$  and  $d_i$  – are the consumer price indices in Georgia and an  $i^{\text{th}}$  trading partner, respectively;

$N$  – is a number of major trading partners; and

$w_i$  – is the weight assigned to the currency of an  $i^{\text{th}}$  country.

The main difference between the two methodologies is in the approach used to calculate the weights of major trading partners. According to the approach under the first methodology, the weight of each currency represents a share of a respective country in Georgia's trade turnover. According to the second methodology, which is based on the methodology elaborated by the European Central Bank, the weight of each currency is calculated taking into account the „third market effect“, i.e. competition faced by Georgian exporters in the foreign markets on the part of domestic businesses as well as exporters from other countries. The „third market effect“ is of a practical importance considering that those trading partners of Georgia (such as Turkey and Ukraine) who represent significant suppliers to the same markets Georgia exports to (thus, rendering strong competition to Georgia in both local and third countries' markets) have more weight than their respective share in Georgia's gross trade.

Moreover, the two methodologies differ by the number of countries covered.

The second methodology covers 15 trading partner countries (Azerbaijan, USA, Bulgaria, United Kingdom, Germany, Turkey, Italy, Canada, Russia, France, Armenia, Ukraine, China, Kazakhstan, and Switzerland), while according to the first methodology the Lari effective exchange rate is relative to the currencies of 12 major trading partners, including Azerbaijan, USA, United Kingdom, Germany, Turkey, Italy, Russia, France, Armenia, Ukraine, Switzerland and the Netherlands.

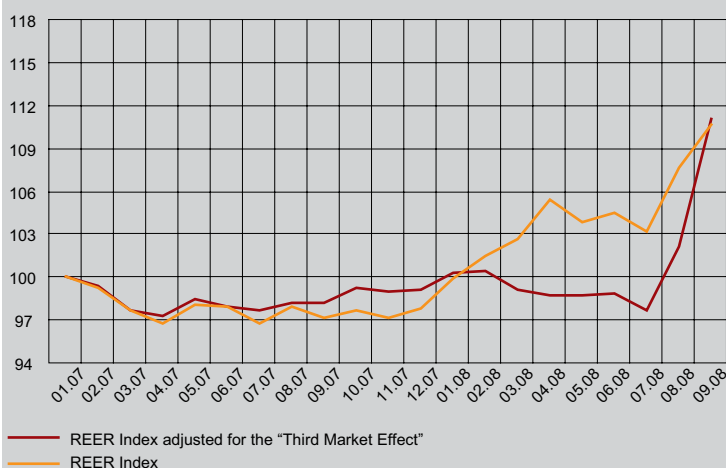
In terms of the REER, Georgia's international competitiveness was comparatively stable with the REER appreciating by 2% only in the period from January 2007 through August 2008. However, after August the REER soared - in September it grew by 9% and 11% compared to August and January, respectively.

Dynamics of the REER has been mostly determined by the NEER dynamics.

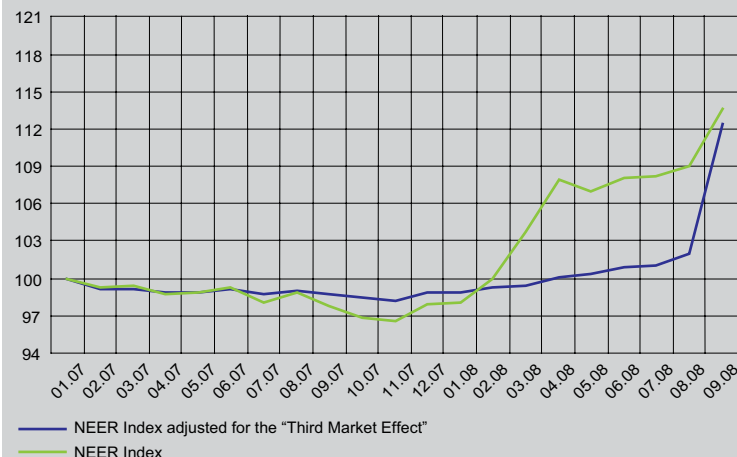
The values of the effective exchange rate calculated in line with the two methodologies particularly diverge during the period of March through August 2008. Such a divergence is mainly conditioned by the processes taking place in those countries that are not included in the first methodology (Bulgaria, Kazakhstan, China, and Canada). In particular, during the above-mentioned period these countries were experiencing an increase in inflation while the exchange rates remained mostly stable. This implies relative strengthening of Georgia's competitiveness, which was not captured by the first methodology. Moreover, differences are also conditioned by the fact that weights assigned to trading partners differ for each methodology, implying, consequently, different impacts of processes taking place in these countries on Georgia's competitiveness.

