

# **Economic Review**

3/2010



Bulgarian monetary policy regime seeks national currency stability with a view to price stability. The BNB quarterly *Economic Review* presents information and analysis of balance of payments dynamics, monetary and credit aggregates, their link with the development of the real economy, and their bearing on price stability. External environment is also analyzed since the Bulgarian economy is influenced by international economic fluctuations. This publication contains quantitative assessments of the development in major macroeconomic indicators in the short run: inflation, economic growth, monetary and credit aggregate dynamics and interest rates.

The *Economic Review, issue 3/2010* was presented to the BNB Governing Council at its 4 November 2010 meeting. It employs statistical data published up to 29 October 2010.

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#### ISSN 1312 - 420X

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This issue includes materials and data received up to 10 November 2010.

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Due acknowledgment is requested.

Elements of the 1999 issue banknote with a nominal value of 20 levs are used in cover design.

Published by the Bulgarian National Bank 1000 Sofia, 1, Knyaz Alexander I Sq.

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#### **Abbreviations**

APRC Annual percentage rate of charge

BIR Base interest rate
BOP balance of payments

BTC Bulgarian Telecommunications Company

b.p. basis points

CEECs Central and East European countries
CEFTA Central European Free Trade Association

CIF Cost, insurance, freight

CIS Commonwealth of Independent States

CZK Czech koruna

DXY an index measuring the exchange rate of the US dollar against the

basket of six major currencies

EA Employment Agency
EC European Commission
ECB European Central Bank
EIB European Investment Bank
EMBI Emerging Markets Bond Index
EONIA Euro OverNight Index Average

EU European Union

EURIBOR Euro Interbank Offered Rate FDI foreign direct investment

FOB Free on board

FRS Federal Reserve System
GDP Gross Domestic Product
GFMS Gold Fields Mineral Services

HICP Harmonized Index of Consumer Prices

HRW hard red wheat HUF Hungarian forint

IEA International Energy Agency
IMF International Monetary Fund
ISM Institute for Supply Management
LEONIA LEV OverNight Index Average
LIBOR London Interbank Offered Rate

M1 narrow money
M2 M1 and quasi-money
M3 broad money
MF Ministry of Finance
mt metric tons

NPISHs Non-profit institutions serving households

NSI National Statistical Institute

OECD Organization for Economic Cooperation and Development

OPEC Organization of Petroleum Exporting Countries

PLN Polish zloty

PMI Purchasing Managers' Index p.p. percentage points PPP Purchasing Power Parity

CIS Commonwealth of Independent States

RON Romanian new leu
WTI West Texas Intermediate

# Summary

During the third quarter of 2010 global economy continued to recover, although at a lower and uncertain pace and against the background of substantial differences across regions. In the United States data on GDP growth were weaker in the second quarter compared with those in the previous one while in the euro area real growth was higher than expected. EU fiscal consolidation processes started to have positive effects on restoring investor confidence and, hence, on economic activity. However, positive GDP growth rates in these countries did not lead to employment growth and unemployment stayed relatively high. Owing to the unstable economic recovery, the European Central Bank and the Federal Reserve made no changes to the monetary policy conducted during the year. In the third quarter of 2010 the trends towards rises in the prices of some major raw materials formed under the pressure of recovering demand and output started to subside; therefore, prices are expected to stabilize. The only exception was registered by food prices which reported a dramatic increase in the third quarter of 2010 as a result of concerns about low yields and the ban on the exports of Russian agricultural products. Owing to the anticipated moderating rate of global demand recovery, food prices may retain their levels.

The improvement in world economic environment had a favourable effect on Bulgaria's exports of goods and services despite the volatility in its dynamics. In the second quarter of 2010 exports retained their upward trend, with their growth accelerating to 3.9 per cent in real terms on the previous quarter. As a result of net exports' positive contribution to growth dynamics and the slowdown in domestic demand decline rates, GDP picked up by 0.5 per cent in the second quarter of 2010 on the first one. Signals about economic recovery remained contradictory.

Household consumption was still strongly impacted by the negative employment and income dynamics. The recovery of its growth is likely to begin at the close of 2010 and in early 2011.

Government consumption over the second quarter of 2010 had a negative contribution of 0.6 percentage points to GDP growth, reflecting mostly decreased operating expenses.

In the fourth quarter of 2010 and the first quarter of 2011 exports are expected to slow down due mainly to weaker external demand. Provided that expectations of low but positive domestic demand growth rates till the end of 2010 and in the beginning of 2011 materialise, imports will also begin to go up slowly; therefore, net exports contribution to GDP dynamics will stay positive, albeit lower on 2009. As domestic demand will rise at low rates, the increase in imports will not exceed that of exports; as a result, current account and trade balance deficits will retain their low levels.

The balance of payments current account reported a surplus of EUR 323 million between January and August 2010. On an annual basis the current account ended in a deficit of 1.9 per cent of GDP which was entirely covered by the inflow of foreign direct investment. We expect the current account deficit to stabilize in the fourth quarter of 2010 and the first quarter of 2011 at a level close to the preset one and the positive foreign investment inflow to continue to fully cover this deficit.

The change in household behaviour since the start of the global crisis has been related with contracted consumer expenditure and dramatic rises in savings. Residents' deposits in the banking system increased considerably; as a result, broad money retained their upward trend reaching an annual increase of 8.4 per cent by September 2010. Annual broad money growth is anticipated to moderate slightly in the fourth quarter of 2010 and the first quarter of 2011. Over the projection horizon interest rates on time deposits will undergo no significant changes. Due to contracted domestic demand and the weak economic activity, credit growth rates stayed low in the third quarter of the year as well. Under the conditions of increasing deposits and reduced demand for loans the banking system was characterised by high liquidity. Part of

this liquidity was used for repaying external obligations; hence, the banking sector external debt decreased substantially. Another part of liquidity was invested in Bulgarian government securities.

In 2010 annual inflation rose from 1.6 per cent as of end-2009 to 3.6 per cent by September. Higher international energy and food prices and the raised tobacco products excise duties have been the main drivers of inflation dynamics since the year's start. The contribution of tobacco products to annual inflation was 1.34 percentage points, of energy products 1.35 percentage points and of foods 0.44 percentage points. There exists uncertainty abut the dynamics of food prices in the following two quarters, and, subsequently, about overall inflation. Tobacco products and transport fuels are anticipated to contribute to a certain slowdown in annual inflation in the first quarter of 2011.

## 1. External Environment

During the third quarter of the current year global economy continued to recover, although a trend towards a moderating growth rate was observed. In the United States data on GDP growth were weaker in the second quarter compared with those in the previous one. Over the same period euro area real growth was higher than expected. Fiscal consolidation processes in the EU started to have a positive effect on restoring investor confidence and, hence, on economic activity.

Global economic indicators decreased in the third quarter of 2010. A slowdown in the recovery of global economy due to the abating effects of the 2009–2010 fiscal stimuli and monetary support is expected. Nevertheless, leading indicators of output, employment and new orders stayed at levels signalling economic growth.

#### Global PMI

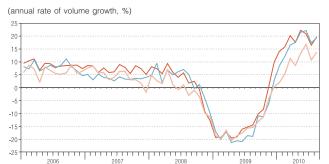


Source: JP Morgan.

The IMF assessed the global growth during the first half of 2010 (5.25 per cent on an annual basis) as higher than expected (5 per cent on an annual basis). The IMF projections for 2010 world GDP growth in real terms published in October indicate a 4.8 per cent growth on an annual basis while a slight slowdown to 4.2 per cent is expected during 2011. Uncertainty about global economic recovery remained significant as a result of the still high unemployment and weak private consumption in a number of advanced economies. Although a buoyant economic activity was observed in the developing countries, they also face the risk of moderating growth rates owing to their strong dependence on external demand for their products.

#### World Trade

— World trade



USA

Euro area

Source: CPB Netherlands Bureau for Economic Policy Analysis.

Signs of a slowdown in economic activity occurred in July and August when the rate of world trade recovery decreased to 18.1 per cent on average on an annual basis against 20.3 per cent in the second quarter of 2010. World industrial output also slowed down in August 2010 to 8.7 per cent<sup>1</sup> on an annual basis compared with its highest value of 11.9 per cent as of May. Global inflation decreased in August 2010 reaching 2.8 per cent on an annual basis.<sup>2</sup> The low capacity utilization in the economy and high unemployment are anticipated to continue to put a downward pressure on consumer prices.

#### Euro area

Significant acceleration in GDP growth to 1.9 per cent in real terms on an annual basis was reported during the second quarter of 2010 in the euro area against 0.8 per cent during the first one. On a quarterly basis GDP growth came to 1 per cent (against 0.3 per cent in the previous quarter). The breakdown by component showed that the higher growth stemmed mainly from the positive 0.3 percentage point contribu-

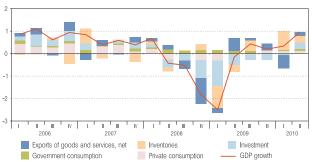
<sup>&</sup>lt;sup>1</sup> Based on World Bank data as of 18 October.

<sup>&</sup>lt;sup>2</sup> Based on World Bank data as of 19 October.

tion of investment to GDP growth over the second quarter against a negative 0.1 percentage point growth over the first one. The recovery in investment growth indicates the investors' positive assessment of the euro area economic development in the future. This led to a rise in the contribution of domestic demand to 0.5 percentage points compared with the zero contribution in the previous quarter. As a result of the stronger increase in exports in comparison with imports, the contribution of net exports was positive at 0.2 percentage points against a negative contribution of 0.6 percentage points during the first quarter of 2010. The contribution of the change in inventories fell to 0.3 percentage points (0.8 percentage points in the previous quarter).

## Contribution of GDP to Euro Area Growth by Component (Quarterly)

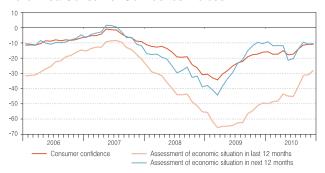
(%, percentage points)



Source: Eurostat.

During the third quarter of 2010 leading euro area indicators underwent divergent changes; however, they remained at relatively high levels. The European Commission leading indicators continued to improve while the composite PMI decreased.

#### Euro Area Consumer Confidence Indices

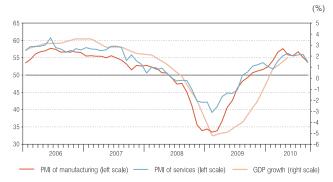


Source: EU Commission

The euro area economic sentiment index recorded a fifth successive monthly rise in October 2010 reaching 104.1. Concurrently, the indicator value for August was revised upwards. The EC business climate indicator which became positive

in April 2010 continued to pick up coming to 0.98 in October. The average values of the two indicators for the third quarter of 2010 were higher than those for the previous one.

PMI in Industry and Services and Euro Area GDP Growth



Source: EU Commission

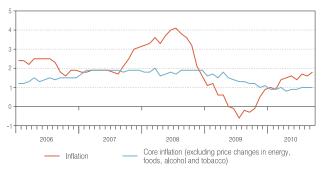
During the period the PMI remained above the level of 50 indicating that the economy continued to grow. After reaching in April 57.3, its highest value in the last two and a half years, the composite PMI fell slightly to 54.1 in September (from 56.2 in the prior month). The output sub-index (PMI in industry) also decreased coming to 53.7 in September (from 55.1) while that of services to 54.1 against 55.9 a month earlier. We expect the trend towards a moderate but unsteady (as regards individual countries) recovery of the economic activity in the euro area to be preserved in the fourth quarter of 2010 and the first quarter of 2011, and a decrease in the growth rate is likely to be observed.

In September 2010 the European Commission raised substantially its growth projections for the euro area in 2010 to 1.7 per cent against 0.9 in May. The revised upwards projections are explained by the higher-than-expected growth in the second quarter. Other factors behind the positive outlook correction were the retained expectations about investment growth and the improved profits of companies, while in terms of consumption - the reduced rate of household savings and the stabilization of labour market conditions. The latest ECB projections for GDP growth in real terms from September 2010 were also raised and the current year growth is anticipated to move within the range of 1.4 per cent and 1.8 per cent on an annual basis, while that for 2011 - within the range of 0.5 per cent and 2.3 per cent as a result of the improved domestic and external demand projections. The previous ECB projections pointed to a GDP growth between 0.7 per cent

and 1.3 per cent for 2010 and between 0.2 per cent and 2.2 per cent for 2011.

#### Euro Area Inflation Rate

(percentage change on same period of previous year)



Source: Eurostat.

The September data on inflation showed acceleration in the growth of the harmonized consumer price index in the euro area to 1.8 per cent on an annual basis against 1.6 per cent in August 2010. On a monthly basis inflation came to 0.2 per cent. Inflation dynamics reflected the rise in the prices of energy products whose rate was 7.7 per cent on an annual basis against 6.1 per cent in August 2010. In September euro area core inflation stayed at the level of 1 per cent on an annual basis reporting no change compared with July and August levels. Free capacities in euro area economy and the relatively high unemployment imply a sustained low core inflation level.

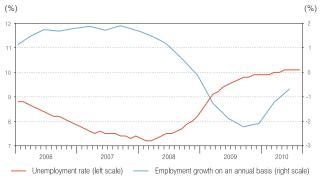
Euro area inflation level in 2010 anticipated by the European Commission was lowered to 1.4 per cent (against the May projections of 1.5 per cent). According to ECB projections the increase in euro area HICP will move between 1.5 per cent and 1.7 per cent in 2010 and between 1.2 per cent and 2.2 per cent in 2011.

Recent Eurostat data on euro area unemployment in August show a 10.1 level: without any change compared with that in the previous three months which points to labour market stabilization. The indicator of the expected unemployment during the following twelve months included in the EC consumer confidence index declined for the seventh consecutive month in September reaching its lowest value in the last two years. This indicator shows an improvement in consumer sentiment about the expected employment which is in line with the observed economic recovery.

Unit labour costs decreased in the second quarter of 2010 by 0.6 per cent on an annual basis (-0.5 per cent during the previous quarter).

Over the same period compensation *per* employee picked up by 2 per cent (against 1.5 per cent) and labour productivity by 2.6 per cent on an annual basis (against 2.1 per cent).



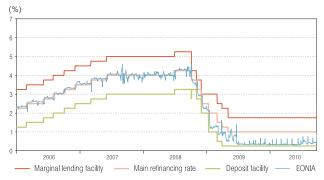


Source: Eurostat.

At its monetary policy meetings in July, August and September the ECB Governing Council left unchanged the repo interest rate (1.00 per cent). The interest rates on the deposit and the lending facility also remained unchanged. According to the ECB the current euro area interest rate level meets the monetary policy purposes.

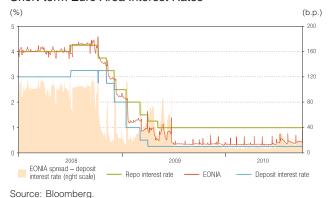
Regarding the non-conventional monetary measures for providing liquidity through refinancing operations, it was announced that the policy of unlimited liquidity allotment on main and long-term refinancing operations would be extended till the end of the year. Unlimited liquidity allotment on the part of the ECB will be terminated at the earliest by the end of the twelveth maintenance period for 2010 which will expire on 18 January 2011. Till the close of the year three three-month refinancing operations will be conducted and their rate will be the average MRO rate over the period. In addition, the ECB will conduct three fine-tuning operations on the maturity date of the last six- and twelve-month operations.

#### **ECB Interest Rates**

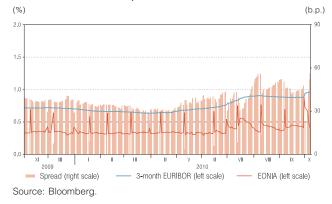


Source: Bloomberg.

#### Short-term Euro Area Interest Rates



## Liquidity Risk Premium (Spread between the Three-month EURIBOR and EONIA)



## FU-8\*

Real GDP growth in the non-euro area EU Member States accelerated in the second quarter of 2010 reaching 0.9 per cent on a quarterly basis (against 0.3 per cent growth in the first quarter). All these countries reported positive growth compared to the previous quarter.

Exports were the main driving factor for improving economic activity over the second quarter of 2010. They rose on average by 4.3 per cent on a quarterly basis. Excluding Lithuania and Estonia, other countries' private consumption had positive growth compared to the previous quarter. Simultaneously, gross fixed capital formation in EU-8 countries increased on average by 5.6 per cent on a quarterly basis (-7.7 per cent in the first quarter), though displaying sizeable differences across countries.

## Growth and Inflation in EU-27 and EU-8 on a Quarterly Basis

(%; seasonally adjusted data)



Sources: Eurostat, own calculations.

In the third quarter of 2010 inflation in EU-8 countries measured by the average-weighted HICP accelerated by 1.2 per cent on a quarterly basis compared to 0.7 per cent in the previous quarter. Major driving factors involve indirect tax increases in most countries and energy product price rises.

#### GDP Growth on a Quarterly Basis

(%; seasonally adjusted data)

		2009	2010		
	II	Ш	IV	1	II
Lithuania	-0.4	0.3	0.3	-3.1	3.2
Estonia	-3.7	-1.4	1.4	1.1	1.9
Poland	0.5	0.7	1.2	0.7	1.1
Czech Republic	-0.5	0.5	0.5	0.4	0.9
Latvia	-1.5	-3.2	-1.2	0.9	0.8
Bulgaria	0.0	-0.1	-0.2	-0.5	0.5
Romania	-1.5	0.1	-1.5	-0.3	0.3
Hungary	-1.3	-0.6	0.0	0.6	0.0
EU-8	-0.3	0.3	0.5	0.3	0.9

Source: Eurostat.

