

BULGARIAN NATIONAL BANK



ECONOMIC REVIEW

1/2017



ECONOMIC REVIEW

1/2017



BULGARIAN NATIONAL BANK

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. Processes and trends in the external environment are also analysed since the Bulgarian economy is directly influenced by them. This publication contains also quantitative assessments of the development in major macroeconomic indicators in the short run: inflation, economic growth, exports, imports, trade balance and BoP current account, foreign direct investment, monetary and credit aggregate dynamics.

The Economic Review, issue 1/2017 was presented to the BNB Governing Council at its 10 May 2017 meeting. It employs statistical data published up to 26 April 2017.

The estimates and projections published in this issue should not be regarded as advice or recommendation. Exclusively the information user is liable for any consequences thereof.

The Economic Review is available at the BNB website, Research and Publications menu, Periodical Publications submenu. Please address notes, comments and suggestions to the BNB Economic Research and Projections Directorate at 1000 Sofia, 1, Knyaz Alexander I Square.

© Bulgarian National Bank, 2017

1, Knyaz Alexander I Square
1000 Sofia, Bulgaria

Tel.: (+359 2) 9145 1351, 9145 1209, 9145 1231

Website: www.bnb.bg

This issue includes materials and data received up to
11 May 2017.

The contents of the BNB Economic Review may be quoted
or reproduced without further permission.
Due acknowledgment is requested.

ISSN 1312 – 420X (print)
ISSN 2367 – 4962 (online)

CONTENT

SUMMARY	7
1. EXTERNAL ENVIRONMENT	9
Current Business Situation	9
International Commodity Prices	16
2. FINANCIAL FLOWS, MONEY AND CREDIT	18
External Financial Flows	18
Monetary and Credit Aggregates	21
Interest Rates	25
Financial Flows between the General Government and Other Sectors of the Economy	29
3. ECONOMIC ACTIVITY	32
Current Economic Environment	32
Exports and Imports of Goods and Services	35
Behaviour of Firms and Competitiveness	41
Household Behaviour	44
Fiscal Policy Effects on the Economy	47
4. INFLATION	51

RESEARCH TOPICS

- Dynamics of House Prices in Bulgaria between 2000 and 2016 ... 61

Charts

Global PMI.....	9	Annual Growth of Credit to Non-financial Corporations and Contributions of Individual Types of Loans	23
World Trade	9	New Loans to Non-financial Corporations (Monthly Volumes)	23
Inflation Measured through CPI.....	10	Annual Growth of Household Credit and Contributions of Individual Types of Loans	24
Contribution to the Change in Real GDP in the Euro Area by Country	10	New Loans to Households (Monthly Volumes)	24
Contribution to the Change in Real GDP in the Euro Area by Component.....	10	Changes in Demand and Credit Standards.....	25
GDP Change and Manufacturing and Services PMIs	11	Overnight Interbank Money Market Rates.....	26
Euro Area Unemployment Rate and Employment Growth	11	Interest Rates on Three-month Deposits	26
Euro Area Inflation Rate.....	11	Yield Curve of Interbank Money Market Instruments	26
ECB and EONIA Interest Rates and Excess Liquidity in the Euro Area Banking System.....	12	Interest Rates on New Time Deposits	27
EURIBOR Dynamics.....	12	Distribution of Interest Rates on New Household Time Lev Deposits.....	27
Contribution to US GDP Growth by Component (Quarterly)	13	Interest Rates on New Loans to Non-financial Corporations by Currency.....	28
US Manufacturing and Services ISM-PMIs and GDP Growth (Quarterly)	13	Interest Rates and Annual Percentage Rate of Charges on New Household Loans	28
US Consumer Confidence Indices	13	Distribution of Interest Rates on New Housing Loans in Euro.....	29
US Inflation Rate	14	Interest Rates on Ten-Year-and-Six-Month Government Securities on the Primary and Secondary Market	29
US Unemployment Rate and Number of New Employees in the US Non-Farm Sector	14	Reference Government Securities Yield Curve in Bulgaria.....	29
China's Quarterly and Annual GDP Growth	14	Consolidated Budget Effect on Other Sectors' Liquidity (Quarterly)	30
Manufacturing PMIs in China and Main Subcomponents	14	Contribution to GDP Growth by Final Use Component.....	32
Investment in Fixed Capital (Total) and in Selected Sectors in China	15	Business Climate and Consumer Confidence	33
China's Inflation Rate.....	15	Expectations about Future Economic Activity	33
House Prices in China.....	15	Industrial Production Index and Production Capacity Utilisation in Industry	33
International Reserves of China	15	Factors Limiting Economic Activities of Corporations.....	34
Brent Crude Oil Price	16	Fan Chart of the Expected Annual Rate of Change of GDP	34
World Crude Oil Supply and Demand (Quarterly)	16	Exports and Imports of Goods Dynamics	35
Brent Crude Oil Futures Prices	16	Exports and Imports of Services Dynamics	35
Price Indices of Major Raw Materials and Commodity Groups	17	Dynamics of Exports to EU and non-EU Countries.....	36
Current and Capital Account Dynamics and Contribution by Component (on an Annual Basis)	18	Exports of Goods Geographical Breakdown	36
Financial Account Dynamics and Contribution by Component (on an Annual Basis).....	19	Exports of Machines, Vehicles, Appliances, Instruments and Weapons	37
Direct Investment Liabilities by Type of Investment (on an Annual Basis).....	20	Exports of Mineral Products and Fuels	37
Gross External Debt as a Share of GDP	21	Exports of Base Metals and Related Products.....	37
Annual Rate of Change in M3 and Contribution by Component.....	21	Exports of Animal and Plant Products, Food, Drinks and Tobacco.....	38
Annual Growth of Non-government Sector's Deposits and Contribution by Sector	21	Exports of Chemical Products, Plastics and Rubber	38
Reserve Money.....	22	Annual Change of Exports of Services and Contribution by Subcomponents	38
Bank Deposits with the BNB	22	Imports of Energy Resources.....	39
Currency in circulation.....	22	Imports of Raw Materials	40
Foreign Currency Purchases and Sales between the BNB and Banks (on a Monthly Basis).....	23	Imports of Consumer Goods.....	40
		Imports of Investment Goods.....	40
		Annual Change in Imports of Services and Contribution by Subcomponents	41
		Value Added Growth and Contribution by Sector	41

Industrial Turnover Dynamics	41
Construction Production Dynamics and New Buildings Permits Issued	42
Contribution to Changes in the Number of Employed by Economic Sector	42
Labour Productivity Developments (Value Added <i>per Employee</i>).....	42
Compensation <i>per Employee</i> at Current Prices	43
Unit Labour Costs.....	43
Gross Operating Surplus at Current Prices.....	43
Contribution of Changes in Production Factors to GDP Growth	44
Economic Activity and Share of Discouraged Persons.....	44
Unemployment Rate.....	45
Employment and Nominal Wage Bill	45
Private Consumption and Consumer Confidence.....	45
Household Unemployment Expectations in the Following 12 Months.....	46
Household Propensity to Save and Expectations	46
Contribution of Major Groups of Revenue to Growth in Total Revenue and Grants, Cumulatively (on an Annual Basis)	47
Contribution of Major Tax Groups to Tax Revenue Growth, Cumulatively (on an Annual Basis).....	48
Contribution of Major Groups of Expenditure to Total Expenditure Growth, Cumulatively (on an Annual Basis)	48
Contribution of Government Consumption Components to Real GDP Growth	49
Annual Inflation and Contribution of Major Commodity and Services Groups to It.....	51
Rate of Change of the Telecommunications Price Index in Bulgaria and the EU.....	52
Rate of Change of the Transport Price Index in Bulgaria and the EU.....	52
Rate of Change in Manufacturing PPI and HICP	52
Rate of Change in HICP on the Domestic Market and Contribution by Major Subsectors.....	53
Rate of Change in the Prices of Brent Crude Oil and A95 Petrol.....	53
Rate of Change in Producer Prices on the Domestic Market by Major Industrial Groupings	53
Rate of Change of Food Price Index.....	54
Contribution of Major Subgroups of Unprocessed Food to Overall Inflation	54
Contribution of Non-food Goods (Excluding Energy Products) and Major Goods Subgroups to Overall Inflation	54
Growth Rate of Nominal Retail Trade Excluding Trade in Motor Vehicles and Motorcycles	55
Growth Rate of Nominal Retail Trade in Non-food Goods Excluding Trade in Automobile Fuels and Lubricants	55
Core Inflation	56
Contribution of Services and Major Services Subgroups to Overall Inflation	56
Contribution of Tobacco Products and Major Subgroups of Goods with Administratively Controlled Prices to Overall Inflation	56

Diffusion Index of Major Goods and Services Groups	57
Selling Prices Expectations in Industry, Retail Trade and Services over the Next Three Months	58
Share of Firms by Sectors Pointing to Insufficient Demand as a Factor Limiting Their Activity.....	58
Fan Chart of the Expected Annual Rate of Change in Inflation at the End of the Corresponding Period.....	58
Rate of Change of the House Price Index (HPI).....	59
Rate of Change of the HPI in Cities with More than 120,000 Citizens in 2016.....	59
Nominal and Real House Prices	62
Annual Growth of House Prices	62
Growth of Disposable Household Income (Deflated by Private Consumption Deflator)	62
Loans for House Purchases – New Business and Stock	63
Interest Rates on New Housing Loans	63
Household House Purchase Intentions	63
House Price-to-Rent Ratio	64
Changes in Credit Standards and Demand as Applied to Housing Loans	64
FDI Flows in Sectors Related to Real Estate Market	65
Housing Stock (Number of Existing Housing) and New Housing	65
Constriction Production Index	65
Contribution to Gross Operating Surplus Growth in Construction	66
Issued Permits of New Residential Buildings	66
Construction Costs	67
Labour Costs in Construction	67
Observed and Long-term (Model Estimated) House Prices	68

Tables

Projections of the Annual Rate of Change of Euro Area Real GDP	12
Projections of Euro Area Annual Inflation Rate.....	12
Flows on Major Balance of Payments Accounts	19
Banks' Flows on Balance of Payments Financial Account	20
Gross External Debt in January 2017	20
Real GDP Growth by Component of Final Use	34
Net Exports of Commodity Groups by Use, January–December 2016.....	35
Exports by Commodity Group, January–December 2016	36
Imports of Commodity Groups by Use, January–December 2016.....	39
Gross Value Added Growth.....	44
Employment and Income Dynamics	46
Retail Trade Turnover	47
Key Budget Indicators Performance for 2016–2017	49
Key Indicators on the Housing Market Developments in Bulgaria	60
Growth Rates of Major Goods and Services Groups Prices and Contribution of These Groups to Inflation	60

ABBREVIATIONS

ABSPP	Asset-Backed Securities Purchase Programme
APP	Asset Purchase Programme
APRC	Annual percentage rate of charge
BIR	Base interest rate
BOP	Balance of Payments
BTC	Bulgarian Telecommunications Company
b.p.	basis points
CBPP3	Covered Bond Purchase Programme
CEECs	Central and East European countries
CEFTA	Central European Free Trade Association
CFP	Consolidated Fiscal Programme
CIF	Cost, insurance, freight
CNY	Chinese Yuan
CPI	Consumer Price Index
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
EWRC	Energy and Water Regulatory Commission
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
MFIs	Monetary Financial Institutions
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
OTC	over-the-counter
PBoC	People's Bank of China
PMI	Purchasing Managers' Index
p.p.	percentage points
PPP	Purchasing Power Parity
PSPP	Public Sector Purchase Programme
RON	Romanian new leu
SITC	Standard International Trade Classification
WTI	West Texas Intermediate

SUMMARY

The global economic indicator continued to increase in the first quarter of 2017. Expectations of the future economic activity tended to improve in both advanced economies and developing countries. Global inflation further accelerated driven by increasing international commodity prices. Taking into account these trends, the ECB increased its euro area economic growth and inflation projections for 2017 and 2018 but made no changes to its monetary policy in the first quarter of 2017. In the USA the Federal Open Market Committee (FOMC) decided to raise the federal funds rate corridor by 25 basis points to 0.75–1.00 per cent, assessing inflation and labour market prospects in the USA as sufficiently favourable.