The processes that took place in Georgia and its major trading partners during August-September resulted in appreciation of the Lari effective exchange rate, thus, weakening Georgia's competitiveness at the international level.

GRAPH 1.  
THE REAL EFFECTIVE EXCHANGE RATE  
(January 2007=100)



GRAPH 2.  
THE NOMINAL EFFECTIVE EXCHANGE RATE  
(January 2007=100)



## 2.7. PRODUCTION AND DEMAND

Georgia's GDP at current prices equaled 4995.2 million Lari in QII 2008. Growth rate of the GDP in real terms equaled 7.9%, which is lower than the QI rate (9.3%). Positive growth rates were registered practically in all sectors of the country's economy.

The lower economic growth was conditioned by the deceleration of growth rates in such important sectors of the country's economy as agriculture (quarterly growth of 1.5%), construction (1.1%), and transport (1.5%). On the other hand, by far higher growth rates in QII, as compared to QI, were registered in such sectors as financial intermediation (40.4%) and manufacturing industry (8.9%). High growth rates remained in the public administration (14.5%) and communications (21.5%) sectors.

The Statistics Department releases the GDP figures on the 85th day from the end of the accounting quarter. This means that the GDP data for QIII 2008, being nowadays a crucial quarter for the country's economy, will be available by December 25 of the current year.

According to the NBG's estimations, the August military hostilities and the global financial crisis will entail significant negative consequences for the economy of Georgia for a period of one year at least. The country's economic growth will essentially dampen to approach the lowest mark registered over the recent years, nearly zero point, in QIII of the current year.

It is expected that in QIII 2008 the economic slump will affect such sectors as transport, agriculture, and restaurants and hotels. In comparison with the previous quarter the situation will also worsen in the construction, financial intermediation, and trade sectors.

### 2.7.1 HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption amounted to 3362.2 million Lari in QII 2008, which in nominal terms exceeds the same parameter of the previous year by 18.4%. During the latest quarters nominal growth rates of

**TABLE 2.7.1**  
**SHARE OF ECONOMIC SECTORS IN GDP (%)**

Economic Sectors	Share in GDP	Growth Rates (QII 2007 = 100)	GDP Growth Contribution (percent points)
Agriculture, Hunting and Forestry, Fish Catching and Fishery	10.0	101.5	0.15
Mining and Quarrying	0.9	100.3	0.00
Manufacturing	8.1	108.9	0.72
Production and Distribution of Electricity, Gas and Water	2.3	105.7	0.13
Processing Products by Households	1.8	104.8	0.09
Construction	6.2	101.1	0.07
Trade; Repair of Cars, Home Appliances, and Goods of Personal Consumption	14.1	109.4	1.33
Hotels and Restaurants	2.1	105.0	0.10
Transport	7.1	101.5	0.10
Communications and Post	3.0	121.4	0.65
Financial Intermediation	2.5	140.4	1.00
Real Estate, Renting, and Business Activities	3.2	115.6	0.50
Imputed Rent of Own Occupied Dwellings	2.2	103.9	0.08
Public Administration	11.7	114.5	1.70
Education	3.1	109.5	0.30
Health Care and Social Assistance	5.4	101.2	0.07
Communal, Social and Personal Services	3.1	115.5	0.49
Private Households with Employed Persons	0.1	102.1	0.00
FISIM Adjustment	-1.0	136.6	-0.36
<b>GDP in Basic Prices</b>	<b>86.0</b>	<b>108.3</b>	<b>7.13</b>
Taxes on Goods	14.5	105.3	0.77
Subsidies on Goods	-0.5	102.5	-0.01
<b>GDP at market prices</b>	<b>100.0</b>	<b>107.9</b>	<b>7.90</b>