#### Exports Growth on a Quarterly Basis

(%; seasonally adjusted data)

		2009	2010		
	II	Ш	IV	- 1	Ш
Lithuania	-2.8	2.0	2.3	-0.7	14.2
Estonia	-2.9	5.2	-2.2	6.2	7.9
Poland	-1.1	3.1	4.4	3.1	5.8
Bulgaria	-2.6	3.6	2.9	1.7	3.9
Hungary	1.3	4.2	3.9	3.5	3.3
Czech Republic	3.0	6.8	-0.4	3.5	2.7
Latvia	-1.1	3.5	5.4	-2.3	2.6
Romania	-1.4	4.0	0.7	12.0	2.0
EU-8	0.3	4.4	2.4	3.9	4.3

Sources: Eurostat, ECB.

<sup>\*</sup> EU-8 includes the states that joined the EU from 2004, excluding Slovenia, Malta, Cyprus and Slovakia. As of 1 January 2007 Slovenia and as of 1 January 2008 Malta and Cyprus have the status of full members of the Economic and Monetary Union. EU-8 indicators are calculated by weighting the time series, with the weights of the relevant countries in total GDP of the group used in calculating the growth. In measuring inflation, the weights of EU-27 countries in HICP as calculated by Eurostat have been used.

#### The Balkan Region

In the second quarter of 2010 positive GDP growth was reported on an annual basis in most Balkan countries. Over the same period the trends to exports growth and weak private consumption were sustained. The strongest economic growth was registered in Turkey and Serbia. In the other Balkan countries, growth was moderate. Industrial output rose in the second quarter in almost all countries except for Greece where it continued to decrease. Over the third quarter of 2010 inflation in this region accelerated, with raw material price rises in world markets contributing most significantly to this.

The consensus forecasts show a gradual recovery in the region's economies, with external demand being the main engine behind this.

#### Real GDP Growth and Inflation in Balkan Countries

(%; seasonally adjusted data)

	2008			2009	2010				
	Total	1	II	III	IV	Total	1	II	III
Growth (on the corresponding period of previous year)									
Bulgaria	6.2	-5.3	-3.8	-4.9	-5.8	-4.9	-4.0	0.5	
Greece	2.0	-1.0	-1.9	-2.5	-2.5	-1.9	-2.3	-3.7	
Macedonia	4.9	-1.1	-1.9	-1.9	1.6	-0.7	-1.1	0.4	
Romania	7.3	-6.2	-8.7	-7.1	-6.5	-7.1	-2.6	-0.5	
Turkey	0.4	-14.5	-7.7	-2.9	6.0	-4.5	11.7	10.3	
Croatia	2.4	-6.7	-6.3	-5.7	-4.5	-5.8	-2.5	-2.5	
Serbia	5.5	-4.3	-4.5	-2.2	-1.7	-3.1	0.4	2.0	
Inflation (average for the period)									
Bulgaria	12.0	5.1	3.1	0.8	0.9	2.5	1.9	2.9	3.3
Greece	4.2	1.8	0.8	0.8	2.0	1.4	3.0	5.1	5.6
Macedonia	8.3	0.9	-0.6	-1.4	-2.1	-0.8	0.5	1.1	1.8
Romania	7.9	6.8	6.1	5.0	4.5	5.6	4.6	4.3	7.5
Turkey	10.4	8.4	5.7	5.3	5.7	6.3	9.3	9.2	8.4
Croatia	5.8	3.8	2.8	1.2	1.6	2.4	0.9	0.7	1.1
Serbia	12.9	9.7	8.1	7.7	5.8	7.8	4.3	3.9	5.9

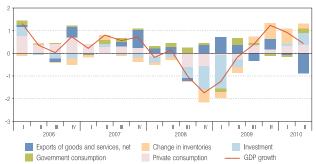
Sources: Statistical institutes and central banks of respective countries, Eurostat.

#### **United States**

During the second quarter of 2010 US real GDP growth reached 3.0 per cent on an annual basis against 2.4 per cent during the first quarter of 2010. GDP growth was underpinned mainly by the growth in investment from the business sector, consumer activity and public expenditure. On a quarterly basis, however, the economic activity rate slowed down to 0.4 per cent against 0.9 per cent in the previous quarter. On a quarterly annualised basis GDP growth came to 1.7 per cent in the second quarter against 3.7 per cent in the prior one.

#### Contribution to US Growth by GDP Component (Quarterly)

(%, percentage points)

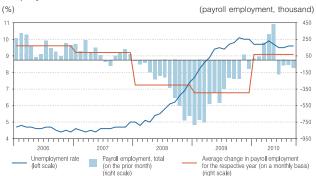


Source: Bureau of Economic Analysis.

Since the end of June 2010 a sizable moderation in the US economic activity has been observed. Household consumption continued to be affected by the worsened labour market conditions. Employment outside the agricultural sector contracted by 95,000 persons in September; as a

result, the number of redundant employees in the sector totalled 218,000 in the third quarter. By the close of the third quarter unemployment among working-age population went up to 9.6 per cent against 9.5 per cent at the start of the quarter.

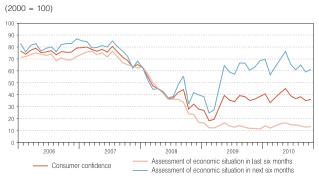
#### US Unemployment Rate and Changes in Payroll Employment



Source: Bureau of Labour Statistics

Remuneration rises remained under the pressure of high unemployment. Hourly compensation growth fell to 2.1 per cent on an annual basis in September against 2.4 per cent in June. Labour productivity in the second quarter of the present year dropped by 1.8 per cent on a quarterly basis for the first time since 2008, which, in turn, led to an increase in unit labour costs.

#### **US Consumer Confidence Indices**



Source: The Conference Board.

As a result of labour market dynamics during the last few months, in September consumer confidence indices declined to their lowest levels since early year. Against this background the rate of savings remained high compared with the long-term average reaching a level of 5.8 per cent in September. The decrease in household indebtedness also continued, impacting negatively current consumption.

The state of the housing market depreciated after the expiry of the time limit for extending a tax loan for house purchases. In the absence of

government stimuli demand for real estates contracted sharply.

#### Sales of Houses in the USA

(growth on an annual basis, %)

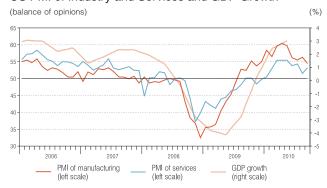


Source: Bloomberg.

This, in turn, combined with the large number of houses for sale, led to a slowdown in the construction activity in the sector. The attempt of Barack Obama's administration at reconsidering the extension of the tax stimuli for house purchases failed. In the absence of a programme supporting demand, the activity in the sector is likely to stay low.

Based on recent data, weakening in the manufacturing sector activity was also observed due to a great extend to the ending cycle of the recovery in inventories. The dynamics of economic indicators for the sector signalled the probability of a sustained trend during the following months as well.

#### US PMI of Industry and Services and GDP Growth



Sources: Institute for Supply Management and Bureau of Economic Analysis.

Deteriorating US economic activity indicators create expectations about the adoption of new fiscal stimuli. In early September 2010 Barack Obama proposed measures in support of the economic activity in the form of tax reliefs for corporations. These reliefs envisage an opportunity for the firms to carry out a hundred per cent depreciation of assets purchased in 2011.

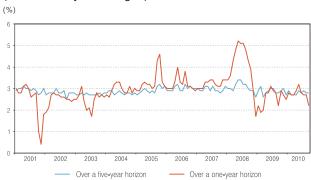
Tax reliefs are connected with the transformation of the temporary Research and Experimentation Tax Credit that expires in 2010 into a permanent one and the increase in the tax credit rate under the programme. The proposed measures are estimated by the White House at USD 130 billion for a ten-year period, the depreciation reliefs being USD 30 billion and tax reliefs USD 100 billion. Another proposal includes the establishment of an 'infrastructure bank' with USD 50 billion capital for financing projects related with the renovation and modernisation of the US traffic infrastructure. The discussion of the proposals at the Congress is pending.

In August inflation measured by the personal consumption expenditure deflator dropped to 1.5 per cent on an annual basis against 2.5 per cent as of early year. At the start of the year the underlyingpersonal consumption expenditure deflator, excluding the impact of energy and food components, also declined coming to 1.4 per cent (from 1.8 per cent) on an annual basis. Consumer and producer prices displayed similar developments. Decelerating economic recovery rates suggest that the price indices may remain below the Federal Reserve target interval of 1.7–2.0 per cent till the end of the year.

Long-term inflation expectations for a five-year period, which are a component of the University of Michigan consumer confidence index, stayed relatively stable till the close of the third quarter. By contrast, the short-term expectations for a one-year horizon reported a fall during two consecutive months.

## Expectations about Consumer Price Inflation (the University of Michigan)

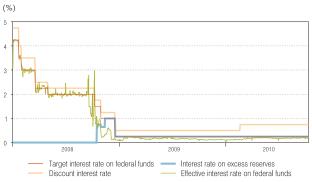
Source: Bloomberg.



The Federal Reserve retained its reference interest rate on federal funds within the range of 0.00 to 0.25 per cent during the third quarter of 2010.

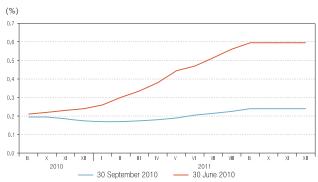
Growing concerns about the economic situation led to a change in the anticipated increase in the interest rate on the federal funds throughout 2011.

#### Short-term US Interest Rates



Source: Bloomberg.

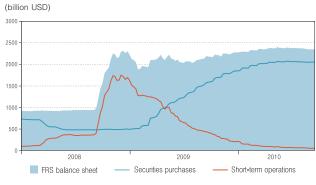
### Expected Reference Interest Rate on US Federal Funds Based on Futures Contracts



Source: Bloomberg.

The deterioration in the macroeconomic data in the third quarter of 2010 led to the adoption of measures to stop the reduction in the Federal Reserve System balance sheet. At the meeting devoted to the US Federal Open Market Committee monetary policy in August it was decided the receipts from advance payments and matured mortgage-backed securities to be reinvested in US government securities.

#### Federal Reserve Balance Sheet



Source: Bloomberg.

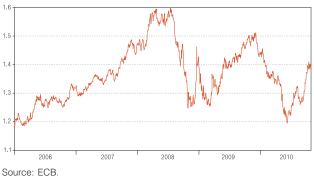
With the latter the Federal Reserve changed its plans for the forthcoming implementation of its strategy for phasing-out the extraordinary measures and increased the probability of resuming the non-traditional measures in support of the economic growth. At its meeting of 21 September 2010 the Open Market Committee decreased substantially its assessment of the current macroeconomic environment and voiced its expectations about a weak activity growth in the medium term. The Federal Reserve also expressed its commitment to renew the non-conventional measures on the money market in support of the economy in the case of a considerable slowdown in the activity and a dramatic decline in the price indices and inflation expectations. Market participants supported the view that the most probable step in this direction would be the renewal of US government securities reverse repurchase operations.

#### The USD/EUR Exchange Rate

During the third quarter of 2010 the US dollar depreciated by 9.5 per cent against the euro and by 7.1 per cent against the basket of the six most traded currencies in the DXY index. Over the review period the euro gradually recovered the losses of May and June 2010 when concerns about the euro area public finances undermined the confidence in the single currency.

#### The USD/EUR Exchange Rate

(USD per EUR 1)



The exchange rate dynamics was impacted considerably by the investors' subsiding risk appetite and the negative US macrodata. Deteriorating expectations of US economic growth in contrast with the better-than-expected data on euro area GDP growth during the second quarter put a downward pressure on the US currency. The fiscal consolidation process and the fiscal situation in Ireland, Portugal, Greece and Spain were

additional factors behind the EUR/USD exchange rate dynamics.

Due to the possible renewing of government securities purchases on the part of the Federal Reserve and adopting of new fiscal measures aimed at stimulating the economy by Barack Obama's administration, investors' expectations about a rise in the interest rate differential between the United States and Europe also contributed to the USD depreciation.

## International Prices of Crude Oil, Major Raw Materials, and Gold

#### Crude Oil

During the third quarter of 2010 the price of Brent crude oil remained stable; it traded within an interval of USD 71–83 *per* barrel (EUR 57–62 *per* barrel). Uncertainty about the velocity of world economic recovery and the low capacity utilization brought about the slight change in crude oil price.

#### Crude Oil Prices

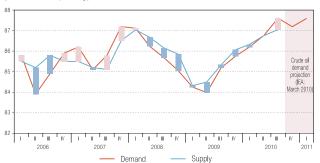


Source: World Bank.

October 2010 IEA data on crude oil market reported consistency between supply and demand in the second quarter, while in the third one demand exceeded supply. The major factor behind this was the lower supply by non-OPEC countries and the higher demand by OECD members. In the first five months of 2010 oil products inventories in OECD countries went up by 0.5 per cent on an annual basis (3.3 per cent on average in 2009). The October 2010 IEA forecasts suggest a 2.5 per cent increase in oil demand on an annual basis, attributable mainly to the growth in non-OECD demand. This forecast was revised upwards by 0.3 percentage points on September 2010.

#### World Crude Oil Supply and Demand (Quarterly)

(million barrels per day)

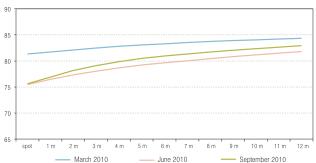


Source: IEA.

Concerns about economic growth slowdown kept market sentiment towards oil price dynamics in the fourth quarter of 2010 and in 2011 unchanged. Market expectations of oil prices during the fourth quarter of 2010 and the first quarter of 2011 point to values within the range of USD 70 to USD 90 per barrel.

## WTI Crude Oil Futures Prices (Average Price of the Contract in the Corresponding Month)

(USD per barrel)



Source: JP Morgan.

#### Major Raw Materials and Commodity Groups

During the third quarter of 2010 world steel production growth moderated, increasing by 4.8 per cent<sup>3</sup> on an annual basis against 27.2 per cent in the second one. The most significant decrease was posted by the Asian countries where the growth rate dropped to 1.6 per cent on an annual basis against 21 per cent on average in the second quarter. In North America and the European Union a decrease in steel production was also observed with growth rate reaching 25.4 per cent and 14 per cent respectively on an annual basis against 64.3 per cent and 50.5 per cent on average in the previous quarter. According to the World Steel Association projections published

In the third quarter of 2010 the food price index went up by 10.3 per cent on a quarterly basis while on an annual basis the growth came to 17.1 per cent. The rises in the prices of cereals and vegetable oils (by 27.1 per cent and 12.7 per cent respectively on a quarterly basis) had a major contribution to this. Compared with the same period of the prior year the prices of cereals and vegetable oils have risen by 43.7 per cent and 33.4 per cent respectively. According to the US Department of Agriculture and the International Grains Council, global yields of wheat during the 2010-2011 season are expected to slow down by approximately 4.9-5.5 per cent on an annual basis, while its consumption is expected to increase by around 1.2-1.8 per cent. Over this period wheat inventories are expected to drop by an average of 8.0 per cent on an annual basis. The decrease in wheat supply stemmed from the unfavourable weather conditions in the Black Sea Region that affected a great part of the yields. The Russian wheat exports ban in August was another factor behind reduced supply on international markets.

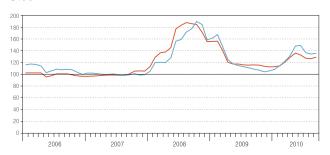
Despite the sharp food price rises in the third quarter of 2010, more moderate rises are anticipated in the fourth quarter of 2010 and in 2011

in October world steel production will pick up by 13.1 per cent on an annual basis in 2010 and by 5.3 per cent in 2011. During the third quarter of 2010 the metal price index went up by 8.1 per cent on average on a quarterly basis due mainly to the rise in the prices of iron ore (by 20 per cent), tin (by 15.3 per cent) and copper (by 3.4 per cent). On an annual basis the index growth rate decreased by 63.6 per cent in the second guarter of 2010 and by 53.9 per cent in the third one. During the third quarter of 2010 the prices of steel products fell by 8.4 per cent as a result of weaker demand following the 23.6 per cent rise in the second one on a quarterly basis. The annual growth in the prices of steel products slowed down to 30.4 per cent against 92.6 per cent in the second quarter of 2010. The prevailing expectations about metal prices point to stabilization in the fourth quarter of 2010 and a moderate growth in 2011.

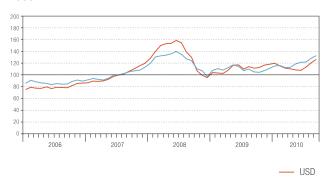
<sup>&</sup>lt;sup>3</sup> Based on World Steel Association data.

## Price Indices of Major Commodities and Commodity Groups (2007 = 100)

#### Steel

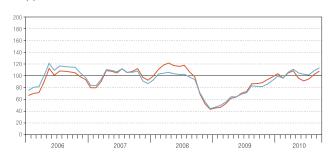


#### Food

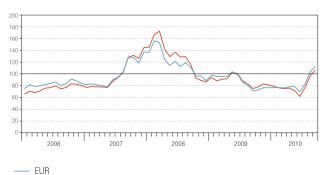


Sources: World Bank, ECB and BNB.

#### Copper



#### Wheat



due to the still weak global consumption.

#### Gold

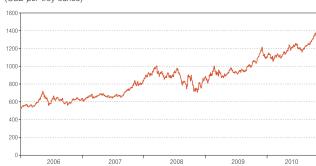
Over the third quarter of 2010 the average gold price (one-month futures) went up to USD 1227.7 per troy ounce (+3.2 per cent on a quarterly basis). A considerably weaker rise was reported in euro (+1.9 per cent on an annual basis) owing to the appreciation in the European currency. On an the annual basis<sup>4</sup> the gold price (one-month futures) posted an increase of 29.7 per cent in US dollars and 39.5 per cent in euro.