In line with the expected improvement of global economic activity, in the second and third quarter of 2017 external demand for Bulgarian goods and services is likely to grow further on an annual basis. Risks of lower growth in Bulgaria's external demand *vis-à-vis* the baseline scenario continue to reflect mainly economic developments in the European Union where prospects might worsen as a result of a possible increase in uncertainty surrounding negotiations over Brexit, and potentially rising political uncertainty in some of Bulgaria's major trading partners such as France, Italy and Turkey.

In 2016 Bulgaria's current and capital account surplus posted a strong increase from the previous year due to lower deficits on the net primary income item and trade balance along with a higher surplus on the net services item. The surplus on overall current and capital balance continued to increase in January and February 2017. In the second and third quarter of 2017 the current account surplus is expected to decrease as a percentage of GDP on an annual basis compared to the last quarter of 2016 as a result of higher deficits on the net primary income item and trade balance. The capital account surplus is also expected to decrease as a share of GDP on an annual basis.

Non-government sector deposits in the banking sector continued growing at comparatively high annual rates in the first quarter of 2017. In an environment of low interest rates both households and corporations preferred to keep their free funds mainly in overnight deposits. Growth rates in loans to non-financial corporations and households accelerated, this trend being more strongly pronounced in household loans as compared with corporate loans. Growth of attracted funds and the high banking system liquidity favoured further declines in interest rates in the first two months of 2017. In the context of improving macroeconomic environment, increasing private consumption and stabilised deposit and lending rates at relatively low levels, growth in deposits is expected to slightly slow down, while the upward trend in loans to non-financial corporations and households is anticipated to be sustained.

In the fourth quarter of 2016 real GDP increased by 0.9 per cent on a quarterly basis. Domestic demand made the major contribution, while net exports' contribution was neutral to the growth.

Short-term economic indicators at the end of 2016 and in the first quarter of 2017 give mostly positive signs about the economic developments. Still low petroleum prices, improved labour market conditions and growing domestic and external demand for goods and services favour the growth in consumption, investment activity and exports, thus accelerating the increase in imports. The expected positive contribution of domestic demand and exports to real GDP growth will be partly offset by the increased negative contribution of imports. Given these trends, quarterly GDP growth is anticipated to slightly decelerate in the second and third quarters of 2017.

The external environment remains a key source of uncertainty, contributing largely to lower than expected real GDP growth in Bulgaria. A possible increase in the external uncertainty can negatively affect both goods and services exports and investment activity in Bulgaria. The EU fund absorption

rate is an internal factor creating uncertainty for the baseline scenario. It will act as a driver for higher than expected growth in real GDP, assuming that the absorption rate of EU funds accelerates throughout the year, and therefore government investment exceeds the projected level.

In the first quarter of 2017 the deflationary trend was reversed, and annual inflation reached 1.0 per cent in March. The main contributor to this were rising international oil and food prices in euro since the second half of 2016. Another factor behind unprocessed food price rises were the unfavourable weather conditions in Bulgaria in early 2017 which boosted expenditure on domestic production and transport of vegetables. Administratively controlled prices were another group with a positive contribution to inflation over the first three months of the year, reflecting mainly higher tobacco excise duties. Deflation in core HICP components continued to be mostly driven by declining prices of durable goods, telecommunication and transport services.

In the second and third quarters of 2017 inflation is expected to pick up gradually as a result mainly of projected strong increases in international euro prices of oil and commodities on an annual basis. The pass-through effect of higher fuel prices onto natural gas, heating and electricity prices will be an additional factor for the increase in consumer prices over the coming months.

1. EXTERNAL ENVIRONMENT

The global economic indicator continued to increase in the first quarter of 2017. Expectations of the future economic activity tended to improve in both advanced economies and developing countries. Global inflation further accelerated driven by increasing international commodity prices. Taking into account these trends, the ECB increased its euro area economic growth and inflation projections for 2017 and 2018 but made no changes to its monetary policy in the first quarter of 2017. In the USA the Federal Open Market Committee (FOMC) decided to raise the federal funds rate corridor by 25 basis points to 0.75–1.00 per cent, assessing inflation and labour market prospects in the USA as sufficiently favourable.

Current Business Situation

In the first quarter of 2017 the global economic indicator (global PMI) continued its upward trend, with both industrial production and services sectors contributing to this improvement. The PMI increased in both developed and developing countries. At the end of 2016 and in the beginning of 2017 world trade growth also accelerated significantly.¹

In the beginning of 2017 global inflation continued to rise mainly due to the year-on-year increase in international petroleum products and metal prices. In February global inflation reached 2.4 per cent on an annual basis², with both developed and developing countries reporting acceleration in inflation at the end of 2016 and in early 2017.

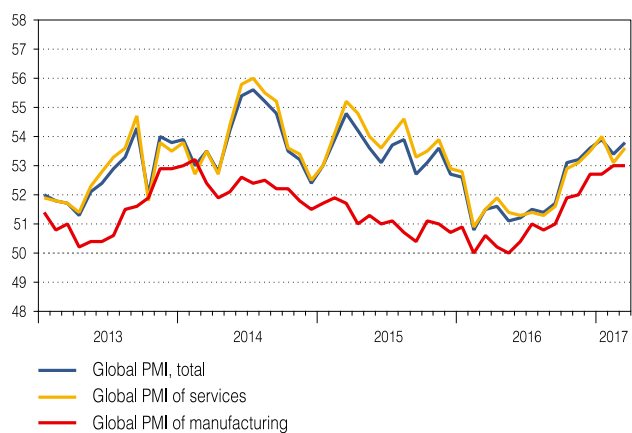
Based on recent trends in the global economic situation, in April 2017 the International Monetary Fund (IMF) revised upwards its October 2016 projections of global economic growth. IMF expectations show that global economic growth will accelerate from 3.1 per cent in 2016 to 3.5 per cent in 2017.³ Across countries, growth outlooks in developed economies are assessed as more favourable than those in the October forecast, while economic growth outlook for the developing countries was revised downwards for 2017 mainly due to expected weaker economic activity in Brazil, India, Mexico and Saudi Arabia.

¹ CPB Netherlands Bureau for Economic Policy Analysis data as of 25 April 2017.

² Based on World Bank data as of 11 April 2017.

³ IMF World Economic Outlook April 2017. Gaining Momentum?: <http://www.imf.org/en/Publications/WEO/Issues/2017/04/04/world-economic-outlook-april-2017>

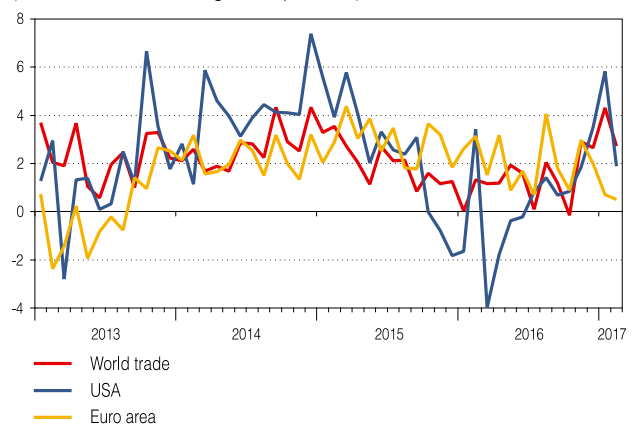
Global PMI



Source: JP Morgan.

World Trade

(annual rate of volume growth, per cent)



Source: CPB Netherlands Bureau for Economic Policy Analysis.

In line with the expected global economic activity improvement, external demand for Bulgarian goods and services is likely to grow further on an annual basis in the second and third quarters of 2017. Risks of lower growth in Bulgaria's external demand *vis-à-vis* the base scenario continue to reflect mainly economic developments in the European Union where prospects might worsen as a result of any increase in uncertainty surrounding negotiations over Brexit, and potentially rising political uncertainty in some of Bulgaria's major trading partners as France, Italy and Turkey.

Euro Area

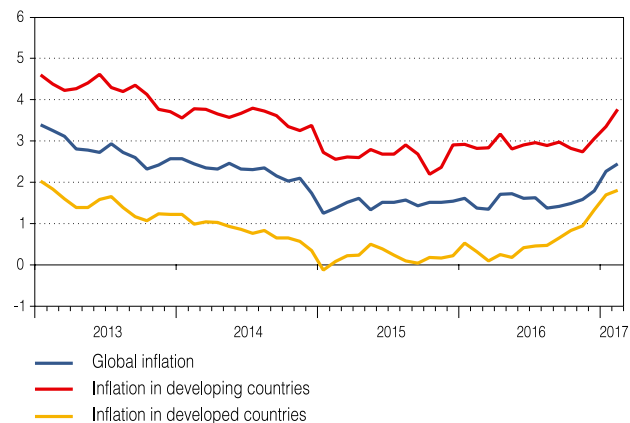
Over the fourth quarter of 2016 euro area real GDP grew by 0.5 per cent on a quarterly basis from 0.4 per cent in the third quarter of the year. A slowdown in real GDP growth was observed in Italy (down to 0.2 per cent), while in Germany and France GDP growth accelerated to 0.4 per cent. In Spain it remained unchanged at 0.7 per cent. By GDP component, positive contributions to quarterly growth in the euro area were recorded in private consumption (0.3 percentage points) and government consumption (0.1 percentage points), changes in inventories (0.3 percentage points) and investment (0.7 percentage points), whereas net exports contributed negatively (-0.8 percentage points).⁴ In the beginning of 2017 developments in leading economic indicators, including PMIs and EC indices, signalled acceleration in euro area economic growth over the first quarter of 2017 compared to the previous quarter.

Labour market indicators continued to improve slowly, with unemployment going down to 9.5 per cent in February 2017. The indicator of the expected unemployment rate over the next twelve months included in the EC consumer confidence index showed an improvement in consumer expectations about labour market developments. As of February the unemployment

⁴ The sizeable contribution of investment and net exports to the change in euro area GDP in the fourth quarter of 2016 reflected the significant changes of these components in Ireland's national accounts. Ireland's national accounts data for the fourth quarter of 2016 reported substantial imports of intellectual property by multinational companies, which, according to the European System of National and Regional Accounts 2010 (ESA 2010), is reported also as investment. According to the Ireland's Statistics Office, the net effect on the GDP of reporting this intellectual property is neutral.