private consumption was significantly lagging behind those of government consumption. The latter increased by 61.3% in the same period reaching 1304.5 million Lari. Such a rapid growth of government consumption in the latest period reduced the share of household consumption in the nominal GDP to 71.8%.

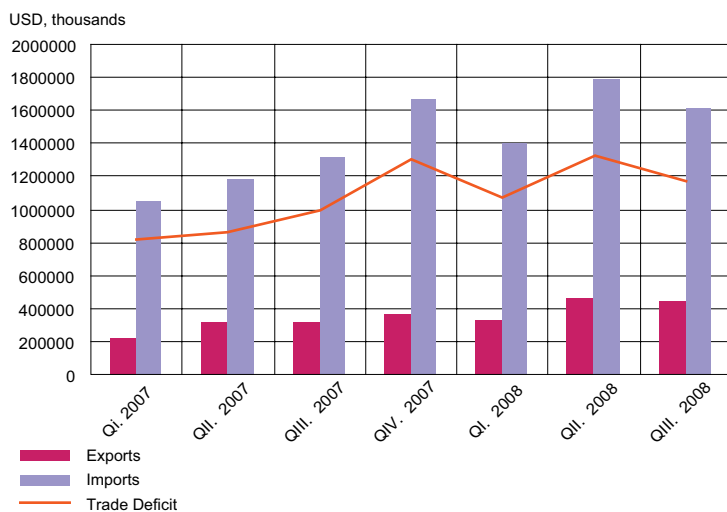
Particularly high growth rate was registered for the “collective consumption” sub-component of government consumption; the growth of this component reached 67.8% in QII 2008.

### 2.7.2. INVESTMENTS

In contrast to the decline registered in the previous quarter, gross capital formation increased by 16.7% reaching 1554.4 million Lari in the reporting quarter. Subsequently, the growth of gross formation of fixed capital equaled 11.4%, while growth of changes in inventories equaled 47.5%.

Starting from QIII, a substantial decline is anticipated in the investments growth ratio. This is largely due to the August war in Georgia. In this context, the main obstruction to investment growth is seen in the forecasted shortfall of foreign direct investments. Potentially, the shortfall could be replenished from the large financial assistance package extended to Georgia; however, this package will not be available until 2009.

**GRAPH 2.8.1**  
**IMPORTS, EXPORTS, AND TRADE DEFICIT**



**TABLE 2.8.1**  
**ANNUAL GROWTH RATE, (%)**

	QI, 2008	QII, 2008	QIII, 2008	Total 2008
Imports	34	50	14	32
Exports	47	46	38	43
<b>Trade Deficit</b>	31	51	6	28

Source: Statistics Department

### 2.8. EXTERNAL TRADE

In January through September 2008 Georgia’s trade deficit amounted to 3569 million USD, which is 33% higher than the same parameter of the previous year. At the same time, exports of goods exceeded the total figure registered in 2007, while showing a 43% increase compared to the same period of the previous year. Imports of goods amounted to 4809 million USD, which is 36% higher than the same parameter of the previous year.

According to the QI-QIII 2008 data, the growth rate of exports of goods exceeded that of imports of goods. This tendency was particularly evident in QIII, when compared to the same period of the

previous year the exports growth rate equaled 38%, while imports growth rate equaled 22%. As a result, the trade deficit increased by 17% only.