During the period investors' concerns about the moderating recovery in the US economy and the potential introduction by the Federal Reserve of new non-standard measures to stimulate the economy had a main impact on gold price. Demand for protection against the volatility of major currencies and unstable stock markets also played a crucial role for the gold price rises. Demand for gold by physical gold exchange-traded funds (ETFs) remained strong in the third quarter of 2010 as well. According to World Gold Coun-

cil data, during the second quarter of 2010, 28 per cent of the demand for physical gold was by ETFs against 8 per cent in the second quarter of 2009. In its statement of 3 August 2010 the Chinese Central Bank announced its decision to allow more commercial banks to trade in gold and to ease the conditions for foreign participation in the Shanghai Gold Exchange. The purpose of the measures is the expansion and development of the Chinese gold market in the long run.

#### One-month Futures of Gold

(USD per troy ounce)



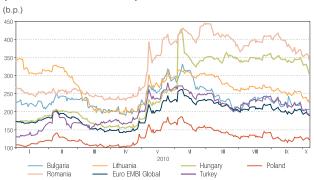
Source: The London Bullion Market Association.

<sup>&</sup>lt;sup>4</sup> 30 September 2009 - 30 September 2010.

## Bulgarian External Debt Dynamics on International Financial Markets

In the third quarter of 2010 the yield spreads of the government debt in the Central and East European countries started to narrow slowly following the sharp widening in the second quarter as a result of the Greek government debt crisis. The *JP Morgan Euro EMBI Global* index declined by 33 basis points to 198 basis points at the end of the quarter. The index fluctuated within a relatively narrow range of 194–233 basis points.

## Government Securities Yield Spreads in CEE Counties (Euro EMBI Global index)



Source: Bloomberg.

The major factor behind the spreads' gradual decline was the increased investor risk appetite, the positive data on euro area economic growth in the current year second quarter and the overall signals of world economic recovery. The credit ratings of the countries in the region underwent no changes during the period; there were no significant negative events and news either. The countries that have agreements with the INF, such as Hungary and Rumania, reported their progress in implementing their commitments despite the strong social tension and political uncertainty. At the end of July 2010 Rumania succeeded in selling an issue of EUR-denominated one-year government securities to the amount of EUR 1.2 billion and with a yield of 4.9 per cent.

Bulgaria's government debt spreads, measured by the *JP Morgan* index, followed the general market trend throughout the period, reporting a 55 basis point decline to 203 basis points.

17 External Environment

# 2. Financial Flows, Money and Credit

The trend towards an improvement in the balance of payments current account balance was sustained in the first eight months of 2010. According to preliminary data for the January to August 2010 period, the overall balance on the balance of payments current and capital accounts amounted to EUR 451.4 million (compared to a deficit of EUR 2119.4 million in the corresponding period of 2009).

Between January and August the balance of payments financial account reported a deficit, with the fall in banks' foreign liabilities contributing most substantially. Under the conditions of increasing residents' deposits and reduced demand for loans, the banking system was characterised by high liquidity which allowed to pay obligations to foreign parent banks with no adverse impact on Bulgaria's economy.

The change in gross international reserves observed on the Issue Department balance sheet reported not only the dynamics of the balance of payments flows but also foreign exchange revaluations which had a positive contribution over the review period due to the higher gold price. In addition to these two factors the changes in the Issue Department balance sheet reflected the use of the government deposit with the BNB for budget deficit financing in the reporting period.

The Issue Department balance sheet figure amounted to BGN 24.96 billion (EUR 12.76 billion) by end-September 2010, with assets decreasing by BGN 302.6 billion over the January–September 2010 period. The analysis of the Issue Department's liabilities suggests that the decrease in the government deposit and other budget organisations by BGN 1065 million contributed most significantly to this fall. A slight decrease by BGN 164 million was reported in circulating banknotes and coins. Banks' deposits with the BNB increased by EUR 452 million, reflecting substantially increased residents' deposits in the banking system.

## Cash Flows Prompting Significant Changes in Gross International Reserves

(million EUR)

		(ITIIIIOIT LOTT)
External flows	January – S	eptember
External nows	2010	2009
Total for the period	-1 236	-660
Purchases and sales of euro	-365	-1 456
at tills	-12	-28
banks, incl.	-353	-1 428
bank's purchases	47 711	88 264
bank's sales	-48 064	-89 693
Flows on accounts of banks, the MF, etc.	-870	796
Minimum required reserves	-366	-56
Government and other depositors	-504	852*

<sup>\*</sup> A total of SDR 610.9 million (EUR 665.7 million) received on 28 August and 9 September 2009 have been included in the *Government* and other depositors item.

Source: BNB.

Cash flows, which prompted stronger changes in gross international reserves between January and September 2010, provided additional information about foreign currency operations of banks and the government with the BNB.

On a cash basis the decrease in gross international reserves in the first nine months of 2010 amounted to EUR 1236 million. Banks' net purchases of euro from the BNB amounted to EUR 353 million and bank reserves denominated in euro decreased by EUR 366 million. These operations were in line with banks' policies of using their high liquidity to repay the obligations to foreign parent banks. Net sales of euro by the government amounted to EUR 504 million.

On an annual basis BNB's international reserves increased by BGN 727 million on September 2009 (EUR 371 million). The average monthly coverage of imported goods and services by BNB international reserves reached 7.6 months by August 2010 against 6.7 months a year earlier.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> The average value of imports of goods and services for the last 12 months and BNB reserves by the end of August 2010 were used in the calculation of this indicator.

## Financial Flows and External Position Sustainability

The balance of payments current account continued reporting a surplus of EUR 323 million between January and August 2010. On an annual basis the current account ended in deficit of 1.9 per cent of GDP which was entirely covered by the inflow of foreign direct investment. Over the fourth quarter of 2010 and the first quarter of 2011 exports are expected to continue growing at a faster rate than imports. The deficit on the current and capital accounts will stabilize as a percentage of GDP at levels close to current ones (1.2 per cent by August). The positive inflow of foreign direct investment is expected to provide a full cover of this deficit.

Between January and August 2010 the balance of payments financial account recorded a deficit of EUR 823 million. The inflow of foreign direct investment, worth EUR 836 million, was insufficient to offset the closure of non-resident deposits with local banks in the amount of EUR 897.4 million and repayment of banks' loans, worth EUR 851.5 million. The decline in liabilities of banks operating in Bulgaria, which also impacted the balance of payment flows, was a result of the high liquidity of banks and its use for payment of their obligations to foreign parent banks due to the low demand for loans in Bulgaria. Therefore, the outflow of resources through the balance of payments financial account did not have negative effects on Bulgaria's economy.

Bulgaria's economy is characterised by low risk of potential speculative capital withdrawal. The share of portfolio investment in Bulgaria's gross international liabilities remained stable at 2.8 per cent by June 2010. Between January and August 2010 short-term external debt contracted by EUR 983.2 million consistent with the decrease in the banks' short-term debt. As a result, its share in Bulgaria's gross external debt fell to 31.2 per cent (33.9 per cent a year earlier). International reserves provided a 109.7 per cent cover of the short-term external debt by August 2010. The sustainability of Bulgaria's external position is largely based on the structure of capital inflows, mainly in the form of foreign direct investment and external borrowing of intercompany or longterm nature.

Foreign direct investment in Bulgaria came to EUR 835.9 million between January and August 2010 against 2118.8 in the corresponding period of the prior year.<sup>2</sup>

By August 2010 net foreign direct investment accounted for 6.0 per cent of the annual GDP for the last four quarters. In the fourth quarter of 2010 and in the first quarter of 2011 the net foreign direct investment flow is expected to be positive, but lower on an annual basis. As a result, the annual *foreign direct investment to GDP* ratio will decline on an annual basis.

Direct investments attracted in the first eight months of 2010 were mostly in the form of equity: EUR 623.9 million, while those to the banking sector were in the form of reinvested earnings: EUR 166.3 million. Other net capital amounted to EUR 45.7 million. Between January and August non-residents' investment in real estate came to EUR 150.7 million (against EUR 405.7 million in the corresponding period of 2009). As a result of the decline in 2009 and the first eight months of 2010 earnings from real estate acquired by non-residents in Bulgaria were close to the levels typical of the years prior to 2006 when the interest of non-residents in acquiring real estate in Bulgaria dramatically enhanced.

The trends in the structure of foreign direct investment were sustained in the first half of 2010 when the flows were directed mainly to production and distribution of electricity and heating (30.2 per cent), real estate operations and business services (26.8 per cent), construction (23 per cent) and manufacturing industry (20.3 per cent). Consequently, real estate operations and business services (22.8 per cent), manufacturing (18.6 per cent) and financial intermediation (17.4 per cent) contributed most significantly to the total stock of foreign direct investment.

The composition of FDI by country in the January-August 2010 period suggests that foreign direct investment attracted from the Netherlands (EUR 1156.6 million), Russia (EUR 134.1 million) and Cyprus (EUR 119.1 million) accounted for the largest shares. Net payments related mainly to revolving intercompany loans were made to

<sup>&</sup>lt;sup>2</sup> Preliminary data that are subject to revision upon receipt of additional information from direct investment enterprises and the NSI. Practice shows that original data on foreign direct investment are usually revised upwards.

Austria (EUR -777.9 million), the Netherlands Antilles (EUR -102.4 million) and the United Kingdom (EUR -97.9 million).

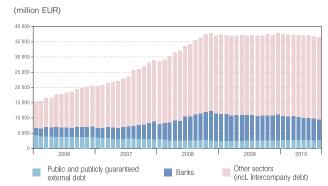
Between January and August 2010 Bulgaria's gross external debt went down by EUR 1333.7 million. Net repayment of borrowed funds amounted to EUR 1701.6 million (revaluations and the change in trade and revolving loans excluded). In the first eight months of 2010 loans and deposits of EUR 3148.5 million were received, and principal payments of EUR 4979.8 million serviced (against EUR 4192.8 million in the corresponding period of the prior year). As a result, by end-August 2010 Bulgaria's gross external debt reached EUR 36.5 billion or 103.8 per cent of the reported GDP for the last four quarters.

Between January and August private non-guaranteed external debt decreased by EUR 1406.8 million to EUR 32.2 billion, mainly due to the decline in banks' long-term loans by EUR 784.7 million. Banks' debt to foreign parent banks incurred in connection with their activity in Bulgaria occupies a large share in banks' external debt (76.6 per cent as of June 2010). The changes in banks' external debt in 2009 and in the first eight months of 2010 resulted from the higher liquidity of local banks and their efforts to reduce their net external indebtedness. Non-bank sector enterprises reduced their external liabilities by EUR 81.9 million in the January-August 2010 period. Intercompany loans increased by EUR 434.6 million in the same period of 2010. The share of intercompany loans in the total amount of external debt increased to 40.9 per cent by August 2010 against 38.2 per cent a year earlier. This dynamics points to a long-term interest of local companies' foreign owners in Bulgaria's economy.

Between January and August 2010 *general government* external debt increased by EUR 19.4 million. The total amount of public and publicly guaranteed debt rose by EUR 73.1 million and came to 11.6 per cent of Bulgaria's total external debt.

Gross external debt service in the January to August 2010 period reached EUR 5339.6 million compared with EUR 4704.5 million in the corresponding period of the prior year. Between January and August 2010 the new loans and deposits received came to EUR 3.1 billion; of this intercompany loans accounted for 45.4 per cent and loans received from banks 33.7 per cent.

#### Gross External Debt



Source: BNB.

The average weighted interest rates on new loans declared between January and August 2010 suggest a minimum increase (on an annual basis) in the cost of external borrowed funds in euro by 0.2 percentage points to 3.4 per cent. New loans in US dollars reported a decrease in that cost by 0.9 percentage points to 5.1 per cent. The interest rates differential between long-term loans to corporations, extended by local banks, and external long-term loans remained positive. The interest rate differential on euro-denominated loans was 4.3 percentage points and that on US dollar-denominated loans – 3.9 percentage points.

By June 2010 there was no notable change in the structure of private non-bank external debt by industry. The largest share in the external debt of other sectors was occupied by real estate operations and business services (21.0 per cent) followed by electricity, gas and water supply (20.2 per cent) and financial intermediation (12.5 per cent). The largest share in intercompany loans was occupied by real estate operations and business services (18.1 per cent) and financial intermediation (15.8 per cent).

#### Long- and Short-term Gross External Debt Dynamics

Source: BNB

In the maturity structure of gross external debt short-term external debt trended downwards. It

decreased by EUR 983.2 million and its share fell to 31.2 per cent compared to 33.9 per cent a year earlier. These developments in the first eight months of 2010 were largely attributable to the closure of deposit accounts of non-residents with banks (EUR -870.5 million).

As regards the currency structure of gross external debt, euro retained its leading position with a share of 88 per cent by June 2010. It occupied the largest share (91.8 per cent) in intercompany loans and the smallest share in the general government sector (71.3 per cent).

Between January and August 2010 Bulgaria's gross foreign assets fell by EUR 633.2 million. Over the same period BNB's foreign reserves decreased by EUR 444.4 million and foreign assets of local banks by EUR 188.9 million. As a result of Bulgaria's gross foreign assets and external debt dynamics, the net external debt decreased by EUR 700.4 million, reaching EUR 18.8 billion by end-August 2010, or 52 per cent of reported GDP for the last four quarters.

The interdependence between the capital flows on the balance of payments financial account and the current account balance was retained in the January-August 2010 period. The improvement of the current and capital account balance continued in the first eight months of 2010 to report a surplus of EUR 451.4 million against a deficit of EUR 2119.4 million in the corresponding period of 2009. By August 2010 the balance of payments current and capital account balance still ended in deficit on an annual basis accounting for 1.2 per cent of GDP reported for the last four quarters against a deficit of 13.9 per cent of GDP a year earlier.

In the January-August 2010 period all current account components improved on the corresponding period of 2009 as follows: the trade balance by EUR 1640.7 million, the balance on services by EUR 489 million, the income account by EUR 239.5 million, and net current transfers by EUR 429.8 million. In the first eight months of 2010 the capital account surplus recorded a decrease on the corresponding period of 2009.

Trade in goods balance recorded the most sizable annual improvement between January and August 2010, and the trade deficit amounted to EUR 1350.1 million in the first eight months of the year. Over the same period nominal exports and

imports (in euro) increased by 32.2 per cent and 7.2 per cent respectively on an annual basis.3 Imports and exports are expected to increase on an annual basis in the fourth guarter of 2010 and first quarter of 2011, with exports growing faster than imports.

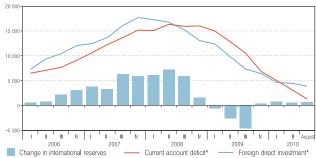
The balance on services reported a surplus of EUR 1563.3 million over the January-August 2010 period (against a surplus of EUR 1074.3 million in the corresponding period of the prior year). The improvement in the balance was mainly due to reduced expenditure on travelling and external insurance and financial services and improved transport and travelling earnings. The improvement on the debit side came to a total of EUR 476.9 million, while receipts on the credit side increased by EUR 12.1 million.

For the January-August 2010 period the income deficit was EUR 945.4 million and improved by EUR 239.5 million on the corresponding period of 2009. The improvement was largely ascribable to lower income payments on direct investments (down EUR 219.1 million) and on other investments (down EUR 123.2 million).

Over the first eight months of 2010 net current transfers amounted to EUR 1055.2 million: up EUR 429.8 million on an annual basis, mainly due to transfers to the general government sector (up EUR 433.1 million). The receipts in the form of private current transfers fell by EUR 15.8 million on an annual basis. Transfers abroad also declined by EUR 47.5 million. As a result, net transfers to the private sector increased by EUR 31.7 million on an annual basis.

#### Dynamics of International Reserves, Foreign Direct Investment and Current Account (on an Annual Basis)

(million BGN)



<sup>\*</sup> Data as of August 2010

Source: BNB.

 $<sup>^{\</sup>rm 3}$  More detailed analysis of exports and imports is presented in Section 3.

The decline in capital transfers on the corresponding period of the previous year reflected the lower net receipts from EU funds. Net capital transfers from the EU to the *general government* sector came to EUR 273.1 million and capital transfers to the EU amounted to EUR 149.3 million. As a result, net capital receipts from EU funds totalled EUR 123.8 million in the January–August 2010 period, down 232.4 million on an annual basis.

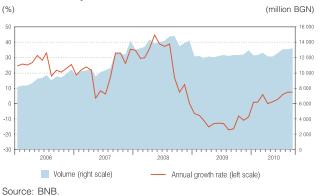
Our expectations for the developments in balance of payments components in the fourth quarter of 2010 and the first quarter of 2011 point to a continuous improvement in the current account balance, though at a lower rate, mainly as a result of exports of goods and non-factor services dynamics that will be faster than that of imports. The balance of payments current and capital account deficit is projected to remain between 1 and 1.5 per cent of GDP on an annual basis by the first quarter of 2011 and FDI inflow is expected to offset it completely.

#### Monetary Aggregates

Broad money retained their upward trend posting an annual increase of 8.4 per cent by September 2010. The annual broad money growth is expected to slightly moderate in the fourth quarter of 2010 and the first quarter of 2011. Over the projection horizon interest rates on time deposits will undergo no significant changes.

Reserve money retained their positive dynamics on an annual basis posting an annual increase by 7.3 per cent by September. Banks' deposits with the BNB increased by 14.6 per cent and contributed by 5.5 percentage points to reserve money growth. In August currency in circulation started to increase on an annual basis and by the end of September the growth reached 2.8 per cent against a decrease of 3.4 per cent by end-June. Determinants of currency in circulation dynamics relate to the gradual economic recovery and stabilization of private consumption.