Inflation Measured through CPI

(per cent, annual rate of change, seasonally adjusted data)

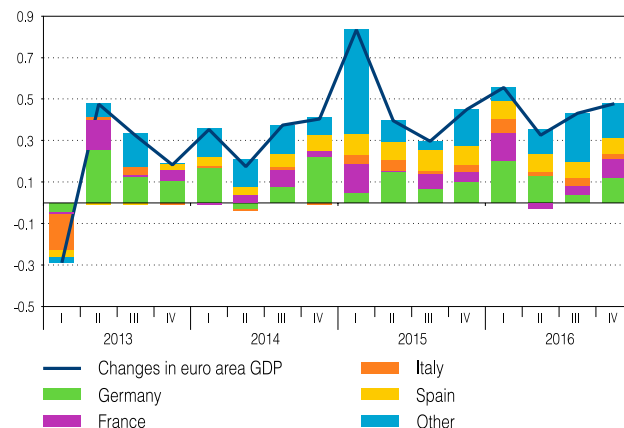


Note: The World Bank measures the change of CPI in individual groups as a weighted average of CPI changes in the countries of the group. Real GDP based on purchasing power parity is used for calculating country weights. Groups include only World Bank Member States classified by the World Bank as developing and developed countries.

Source: the World Bank.

Contribution to the Change in Real GDP in the Euro Area by Country

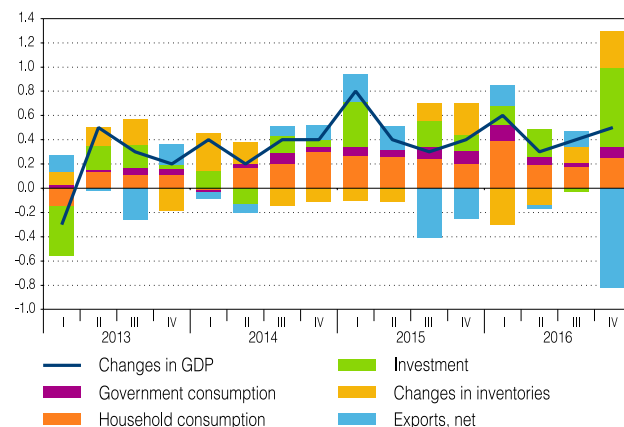
(per cent, percentage points; on a quarterly basis)



Sources: Eurostat and BNB calculations.

Contribution to the Change in Real GDP in the Euro Area by Component

(per cent, percentage points; on a quarterly basis)



Source: Eurostat.

rate in Greece and Spain remained the highest: 23.1 per cent and 18.0 per cent respectively, with a continued decline in the indicator observed in Spain. Germany continued to report the lowest unemployment rate of 3.9 per cent.

In March annual inflation stood at 1.5 per cent against 2.0 per cent in February. The slowdown in inflation in March was largely due to the weakening of the positive contribution of the HICP energy component and to the lower increase in unprocessed food and services prices.

In March the ECB raised its euro area real GDP growth outlook by 0.1 percentage points for 2017 and 2018. The 2019 growth outlook remained unchanged. Risks to lower than projected growth are mainly associated with global factors.

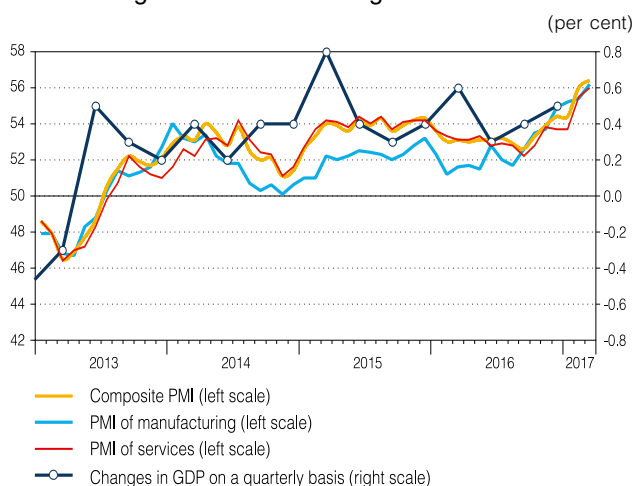
The ECB also upgraded its euro area inflation forecast for 2017 and 2018 to 1.7 per cent (+0.4 percentage points) and 1.6 per cent (+0.1 percentage points) respectively, whereas that for 2019 remained unchanged. The substantial upward HICP revision for 2017 related to higher international oil prices than the assumptions in the December 2016 ECB projections.

At its monetary policy meetings of 19 January and 9 March 2017, the ECB made no changes to the interest rates. The forward monetary policy guidance also remained unchanged and ECB interest rates are expected to stay at current or lower levels for an extended period of time or even after the end of the expanded ECB Asset Purchase Programme (APP).

As regards previous measures, it was decided that the change to the rule on the purchase under the APP of assets with yields below the deposit facility rate (DFR) shall be applied only with regard to the public sector purchase programme (PSPP), but priority will be given to purchases of assets with yields above the DFR. As regards the other asset purchase programmes – CBPP3, ABSPP and CSPP, purchases of assets will occur only when the yields of the latter are higher than the ECB DFR.

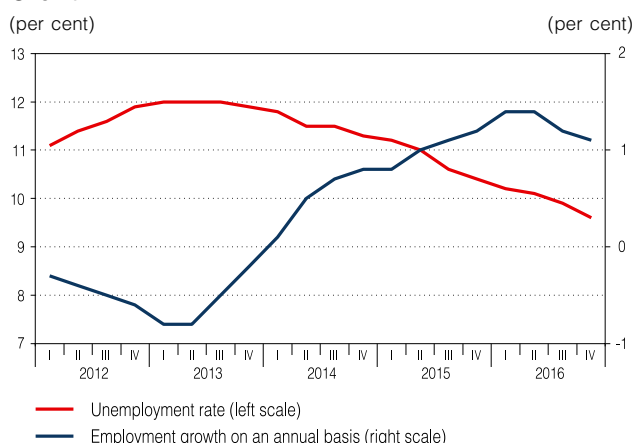
On 23 March 2017 the ECB conducted the fourth and last operation of the second series of targeted long-term refinancing operations (TLTROII) and allotted EUR 233.5 billion among

GDP Change and Manufacturing and Services PMIs



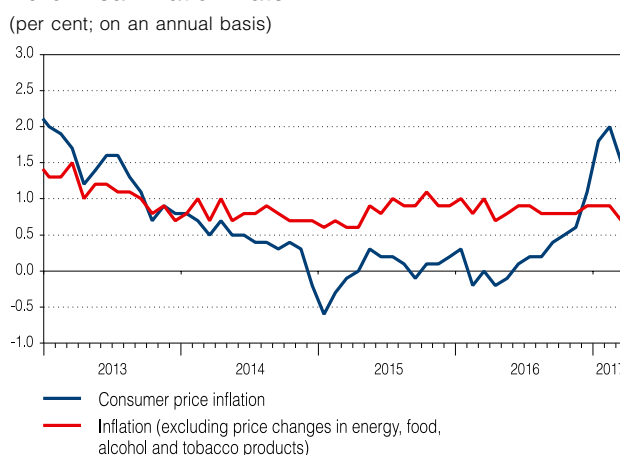
Sources: Eurostat, Markit.

Euro Area Unemployment Rate and Employment Growth



Source: Eurostat.

Euro Area Inflation Rate



Source: Eurostat.

474 banks. The net effect on banking system liquidity amounted to EUR 216.7 billion, as banks repaid ahead of the payment schedule EUR 16.7 billion of their participation in the first round of the targeted longer-term refinancing operations (TLTRO I). The total outstanding amount under the ECB targeted operations (TLTRO I and TLTRO II) amounted to EUR 762.4 billion.

As of 7 April 2017 the cumulative amount of purchases under the APP totalled EUR 1791.2 billion, of which EUR 1474.3 billion under the PSPP, EUR 214.7 billion under the CBPP3, EUR 24.3 billion under the ABSPP and EUR 77.9 billion under the CSPP.

As a result of continuing APP purchases and allocation of funds under TLTRO II, as of 7 April 2017 excess liquidity in the euro area banking system increased to EUR 1591.4 billion from EUR 1207.4 billion at the end of December 2016, the Eurosystem balance sheet figure reaching EUR 4.116 trillion. The increased excess liquidity in the euro area banking system continued to contribute to the low EONIA level, its average value reaching -0.35 per cent for the 1 January to 13 April 2017 period, the same as in the fourth quarter of 2016. The trade volume of overnight deposits on the interbank market in the euro area also increased slightly, with its daily average coming to EUR 9.2 billion for the 1 January to 13 April 2017 period (EUR 8.8 billion for the fourth quarter of 2016). EURIBOR interest rates on interbank market deposits continued to follow a downward trend in the first quarter of 2017. On 13 April 2017 one-month interest rates reached -0.37 per cent (-0.4 basis points on the end of 2016), and those with maturities of six and 12 months fell to -0.25 per cent (-2.5 basis points on the end of December 2016) and -0.12 per cent (-3.8 basis points on the end of December 2016).

United States

In the fourth quarter of 2016 the US real GDP growth rate moderated on a quarter-on-quarter basis from 0.9 per cent in the third quarter to 0.5 per cent, entirely due to the negative contribution of net exports.

Projections of the Annual Rate of Change of Euro Area Real GDP

(per cent)

Institution	Date of release	2017		2018		2019	
		last	previous	last	previous	last	previous
ECB	III.2017	1.8	1.7	1.7	1.6	1.6	1.6
EC	II.2017	1.6	1.5	1.8	1.7	-	-

Sources: the ECB, the EC.

Projections of Euro Area Annual Inflation Rate

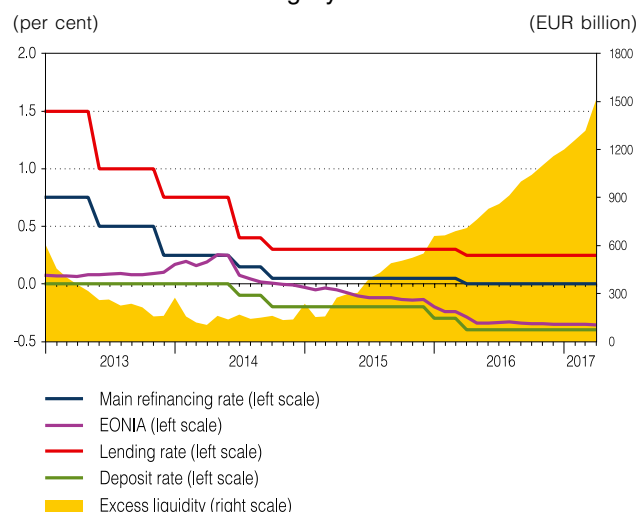
(per cent)

Institution	Date of release	2017		2018		2019	
		last	previous	last	previous	last	previous
ECB	III.2017	1.7	1.3	1.6	1.5	1.7	1.7
EC	II.2017	1.7	1.4	1.4	1.4	-	-

Sources: the ECB, the EC.

ECB and EONIA Interest Rates and Excess Liquidity in the Euro Area Banking System

(per cent)

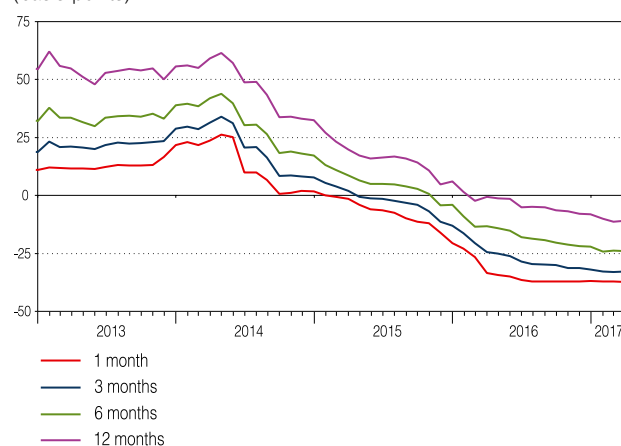


Note: Average EONIA data means average for the month.