As shown in the diagram, external trade turnover has declined in QIII 2008 compared to QII, which does not reflect the tendency of previous years. However, such a reduction shall not be considered unexpected taking into account the August military hostilities.

At the same time, the extent of the August impact differs with respect to imports and exports. Namely, the slowdown in the growth rate of imports was stronger and equaled 10% compared to the previous quarter, while exports fell by 5% only. External trade turnover was particularly low in August.

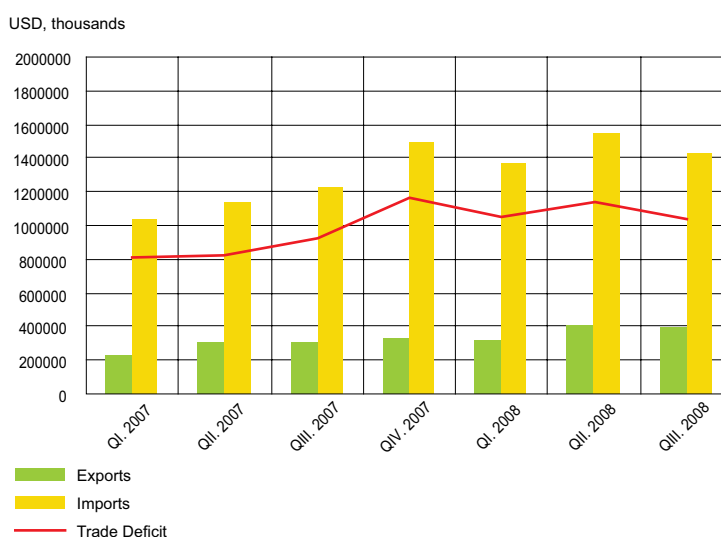
In January through September 2008 the top ten export commodity groups are as follows: ferroalloys, ferrous scrap metals, cars, copper mines and concentrates, fertilizers, gold, spirits and alcoholic beverages, copper scrap, and wine of fresh grapes, which exceed 70% of total exports. Turkey remains the largest trading partner of Georgia.

High exchange rate volatility of the US dollar during the above-mentioned period against the Lari and other currencies has brought about certain difficulties in the analysis of external trade. This is because the data are calculated in terms of the US dollars, according to the existing methodology. In order to address this issue, the

external trade data, as shown in the chart below, were adjusted using the nominal effective exchange rate of the US dollar (with respect to January 2007, the adjustment was made relative to the major currencies). As for the effect of price changes, due to unavailability of external trade price index it is extremely difficult to separate the price increase effect from volumes increase.

As a result of the above-mentioned adjustment, in January through September 2008 trade deficit increased by 25%, exports of goods increased by 34%, and the imports increased by 27%, as compared to the analogous period of the previous year. It must be noted, however, that this performance does not affect the overall external trade tendency.

**GRAPH 2.8.2**  
IMPORTS, EXPORTS AND TRADE DEFICIT ADJUSTED BY THE NOMINAL EFFECTIVE USD EXCHANGE RATE



### BOX 3. FOREIGN EXCHANGE VALUE OF THE US DOLLAR

The Federal Reserve System publishes several indices of the EER of the US dollar in line with the methodology revised in 1998. As mentioned above, the main reason why the indices were introduced was to evaluate the impact of the USD exchange rate fluctuations (strengthening/weakening) on trading competitiveness of the US relative to the major trading partners. In addition, to measure the degree of financial markets' pressure on the US dollar exchange rate, one of the indices reflects the exchange rate fluctuations relative to the major currencies only.

The methodology used by the Fed is similar to that used by the ECB (see BOX 2, Effective Exchange Rate of Lari), with the difference that the weights are calculated by taking into

consideration annual external trade data and are updated on a yearly basis and calculated by taking into consideration the annual external trade data.