#### Reserve Money



#### Currency in Circulation



Source: BNB

In September the average amount of banks' deposits with the BNB was larger by BGN 261.6 million than in the corresponding month of the previous year. Given the high liquidity of the banking system the share of excess reserves in the total amount of reserves maintained by banks reached 4.1 per cent by September 2010 against 1.1 per cent a year earlier. Banks' minimum required reserves maintained with the BNB rose by BGN 94.5 million. The dynamics of banks' deposits with the BNB in compliance with the requirements of Ordinance No. 21 of the BNB is determined by several factors. On the one hand, growth in residents' liabilities, worth BGN 2854 million, contributed to the increase in these reserves. On the other hand, the fall in funds attracted from non-residents in the amount

of BGN 2326 million, related to repayment of obligations to foreign parent banks, added to the decrease in the required reserves. Third, the increase in banks' cash balances by BGN 149 million, 50 per cent of which is recognised as reserve assets under Ordinance No. 21 of the BNB, also contributed to the decline in banks' deposits with the BNB. Finally, the funds recognised since 1 February 2010 as reserve assets on banks' settlement accounts with the BNB as part of the national system component of TARGET2.4 contributed to the fulfilment of minimum required reserves by BGN 10.2 million.

#### Banks' Deposits with the BNB

(million BGN) 7000 6000 2000 1000 2009 Daily amount

Monthly average amount

Source: BNB.

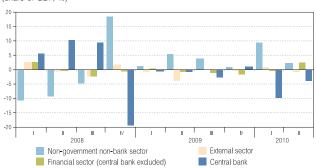
During the fourth quarter of 2010 and the first quarter of 2011 currency in circulation is expected to retain its moderate growth rates which will reflect the expected increase in household consumption. Banks' deposits with the BNB are anticipated to continue to contribute to reserve money growth, albeit at a slower pace than that observed in the January-September 2010 period.

Fiscal policy impacted the allocation of liquidity by economic sector. In the second guarter of 2010 the financial sector (excluding the BNB) and non-government non-bank sector were net recipients of liquidity accounting for 2.3 per cent and 2.4 per cent of GDP respectively. Liquidity sources were the excess of revenue over expenditure of the BNB for 2009, the fiscal reserves on accounts with the BNB and the external sector. The transferred liquidity from the central bank amounted to 4.0 per cent of GDP over the guarter and

reflected not only the excess of revenue over expenditure of the BNB, worth BGN 355 million and deposited in favour of the budget, but also the decline by BGN 322.5 million in government and other budget organisations deposits with the BNB. The external sector was a net source of liquidity for the consolidated budget (0.8 per cent of GDP for the quarter) attributable mostly to the received current and capital transfers from abroad approximating BGN 254 million and significantly lower interest expenditure on external loans compared with the first quarter of the year.

#### Influence of Consolidated Budget on Other Sectors' Liquidity (Quarterly)

(share of GDP, %)



Sources: MF, BNB.

In the third quarter of 2011 the external sector continued to be a source of liquidity for the budget mainly due to the funds transferred by the European Commission on the account of the National Fund to the Minister of Finance under JEREMIE (Joint European Resources for Micro to Medium Enterprises initiative). As a result of government fiscal policy, deposits of the government and other budget organisations with the BNB went up. This reflects to a large extent the change in the manner of budget deficit financing by the government between July and September 2010. The Ministry of Finance active issuing policy on the government securities market resulted in withdrawal of resources from the financial sector (the BNB excluded).

Broad money retained their upward trend reaching an annual increase of 8.4 per cent by September 2010. The annual growth of broad money is expected to moderate in the fourth guarter of 2010 and the first guarter of 2011 to its rates reported in the first half of 2010.

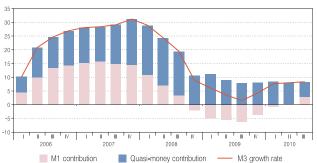
 $<sup>^{\</sup>rm 4}$  The BNB and the national bank community joined TARGET2 on 1 February 2010 (see the press release of the BNB from 22 January 2010). Article 4 paragraph 2 of Ordinance No. 21 of the BNB states:

<sup>1.</sup> fifty per cent of cash in vaults, including those in ATM terminals of banks

<sup>2.</sup> funds on banks' settlement accounts in the national system component of TARGET2 equal to 10 per cent of the average daily amount of successfully settled payment orders for the period under Article 7.1

## Annual M3 Growth Rate and M1 and Quasi-money Contribution (Quarterly)

(%, percentage points)



Source: BNB.

The acceleration in broad money growth observed in September was ascribable mainly to the M1 monetary aggregate which by the end of the month increased by 7.7 per cent on an annual basis against an increase of 0.9 per cent at the end of the second guarter of 2010. M1 developments continued to reflect mainly the increase in overnight deposits: up 11.3 per cent on an annual basis. Overnight deposits of social insurance funds reported a sizable growth of approximately BGN 692 million. Compared with August 2009 they contributed by 6.4 percentage points to the overall increase of overnight deposits. In July overnight deposits of non-financial enterprises posted an annual increase (1.1 per cent) for the first time since September 2008 and in September 2010 this increase accelerated to 4.0 per cent. Household overnight deposits continued to grow reaching in September 9.6 per cent on an annual basis. Money outside banks also exhibited a slight increase and by September it rose by 2.2 per cent compared to a decrease of 3.6 per cent by the end of June.

## Annual Quasi-money Growth Rate and Contribution of Its Components (Quarterly)

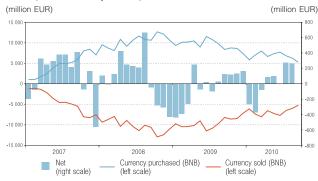
(%, percentage points)



The annual growth rate of quasi-money slowed moderately to 8.7 per cent by the end of Sep-

tember 2010, with the gradual increase in the contribution of deposits denominated in levs (7.2 percentage points) retained at the expense of those denominated in foreign currency (1.5 percentage points). Deposits with agreed maturity of up to two years rose by 8.6 per cent on an annual basis, with household deposits contributing most significantly (9.6 percentage points). By end-September household deposits in levs increased by 25.5 per cent on an annual basis and those in foreign currencies by 9.6 per cent. Non-financial corporations reported a decrease of 7.6 per cent in deposits with agreed maturity of up to two years. Their lev deposits went up by 6.5 per cent on an annual basis by September and the annual decline in their foreign currency deposits was 17.4 per cent.

## Currency Sales and Purchases between Banks and the BNB (on a Monthly Basis)



Source: BNB.

Foreign currency trade with the BNB was the main tool used by banks to manage their lev liquidity. It is used to perform the main function of the Currency Board to buy and sell on demand national currency against euro.

The decrease in trade between the BNB and banks continued. In the third quarter of 2010 the average daily volume of currency trade with the BNB came to about EUR 564 million, which was approximately 20.5 per cent less compared to the average daily volume in the second quarter. Over the same period banks realised net sales of euro to the amount of about EUR 542.5 million (compared with net purchases of around EUR 189.5 million in the second quarter of 2010).

Between July and September interest rate levels in the interbank money market continued to fall. The average interest rate on transactions concluded on the interbank money market went down from 0.30 per cent in the second quarter to 0.25 per cent in the third quarter.

#### LEONIA/EONIA

(%, percentage points)

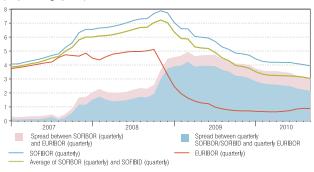


Source: BNB.

The LEONIA index exhibited a similar trend going down from 0.19 per cent in the second quarter to 0.17 per cent in the third quarter. The spread between LEONIA and EONIA remained negative, hovering around 28 basis points in the third quarter against 17 basis points in the second quarter. The increased negative value of the spread was mainly attributable to the rise in European interest rates. In contrast to euro area interest rates these in Bulgaria were characterised by very low volatility which is indicative of the availability of a sizable amount of free bank resources in the interbank market.

## SOFIBOR, average SOFIBOR/SOFIBID and EURIBOR (quarterly horizon)

(%, percentage points)



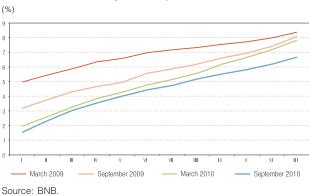
Source: BNB

The SOFIBOR reference rate (quarterly), used as an indicator for short-term interest rates, followed a downward trend, reaching an average daily value of 3.9 per cent by September 2010. The spread between SOFIBOR (quarterly) and EURIBOR (quarterly) also followed the downward trend to come to 306 basis points by September (down 39 basis points compared to its June level). The spread narrowed mainly as a result of the fall in SOFIBOR by 24 basis points between July and September, while EURIBOR increased by 15 basis points over the same period. The average value between SOFIBOR and SOFIBID gives a

better picture of the interest rate level in Bulgaria. Correspondingly, it is more correctly to compare this value with EURIBOR which is the closest rate to the actual market price at which transactions are concluded.<sup>5</sup> The average SOFIBOR/SOFIBID reference rates on the interbank market in Bulgaria for the quarterly horizon declined to 3 per cent in September 2010, down 297 basis points from the level by end-2007, and the spread between the average quotation and EURIBOR (quarterly) decreased to 215 basis points.

The yield curve gives a positive signal for the interbank market development. In contrast to the March 2009 – March 2010 period, when mostly a decrease in the short end of the yield curve was observed, a decline in the long end of the yield curve occurred in the last six months until September. Between March and September 2010 the fall in the 12-month horizon came to 114 basis points.

## Interbank money market yield curve (based on average SOFIBOR/SOFIBID quotations)

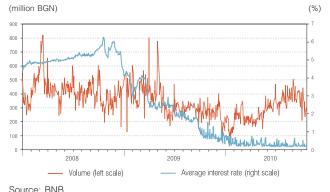


Further reductions in EURIBOR spreads will be driven by interest rate developments in the euro area which directly depend on the normalisation of the money market (reduction in the risk premium for Bulgaria) and the amount of liquidity provided by the ECB to euro area banks.

The average daily volume of transactions on the interbank money market for the July-September 2010 period increased to around BGN 371 million, from BGN 266 million in the second quarter, a level close to pre-crisis levels, which is also indicative of the improved situation on the interbank market.

<sup>&</sup>lt;sup>5</sup> For further methodological notes see the box entitled *Differences* between the *Methodology for Calculating Money Market Indices in the Euro Area and in the New EU Member States*, Economic Review, 2010, issue 2.

#### Trade Volume and Interbank Money Market Interest Rates



Interest rates on new time deposits retained the downward trend observed since early 2010 and stabilized around levels attained in mid-year. By September the average interest rate on new time deposits denominated in levs reached 5 per cent and the average interest rate on time deposits denominated in euro came to 4.6 per cent. Between January and September 2010 the average interest rate on deposits fell by 150 basis points to 4.6 per cent.

## Interest Rates on New Time Deposits (average weighted by maturity)



Interest rates on time deposits are expected to remain almost unchanged in the fourth quarter of 2010 and the first quarter of 2011, but they may slightly go down. This is supported by the high banking system liquidity (the *liquid assets to total liabilities* ratio was 21.5 per cent by end-August) and the expected relatively low lending activity.

## Distribution of Interest Rates on Household Lev Deposits with Maturity of up to One Month

(frequency - number of banks)



Source: BNB.

As regards the distribution of interest rates on household lev deposits with maturity of up to one month by bank, the number of banks offering rates up to 2 per cent and the 3 to 4 per cent interval increased at the expense of those offering rates within the 2 to 3 per cent, 4 to 5 per cent and over 5 per cent band. The average interest rate level in September decreased on June 2010 and the dispersion coefficient went down by 24 basis points to 1.08 percentage points.

#### **Credit Aggregates**

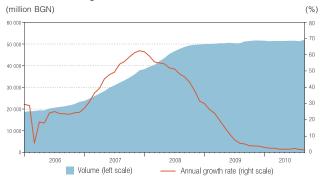
The downward trend in credit growth was sustained due to slow recovery of economic activity and high uncertainty which limited demand for loans. Over the projection horizon interest rates on loans will undergo no significant changes.

The uncertainty about the rate of macroeconomic environment recovery in Bulgaria had a negative effect on demand and correspondingly on lending in the third quarter of 2010. Low credit demand, and the retained tight lending standards applied by banks curbed credit growth. By the end of September the annual growth of claims on the non-government sector accounted for 1.5 per cent.

In the third quarter of 2010 claims on the non-government sector increased by BGN 439.1 million against an increase of BGN 673 million in the corresponding period of 2009. Since early 2010 claims rose to BGN 354.9 million. The increase reflected mainly higher net purchases of loans from commercial banks amounting to EUR 554.8 million in the January–September 2010 period.

<sup>&</sup>lt;sup>6</sup> Based on the lending activity survey conducted by the BNB.

#### Claims on Non-government Sector

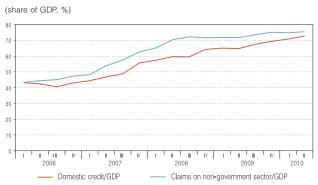


Source: BNB.

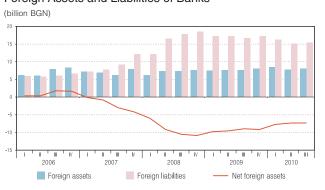
Banks' credit standards are anticipated to be sustained over the projection horizon and growth rates of claims on the non-government sector to further moderate until the close of 2010. Claims are expected to grow slightly in the first quarter of 2011.

The lower nominal GDP (by 2.2 per cent on annual basis) in the second quarter of 2010 and credit growth by 2 per cent over the same period contributed to the rise in the *claims to non-gov-ernment sector to GDP* ratio. By the end of June the value of this ratio reached 75.5 per cent: up 0.6 percentage points on the previous quarter.

#### **Domestic Credit**



Foreign Assets and Liabilities of Banks

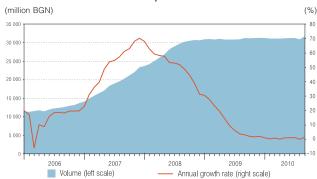


Source: BNB.

Source: BNB.

Between January and September 2010 banks' funds attracted from non-residents went up by BGN 247.8 million and their foreign assets grew by BGN 244.8 million. As a result banks' net foreign liabilities experienced insignificant changes, exhibiting an increase of BGN 3 million. The change in liabilities and claims on non-residents in the third guarter of 2010 were driven by oneoff operations of some banks in September which raised both their foreign liabilities and foreign assets. Until August banks' net foreign assets tended to decrease and for the January-August 2010 period they posted a decline by BGN 2.9 billion. In September banks' foreign liabilities rose by BGN 1.4 billion and consequently the external indebtedness was reduced to BGN 1.9 billion in the January-September 2010 period. The trend observed between January and August 2010, namely the banks' preference for reducing their foreign liabilities, reflected the ample liquidity, low domestic demand and prudent lending policy. No significant change in the banks' behaviour is expected in respect of foreign assets and liabilities over the projection horizon.

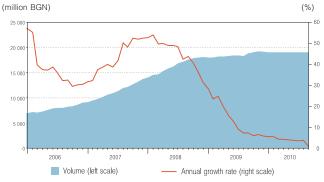
#### Claims on Non-financial Corporations



Source: BNB

Weaker credit demand, resulting from the uncertain macroeconomic environment and banks' tighter lending standards continued to impede growth in claims on non-financial corporations. Their annual growth rate remained low and by the end of September it was 1.6 per cent. Claims on non-financial corporations increased by BGN 489.5 million between July and September 2010 mainly as a result of loans repurchased in September. Between January and September 2010 newly extended loans to non-financial corporations went down by 9.1 per cent on the corresponding period of the previous year.

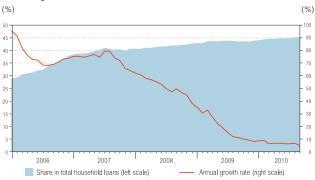
#### Claims on Households



Source: BNB

Lending to households remained relatively weak. This trend was underpinned by the lower demand for loans, reflecting the high degree of uncertainty surrounding employment and income and by the tightening of banks' lending policies. Between July and September claims on households declined by BGN 61.5 million against an increase of BGN 471 million in the corresponding period of 2009. Their annual growth rate slowed down due to base effects and by the end of September came to 0.7 per cent. Housing loans growth slowed down to 4.7 per cent by end-September but retained its higher rates compared with consumer loans (0.5 per cent), mainly due to the continuous decline in housing prices and the reduction of interest rates on this type of long-term loans. Overdrafts and other loans to households reported an annual decline by 9.2 per cent and 9 per cent respectively.

#### Housing Loans



Source: BNB.

In the third quarter interest rates on housing loans were comparatively lower than in the previous quarter, while interest rates on consumer loans remained relatively stable. The average annual percentage rate of charges on newly extended consumer loans amounted to 13.45 per cent in September (against 13.50 per cent in June) and the average interest rate on these loans ac-

counted for 12.04 per cent by September declining insignificantly on June (by 6 basis points).

Between July and September 2010 the new housing loans totalled BGN 307.8 million, up 10.4 per cent than in the corresponding period of the prior year. The annual percentage rate of charges on housing loans declined by 14 basis points on June and reached 9.3 per cent in September. In September interest rates on housing loans accounted for 8.40 per cent, a decrease by 23 basis points compared with June 2010.

## APRC on Newly Extended Household Loans (average weighted by currency)

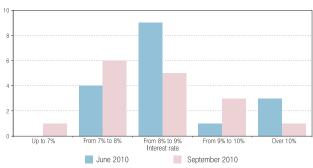


Source: BNB.