Source: the ECB.

EURIBOR Dynamics

(basis points)



Source: the ECB.

In the first quarter of 2017 the average values of leading US economic indicators, among which ISM-PMI and consumer confidence indices went up on the fourth quarter of 2016, while monthly data on individual consumption expenditure and retail sales showed a slight moderation in household consumption growth in the first quarter of 2017, contrasting with the positive change in consumer sentiment.

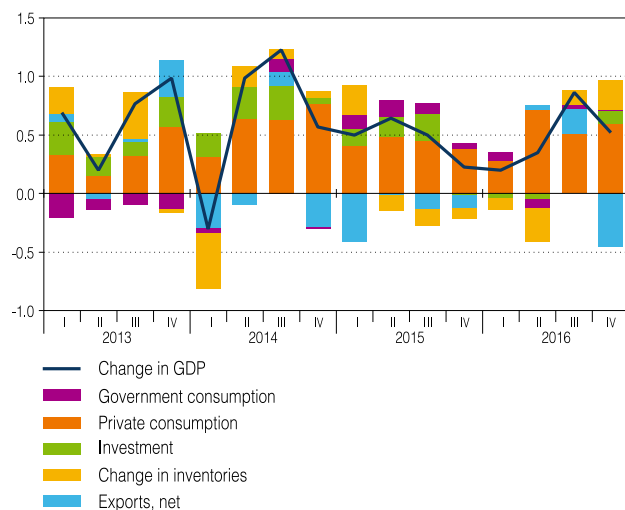
In February the annual rate of change of the price index of personal consumer expenditure (PCE) increased to 2.1 per cent (1.9 per cent in January and 1.6 per cent in December) and exceeded the Federal Reserve target of annual inflation rate of 2 per cent. In February the annual growth rate of core inflation (excluding food and fuel prices) stabilised at 1.8 per cent for the second consecutive month. March CPI data, the other key US inflation indicator, point to a decrease in both the annual rate of overall inflation (down to 2.4 per cent from 2.7 per cent in February) and in the annual rate of core inflation (down to 2.0 per cent from 2.2 per cent in February). Preliminary data for April concerning expectations about the change in consumer prices in one to five-year horizon, which are part of the consumer confidence index of the University of Michigan, showed stabilisation in both long-term and short-term inflation expectations.

US labour market conditions continued to improve in the first quarter of 2017. The average quarterly number of new employees in the US non-farm sector was relatively stable, with the unemployment rate going down to 4.5 per cent in March. Latest data on leading economic indicators signal that US labour market conditions will remain favourable in 2017.

On the basis of the reported and expected US labour market and inflation indicators, at its 14 and 15 March 2017 meeting the Federal Open Market Committee (FOMC) took a decision to raise by 25 basis points the federal funds rate corridor to 0.75–1.00 per cent. According to the projection median of individual FOMC members, in addition to the March hike two further increases of the federal funds rate are expected by the close of 2017.

Contribution to US GDP Growth by Component (Quarterly)

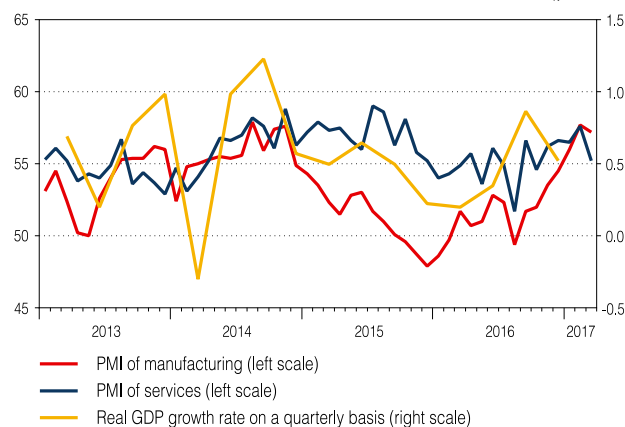
(per cent; percentage points)



Source: Bureau of Economic Analysis.

US Manufacturing and Services ISM-PMIs and GDP Growth (Quarterly)

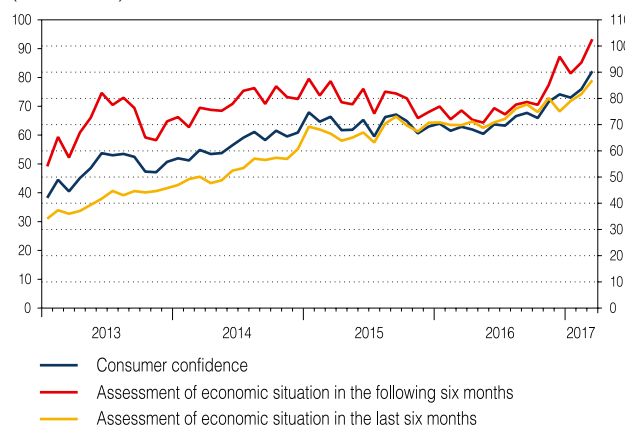
(per cent)



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

US Consumer Confidence Indices

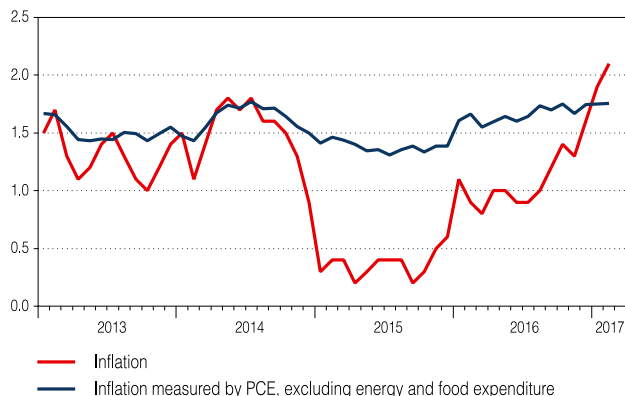
(2000 = 100)



Source: the Conference Board.

US Inflation Rate

(per cent; on an annual basis)



Note: Inflation is measured by the personal consumption expenditure deflator.

Source: Bureau of Labor Statistics.

China

Over the first quarter of 2017 China's real GDP growth rate accelerated to 6.9 per cent on an annual basis (6.8 per cent in the previous quarter).⁵ Based on economic indicator dynamics, accelerated annual growth reflected investment and industrial production and, to a lesser extent, external demand. In March annual growth in overall investment came to 9.2 per cent from 8.9 per cent in February and 8.1 per cent in January. Higher investment and enhanced investment activity in manufacturing and in the real estate sector contributed most to investment growth. In March 2017 annual growth of industrial production in China accelerated to 7.6 per cent from 6.0 per cent in January and February, with all subsectors reporting higher growth rates.

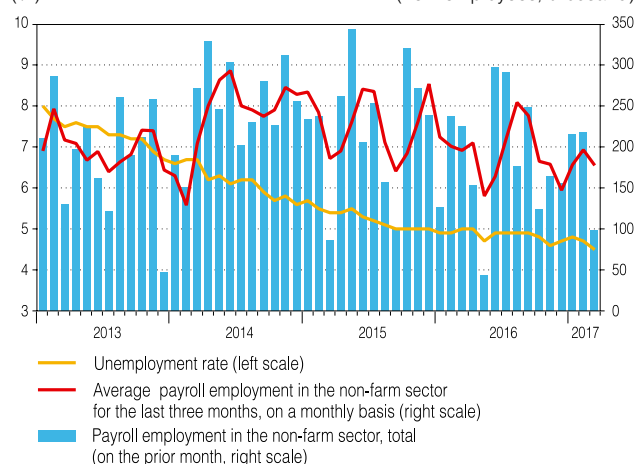
In the first quarter of 2017 annual inflation moderated from 2.5 per cent in January to 0.8 per cent in March, largely due to the fall in food prices. The annual rate of change in production prices which reached positive levels in September 2016 slowed down significantly at the end of the first quarter of 2017 mainly due to the fall in iron ore and coal prices.

The increase in house prices in large cities also continued to slow down in recent months, but remained high despite the continued implementation of administrative and regulatory measures

⁵ At the beginning of the year China's government announced an economic growth target of 6.5 per cent for 2017.

US Unemployment Rate and Number of New Employees in the US Non-Farm Sector

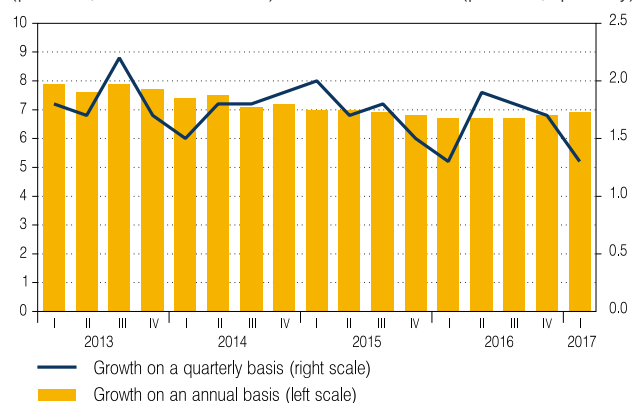
(%) (new employees, thousand)



Source: Bureau of Labor Statistics.

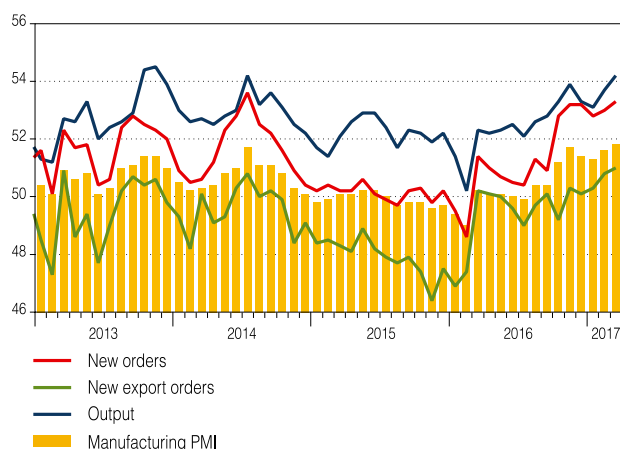
China's Quarterly and Annual GDP Growth

(per cent, on an annual basis) (per cent, quarterly)



Source: National Bureau of Statistics of China.

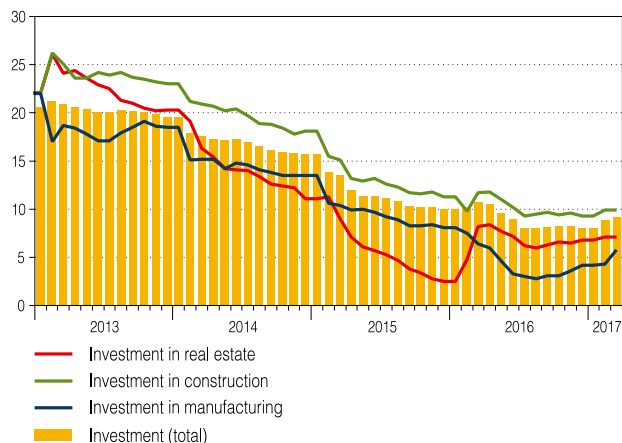
Manufacturing PMIs in China and Main Subcomponents



Source: China Federation of Logistics and Purchasing.