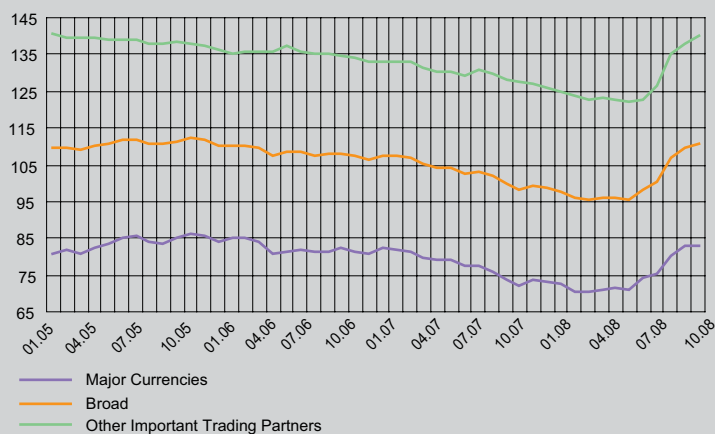
Three types of the indices are calculated differing from each other by sets of currencies included. These indices are: the broad index, the major currencies index, and the other important trading partners index.

The broad EER index includes the currencies of those economies whose share in external trade (export and import) exceeds 0.5% as of 1997. There were 26 economies (90% of the US external trade) conforming to this criterion, including, inter alia, 11 euro area countries.

The Fed distinguishes two groups of currencies of major trading partners. The first group covers the so-called major currencies, widely used outside of the respective economies, including Euro (EUR), Canadian Dollar (CAD), Japanese Yen (JPY), British Pound (GBP), Swiss Franc (CHF), Australian Dollar (AUD), Swedish Krona (SEK). The currencies that are included into the broad index but are excluded from the major currencies category belong to the "other important trading partners" group.

Subsequently, beside the broad index, two more sub-indices corresponding to the above-mentioned currency groups are calculated. These two indices are:

**GRAPH 1**  
NEER DYNAMICS FOR US DOLLAR  
2005-2008



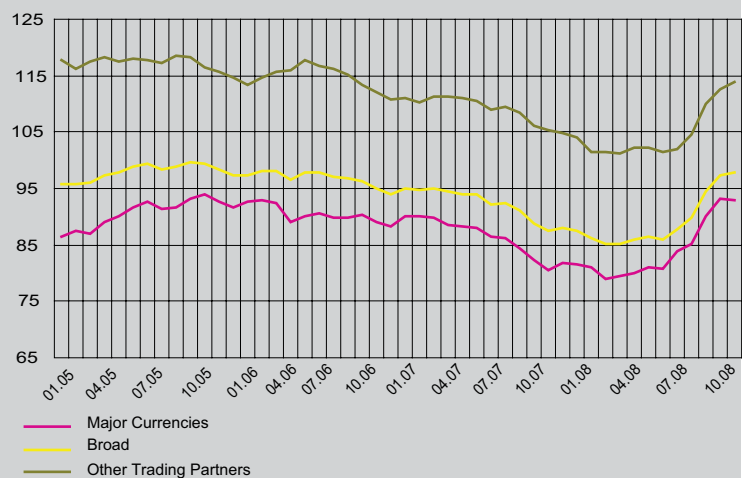
the major currencies index, and the “other important trading partners” index. The major currencies index is used to measure the degree of financial markets’ pressure on the exchange rate of the US Dollar.

Monthly dynamics of all the three indices for both nominal and real effective exchange rates are shown below.

As shown in the diagram above, all NEER indices have similar dynamics. Depreciation of the US dollar began in the second half of 2006 and continued until August 2008. The subsequent months show a strong appreciation, and by the end of 2008 the US dollar NEER moves back to around the 2005 level. Assuming August 2008 is a starting point, the NEER appreciated as follows: 11.7% by the major currencies index; 12.8% by the broad index; and 13.9% by the other trading partners index.