The strongest cut in interest rates on household loans offered by banks was reported in the *other loans* category, exhibiting a drop by 108 basis points on June.

## Distribution of Interest Rates on Housing Loans with Original Maturity of over 10 Years

(frequency - number of banks)



Source: BNB.

As regards the distribution of interest rates on housing loans by bank<sup>7</sup> in September the number of banks offering rates under the 7 per cent, 7 to 8 per cent and 9 to 10 per cent interval increased compared with June at the expense of those offering rates within the 8 to 9 per cent

<sup>&</sup>lt;sup>7</sup> Housing loans in euro with an original maturity of over 10 years which comprise the largest share in the newly extended loans in the last three years.

and over 10 per cent band. The average interest rate level in September decreased on June 2010, while the dispersion coefficient remained unchanged in this segment at 1.1.

The average interest rate on loans to non-financial corporations accounted for 8.04 per cent by September, down 20 basis points on June and 9 basis points on the end of the prior year. High liquidity of banks and the decrease in the cost of deposits had a weak effect on lending rates in Bulgaria.

### Interest Rates on New Long-term Loans in Levs and Euro to Non-financial Corporations



Sources: BNB and ECB.

The high degree of uncertainty surrounding interest rate developments in the short-term horizon was sustained. The interbank money market has only a supporting role in bank liquidity management and we cannot expect that high liquidity of this market will seriously add to the fall in lending rates. The anticipated stabilization of deposit rates will probably impede the decrease in lending rates in the following two quarters. The spread between deposit and lending rates will be further affected by the increasing bank provisions due to impairment of overdue loans, as well as by banks' efforts to maintain reasonable profitability levels.

# 3. Economic Activity

In the second quarter of 2010 exports retained their upward trend, with growth accelerating to 3.9 per cent on the previous quarter. GDP rose by 0.5 per cent on a quarterly basis, though recovery signals were ambiguous and uncertain. In the last quarter of 2010 and the first quarter of 2011 exports are expected to further contribute positively to the growth along with a gradual recovery of domestic demand.

Export growth and slowing declines in consumption and investment were driving factors behind the 0.5 per cent GDP growth in real terms in the second quarter of 2010 compared with the previous quarter. GDP registered positive growth for the first time since 2009. This dynamics is estimated on the basis of preliminary, seasonally adjusted data and is likely to be revised. Overall, in the first half of 2010 real GDP (corrected for seasonal and calendar effects) remained 0.6 per cent below the level of the first half of 2009.

Goods and services exports continued to have the strongest positive contribution to GDP growth. On a chain basis, exports have risen since mid-2009. In the second quarter of 2010 their growth accelerated to 3.9 per cent on the previous quarter and to 12.6 per cent on an annual basis compared to the respective quarter of 2009. Exports growth reflected also the recovery in imports of major commodities and raw materials used in the production of export output, e.g. in oil processing, metallurgy and energy. On a chain basis, goods and services imports have begun to increase since early 2010. Over the half-year it rose by 4.1 per cent on the second half of 2009.

In the second quarter of 2010 household consumption continued to decrease albeit at significantly lower rates (to -0.5 per cent on the previous quarter). The lack of a significant improvement in the labour market current situation and household real income decreases over the second quarter<sup>2</sup> reported in the national accounts statistics and household budget surveys acted as

a drag on consumer decisions, though the household confidence index began to improve over the same period.

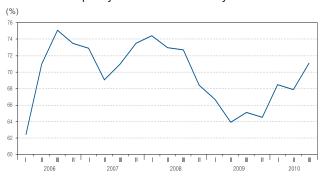
Divergent dynamics of the fixed capital investment was observed in the first half of the year. It rose by 3.8 per cent in real terms over the first guarter followed by a 3 per cent fall in the second quarter on the previous one. The unstable international economic environment, reduced demand and production capacity utilization in industry continued to exert a negative effect on firms' investment expenditure dynamics. On an annual basis, declines in not seasonally adjusted data were -12.8 per cent in the first quarter and -13.7 per cent in the second quarter compared with relevant quarters of 2009: a significant moderation in the rate of decline on the fourth quarter of 2009 (by 37.5 per cent on an annual basis). Compared with the corresponding quarters of the previous year, nominal expenditure on acquisition of fixed assets decreased by 3.2 per cent in the first quarter and 11 per cent in the second quarter. The decline in the fourth quarter of 2009 was 45 per cent. By sector, this expenditure was marked by high fluctuations in individual quarters. The expenditure on acquiring fixed assets in public services (general government, education, healthcare and social activities) rose by 72 per cent on an annual basis in the first guarter followed by a 60 per cent decrease in the second quarter. The corresponding contribution to the annual rate of change in the overall expenditure on acquiring fixed assets in economy was 4.9 percentage points in the first guarter and -7.8 percentage points in the second quarter. Over the first half of 2010 real estate operations (5.6 percentage points), trade, repair of motor vehicles and motorcycles, transport, storage and mail services, hotels and restaurants (3.6 percentage points) and construction (0.8 percentage points)

<sup>&</sup>lt;sup>1</sup> Since September 2010 the NSI has started to publish seasonally adjusted data on GDP components. This analysis and the Household Behaviour and Behaviour of Firms and Competitiveness sections employ such data unless otherwise indicated. For indicators on which there are no officially published seasonally adjusted data, adjustment was made *via* the *TRAMO SEATS* programme by using automated set up for diagnostics and optimization of adjustment parameters.

 $<sup>^{2}</sup>$  For further details see the *Household Behaviour* section in this issue.

had positive contributions on an annual basis. A recovery in the expenditure on acquiring fixed assets in these three industries was reported after its significant drop in 2009 whose rate was higher than the average rate for the economy. The industrial sector continued to have a negative contribution (7 percentage points) and total expenditure on acquiring fixed assets in economy fell by 7.5 per cent.

#### Production Capacity Utilization in Industry



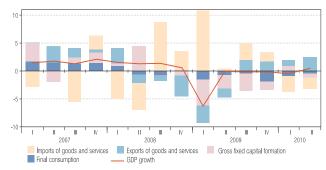
Source: NSI, Business Survey in Industry.

In early September turnover picked up in an increasing number of industrial sectors. In addition to external sales which were approaching the

pre-crisis levels, domestic sales contribution also increased. In the last quarter of 2010 and the first quarter of 2011 exports are expected to further contribute positively to the growth along with a gradual recovery in domestic demand. Economic activity revival will reflect positively on investment activities in Bulgaria and imports will further increase. Consumer demand will start recovering by end-year, though at slower rates due to limited income and higher rate of household savings.

## Contribution to GDP Growth by Component of Final Consumption

(%;quarter-on-quarter percentage points, seasonally adjusted data)



Note: Non-additive contributions due to direct chain-linked volumes and seasonal adjustment of GDP and its components.

Sources: NSI, BNB.

#### GDP by Component of Final Consumption (Real Rate)

(%, real growth on the corresponding period of previous year; seasonally adjusted data)

	2007			2008					20	2010				
	Ī	II	Ш	IV		II	III	IV	- 1	Ш	III	IV	1	Ш
Consumption	2.0	1.6	1.5	1.6	1.0	-0.7	-0.9	0.1	-1.8	-0.8	-0.6	-2.2	-1.0	-0.6
incl.														
Household consumption	2.1	2.7	1.7	1.6	1.7	-1.6	-0.6	-0.4	-1.4	-0.4	-0.7	-1.7	-1.5	-0.5
Final government consumption expenditure	4.7	-1.3	1.3	1.3	-2.4	1.1	-2.4	4.2	-10.5	1.2	2.5	-3.1	3.5	0.3
Collective consumption	1.5	-3.6	-2.2	4.2	-4.6	2.6	0.6	0.5	0.1	1.4	-2.2	-23.4	26.5	-3.9
Gross capital formation	7.1	-1.5	3.1	2.7	-3.8	31.9	-7.6	-3.6	-28.4	-1.9	-8.1	-1.8	-1.2	-1.3
Gross fixed capital formation	11.4	-6.4	4.0	6.4	1.6	14.5	-0.4	-2.3	-14.1	-8.0	-10.8	-6.0	3.8	-3.0
Exports of goods and non-factor services	0.2	4.6	2.5	0.8	4.2	-2.3	-1.4	-6.1	-5.2	-2.6	3.6	2.9	1.7	3.9
Imports of goods and non-factor services	3.2	0.0	6.2	-2.7	5.6	5.1	-9.1	-4.1	-13.3	-0.5	-3.8	-2.3	4.0	2.7
Real GDP growth	1.5	1.7	1.3	2.1	1.5	1.3	1.4	0.6	-6.3	0.0	-0.1	-0.2	-0.5	0.5

Sources: NSI, BNB.

#### Household Behaviour

Household consumption was still impacted by the negative employment and income dynamics. It continued to decline, albeit at a slower pace. Its growth recovery will likely begin at the close of 2010 or in early 2011.

Over the second quarter household consumption declined by 0.5 per cent on the first quarter. Though since the third quarter of 2009 consumer expenditure has declined most significantly on a chain basis, annual dynamics remained negative with no sustainable trends to a recovery in demand by the end of the first half of 2010.

The lack of a significant improvement in the labour market current situation and household income decreases acted as a drag on consumer expenditure, though the household confidence index began to improve. According to national accounts data, employment slowed further on a chain basis, albeit at lower rates on end-2009.

Labour force survey data show that unlike the first quarter when the youngest employees had a major contribution to employment declines on a chain basis, its decline in the second quarter affected mostly older employees (over 35), while in the age group below 35, employment increased.

Weaker labour demand and limited job opportunities continued to impede the active participation of working-age persons in the labour market. The economic activity rate in the 15–64 age group dropped to 66.5 per cent in the first quarter (against 67.8 per cent at the end of 2008 and 66.7 per cent at the end of 2009) and slightly increased to 66.6 per cent in the second quarter. Since early 2010 a trend to slower growth in the number of discouraged people has been observed. According to seasonally adjusted data of the Labour Force Survey, the unemployment ratio in Bulgaria picked up to 10.2 per cent by end-June against 8.2 per cent by end-2009.

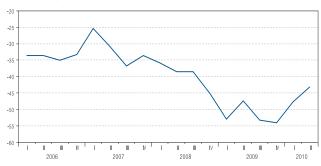
Based on Employment Agency data corrected for seasonal effects unemployment measured by the number of unemployed registered in the labour offices reached the highest value of 9.6 per cent in April (9.95 per cent according to not seasonally adjusted data published by the Employment Agency). In the second and third quarters registered unemployment slightly decreased to 9.5 per cent as of September (9.03 per cent according to not seasonally adjusted data published by the Employment Agency). Employment is likely to recover step-by-step. Compared with the last guarter of 2009 and the first guarter of 2010, competition for occupying vacancies weakened in the following quarters, albeit remaining at comparatively high levels. The Labour Force Survey shows that the increased number of unemployed during the second quarter compared with a year earlier was mainly at the expense of the longterm unemployed (over six months). Though the qualification structure of the persons dismissed in the last several quarters involves good opportunities for their comparatively prompt rehiring, the prolonged unemployment increases the risk for unemployed persons of losing labour skills and

finding their return to the labour market more difficult. In addition, the business situation survey data were dominated by managers with more pessimistic expectations of the number of staff, although their share did not rise considerably.

Compared with the first quarter, real income growth measured by compensation *per* employee deflated by HICP was negative at -0.8 per cent in the second quarter, reflecting mainly the employment decline. Households retained the level of their expenditure on essential commodities and continued to reduce purchases of non-food and durable goods. At the same time, higher savings rates were retained and net assets in the banking system continued to increase.

#### Households Confidence Indicator

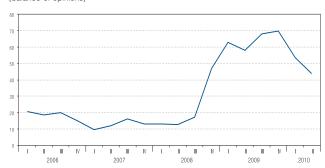
(balance of opinions)



Source: NSI - Consumer Survey.

Favourable developments were registered in consumer and retail trade confidence over the third quarter. They give grounds to expect recovery in the positive growth of consumer demand until the end of 2010.

### Unemployment Expectations in the Next Twelve Months (balance of opinions)



Source: NSI - Consumer Survey.

#### Retail Trade Turnover

(% on corresponding period of previous year; seasonally adjusted data at constant prices)

		2008				21	009	2010			
	1	II	III	IV	1	II	III	IV	- 1	II	July-August
Retail trade turnover (excluding cars and motorcycles)	3.0	1.8	-1.1	-1.1	-2.9	-3.8	-2.8	-2.6	-2.2	-0.7	0.1
incl.											
Foods, drinks and tobacco	0.8	-0.2	0.8	1.3	1.2	-0.9	0.5	0.2	-0.4	0.3	0.0
Textile, clothing, footwear and leather	11.3	-0.3	0.1	-0.7	-4.4	-3.9	-4.5	-0.1	-2.5	-1.8	-0.6
Household goods and home appliances	2.6	0.8	-1.2	-2.8	-5.4	-5.7	-5.7	-3.6	-2.1	-1.5	-0.1
Computers and communication equipment	5.5	2.5	-0.2	-1.6	-12.2	-4.1	-6.1	-5.0	-5.0	-2.5	0.4
Pharmaceutical and medical goods, cosmetics and toiletries	12.1	5.2	1.9	0.7	-1.1	-2.8	0.4	0.7	-8.6	0.9	0.1
Unspecialized shops with different kinds of goods	21.5	2.1	0.2	-1.6	-3.9	-4.6	-4.9	-4.1	-2.9	-2.4	-1.2
Automobile fuels and lubricants	2.8	0.4	-2.6	-2.3	0.3	-5.2	-1.3	-2.0	-2.5	-1.0	-0.3

Source: NSI - Domestic Trade Survey.

#### **Employment and Income Dynamics**

(% on corresponding period of previous year; seasonally adjusted data unless otherwise indicated)

		2008				200	09	2010			
	1	Ш	III	IV	- 1	Ш	III	IV	1	Ш	III
Employed	1.0	0.3	0.4	-0.2	-0.6	-1.3	-1.6	-1.8	-2.0	-1.6	
Real wage*	1.1	1.7	0.7	4.1	0.7	2.8	1.8	0.5	2.4	0.1	
Wage bill* Unemployment at the end of the period,	1.2	1.3	0.6	6.7	-0.9	0.2	-1.2	-0.5	0.4	-0.8	
% of the labour force	6.8	6.0	5.8	6.3	6.9	7.3	8.0	9.1	10.1	9.3	9.0

<sup>\*</sup> Real wage dynamics is approximated by compensation of employees under the System of National Accounts, deflated by HICP.

Sources: NSI - SNA, BNB calculations, Employment Agency.

#### Government Finance and Consumption

The cash balance on the consolidated fiscal programme amounted to BGN -1536.7 million between January and August 2010.

Government consumption over the second quarter of 2010 had a negative contribution of 0.6 percentage points to GDP growth, reflecting mostly decreased operating expenses. In the third quarter real government consumption growth is expected to be close to zero and to accelerate significantly in the last months of the year. In the first months of 2011 government is expected to follow further its conservative policy in the area of expenditure.

The cash-based budget balance by end-August was BGN -1536.7 million: almost half the projected negative balance of BGN -3262.1 million provided for in the Amendment to the State Budget Law. The deficit accumulated between January and August was financed almost entirely by funds of the fiscal reserve which decreased by BGN 1.5 billion. The main reason behind this deficit involved the annual decline of 7.7 per cent in total revenue and grants. The downward trend in the annual rate of decline in tax revenue was retained (-24.0 per cent in January and -9.8 per cent in August). The fading out of early 2010 one-off effects and slower declines in household consumption had a positive effect on dynamics of

VAT income<sup>3</sup> which fell by 9.1 per cent annually between January and August against -37.9 per cent in the first quarter of 2010. VAT revenues again had one of the largest contributions (-2.18 percentage points) to total government revenue negative growth.

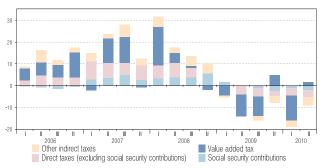
Divergent dynamics was registered in the monthly excise and corporate tax revenue. Their annual decline since early 2010 was relatively constant and reached -13.1 per cent and -27.3 per cent respectively between January and August.

Economic Activity

<sup>&</sup>lt;sup>3</sup> One-off effects of early 2010 reflected decreases in government current and capital expenditure over the last quarter of 2009 which resulted in lower VAT income in early 2010. In addition, the bulk of VAT due by the end of 2009 but non-refunded yet was paid in the first months of 2010 due to government tax revisions of firms entitled to a tax credit.

#### Contribution of Major Tax Groups to Tax Revenue Changes under the Consolidated Fiscal Programme (quarterly, on an annual basis)

(percentage points)



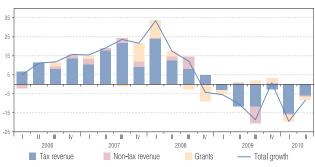
Sources: MF\_BNB

Declines in revenue from personal income taxes and social security contributions (which depend on compensation of employees in economy) were significantly lower. Between January and August 2010 this revenue remained at a constant level *vis-à-vis* the corresponding period of the previous year. Its slight decrease was due mostly to the reduction of the contribution rate to the Pension Fund by 2 percentage points and lower employment.

The deficit on EU programmes accumulated between January and August was BGN 88.9 million against a surplus of BGN 98.7 million over the same period of 2009. Revenue from EU funds rose by 15.7 per cent on an annual basis reaching BGN 918 million. The most sizeable increase in EU grants was reported in July when the European Commission reimbursed funds to the amount of BGN 331 million on the JEREMIE initiative related to financing small and medium enterprises.