Investment in Fixed Capital (Total) and in Selected Sectors in China

(per cent; on an annual basis)



Source: National Bureau of Statistics of China.

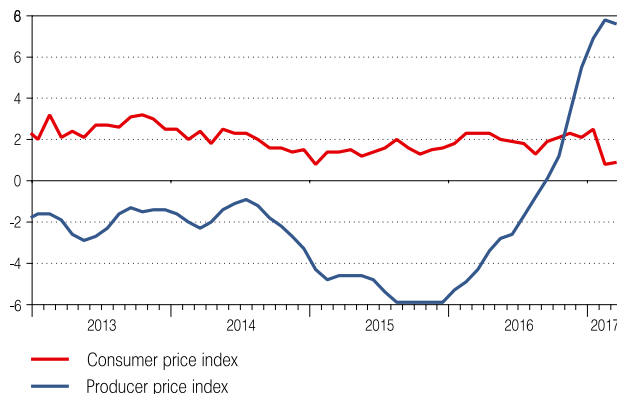
introduced to reduce housing demand. In March 2017 the sales of new houses in China grew by around 18 per cent on an annual basis or at a much slower pace than in the first two months of the year, when an increase of 23 per cent was reported in both months.

In the first quarter of 2017 the People's Bank of China changed interest rates on some of its instruments on several occasions, thereby controlling the level of liquidity in the banking sector. According to the central bank, these measures aim to limit the risks stemming from the excessive increase in asset prices in certain sectors of the economy, as well as from the rising indebtedness of households and businesses. The increase in some interest rates results in monetary policy tightening, which would contribute to curbing capital outflow, containing the high growth rates of investment in housing and in house prices, and limiting the movements in the exchange rates of the yuan against the US dollar following the March increase in the US Federal Reserve's target rate.

In the first quarter of 2017 China's international reserves stabilised at USD 3.001 trillion, which to some extent was a consequence of the administrative measures aimed at tightening of capital controls by the regulatory authorities. As a result, the net decrease in China's international currency reserves over the review quarter was limited to USD 1.4 billion.

China's Inflation Rate

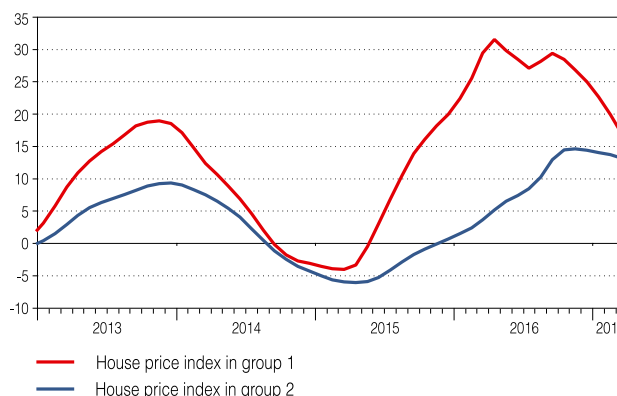
(per cent, annual rate of change)



Source: National Bureau of Statistics of China.

House Prices in China

(per cent, annual rate of change)



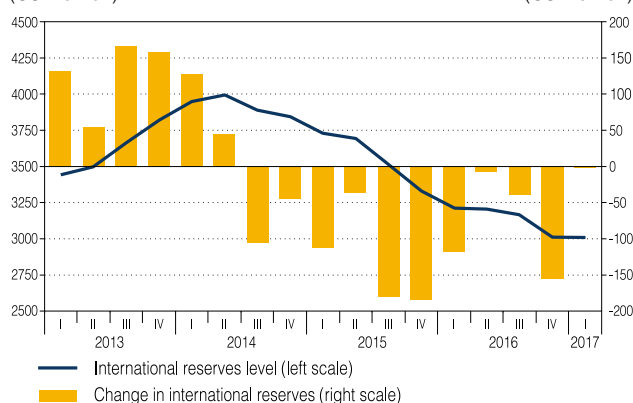
Note: Group 1 includes the four largest cities of China: Beijing, Shenzhen, Guangzhou, and Shanghai. Group 2 includes the centres of the rest provinces.

Source: National Bureau of Statistics of China.

International Reserves of China

(USD billion)

(USD billion)



Source: People's Bank of China.

International Commodity Prices

Crude Oil

The increase in international oil prices during 2016 resulted from declines in excess supply. The December 2016 agreement on oil production cuts between OPEC and other large producer countries was intended to limit further supply and correspondingly increase oil prices. However, crude oil prices stabilised, remaining almost unchanged between December 2016 and February 2017 at around USD 55 *per barrel* (Brent) despite the released data suggesting strict adherence to and application of the parameters under the agreed oil cuts agreement. In March the oil price even declined on a quarterly basis, reflecting the released data on a significant increase in US oil inventories and the indications that higher prices help strengthen production in non-OPEC countries and in particular the USA.

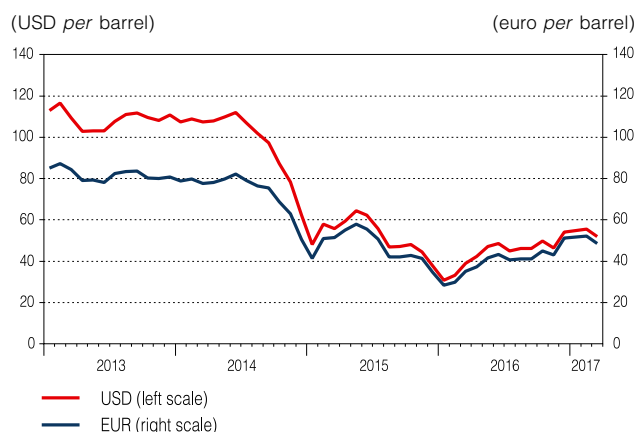
In March market expectations of oil prices in the second and third quarters of 2017, based on crude oil futures prices, decreased *vis-à-vis* the expectations in December, with market participants reporting data about an increase in US inventories and projections about higher production in non-OPEC countries over 2017. As a result, the expected crude oil price by mid-2017 is about USD 53 *per barrel*.

Commodity and Food Prices

The upward trend in metal prices in both euro and US dollars observed in 2016 was retained in the January to March period. In the first quarter of 2017 the average metal price rose by 10.8 per cent on a quarterly basis (up 12.3 per cent in euro). Metal price dynamics continues to reflect largely the economic development and government investment expenditure of China as the largest consumer of metals worldwide. Metal price rises in early 2017 were also driven by the new contraction of global supply due to closure of inefficient capacities,⁶ introduction of regulatory environmental measures and strike action in the world's largest copper mine in

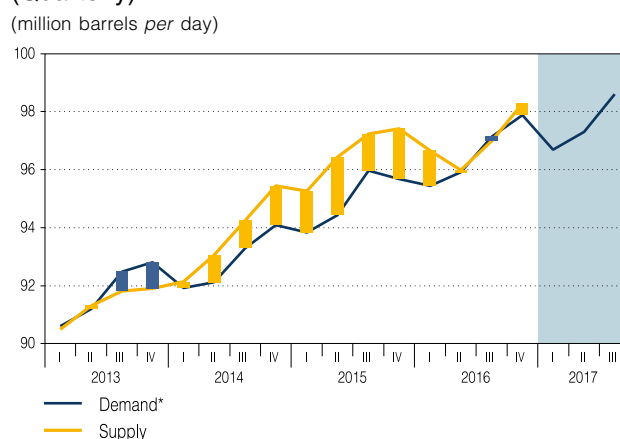
⁶ See IMF, *Commodity Market Monthly*, 15 February 2017, p. 3. <https://www.imf.org/external/np/res/commmod/pdf/monthly/021517.pdf>

Brent Crude Oil Price



Source: the World Bank.

World Crude Oil Supply and Demand* (Quarterly)

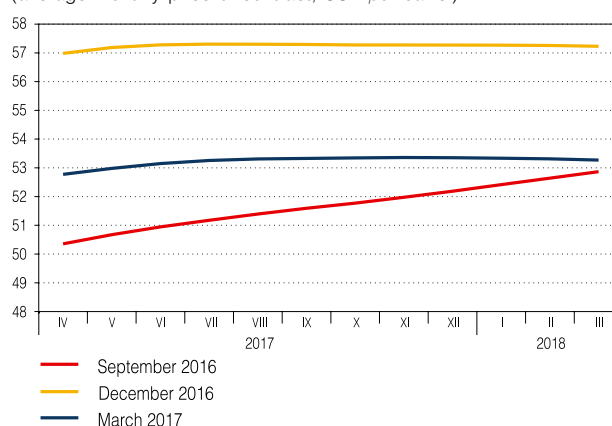


*Including latest available IAE data of March 2017 on crude oil demand.

Source: the IEA.

Brent Crude Oil Futures Prices

(average monthly price of contract, USD *per barrel*)



Source: JP Morgan.

Chile.⁷ Reflecting the above two factors, in the first quarter of 2017 the price of copper, which is of key importance to Bulgarian exports of goods, increased by 10.6 per cent on a quarterly basis. Metal prices in euro and US dollars are expected to continue rising in the second and third quarters of 2017 on both quarterly and annual basis, though at significantly weaker rates than those in the beginning of the year.

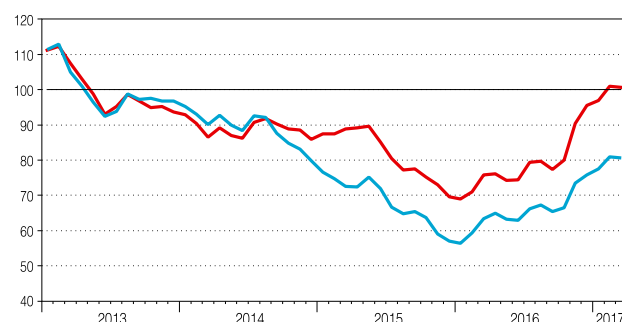
In the first quarter the global food price index in both euro and US dollars picked up on a quarterly basis. The prices of most index subcomponents increased, with cereals and meat recording the strongest growth. Increased prices of cereals and particularly wheat which is essential for the Bulgarian goods exports reflected the expectations of poorer harvests worldwide due mainly to the lower yield in the USA.⁸ Therefore, the wheat price in the first quarter rose by 16.9 per cent on a quarterly basis. Meat prices went up under the influence of strengthening demand for pigmeat in China. Over the second and third quarters food prices in euro are projected to increase further on an annual and quarterly basis.

If market expectations of international fuel, commodity and food price dynamics materialise, the terms of trade for Bulgaria will improve in the second and third quarters of 2017.