The REER indices also show alike dynamics, with the difference that the values of the broad and major currencies indices converge closer to each other, which means that in the period under consideration the US had a higher inflation compared to other leading economies.

**GRAPH 2**  
**REER DYNAMICS FOR US DOLLAR**  
2005-2008



### 3. INFLATION FORECAST

In forecasting inflation the NBG mainly uses two approaches. On the one hand, the NBG monitors each of the product indices included in the consumption basket and makes inflation forecasts under certain assumptions and projections. On the other hand, it applies econometric modeling of inflation dynamics.

As it was already mentioned, the price increase on certain products in the consumption basket was probably of one-time nature. Hence, the resulting effect will no longer affect the annual inflation of the current year. For instance, the price on white wheat flour increased in October-November 2007 pushing the annual inflation rate up by 1.5 percentage points. However, starting from August 2008, under the assumption that no sharp price changes take place in the subsequent period, the above-mentioned effect (1.5pps.) will no longer increase the annual inflation rate. Table 3.1 below lists those components in the consumption basket the price increases whereof were probably of one-time nature in the previous year, and hence, will not affect the inflation rate in 2008.

In the process of forecasting inflation the NBG takes into account expected dynamics' of world prices on certain important

products of the consumption basket; currently, these dynamics have a downward tendency. Subsequently, assuming that the regulated prices remain constant, the annual inflation rate is expected to decline. According to the existing estimates, by the end of 2008 the annual inflation rate will stand at approximately 6.4%, and the average annual rate – at 9.8%.

The estimated econometric model used for inflation forecasting is given as follows:

$$\delta p = 0.13 \delta e_{-2} - 0.073 \delta e_{-4} + 0.035 \delta m_{-1} + 0.034 \delta m_{-2} - 0.040 \delta m_{-3} + 0.011 \delta p^{oil}_{-1} + 0.025 \delta p^{food}_{-1} - 0.022 ecm$$

where

- $p$  – Consumer Price Index;
- $m$  – Money Mass;
- $e$  – Exchange Rate Lari/USD;
- $p^{oil}$  – Average Global Price of Oil;
- $p^{food}$  – Fruits and Vegetables Price;
- $ecm$  – is a variable depicting long-term equilibrium and is expressed as follows:

$$ecm = p_{-1} - 0.38e_{-1} - 0.62m_{-1} + 1.06y_{-1} - 6.91$$

where

$y$  is GDP.

The equation also includes seasonal and dummy variables to describe seasonality and structural changes.

With regard to the explanatory variables included in the model, the following assumptions are made:

TABLE 3.1  
THE EFFECTS TO BE EXCLUDED FROM 2008 ANNUAL INFLATION (%)

	10.08	11.08	12.08
White Wheat Flour	0.6	1.5	1.5
Wheat Flour	0.1	0.2	0.2
Sunflower Oil	0.7	0.6	0.6
Price of Intracity Transportation by Bus, Micro Bus, and Taxi	0.0	0.2	0.2
<b>Total</b>	<b>1.4</b>	<b>2.5</b>	<b>2.5</b>



- The volume of broad money excluding foreign currency deposits will decrease by annual 5% by the end of 2008;

- The real GDP growth rate will equal 2%; nominal exchange rate of Lari against the USD will not change, which can be explained by the fact that in general exchange rate follows a random walk process.

- Prices on fruit and vegetables will each month be 1% higher than the price increase on other products of the consumption basket; this is based on the assumption that during a financial crisis consumers abstain to a larger extent from buying non-staple goods than from buying food products;

- Global oil price will be near 50 USD per barrel by the end of the year.

The results obtained by using the estimated annual inflation model can be depicted as follows:

Based on the obtained results by the end of 2008, the annual inflation with a 10% probability will vary from 5.5% to 6.1%.