## Contribution of Major Groups of Revenue to the Change in Total Revenue and Grants (Quarterly, on an Annual Basis)

(%, percentage points)



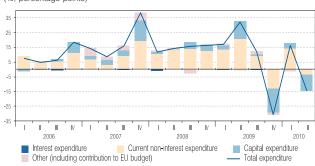
Sources: MF, BNB.

Between January and August total budget expenditure (including Bulgaria's contribution to the EU budget) fell by 1.3 per cent on an annual basis. The significant drop in capital expenditure

had the largest contribution to this fall. Its annual change was -30.3 per cent by end-August. The exhausted effect of pension growth at the end of June predetermined the moderation in the growth rate of social expenditure which rose in the January to August period by 9.9 per cent annually against 14.6 per cent in the first half of the year. In the second quarter of 2010, as in the first quarter, though slowing, social expenditure and subsidy payments had the largest positive contributions (3.95 and 1.14 percentage points) to the change in total government expenditure. In August a one-off payment to the amount of BGN 116 million was made in favour of tobacco producers for 2009 harvest. The payment was included in the Amendment to the 2010 State Budget Law and boosted expenditure on subsidies by 21.2 per cent on an annual basis.

## Contribution of Major Groups of Expenditure to Total Expenditure Growth (Quarterly, on an Annual Basis)

(%, percentage points)



Sources: MF, BNB.

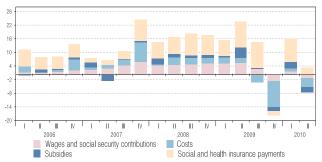
In the second half of the year social expenditure was affected by the Amendments to the Law on the Social Security Budget effective as of 1 July. Lifting the maximum limit of the unemployment benefits allows highly paid employees to receive up to 60 per cent of their insurable income. Budget effects of this measure are largely offset by another change in the law which binds employers to pay the first three days of employees' sick leave to the amount of 70 per cent of their daily pay.

As a result of government employees lay-off in early 2010 and the exhausted effect of lay-off compensation payments, in the second quarter government expenditure on wages and social and health insurance contributions declined by 5.2 per cent on an annual basis. In the January to August period the annual change was negative (-0.5 per cent) on the same period of 2009. Despite the decrease in the wage bill, staff shed-

ding may not be enough to achieve the expenditure levels under the amended State Budget Law.

#### Contribution of Major Groups of Current Non-interest Expenditure to Total Expenditure Growth (Quarterly, on an Annual Basis)

(percentage points)

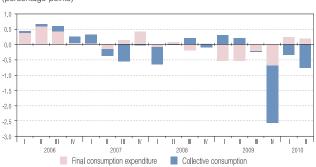


Sources: MF, BNB

The annual decline in the current non-interest expenditure over the second quarter of 2010 (-4.8 per cent) and reduced operating expenditure in particular (-22.6 per cent on an annual basis) impacted unfavourably government consumption contribution to GDP growth.<sup>4</sup> The negative contribution of 0.6 percentage points in the second quarter reflected entirely lower levels of collective government consumption (-0.8 percentage points), while individual consumption reported a slight positive contribution of 0.2 percentage points.

#### Contribution of Government Final Consumption Expenditure and Collective Consumption to Economic Growth

(percentage points)



Note: Contribution to seasonally adjusted GDP growth on the same period of the previous year.

Sources: MF, BNB

On 22 October the NSI published revised data on the *general government* sector under the ESA 95 methodology. The main reason for this revision was the application of a new time-adjusted cash revenue method in reporting taxes and

social contributions.5 Data on the accrual-based balance and government debt reflected also the inclusion of the National Railway Infrastructure Company in the scope of the general government sector since 2007. Not least, revised notification tables for 2009 include also final audited annual financial data on all budget units<sup>6</sup> of the *general* government sector which require a change in the consolidated cash balance, accrued government obligations and claims, as well as budget effects related to hospitals' activities. GDP data were also revised. As a result of these changes, the accrual-based deficit for 2009 was significantly revised: from -3.9 per cent to -4.7 per cent of GDP. These changes and especially the Railway Infrastructure Company reclassification may pose additional risks to 2010 and 2011 budgetary targets set by the government (deficits of 3.8 per cent and 2.5 per cent of GDP).

#### Primary Balance (Quarterly)

On an annual basis (total amount of the primary balance and GDP for the last four quarters)

Sources: MF, BNB

Since mid-2010 the manner of financing budget deficit has been changed. In the first half-year the negative balance was financed almost entirely by fiscal reserve funds, while in the third quarter the government relied primarily on funds generated in the domestic government securities market. Between January and September newly issued government securities totalled BGN 1330 million in nominal value of which BGN 787.1 million in the third quarter due to the increased investor interest. There was a particularly strong interest in the 15-year EUR-denominated interest-bearing treasury bonds offered by the Ministry of Finance for sale on 27 September 2010. Approved bids of EUR 234.1 million exceeded almost 5.2 times the

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<sup>&</sup>lt;sup>4</sup> Including the contribution of the government consumption to seasonally adjusted GDP growth compared to the same period of the previous year.

<sup>&</sup>lt;sup>5</sup> Under this methodology, taxes and social contributions on an accrued basis over a given period are estimated on the basis of cash receipts in the current and following periods while reporting the time difference between the accrual and cash-based accounting.

<sup>&</sup>lt;sup>6</sup> They include payrolls of ministries, agencies and municipalities, as well as annual financial statements of public hospitals and other public companies.

initially offered amount of EUR 45 million, and the average annual yield was relatively low at 6.45 per cent.

Developments in the government bond market and lower levels of the average yield attained in primary auctions led to a significant increase in net domestic government securities financing of the budget deficit from BGN -87.8 million at the end of the first quarter to BGN 676.2 million at the end of September. This trend is expected to continue in the fourth quarter as well, when the MF projects to issue government securities at seven auctions with a total nominal value of at least BGN 178.7 million.

Between January and August the volume and liquidity of the government securities secondary market increased considerably with the ratio of the volume (in levs) of registered securities transactions to those in circulation exceeding 1.7 against an average level of approximately 0.6 in the first three months of the year. Short-term repo agreements (from one to seven days) which are a preferred instrument of banks for regulating their daily liquidity retained the largest share of 90 per cent of the volume of traded government securities. Yield on repos continued to be comparable with the yield on interbank unsecured deposits in August which signals the ample liquidity of the financial sector.

The increasing secondary market volumes strengthened further the investor interest in acquiring government securities in the primary auctions by both bank and non-bank institutions. Secondary market developments facilitated the effective management of bank and non-bank institutions' liquidity through government bond trade and repurchase agreements. This trend and the ample liquidity of the banking system indicate no effect of crowding out of the private sector from the credit market as a result of the active MF issuing policy. In the first eight months of 2010 financial institutions operating amid uncertainty about a macroeconomic recovery used their free resources to repay foreign liabilities and invest in low risk assets, such as government securities.

Higher demand for government securities in the primary market was also due to primary dealers' customers, such as banks which were not primary dealers, non-bank financial institutions and firms. As a result, government securities acquired in the primary market between January and Au-

gust by primary dealers' customers rose almost 3.7 times on the same period of 2009 to reach 44 per cent of the total nominal value of the bonds issued (against 38 per cent in the same period of 2009). High banking system liquidity was among major factors behind the strong demand for government securities in the primary market. It should be noted that banks' demand was not due to the needs of budget servicing banks to have sufficient government securities holdings to secure budget balances on accounts. Based on the BNB analytical reporting, an assumption can be made that in August the value of government securities held by banks was around BGN 1.13 billion (37 per cent) higher than the amount required to secure cash on deposits of the general government sector.

In the fourth quarter of 2010 and first months of 2011 the trend to indirect tax revenue stabilization is expected to be sustained and household consumption to begin to gradually recover. Projected indirect tax revenue under the amended Law on the 2010 State Budget seems realistic and possible excise revenue shortfalls are likely to be offset by higher-than-expected VAT revenue. Corporate tax revenue will respond with the highest lag to economic recovery processes. The decline is likely to continue until the year-end, while a slight improvement is expected in the first quarter of 2011 compared with the same period of 2010. The improvement reflected the low base in 2010 and to a certain extent the rise in the ratio for determining firms' monthly advance payments under the Corporate Income Tax Law effective as of 1 August 2010.

In the last months of 2010 investment and operating expenditure are expected to increase considerably which will have a positive effect on the revenue generated in the first quarter of 2011. In the fourth quarter of 2010 a positive contribution of the government consumption to GDP growth is projected as a result of a dominating effect of operating and healthcare expenditure growth.

Great uncertainty still prevails with regard to the government expenditure policy in the beginning of 2011. In the first quarter of 2011 total government expenditure is expected to be close to early 2010 levels in nominal terms, with the contribution of government consumption to GDP growth likely to remain close to zero.

### Behaviour of Firms and Competitiveness

Signs of economic activity recovering are still weak and contradictory. Firms continued to manage their operating expenditure in a way which avoided substantial deterioration in their financial state.

Value added generated in the second quarter of 2010 rose by 0.5 per cent on the previous quarter. The extent of the overall economic activity dynamics on a quarterly basis was very tight over the recent quarters and its growth came to a virtual standstill after the dramatic decline in GDP

(-6.3 per cent) and value added (-4.4 per cent) in the first quarter of 2009 compared with the previous one. Thus, even though positive growth was reported in the second quarter of 2010, it is still early to talk about a steady trend to economic recovery.

#### Gross Value Added Growth

(real rate; % on the previous quarter; seasonally adjusted data)

	2007			2008			2009			2010				
	- 1	II	III	IV	- 1	Ш	III	IV	- 1	Ш	III	IV	- 1	Ш
Agriculture	-3.8	-6.2	-30.1	14.9	19.0	9.6	-1.7	0.4	-5.3	1.0	2.8	-0.6	3.6	-0.4
Industry	5.2	1.6	3.7	2.9	0.6	-0.8	-2.7	-2.6	-4.4	0.7	-0.2	-1.0	2.2	0.0
Construction	3.3	4.0	2.8	3.1	1.6	2.1	3.3	2.3	-8.3	-0.4	-0.2	-0.3	0.0	1.4
Trade, repair; hotels and restaurants; transport and communications	1.2	2.2	1.4	1.4	1.1	0.9	0.9	-1.0	-0.1	-1.8	-0.9	1.2	-0.4	1.2
Finance, credit, insurance; operations in real estate and business services	1.5	4.2	3.4	2.5	2.9	0.4	2.8	0.3	-0.1	-0.1	-1.5	-1.4	-1.4	-1.4
General government; education; healthcare; other services	1.6	1.0	0.6	-0.2	-0.3	0.1	0.5	1.1	0.2	0.1	-0.2	-0.4	0.3	0.6
Total for the economy	1.3	1.9	1.1	2.5	1.5	1.1	1.7	0.3	-4.4	0.3	0.0	0.1	-0.3	0.5

Source: NSI.

In the second quarter value added in industry retained its previous quarter's level indicating a zero contribution to total value added growth. It should be noted that the increase in the real output volume was close to zero compared with the first quarter of 2009, as measured by the manufacturing index of the short-term<sup>7</sup> business statistics. By contrast, nominal industrial export volumes have recovered at accelerated rates on a chain basis since the middle of 2009 and since the end of 2009 nominal domestic market volumes have also started to revive. Exporting firms took advantage of favourable international price situation which would affect positively their financial state. This supported the 1.7 per cent increase in value added compared with the first quarter of 2009. Despite the lack of output growth, the positive growth in value added indicates an improving efficiency of industrial corporations.

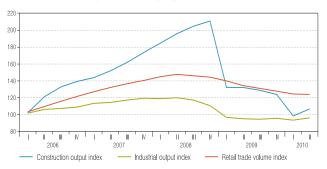
In the second quarter of 2010 trade, hotels and restaurants; transport and communications (1.2 per cent value added growth on the first quarter) contributed most significantly to the growth. More detailed information on the economic activity in this group can be found in the short-term business statistics of the NSI which indicates an upward trend in the volumes of the transport sector, including road, waterway transport and storage activities. The revival in this sector is likely to reflect the strong export dynamics and the overall increase in Bulgaria's foreign trade turnover. Volumes in the other sectors of this group slightly increased or continued to decrease due to the weak domestic demand.

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 $<sup>^{7}</sup>$  Quarterly national accounts data on output were not available at the time of publication of this  $\it Economic\ Review$  issue.

## Indices of Industrial Production, Construction and Retail Trade Volume

(2005 = 100 at constant prices; seasonally adjusted data)



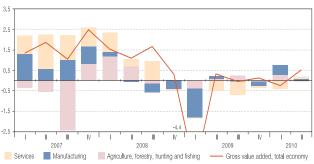
Sources: NSI, BNB.

Value added in construction rose by 1.4 per cent on the previous quarter after its practically zero growth in the period since the second quarter of 2009. Short-term business statistics data show that construction output volumes fell dramatically (37 per cent) in early 2009 and value added under the System of National Accounts decreased by 8.3 per cent. In the following quarters the output continued to decrease, while the value added level remained relatively stable. This signalled an ongoing reorganization resulting in optimization of the production process and failure of inefficient firms. Throughout 2009 declines in building construction continued to deepen, though at moderate rates, while civil and engineering construction reported relatively stable volumes, albeit significantly below the 2008 level. In the second quarter of 2010 engineering and civil construction recovered after a short-term downturn over the first quarter, while building construction registered growth for the first time since 2008. Similar developments were observed in unfolded build-up area with issued construction permits which is a coincident rather than a leading indicator in this sector. This indicator also posted an increase on a chain basis after five quarters in which declines were reported. If these short-term developments are to be sustained, this will create conditions for a revival in a number of industries which will support the overall economic recovery. However, currently construction managers tend to be cautious in their expectations of production activity in this sector.

The significant decline which started in mid-2009 continued to be observed in *finance, credit* and insurance, movable and immovable property operations and business services despite some recovery in fixed assets investment (see the beginning of this Section).

### Value Added Growth and Contribution by Sector

(%; quarter-on-quarter percentage points)



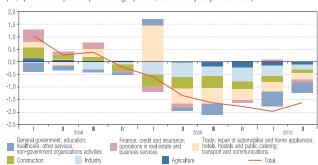
Note: Non-additive contributions due to direct chain-linked volumes and seasonal adjustment of gross value added and its components.

Sources: NSI, BNB,

In the second quarter firms continued to reduce employment, though the rate of decline slowed down from its maximum value of 2 per cent in the first quarter to 1.6 per cent in the second quarter compared with the previous one. Employment in industry fell by 0.9 per cent: a 2 percentage point decrease from the maximum value of 2.9 per cent in the fourth quarter of 2009. In construction, the rate of decline moderated to 2.4 per cent against 7 per cent in the third quarter of 2009.

## Contribution to Changes in the Number of Employed by Economic Sector

(%; quarter-on-quarter percentage points, seasonally adjusted data)



Note: Non-additive contributions due to direct chain-linked volumes and seasonal adjustment of gross value added and its components.

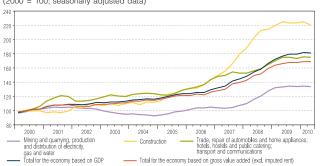
Sources: NSI, BNB.

A key component in firms' strategy for preserving their sustainable financial state was the reduction in the number of personnel. In addition, expenditure optimization which may be seen in the trend of the *value added to output* ratio had a favourable effect on the operating surplus. The rate of nominal wage growth remained positive

over the period of the economic and financial crisis: 2 per cent on average quarter on quarter since early 2009. Explanation of wage dynamics could be found in the structure of the dismissed persons over the last few quarters. On the one hand, employees with primary and lower education were mostly affected by the labour shedding: their share in the number of persons dismissed since 2009 was 38 per cent against the share of 14 per cent of employment. On the other hand, young workers (up to 34) and employees with shorter professional experience and probably lower remuneration were dismissed.

### Nominal Unit Labour Costs

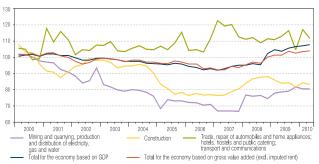
(2000 = 100: seasonally adjusted data)



Sources: NSI, BNB

### Real Unit Labour Costs

(2000 = 100; seasonally adjusted data)



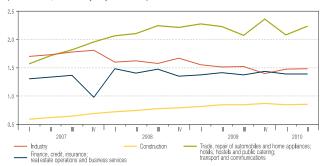
Sources: NSI, BNB.

Developments in nominal unit labour costs show that in most industries their growth has been reversed or slowed down since the second quarter of 2009 indicating firms' efforts to maintain expenditure discipline. Wage bill growth was insignificant in real terms. In addition, wage dynamics reflected mainly the renewed positive growth in labour productivity in industry and construction and in economy as a whole. This was confirmed by the calculations of the real unit labour costs. Between early 2009 and August 2010 real unit labour costs in industry rose from 77 per cent to

80.5 per cent of the average 2000 level, while in construction, they fell from 86 per cent to 83 per cent. Real unit labour costs in total economy<sup>8</sup> increased from 101 per cent to 104 per cent over the same period. It should be taken into account that between 2002 and 2008 they stood firmly below the 2000 level. This pertains to accumulated buffers and opportunities for increasing wages at rates exceeding the productivity growth with a view to maintain firms' human resource potential without undermining cost competitiveness. Such reserves continued to be accumulated in industry and construction.

### Gross Operating Surplus at Current Prices

(billion BGN; seasonally adjusted data)



Sources: NSI, BNB.

An essential positive signal about the state of the economy came from the trend formed in the last three quarters toward a gradual increase in the gross operating surplus at a macro-level. The major factor behind this increase is the starting recovery in the value of this indicator in industry which was strongly impacted by the world economic and financial crisis and consequently the weak domestic demand. Gross operating surplus in other industries showed greater resilience without any significant declines which confirms firms' adjustment capacity to unfavourable economic conditions.