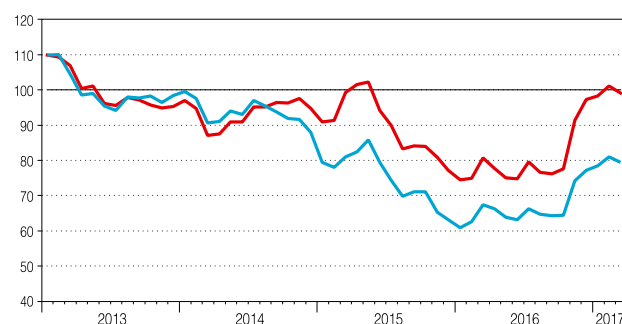
Price Indices of Major Raw Materials and Commodity Groups

(2013 = 100)

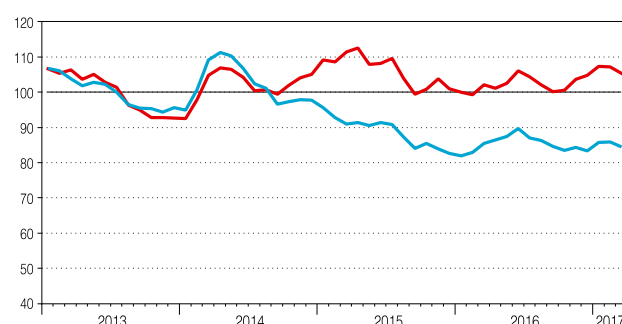
Metals



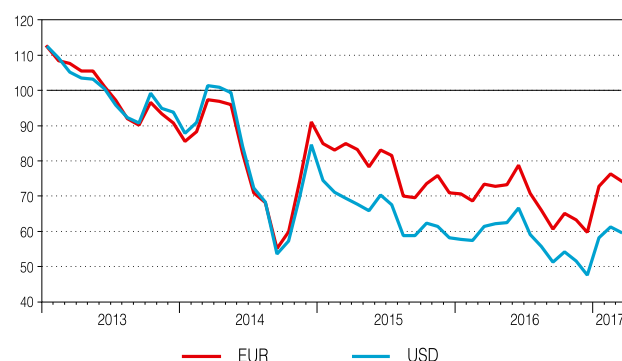
Copper



Food



Wheat



Sources: the ECB, BNB calculations.

⁷ See IMF, *Commodity Market Monthly*, 15 March 2017, p. 3. <https://www.imf.org/external/np/res/commmod/pdf/monthly/031517.pdf>

⁸ *Ibid.*, p. 5.

2. FINANCIAL FLOWS, MONEY AND CREDIT

In 2016 Bulgaria's current and capital account surplus posted a strong increase from the previous year due to lower deficits on the net primary income item and trade balance along with a higher surplus on the net services item. The surplus on overall current and capital balance continued to increase in January and February 2017. In the second and third quarter of 2017 the current account surplus is expected to decrease as a percentage of GDP on an annual basis compared to the last quarter of 2016 as a result of higher deficits on the net primary income item and trade balance. The capital account surplus is also expected to decrease as a share of GDP on an annual basis.

Non-government sector deposits in the banking sector continued growing at comparatively high annual rates in the first quarter of 2017. In an environment of low interest rates both households and corporations preferred to keep their free funds mainly in overnight deposits. Growth rates in loans to non-financial corporations and households accelerated, this trend being more strongly pronounced in household loans as compared with corporate loans. Growth of attracted funds and the high banking system liquidity favoured further declines in interest rates in the first two months of 2017. In the context of improving macroeconomic environment, increasing private consumption and stabilised deposit and lending rates at relatively low levels, growth in deposits is expected to slightly slow down, while the upward trend in loans to non-financial corporations and households is anticipated to be sustained.

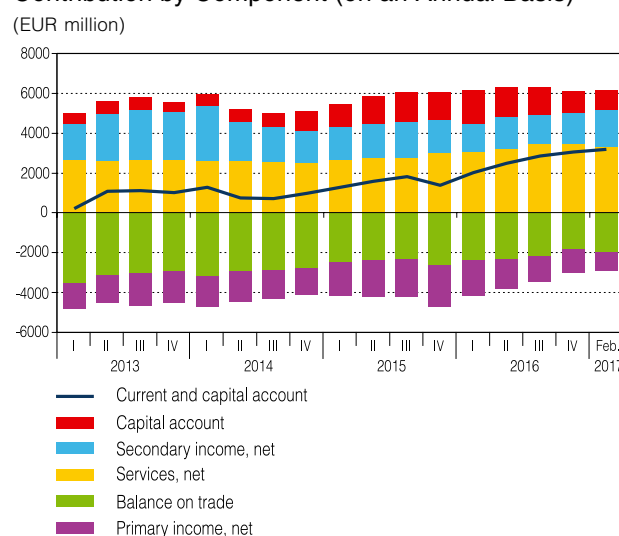
External Financial Flows

In 2016 the balance of payments current and capital account surplus increased by EUR 1694.5 million from 2015, reaching EUR 3055.6 million (6.5 per cent of GDP). The main drivers were lower deficits on the primary income and trade balance items, as well as the increased surplus on the services (net) item.¹⁰ In February 2017 the total current and capital account surplus accumulated for the last 12 months continued to expand compared to December 2016.

The significant year-on-year drop in the primary income deficit for 2016 resulted from lower outflows under the reinvested profit and dividend and distributed profit items. February data suggest that this trend was sustained, and the deficit accumulated for the last 12 months continued to decline from the level of December 2016.

Year-on-year contraction of the trade deficit in 2016 was due to both higher real growth in goods exports compared to goods imports and favourable terms of trade for Bulgaria over the year. Concurrently, the strong increase in earn-

Current and Capital Account Dynamics and Contribution by Component (on an Annual Basis)



Source: the BNB.

¹⁰ The analysis of balance of payments flows employs information from its analytical reporting.

ings from tourism and transport was the major factor behind the higher surplus on the services (net) item over 2016. February 2017 data suggest that the trade balance deficit accumulated in the last 12 months expanded, while the services surplus shrank from December 2016 due to the higher nominal growth in goods and services imports *vis-à-vis* exports.¹¹

The annual increase in the current and capital account surplus for 2016 was limited by the drop in the capital account surplus and, to a lesser extent, the lower net secondary income surplus. In the beginning of 2017 capital account flows continued to limit the growth in the overall current and capital account. At the same time, as of February 2017 the net secondary income surplus accumulated for the last 12 months picked up when compared to December 2016, reflecting mainly the funds reimbursed by the EU under the EU Common Agricultural Policy.

In the second and third quarters of 2017 the current account surplus is expected to decrease as a share of GDP on an annual basis compared to the last quarter of 2016, resulting from the higher deficits on the net primary income and trade balance items. Gross operating surplus in 2016 is expected to contribute to an increase in dividend payments to non-residents, which will accordingly push up the net primary income deficit. Despite the projected improvement in the terms of trade, in the second and third quarters of 2017 the trade balance deficit is anticipated to increase slightly as a share of GDP amid the higher growth in real goods imports compared to goods exports. In the context of still low absorption of funds under the EU-funded operational programmes for the 2014–2020 programming period, the capital account surplus is projected to shrink on an annual basis as a share of GDP, compared with the fourth quarter of 2016.

In 2016 the negative financial account balance contracted significantly from 2015. This was driven by the higher year-on-year increase in Bulgarian residents' foreign assets compared to the growth in foreign liabilities. Foreign asset

¹¹ For a more detailed analysis of exports and imports of goods and services, see Chapter 3.

Flows on Major Balance of Payments Accounts

(EUR million)

	2015	2016	On an annual basis as of February 2017
Current account	-60.5	1 988.6	2 220.2
Trade balance	-2 622.4	-1 844.8	-1 986.6
Services, net	3 003.6	3 446.8	3 327.3
Primary income, net	-2 082.1	-1 198.6	-953.8
Secondary income, net	1 640.4	1 585.3	1 833.3
Capital account	1 421.6	1 066.9	973.9
Financial account	-1 076.0	-51.3	-629.7
Changes in reserves	3 729.7	3 467.3	4 081.6

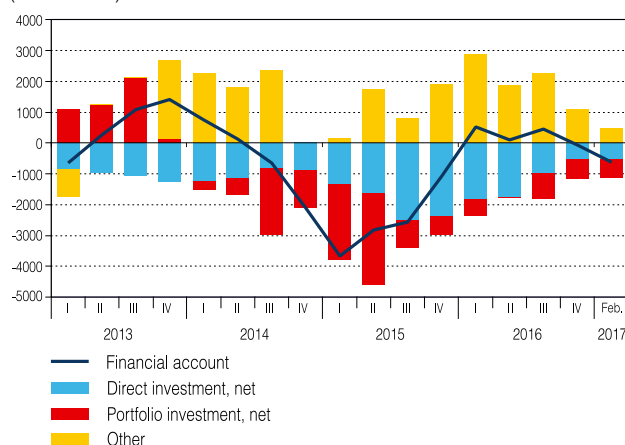
(per cent of GDP)

	2015	2016	On an annual basis as of February 2017
Current account	-0.1	4.2	4.7
Trade balance	-5.8	-3.9	-4.2
Services, net	6.6	7.3	7.0
Primary income, net	-4.6	-2.5	-2.0
Secondary income, net	3.6	3.3	3.9
Capital account	3.1	2.3	2.1
Financial account	-2.4	-0.1	-1.3
Changes in reserves	8.2	7.3	8.6

Source: the BNB.

Financial Account Dynamics and Contribution by Component (on an Annual Basis)

(EUR million)



Note: The Other item includes Other Investments, net, and Financial Derivatives (Other than Reserves) and Employee Stock Options, net.

Source: the BNB.

dynamics in 2016 reflected mainly the assets of other sectors,¹² and bank transactions.¹³

The increase in total financial account liabilities reflected the foreign funds attracted from other sectors, mostly in the form of portfolio investment and, to a lesser extent, other investment (other than direct and portfolio investment). Foreign liabilities growth was also due to the government transactions involving issuance of Eurobonds in international capital markets in March 2016.

As of February the financial account surplus accumulated for the last 12 months increased when compared to December 2016, reflecting declines in foreign assets of Bulgarian residents and growth in foreign liabilities. Lower outflows reported by banks contributed to the drop in foreign assets. In February foreign funds attracted from other sectors continued contributing most significantly to growth in foreign liabilities.¹⁴

In 2016 foreign direct investment liabilities (reporting FDI inflows into Bulgaria) decreased on an annual basis to EUR 1129.1 million (against EUR 2493.9 million in 2015). In the first two months of the year foreign direct investment inflows declined from the corresponding period of 2016. The highest FDI inflow was attracted from the Netherlands, Malta and Germany.¹⁵

Positive net flows on the current and capital account, as well as the inflow of funds on the financial account led to an increase in gross international reserves by EUR 3467.3 million in 2016, according to the balance of payments data.¹⁶ As of February gross international reserves posted growth of EUR 4081.6 million for the last 12 months. In February the international reserve coverage of the average nominal imports of goods and non-factor services remained high (9.8 months) for the last 12 months, posting a rise from February 2016 (8.4 months).

¹² Excluding Other Monetary Financial Institutions and General Government sectors.

¹³ Further details on bank operations are provided in the Monetary and Credit Aggregates section of Chapter 2.

¹⁴ See footnote 12.

¹⁵ Preliminary data subject to revision.

¹⁶ Valuation adjustments and price revaluation excluded.