GRAPH 3.1  
ANNUAL INFLATION FORECAST

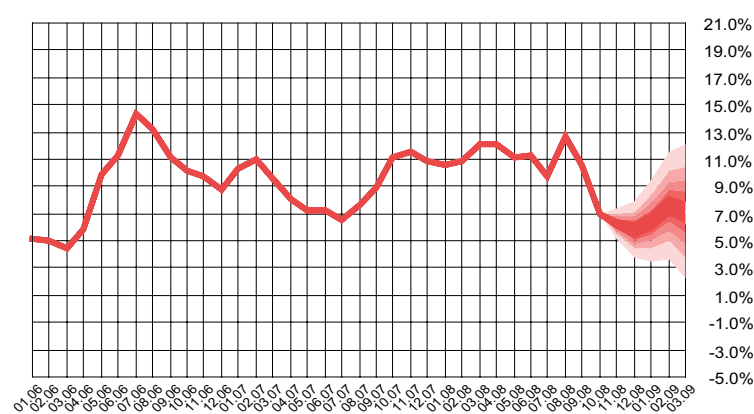


TABLE 3.2  
FORECAST OF CERTAIN GOODS PRICE INDICES AND THEIR SHARE IN THE ANNUAL INFLATION 2008

	Price Indices of Goods from Consumption Basket (December 2006 = 1)									Share in Inflation %	Share in Average Annual Inflation %	Share in Inflation %	Share in Average Annual Inflation %	Assumption
	Factual			Forecast										
	07.08	08.08	09.08	10.08	11.08	12.08	01.09	02.09	03.09					
<b>Total Inflation</b>										<b>6.4</b>	<b>9.8</b>	<b>5.0</b>	<b>8.4</b>	
White Wheat Bread	1.38	1.38	1.38	1.38	1.38	1.38	1.39	1.39	1.39	0.2	2.1	0.2	1.4	Constant
Wheat	1.25	1.24	1.24	1.23	1.16	1.16	1.17	1.17	1.17	0.0	0.0	0.0	0.0	Bloomberg Forecast
Wheat Flour	1.37	1.39	1.38	1.38	1.39	1.39	1.40	1.40	1.40	0.1	0.3	0.0	0.2	Bloomberg Forecast
Maize Flour	1.20	1.25	1.23	1.24	1.20	1.20	1.20	1.20	1.20	0.0	0.0	0.0	0.0	Constant
Sunflower Oil	1.80	1.80	1.81	1.70	1.72	1.72	1.72	1.72	1.72	0.1	1.0	-0.1	0.7	Constant
Sugar	0.86	0.93	0.94	0.93	0.94	0.94	0.90	0.90	0.90	0.1	-0.1	0.1	0.0	Bloomberg Forecast
Salt	1.08	1.11	1.10	1.10	1.11	1.11	1.08	1.08	1.08	0.0	0.0	0.0	0.0	Constant
Cold Water	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	0.0	0.0	0.0	0.0	Constant
Waste Disposal	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	0.0	0.0	0.0	0.0	Constant
Electricity	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	Constant
Natural Gas	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	0.0	0.3	0.0	0.1	Constant
Liquid Gas	1.25	1.29	1.29	1.31	1.40	1.40	1.33	1.33	1.33	0.1	0.1	0.0	0.1	Bloomberg Forecast
Oil	1.29	1.29	1.26	1.21	1.08	1.08	1.08	1.08	1.08	0.0	0.0	0.0	0.0	Bloomberg Forecast
Diesel Fuel (L-42, L-62)	1.55	1.55	1.51	1.44	1.20	1.20	1.20	1.20	1.20	0.0	0.0	0.0	0.0	Bloomberg Forecast
Gasoline (Regular, Premium)	1.40	1.38	1.35	1.28	1.07	1.07	1.07	1.07	1.07	-0.3	0.4	-0.4	0.2	Bloomberg Forecast
Transportation by Suburb Train	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.0	0.0	0.0	0.0	Constant
Transportation by Long Distance Train	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	0.0	0.0	0.0	0.0	Constant
Transportation by Bus and Subway	1.62	1.62	1.62	1.62	1.79	1.79	1.79	1.79	1.79	0.0	0.0	0.0	0.0	Constant
Transportation by Intracity Bus, Micro Bus and Taxi	1.25	1.25	1.25	1.25	1.25	1.25	1.38	1.38	1.38	0.5	0.7	0.7	0.7	Constant
Transportation by Suburb Bus	1.26	1.26	1.26	1.26	1.26	1.26	1.39	1.39	1.39	0.1	0.1	0.1	0.1	Constant
Transportation by Intracity Bus	1.17	1.17	1.29	1.30	1.30	1.30	1.42	1.42	1.42	0.1	0.1	0.1	0.1	Constant
Other Production	1.03	1.06	1.05	1.06	1.08	1.09	1.11	1.12	1.11	3.8	3.0	3.7	3.4	6-% Annual Growth