<sup>&</sup>lt;sup>8</sup> Real unit labour costs are calculated on the basis of value added less the owner-equivalent rent component.

### **Exports and Imports of Goods**

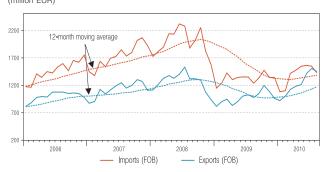
In the fourth quarter of 2010 and the first quarter of 2011 exports are expected to slow down due mainly to lower increase in external demand, while imports will gradually accelerate their growth rates. Export growth rates will again outstrip those of imports and trade deficit will continue to decrease.

Between January and August exports posted a positive growth rate of 32.2 per cent as a result of external demand revival and international price rises. Imports also grew, though at significantly lower rates (7.2 per cent). This rise is due mainly to higher international prices. On an annual basis, in August exports increased by 47.6 per cent and imports by 14.8 per cent.<sup>9</sup>

Exports are expected to post again positive growth, though the rate will slow down due to weaker increase in external demand. In the fourth quarter of 2010 and the first quarter of 2011 imports will continue to register a positive growth rate which will accelerate moderately as a result of domestic demand recovery, albeit at a lower pace than that of exports.

Exports growth outstripped imports growth and trade deficit fell by EUR 1640.7 million between January and August 2010. This dynamics was largely due to the increase in net exports of *investments goods* and *raw materials* groups. Investment goods exports rose, while imports dropped compared with the same period of the previous year. The raw materials group posted growth both in exports and imports, though growth rates of imports were lower than those of exports.

## Dynamics of Exports and Imports (million EUR)



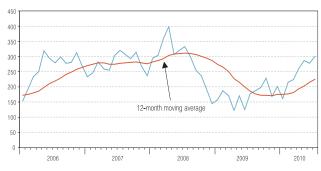
Source: BNB.

Between January and July 2010 exports of all commodity groups recorded positive growth rates. Base metals and their products (9.6 percentage points), followed by machines, vehicles and appli-

ances (6.3 percentage points), mineral products and fuels (5.9 percentage points) and chemical products, plastics and rubber (3 percentage points) had the major contribution to this growth. Between April and July growth rates accelerated compared with the first quarter.

### **Exports of Base Metals**

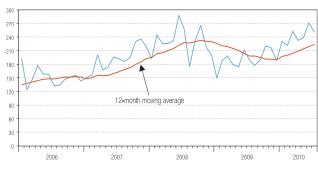
(million EUR)



Source: BNB.

Between January and July exports of base metals and their products rose by 55.3 per cent or EUR 615.5 million in nominal terms compared with the same period of 2009. Copper and copper products (35.5 percentage points), followed by iron and steel (9.2 percentage points), aluminum (3.2 percentage points), zink (2.7 percentage points) and lead (2.6 percentage points) contributed most significantly to the revenue in this group. The increase is mostly due to the high international prices of metals over the review period. Over the projected horizon base metal export growth rates are expected to moderate as a result of slower increases both in prices and in external demand.

## Exports of Machines, Transport Vehicles and Appliances (million EUR)



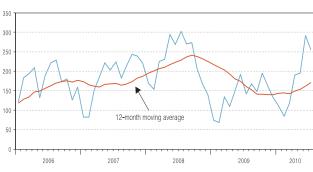
Source: BNB.

 $<sup>^{\</sup>rm 9}$  The analysis presented in this section is based on nominal exports and imports data in euro.

Between January and July 2010 exports of machines, transportation vehicles and appliances reached EUR 1702.5 million: an increase of 31.5 per cent on an annual basis. Electrical machines and appliances (11.1 percentage points), nuclear reactors (9.8 percentage points), automobiles (4.0 percentage points), optical measuring and control instruments (2.3 percentage points) contributed to the increase. The remaining items in this group also had positive contribution with the exception of aeronautics and astronautics (-1.2 percentage points). Exports of machines, transport vehicles and appliances posted constant growth since the beginning of 2010. Our expectations for the projected horizon are for moderation in this growth rate due to the slowdown in the growth rate of external demand.

### Exports of Mineral Products and Fuels

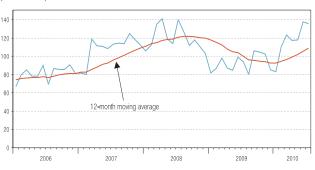
(million EUR)



Source: BNB.

Exports of mineral products and fuels totaled EUR 1250.8 million over the review period: 43.4 per cent more than in the same period of the previous year. This reflected primarily the increase in the value of exports of *mineral fuels, mineral oils and products thereof* (40.5 percentage points), reflecting the significant fuel price rises. Over the projected horizon the growth rate of revenue from this group's exports is expected to decrease due to weaker rise in fuel prices.

Exports of Chemical Products, Plastics and Rubber (million EUR)

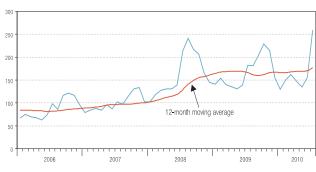


Source: BNB.

Chemical products exports totaled EUR 822.7 million: a 30.8 per cent increase on an annual basis. Within this group, *pharmaceuticals* (11.5 percentage points), *fertilizers* (8.2 percentage points) and *inorganic products* (4.1 percentage points) had the largest contribution. *Organic chemical products* (-2.3 percentage points) and various types of *chemical industry products* (-0.5 percentage points) had a negative contribution over the period. In this group, export growth rates are expected to slow down due to moderation in external demand growth.

## Exports of Animal and Plant Products, Foods, Drinks and Tobacco

(million EUR)



Source: BNB

Animal and plant products exports increased by 11.4 per cent or EUR 116.7 million on the January to July 2009 period. *Oil seeds and fruit* (2.1 percentage points), *cocoa and its products* (1.5 percentage points), *tobacco* (1.4 percentage points), *meat* (1.3 percentage points) and *foods based on cereals* (1.2 percentage points) had the largest contribution in this group. Cereals posted a decline (-1 percentage point) due to lower prices compared with the January to July 2009 period. Over the projected horizon growth is expected to be even lower as a result of slowing food price growth.

## Contribution of Commodity Groups to Trade Growth, January – July 2010

	Ex	ports	Imports			
	growth, %	contribution, p.p.	growth, %	contribution, p.p		
Consumer goods	16.2	4.7	4.1	0.8		
Raw materials	33.3	14.0	15.9	5.4		
Investment goods	33.4	5.6	-12.4	-3.2		
Energy resources	45.9	5.6	16.8	3.3		
Growth, total	29.9		6.3			

Source: BNB.

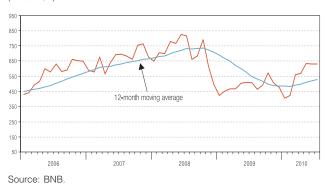
Between January and July imports (CIF) came to EUR 10,349.8 million: a nominal increase of EUR 611.4 million or 6.3 per cent on the January

to July 2009 period. The increase is due mainly to the trade revival over the second quarter of 2010. Positive developments in individual groups by end use were reported by raw materials (a 5.4 percentage point contribution), energy resources (3.3 percentage points) and consumer goods (0.8 percentage points), while investment goods registered a negative development (-3.2 percentage points).

The raw materials group registered a positive growth rate in early 2010 which strengthened in the second quarter. Growth between January and July was 15.9 per cent or EUR 396.2 million in nominal terms. All items in this group had a positive contribution except for textile (-1.2 percentage points). Ores (7 percentage points) followed by other metals (3.7 percentage points) had the largest contribution. Metal price rises and increased demand driven by exports growth were the major factors for the growth in imports of this group. Over the projected horizon the growth rate of raw materials imports is expected to accelerate due to domestic demand recovery, though its effect will be weakened by the slowing growth rate of metal prices.

### Imports of Raw Materials

(million EUR)



Imports of investment goods came to EUR 2229.9 million: 12.4 per cent less than the value reported a year earlier. The decline rate moderated on an annual basis between April and July compared with the first quarter: from -17 per cent to -8.9 per cent. Only *spare parts* (a 3.2 percentage point contribution) posted an increase in this group. Values of the other items decreased on the corresponding period of 2009, with *machines and equipment* (-6.7 percentage points) having the largest contribution in absolute value, followed by *motor vehicles* (-3.8 percentage points). Over the projected horizon expenditure on this group's imports is expected to

approach or even reach the values reported a year earlier due to revival of economic activity in Bulgaria.

### Imports of Investment Goods

(million EUR)

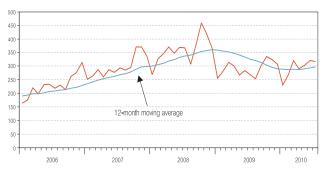


Source: BNB

Consumer goods imports account for EUR 2051.5 million over the review period: a 4.1 per cent rise on the level registered a year earlier. In the first quarter this group posted a decline on 2009 but the increase reported between April and July was enough to compensate it. *Clothing* had the major positive contribution (4.2 percentage points), while *foods*, *drinks* and *tobacco* registered the largest negative contribution in absolute terms (-1.6 percentage points). In the last quarter of 2010 and the first quarter of 2011 imports of consumer goods are expected to post growth due to consumer demand recovery.

### Imports of Consumer Goods

(million EUR)



Source: BNB.

Imports of energy resources between January and July totaled EUR 2227.5 million: a 16.8 per cent increase on the same period of the previous year. In this group as well, a decline was reported over the first quarter followed by a comparatively large increase between April and July (33.4 per cent). Crude oil and natural gas (13.3 percentage points), fuels (9.5 percentage points), oils (7.4 percentage points) and electricity (7.4 percentage points) had major contributions to

the growth. Only *coal* (-4 percentage points) registered a decline. Over the projected horizon the increasing domestic demand is expected to have a greater influence on the value of energy resources imports rather than oil price growth moderation. Hence, import growth rates are projected to accelerate further.

### Imports of Energy Resources

(million EUR)

600
550
450
400
350
300
250
250
12-month moving average
150
100
500
2006
2007
2008
2009
2010

Source: BNB

Between January and July exports to other EU countries rose by 20.2 per cent and to non-EU countries by 48.53 per cent. Imports from EU Member States also had a positive, though a lower, growth rate: 1.9 per cent. Imports from other countries increased by 11.1 per cent.

In the first quarter of 2010 the market share of Bulgarian goods in total imports of EU Member States stabilized at a level of 0.62 per cent on an annual basis.

43 Economic Activity

# 4. Inflation

In 2010 annual inflation rose from 1.6 per cent as of end-2009 to 3.6 per cent by the close of September. Higher international energy and food prices and the raised tobacco products excise duties have been the main drivers of inflation dynamics since the year's start.

There exists uncertainty about food price dynamics in the following two quarters and, subsequently, about overall inflation. The current higher-than-expected food inflation and the fuel price rises are the main factors behind the further increase in inflation till end-2010. Tobacco products and transport fuels are anticipated to contribute to a certain slowdown in annual inflation in the first quarter of 2011.

In 2010 annual inflation rose from 1.6 per as of end-2009 to 3.6 per cent by the close of September. Higher international energy and food prices and the raised tobacco products excise duties are the main pro-inflationary factors in the present year. Under the conditions of weak economic activity and low domestic demand, inflation, excluding foods, energy products, controlled prices and tobacco products, continued its downward trend, stabilizing in mid-year around 0 per cent (1.8 per cent at end-2009). As of September energy products and tobacco products had the highest positive contribution to annual inflation (1.4 percentage points and 1.3 percentage points respectively).

### Inflation

(%)

16
14
12
10
8
6
4
2
0
2006 2007 2008 2009 2010
Initiation on the corresponding month of previous year Average annual inflation for last 12 months

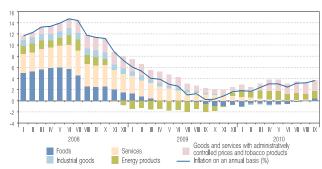
Source: NSI.

Since the end of June 2010 unprocessed food prices registered an upward dynamics and in August and September some processed food prices, following price development on international markets, reported significant rises which were not included in the outlook for inflation as of mid-year. Food prices had a key role in the acceleration of overall consumer price inflation from 2.9 on aver-

age in the second quarter to 3.3 per cent in the third guarter.

Inflation Rate on Corresponding Month of Previous Year and Contribution of Major Goods and Services Groups to It

(%, percentage points)



Note: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately. Administratively controlled prices are calculated on the basis of elementary aggregates in the consumer basket.

Sources: NSI, BNB.

There exists uncertainty about food price dynamics in the following two quarters and, subsequently, about overall inflation. Uncertainty stems mainly from the possible secondary effects of the allready registered major food price rises on other food prices which may lead to a further increase in food inflation during the next two quarters. The current higher-than-expected food inflation is the main factor behind the further increase in overall inflation till end-2010.

Energy products are anticipated to bring about a slight increase in overall inflation till the end of the year while their contribution should start decreasing since yearly 2011; this trend, however, is not likely to be affected strongly by the rises in the excise duties of certain fuels since the beginning of the next year. Tobacco products are also expected to contribute to a certain slowdown in

<sup>&</sup>lt;sup>1</sup> The analysis in this section is based on NSI data on HICP.

overall annual inflation in the first quarter of 2011. External factors such as international price dynamics remain the main risks to inflation outlook in the last quarter of the present year and the first quarter of 2011. We expect inflation, excluding foods, energy products, controlled prices and tobacco products, to be relatively low as a result of the weak domestic demand.

Current information about general consumer price dynamics in the following months may be derived from industrial producer prices on the domestic market and from business situation surveys.

Producer prices on the domestic market registered an upward trend during the first half of the present year underpinned mainly by the increased crude oil and metal prices on international markets. Producer prices growth rate reached 5.6 per cent in June and accelerated to 10 per cent in August (-0.7 per cent at the close of 2009). Higher prices in the sectors of production and distribution of electricity, heating and gaseous fuels, and food production played a key role for the higher price dynamics in the second half of the year. As regards the possible spilling over of producer price inflation to end-use consumer prices, it should be taken into account that over the 2009 to 2010 period the dynamics of producer prices displayed considerably higher fluctuations than that of consumer prices. In addition, producer price inflation for consumer products (slightly above 1 per cent on an annual basis as of August) stayed substantially more moderate than overall inflation of producer prices.

The business situation survey also showed expectations of a relative stabilization in consumer price dynamics. According to September data on the business situation in Bulgaria, expectations of selling prices in industry and trade remain at relatively low levels while in the services sector expectations of price falls prevail.

## Rate of Change of Producer Price Index in Industry and of Harmonised Index of Consumer Prices

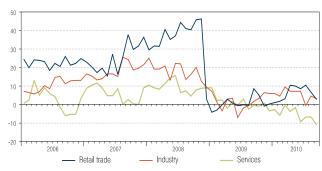
(on corresponding month of previous year, %)



Sources: NSI, BNB.

## Expectations of Selling Prices in Industry, Retail Trade and Services during the Next Three Months

(balance of opinions)



Sources: NSI, BNB.

Growth Rate of Major Goods and Services Groups Prices and Their Contribution to Accumulated Inflation

		ed inflation ember 2009 2008 = 100)	as of Septe	ed inflation ember 2010 2009 = 100)	Annual inflation as of September 2010 (September 2009 = 100)		
Inflation (%)	1.	.0	2	.9	3.6		
	Inflation rate by group, %	Contribution, p.p.	Inflation rate by group, %	Contribution, p.p.	Inflation rate by group, %	Contribution, p.p.	
Foods	-4.0	-0.97	0.9	0.19	1.9	0.44	
Processed foods	-2.8	-0.42	2.6	0.35	2.8	0.38	
Unprocessed foods	-5.9	-0.55	-1.8	-0.16	0.6	0.06	
Services	1.9	0.57	-1.2	-0.38	-0.2	-0.08	
Catering services	3.5	0.42	1.5	0.19	2.4	0.30	
Transport services	-1.2	-0.06	-0.2	-0.01	-0.2	-0.01	
Telecommunication services	-0.8	-0.03	-0.7	-0.03	-0.9	-0.04	
Other services	2.7	0.25	-5.5	-0.54	-3.4	-0.33	
Energy products	6.1	0.46	14.2	1.32	14.6	1.35	
Transport fuels	7.8	0.52	15.7	1.31	16.2	1.35	
Industrial goods	-0.4	-0.07	-0.6	-0.11	-0.2	-0.04	
Goods and services with administratively controlled prices	1.8	0.29	3.7	0.56	3.8	0.59	
Tobacco products	23.9	0.69	33.8	1.33	33.8	1.34	

Sources: BNB, NSI.

45 Inflation

### **Food Prices**

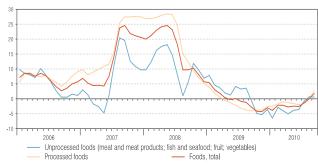
The 2009 trend towards decline in the food price index on an annual basis was sustained during the first half of 2010. By June both food groups (processed and unprocessed) had a 0.3 percentage point negative contribution to annual inflation. Compared with end-2009, in the course of the first half of 2010 lower deflation was observed in the prices of vegetable oils and cereals in line to a great extent with international price dynamics while in mid-year vegetable prices reported a minimum positive growth rate on an annual basis.

During the second half of the year food prices started to register a strong upward dynamics which was not included in the outlook for inflation as of the middle of the current year. In August and September processed food prices reported their highest monthly rises since 2008 (by 1.4 per cent and 2.5 per cent respectively) with bread and cereals, vegetable oils and dairy products having the greatest contribution. In the third quarter fruit and vegetable prices picked up by 5 per cent on average compared with the corresponding period of the prior year. Of all major food groups only in that of meat and meat products a

relatively stable price decline on an annual basis was reported (-4 per cent). By September the food group as a whole contributed by 0.4 percentage points to annual inflation (-0.7 percentage points at the close of 2009).