Banks' Flows on Balance of Payments Financial Account

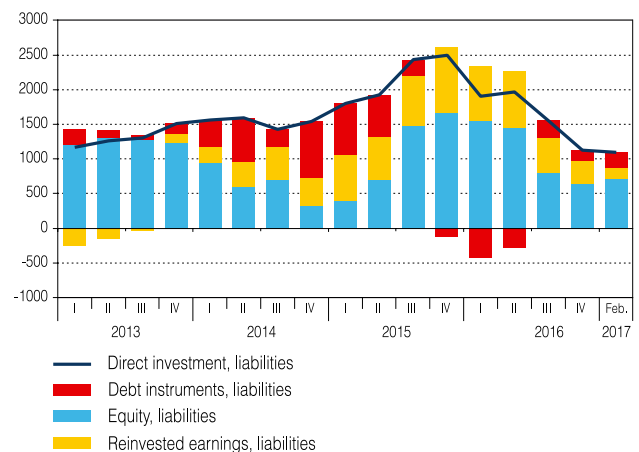
(EUR million)

	2015	2016	January – February 2017
Direct investment			
assets	1.6	9.9	-0.2
liabilities	326.6	69.5	0.1
Portfolio investment			
assets	-785.9	317.5	-56.9
liabilities	1.5	0.8	2.3
Other investment			
assets	-2 022.4	525.6	437.3
liabilities	-1 636.1	-126.9	-190.6
Total assets	-2 806.7	852.9	380.2
Total liabilities	-1 308.0	-56.6	-188.2
Net assets	-1 498.7	909.5	568.4

Source: the BNB.

Direct Investment Liabilities by Type of Investment (on an Annual Basis)

(EUR million)



Source: the BNB.

Gross External Debt in January 2017

(EUR million)

	Amount	Change	
		Compared to December 2016	For the last 12 months
General government	6 738.9	-43.6	1 255.6
Central bank	0.0	0.0	0.0
Banks	3 897.2	-265.7	-170.5
Other sectors	11 282.0	78.7	-154.2
FDI: intercompany loans	12 529.4	35.7	-74.0
Total	34 447.5	-195.0	856.9

Source: the BNB.

In January 2017, Bulgaria's gross external debt decreased on the end of 2016, mainly due to the drop in external debt of banks and the government. The decrease in the government external debt reflected mainly residents' purchases of Bulgarian government securities issued in international markets from non-residents. The share of long-term debt in Bulgaria's total gross external debt was 77.3 per cent in January.

In the context of low interest rates retained in the euro area in early 2017, conditions for foreign debt assumption by Bulgarian residents remained favourable. In the beginning of 2017 external debt service costs paid by residents declined from the same period of the previous year. In January 2017 non-resident loans and deposits increased by 32.1 per cent on an annual basis. The share of long-term loans in total new loans increased further to 52.2 per cent (49.3 per cent in January 2016).

Monetary and Credit Aggregates

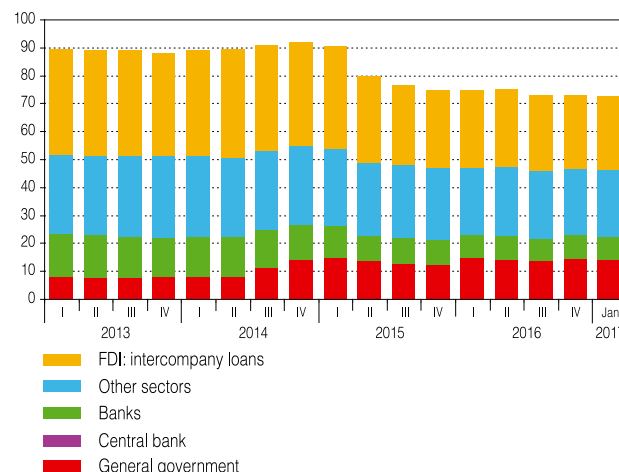
In the first quarter of 2017 the broad monetary aggregate M3 continued to increase at a comparatively high rate, with its annual growth accounting for 8.5 per cent in March. Broad money developments were mainly driven by overnight deposits and, to a lesser degree, by currency in circulation outside MFIs. The trends observed in overnight deposits reflected the retention of a comparatively high savings rate in the economy and agents' preferences for easier access to savings amid low deposit rates.

Resident deposits continued to occupy the bulk of the total amount of bank funds attracted from the non-government sector, their share reaching 91.6 per cent on average for the first quarter of the year. In March 2017 the annual growth of non-government sector's deposits¹⁷ was 8.4 per cent, with household deposits contributing most significantly. Their annual increase was 6.4 per cent, and they amounted to BGN 45.5 billion. The contribution of non-financial corporations' deposits was lower, their amount reaching

¹⁷ Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations (94.6 per cent on average for the last 12 months as of March 2017) comprise the major share of all non-government sector's deposits, and the analysis therefore is focused on these two sectors.

Gross External Debt as a Share of GDP

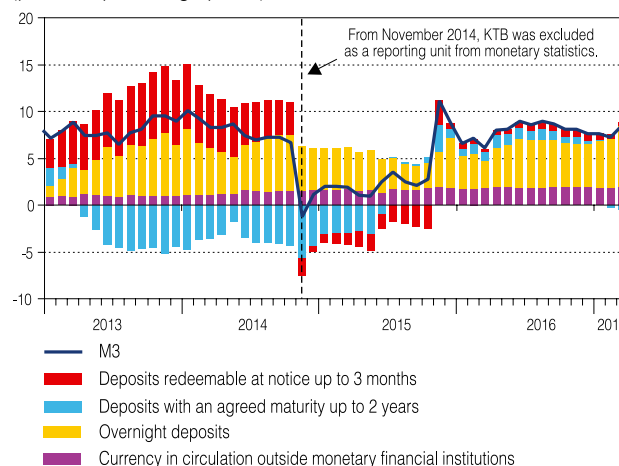
(per cent of GDP)



Source: the BNB.

Annual Rate of Change in M3 and Contribution by Component

(per cent, percentage points)

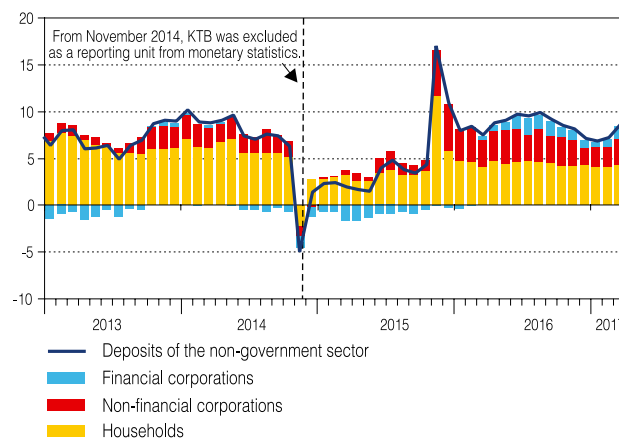


Note: The marketable instruments component is not shown on the chart due to its insignificant contribution to broad money growth.

Source: the BNB.

Annual Growth of Non-government Sector's Deposits and Contribution by Sector

(per cent, percentage points)



Source: the BNB.

BGN 19.2 billion, up 10.0 per cent on an annual basis. In an environment of low interest rates, both households and firms preferred to keep their free funds mainly in overnight deposits, and in terms of currency, they continued to save primarily in levs.

In the first quarter of 2017 the effective implicit rate of minimum required reserves¹⁸ remained broadly at its level of end-2016 reflecting the retained high share of attracted funds of residents. In March it was 9.42 per cent, with commercial banks' deposits with the BNB comprising 8.36 percentage points of minimum required reserves, and the remaining 1.06 percentage points in the form of recognised cash balances.

In the first quarter of 2017 the annual growth rate of reserve money accelerated significantly from the end of 2016, accounting for 18.7 per cent in March (4.0 per cent by end-2016). Bank reserves with the BNB had the major contribution to the growth in money supply. The increase in currency in circulation contributed less strongly.

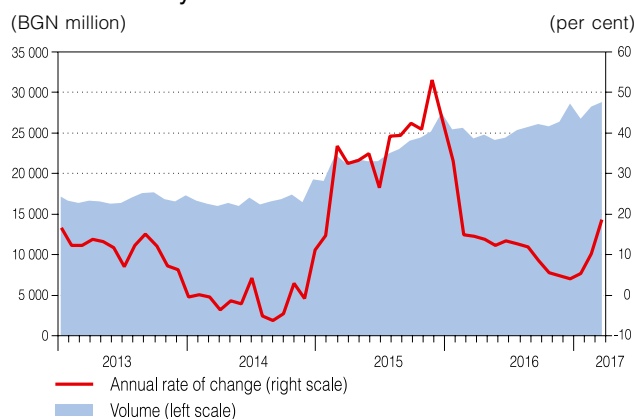
The BNB bank reserve dynamics was mainly affected by the volume of excess reserves. As of March 2017 the excess of funds on minimum reserve accounts over the required minimum under Ordinance No 21 was 124.6 per cent on an average daily basis (89.8 per cent in December 2016).

In March banknotes and coins in circulation posted 13.3 per cent growth on an annual basis (11.2 per cent by end-2016). Developments in currency in circulation were influenced by the optimistic sentiment of firms and households about the economic activity and growing labour income which stimulated private consumption. However, the continuous decrease in deposit rates weakened the motivation of households and firms to deposit funds with banks.

The banking sector retained its stable liquidity position, with the liquid asset ratio rising in February 2017 to 38.80 per cent (38.24 per cent at the end of 2016). Under currency board arrangements, foreign currency trade with the

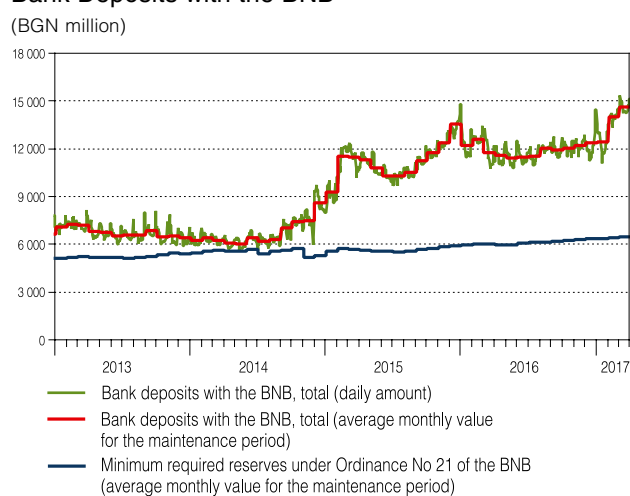
¹⁸ Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations (94.6 per cent on average for the last 12 months as of March 2017) comprise the major share of all non-government sector's deposits, and the analysis therefore is focused on these two sectors.

Reserve Money



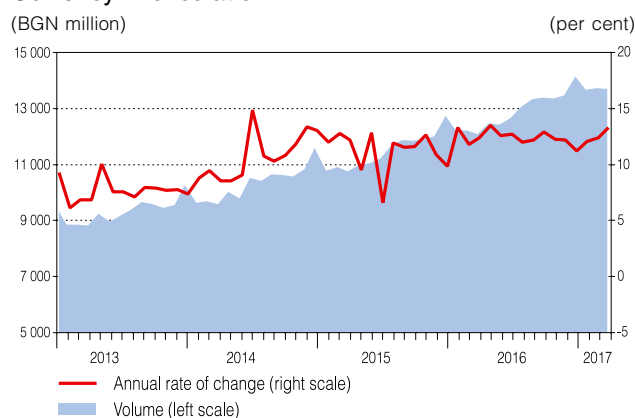
Source: the BNB.

Bank Deposits with the BNB



Source: the BNB.

Currency in circulation



Source: the BNB.

BNB in euro is the main tool to manage bank liquid resources. As of March BNB purchases (net) from banks accounted for EUR 1.9 billion on an annual basis.

In the same period, banks used attracted funds primarily to boost their reserves with the BNB and credit the non-government sector. A portion of these resources went on purchases of Bulgarian government securities. Concurrently, as of March foreign assets of banks declined on an annual basis.