## 4. DECISIONS OF THE MONETARY POLICY COMMITTEE

The Monetary Policy Committee was gradually tightening the monetary policy over the first half of 2008. The tightening discontinued in June, and starting from August the Committee reversed to the gradual loosening. Such changes in the policy were made to address the situation in the financial sector and, overall, in the country's economy.

In order to provide commercial banks with sufficient liquidity the NBG suspended the required reserve requirements of commercial banks for the period from August 7 through September 3, while during the reserves observance period from September 4 through October 1 the banks were allowed to keep only 25% of the required reserves prescribed by current regulations.

In order to maintain financial stability and provide the banking system with short-term liquidity funds in August, the NBG extensively used lending of last resort facility. Subsequently, one-month maturity loans were extended in absence of any collateral. Only three commercial banks benefited from this facility for a total amount of 38.1 million Lari. These loans were shortly repaid.

Reductions of NBG's interest rates have manifested monetary policy loosening. In particular, the NBG reduced its key policy rate twice, from 12% to 11% and then to 10% (Prior to September 2 the NBG was using the 7-day CDs as the main monetary policy instrument, but replaced it with the 7-day refinancing loans thereafter). In addition, the NBG reduced

the interest rates from annual 19% to 13% for the 91-day CDs and from 20% to 13% for the last resort lending facility.

As the necessity to withdraw money from the economy no longer existed, limits on the securities at the 91-day CD auctions were significantly reduced (from 70 million Lari to 25 million Lari). Moreover, the NBG offered commercial banks the redemption of CDs.

As already mentioned above, on September 2 the NBG made a decision to replace the one-week instrument, and reverse the policy from liquidity absorption to its supply. As a result, the use of one-week CDs was suspended and one-week refinancing operations launched. Along with the overnight loans, commercial banks could receive the one-week loans against certain types of collateral. Types of collaterals were diversified to include foreign currencies, along with such collaterals as CDs of the NBG, government's Treasury Notes, and Treasury Bills of the Ministry of Finance.

The above NBG's decisions primarily pursued the tasks of maintaining financial stability. The developments unfolded in such a way that these tasks did not conflict with the NBG's primary goal – ensuring price stability. The NBG's inflation forecasts by means of applying different forecasting methodologies, made it possible to loosen the monetary policy.

One of the major reasons of deceleration of economic growth was the reduction of loans extended to the domestic economy.

To alleviate the situation it was necessary to provide additional liquidity funds to commercial banks. Thus, in September the NBG issued a six-month loan in the amount of 150 million Lari at 13% interest.

The decisions of the Monetary Policy Committee of the NBG made it possible to avoid further aggravation of conditions faced by Georgia's financial sector. In September 2008 the banking sector was more or less stabilized.

3/5 Leonidze Str., Tbilisi 0105, Georgia  
Tel: 442 544; Fax: 442 577;  
E-mail: [Info@nbg.gov.ge](mailto:Info@nbg.gov.ge); [www.nbg.gov.ge](http://www.nbg.gov.ge)