### Rate of Change of Food Prices

(on corresponding month of previous year, %)



Sources: NSI, BNB.

Food price dynamics was strongly dependent on weather conditions in Bulgaria and on price developments on international markets (see the box entitled *Food and Fuel Price Dynamics between 2007 and 2010*). Processed food price rises during the last two months resulted mainly from the strong increase in the prices of wheat and vegetable oils on international markets and

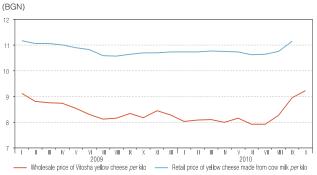
### Dynamics of Wholesale and Retail Prices of Major Food Products

## 

Retail price of type "500" packed wheat flour per kilo

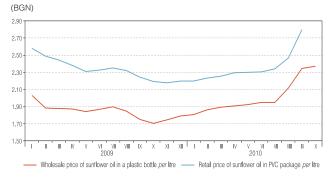
### Yellow Cheese

Wholesale price of type "500" flour per kilo -

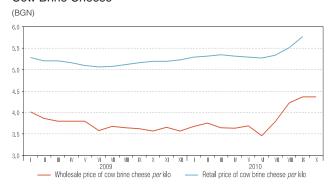


Sources: NSI, State Commission for Commodity Exchanges and Market Places

### Sunflower Oil



### Cow Brine Cheese



its comparatively fast spillover to end-use food prices in Bulgaria. Over the August to September period the accumulated inflation of flour and vegetable oil prices came to 20 per cent while the price of bread went up by some 10 per cent.

A possible explanation of the more substantial rises in the prices of some dairy products is the gradual orientation of consumer demand towards higher-price and higher-quality products segments although it is somewhat difficult to measure the impact of this on prices.

Current data on food wholesale price dynamics by mid-October show relative unwinding of the market with stabilization or lower change rates of some major processed food prices. This gives ground for expectations of limited rises in the prices of these products during the next months compared with the high rises on a monthly basis in August and September 2010.

### **Energy Products Prices**

Oil price rises in parallel with the appreciating US dollar against the euro in the first half of the year played a key role for energy products price dynamics. The annual growth rate of energy products prices accelerated to 20 per cent in March (6.4 per cent at end-2009); hence, this component had a major contribution to the increase in overall annual inflation.<sup>2</sup> Stabilization of the oil price in euro terms during the third quarter brought about relative stabilization of diesel and petrol prices. Greater fluctuations were observed in the price of propane-butane. In September the energy products price index was higher by 14.6 per cent on the corresponding month of the prior year (a 1.4 percentage point contribution to annual inflation).

Energy products will retain their high contribution to inflation in the next months. Based on the assumption that oil prices are within the range of USD 70–90 *per* barrel and the USD/EUR exchange rate stabilizes at a monthly average level of around 1.30, energy products are expected to have a slight contribution to overall annual inflation till the end of 2010 that will start to subside in early 2011. This dynamics is not expected to be greatly affected by the planned rises in the

excise rates of diesel and unleaded petrol during the next year.<sup>3</sup>

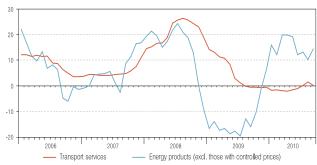
## Monthly Rate of Change in the Prices of Urals Crude Oil (in Euro) and A95 Petrol



Sources: U.S. Energy Information Administration, NSI.

## Rates of Change of Energy Products and Transport Services Prices

(on corresponding month of previous year, %)



Note: Energy products excluding those with controlled prices include fuels and lubricants for personal transportation vehicles, and solid, fluid and gaseous fuels for households.

Sources: NSI, BNB.

## Administratively Controlled Prices and Tobacco Products Prices

During the nine months since the year's start the annual growth rate of the prices of goods and services with administratively controlled prices picked up to 4 per cent (2 per cent at the close of 2009). As of September this group had a 0.6 percentage point contribution to annual inflation.

In the group of administratively controlled prices higher fees for issuing identity documents (by 90 per cent) and the increase in the prices of heating and electricity (by 16 per cent and 2 per cent respectively) played a key role for accumulated overall inflation since early year.

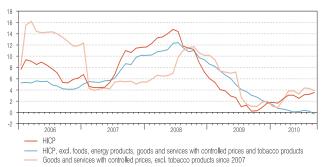
47 Inflation

<sup>&</sup>lt;sup>2</sup> In the group of energy products transport fuels occupy the largest relative share; hence, their price developments determine the price dynamics of energy products in general.

 $<sup>^3</sup>$  The excise rate of gasoline used as a motor fuel is envisaged to be raised to BGN 615 per 1000  $\rm I$  in 2011 (from BGN 600 per 1000  $\rm I$  in 2010) while that of unleaded petrol to BGN 710 per 1000  $\rm I$  (from BGN 685 per 1000  $\rm I$  in 2010).

### Rate of Change in Controlled and Uncontrolled Prices

(on corresponding month of previous year, %)



Note: Given the relation between tobacco products prices and administratively set excise rates, tobacco products are discussed separately from the group of goods and services with non-controlled prices regardless of the tobacco products market liberalization in early 2007. Administratively controlled prices are calculated on the basis of elementary aggregates in the consumer basket.

Sources: NSI, BNB.

The rise in the natural gas prices by 25 per cent during the third quarter of the year was the main factor behind the increase in the prices of heating and central gas supply which was partially reflected in the consumer price inflation in July. The remaining part of the rises in the prices of these two groups are expected to be reflected by the end of 2010. So far no other adjustments in administratively controlled prices have been announced; hence, the moderation in their annual inflation is anticipated to come to some 3 per cent at the close of the first quarter of 2011.

Over the review year tobacco products prices went up by 34 per cent due to the increased excise duties. Higher tobacco products prices were the main driver of annual inflation dynamics in 2010. In September their contribution amounted to 1.3 percentage points and will stay high in the last quarter as well. In 2011 no changes in tobacco products excise duties are envisaged; therefore, their prices will not be a pro-inflationary factor. This will contribute to a slowdown in annual inflation in the first quarter of the next year while in the second quarter of 2011 a stronger downward effect (about 1 percentage point) on inflation is expected.

### **Industrial Goods Prices**

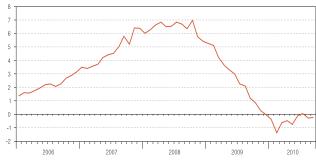
During the first nine months of the year the price index of non-food goods (fuels excluded) fell by 0.4 per cent on average compared with the corresponding period of 2009.

By month, the strongest decline on an annual basis was reached in February (-1.3 per cent) followed by a gradual moderation in the decline rates to -0.2 per cent. This trend was underpinned basically by the moderating falls in the prices of automobiles (-11 per cent in February, -3.8 per cent in September) and footwear (-6 per cent in February, -0.9 per cent in September). The annual drop in clothing prices displayed a similar dynamics. Automobiles, clothing and footwear affected more pronouncedly the overall index of non-food prices due to their comparatively higher relative share in the consumer basket. The total contribution of the other industrial goods groups to annual inflation in September was low (0.1 percentage points), displaying a trend towards stabilization at this level.

Non-food price dynamics was impacted predominantly by the developments in consumer demand and the price policy implemented by retail trade firms. Data on retail sales revenues (at constant prices) show moderating decline rates on an annual basis while according to the business situation survey in trade pessimistic assessments of the reported sales volume are becoming fewer by month during the year. This current information shows the gradual easing of the consumer demand downward pressure on non-food price index. The rate of decrease in non-food prices is expected to continue to moderate during the next two quarters and the prices in this group are likely to post a low positive growth rate on an annual basis in early 2011.

Rate of Change of Industrial Goods Prices Excluding Energy Products and Goods with Administratively Controlled Prices

(on corresponding month of previous year, %)



Sources: NSI, BNB.

### **Services Prices**

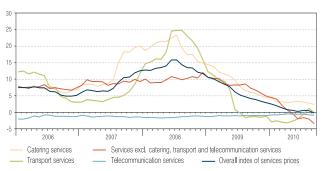
During the first half of 2010 annual inflation in services (excluding those with administratively controlled prices) continued its downward

<sup>&</sup>lt;sup>4</sup> Due to the increase in the excise duties in Bulgaria over the review year their levels are at present 20 per cent higher than the minimum for the EU.

movement reaching -0.2 per cent in September (2.9 per cent at the close of 2009). Accommodation services price falls and the drop in inflation of catering and insurances had a major contribution to this trend.<sup>5</sup>

## Rates of Change of Services Prices Excluding Those with Controlled Prices

(on corresponding month of previous year, %)



Sources: NSI, BNB.

Since mid-year the slowdown in the annual inflation of most services was weaker compared with the first six months and for other services

the low rates of price rises stabilized. Auto transport prices that registered a drop of about 1 per cent during the first half of the year compared with the same period of 2009, reported a low positive growth rate on an annual basis in the third guarter. Services current price dynamics may be explained by the moderating decline in consumer demand and the pressure on prices associated with the higher expenditure on raw materials (such as expenditure on fuels for transport services). It should also be taken into account that, following the dramatic drops in the prices of major raw materials at end-2008 and in 2009, the prices of services posted a slight decline (transport services) or a slower growth rate on an annual basis (catering). This reaction implies that companies are likely to have managed to accumulate financial resources which, given the subsequent food and fuel price rises, have so far prevented stronger increases in the prices of services, such as transport and catering. During the next two quarters inflation of services will probably be relatively low and could slightly accelerate on its current rates.

### Food and Fuel Price Dynamics between 2007 and 2010

Between 2007—2010 inflation in Bulgaria was characterized by strong fluctuations primarily reflecting the impact of international food and oil prices. From mid-2007 to mid-2008 the prices of these two groups saw a sizeable increase that resulted in a pronounced acceleration of overall annual inflation of consumer prices. Then followed a period of decline (in the second half of 2008 and during most of 2009) reflecting mainly the sharp decrease in the prices of major commodities driven by the global drop in economic activity and the increase in supply of foods in Bulgaria after the good harvest in 2008. The upward dynamics in oil prices in 2009 and early 2010 and the increase in international food prices especially in the second half of 2010, are important factors for the overall rise in inflation in 2010 compared to end-2009 level.

### **Food Prices**

The first strong increase in international food prices over the review period was in 2007, when due to weather conditions and the sizeable fall in the yields of major producer countries the prices of wheat, sunflower and other crops peaked up swiftly. The extremely unfavourable climate conditions in Bulgaria in 2007 also resulted in a sizable fall in agricultural production which led to a contraction in supply of local agricultural products.

In 2008 the food supply problems were overcome due to the good harvest worldwide and respectively prices started to fall. This trend began in the second half of 2008 and continued in 2009. After the relative stabilization observed, in August 2010 a new rise in wheat prices was seen, driven by the uncertainty related to the yields for the current year and the ban on Russian cereal exports.

In line with the described dynamics in international food prices in Bulgaria the latter picked up sharply in the second half of 2007. Bread and cereals, dairy products, vegetable oil and vegetables contributed most to inflation. At the end of 2007 total accumulated inflation on food products reached 20 per cent on an annual basis. A comparison of the rate of increase in prices of certain goods, representing these groups between July 2007 and December 2009 shows, that at the end of 2009 prices of goods with relatively minor processing (flour and vegetable oil), as well as chicken and to a lower extent white bread have returned to their July 2007 levels. By mid-2010 the price of

(continued)

<sup>&</sup>lt;sup>5</sup> In discussing services price dynamics in 2010 it should be taken into account that it is greatly affected by the inclusion of two new services groups in the consumer basket: holiday accommodation services and low-tariff flights.

pig meat which saw a more pronounced increase in 2008, also declined to its average level observed in the first half of 2007. Vegetable price indices were 6.4 per cent lower in September 2010 compared to September 2007.

As a result of the sharp increase in international and domestic prices of wheat in August 2010 and of its comparatively fast spillover to end-use consumer prices, the prices of flour and bread in Bulgaria rose significantly. In August and September the price of flour increased by around 20 per cent and that of bread by 10 per cent.

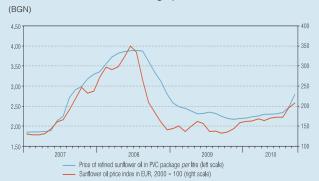
The price of vegetable oil in Bulgaria followed, almost without any lag, the trends in the movements in international prices of sunflower oil and in line with the international market environment also saw a more pronounced increase in August and September (20 per cent).

## International Wheat Price (in EUR) and Price of Flour *per* Kilo



Sources: NSI, World Bank, BNB.

## International Sunflower Oil Price and Price of Refined Sunflower Oil in PVC Package *per* Litre



Sources: ECB, NSI, BNB.

### Price of Poultry Meat per Kilo



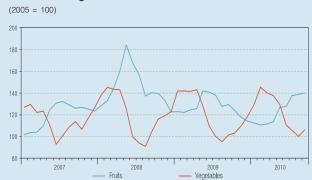
Note: Data on representative good: Chicken without giblets, frozen. Source: NSI.

### Price of Type "500" Flour Bread per Kilo



Source: NSI.

### Fruits and Vegetables Price Indices



Source: NSI.

### Price of Pig Meat per Kilo



Note: Data on representative good: boneless pork round Source: NSI.

(continued)

Most food products saw no sizeable price decrease in 2009 and 2010 and remained at levels higher than those in the first half of 2007. The processed and unprocessed food price index marked an increase of 16 per cent in July 2010 compared to July 2007, and by September the increase on the corresponding month of 2007 was 9 per cent

Food price dynamics in the recent years especially in the period of decline in international prices may be explained not only by the international market environment and weather conditions in Bulgaria, but also by the impact of a number of other factors. The latter include the nominal and real convergence processes, the related trend towards an increase in the quality of food products and demand for them (especially foreign demand due to the lower relative prices prior to Bulgaria's integration into the single European market). In 2006 the prices of food products and soft drinks in Bulgaria were 44 per cent below the average price level for EU-27 and in 2009 this difference shrank to 32 per cent. The level of prices was affected by the policy of firms involved in food production and trade, which in 2008 and 2009 did not decrease the end-user consumer prices of their products in line with the fall in commodity prices. This probably reflects a number of factors, such as impeded supply growth, firms attempts to retain or increase their profits, low demand elasticity, and solvent demand.

### Oil and Transport Services' Prices

The international price of crude oil is the main factor affecting fuel price dynamics in Bulgaria. Due to its relatively large share in prices (around 50 per cent) indirect taxation also impacts the end-use prices. Fuel price levels (A95 petrol and diesel) are computed without the tax component when they are compared with oil price dynamics.

Between 2007 and 2010 fuel prices followed the fluctuations in the price of oil (computed in euro). At the end of 2009 when the price of oil per barrel was close to that in mid-2007 (around EUR 51), diesel and petrol prices were slightly lower compared to the corresponding prices in 2007. By end-2009 the CPI of energy products (excluding administratively controlled prices) at a constant base was close to that of mid-2007, which also shows the key role of oil prices in the formation of end-use fuel prices in Bulgaria. Between April and September 2010 when the average monthly price of oil stabilized at around EUR 59 per barrel, diesel and petrol prices stood at relatively stable levels. On the basis of econometric estimates it can be concluded that the changes in the price of petrol have relatively quickly spilled over to domestic prices of transport fuels (with a lag of one month) and the coefficient of price elasticity, excluding excise and VAT, ranged between 0.5 and 0.7.

The price of the transport services with the largest relative weight in the consumer basket – the interurban bus transport – increased sizeably between mid-2007 and mid-2008 as a result of the upward dynamics of fuel prices over the same period. Following the decline in fuel prices at the end of 2008, the price of transport remained relatively sustained. In the second half of 2009 it fell by

## Fuel Price Dynamics (Excluding VAT and Excise) and Oil Prices



Sources: U.S. Energy Information Administration, NSI, BNB.

## Indices of Energy Product Prices and Price of Interurban Bus Transport



Note: Transport fuels take a large share in the group of energy products (around 90 per cent). Hence their price dynamics also plays a major role in determining energy product prices.

Sources: NSI, BNB.

around 2 per cent on average on an annual basis, and in 2010 when fuel prices started to increase strongly, the rate of decline in the prices of transport services gradually moderated and in the third quarter an annual increase of 1 per cent was reported. The relatively weak response of transport services prices against the background of a strong fall in fuel prices observed at the end of 2008 could be explained by the fact that firms considered this deceleration as temporary and rather preferred to keep the prices unchanged while accumulating financial resources. This enabled them to react more slowly to the pronounced increase in fuel prices over the recent months.

(continued)

### Conclusions

The analysis of food prices in the 2007–2010 period shows the key importance of exogenous factors for their dynamics both on the supply side (related mainly to the agricultural yields in Bulgaria and in the region) and on the overall price developments on international markets. Against the background of growing domestic and especially external demand in 2007, the rapid increase in international food prices together with the sharp contraction in supply resulting from the reduction in agricultural production over the same year allow for considerable increases in food prices by the firms. Until mid-2010 the prices of food with relatively minor processing saw a decrease and came back to the levels of mid-2007, but most food prices remained at higher levels. In the second half of 2010 the prices of major food products saw a new, more pronounced increase, which again followed relatively quickly the sharp increase in international food prices. Fuel prices are largely indicative of the fact that they are directly related to oil prices (both with regard to increases and decreases) while transport services prices point to asymmetries (they lack downward flexibility when fuel prices decline).