In the first quarter of 2017 the annual growth of credit to non-financial corporations and households¹⁹ accelerated to reach 3.3 per cent in March (1.0 per cent by end-2016). In the context of improving economic activity and comparatively low lending rates, corporations and households' demand for bank resources continued to increase. At the same time, credit dynamics reflects also more active supply of loans by banks after the bank asset quality review completed in the middle of 2016.

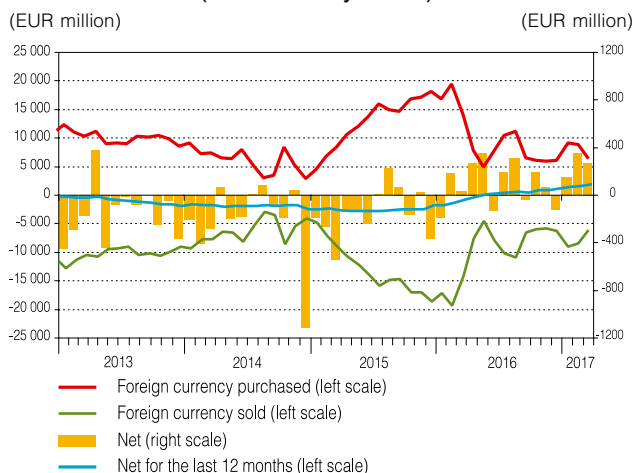
In March 2017 the growth of credit to non-financial corporations accelerated to 2.5 per cent on an annual basis (0.3 per cent at the end of 2016). Loans, excluding overdrafts, made the major positive contribution to the annual growth. New loans²⁰ to corporations retained their volumes at the levels close to those of end-2016.²¹ In February 2017 the share of newly extended corporate loans in levs rose on average to 50.3 per cent, up 0.9 percentage points, for the last 12 months as compared with end-2016, entirely at the expense of the decreased share of new corporate loans in euro whose share was 46.7 per cent in February. The share of new corporate loans in US dollars remained low, reaching 3.1 per cent in February.

¹⁹ Loans represented the bulk of bank claims on the non-government sector with a share of 98 per cent on average for the last 12 months as of March 2017, and the analysis is therefore focused on them. In addition to loans, claims include also repurchase agreements, securities other than shares, and shares and other equity. Non-government sector's deposits, in turn, include loans to households, loans to non-financial corporations and loans to financial corporations. The share of loans to households and non-financial corporations in total loans to the non-government sector accounted for 97 per cent on average for the last 12 months as of March 2017, and therefore developments in these two sectors are addressed.

²⁰ The terms 'new' and 'newly extended' hereinafter referred to as the statistical category 'new business'.

²¹ Based on 12-month moving average.

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

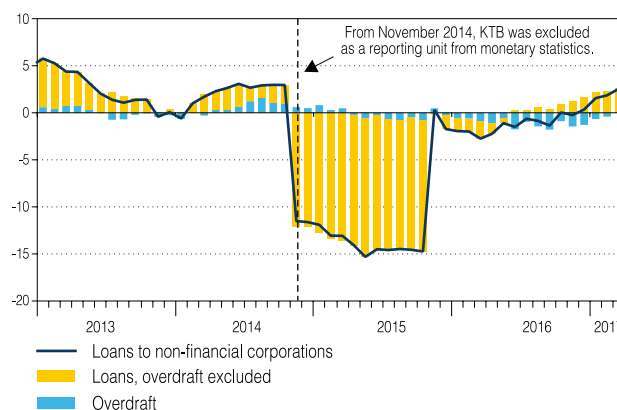


Note: Net means currency purchased minus currency sold by the BNB. Data refer to all bank transactions in foreign currency including liquidity management operations related to the transfer of own funds from lev accounts with the BNB to own accounts with the BNB in euro and vice versa.

Source: the BNB.

Annual Growth of Credit to Non-financial Corporations and Contributions of Individual Types of Loans

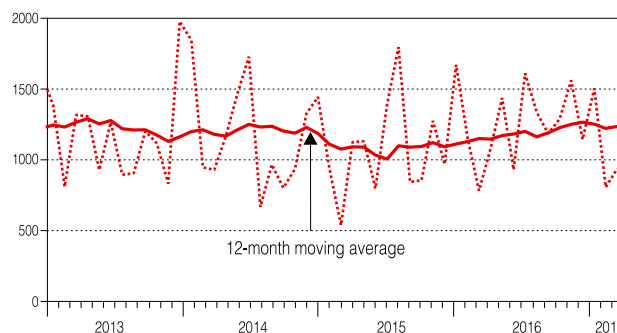
(per cent, percentage points)



Source: the BNB.

New Loans to Non-financial Corporations (Monthly Volumes)

(BGN million)



Note: For data characterised by significant fluctuations, additionally moving averages computed for suitably selected periods are provided, in order to smooth the fluctuations in corresponding time series and present the trends in their development.

Source: the BNB.

The upward trend in the growth of household loans was more pronounced than that in corporate loans, in March 2017 their annual increase reaching 4.7 per cent (2.0 per cent by end-2016.). Other loans had the main contribution to household credit dynamics over the first quarter, followed by consumer and housing loans. Concurrently, the contribution of overdrafts remained negative. The increase in other household loans continued to reflect mainly the loans extended under the National Programme on Energy Efficiency of Residential Buildings. In the first two months of 2017 the upward trend in new loans to households was sustained for both consumer and housing loans and other loans.²²

Results of the BNB lending survey²³ conducted in the fourth quarter of 2016 show retention of the bank standards²⁴ in approving credit applications of corporations and easing of the standards for crediting households, particularly for housing loans. The overall macroeconomic environment and favourable outlook in the housing market were the main drivers for the easing of credit standards and conditions²⁵ for households. Increased competition, high banking system liquidity, rising volumes and falling costs of attracted funds made an essential contribution to the easing of banks' corporate and household lending policies.²⁶ In the first quarter of 2017 bank expectations show further easing of loan standards for households and relatively retained standards for corporations.

In the October to December 2016 period, banks registered growing demand for loans by both corporations and households, with the strongest growth recorded in housing loans. According to the balance of opinions, the main factors behind enhanced demand for bank resources

²² Based on 12-month moving average.

²³ Summarised results of the bank lending survey are presented through weighting bank responses by their market share in the relevant credit segment.

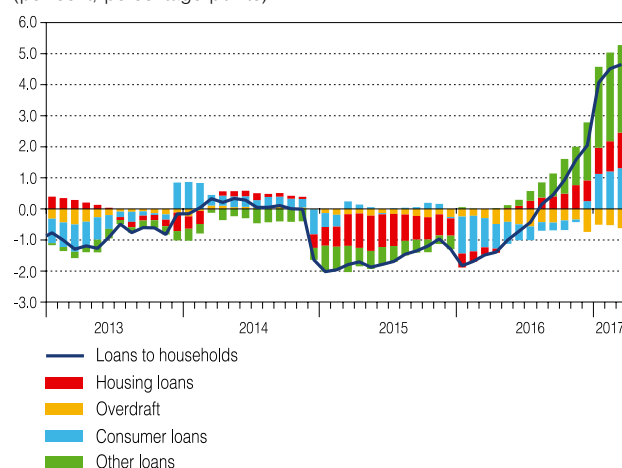
²⁴ Credit standards are understood as internal bank guidelines or criteria for loan approvals established prior to negotiating the terms of extended loans. Credit standards determine the type of the loan and collateral considered admissible by banks, taking into account specific priorities by sector, *etc.* Credit standards specify also all relevant conditions to be met by a borrower.

²⁵ Credit conditions typically involve the reference interest rate surcharge, the loan amount, conditions for its utilisation and other conditions, fees and commissions, collateral or guarantees to be provided by a borrower.

²⁶ Credit policy refers to credit standards and credit conditions applied by banks in extending loans.

Annual Growth of Household Credit and Contributions of Individual Types of Loans

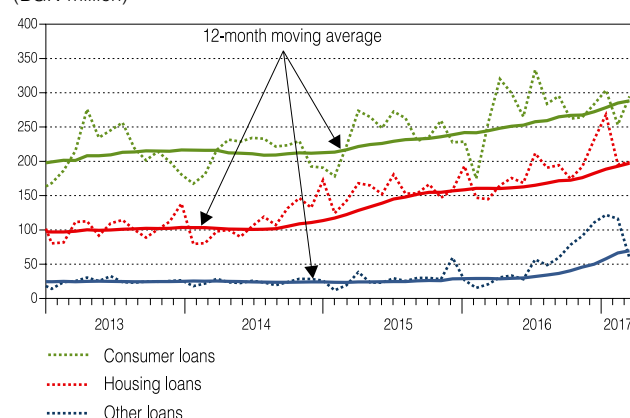
(per cent, percentage points)



Source: the BNB.

New Loans to Households (Monthly Volumes)

(BGN million)



Source: the BNB.

by corporations were demand for investment loans and low interest rate levels. Low interest rates stimulated also demand for loans by households. The increased demand for housing loans was largely driven by the favourable outlook in the residential property market, including expectations of house prices. Bank expectations in the first quarter of 2017 show that demand for funds by corporations and households will further increase, with more significant growth projected in household lending.

Over the second and third quarters of 2017 deposit growth rates are expected to moderate slightly as a result of the projected increase in private consumption and stabilisation of deposit rates at the low levels attained. In the context of a continuing improvement in economic activity and comparatively low lending rates, the upward trend in the credit to non-financial corporations and households is expected to be sustained. A positive effect on credit dynamics is expected to occur on the part of both demand and supply.

Interest Rates

High liquidity of Bulgarian banks in levs and euro continued to limit the increase in trade volumes on the domestic interbank lev money market. Concurrently, the early 2015 trend toward significantly higher interbank trade volumes in US dollars was retained.²⁷ This is likely to reflect demand for US dollar assets which offer a comparatively higher yield under different monetary conditions in the USA and the euro area.²⁸

Fluctuations in the LEONIA index²⁹ reporting real transactions in the unsecured overnight deposit market remained high, with the index

²⁷ An average of 83 per cent of interbank money market transactions over the 2015–2016 period was denominated in US dollars.

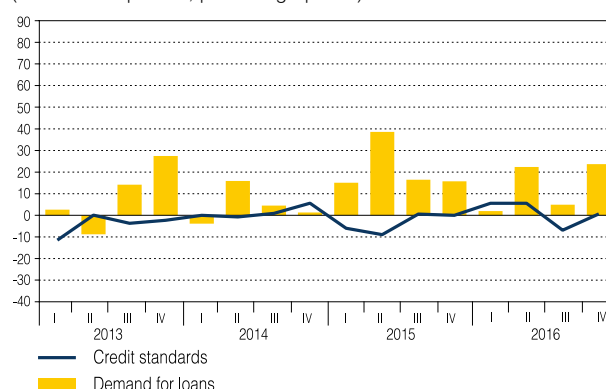
²⁸ In February the US two-year government securities yield was 1.2 per cent and the German government bond yield came to -0.8 per cent. In Bulgaria, the overnight interbank money market rate in US dollars was 0.7 per cent.

²⁹ At its 16 March 2017 meeting, the BNB Governing Council decided to discontinue, as from 1 July 2017, the calculation of the LEONIA reference rate and adopted a Methodology for Calculation of the LEONIA Plus Reference Rate of Concluded Overnight Deposit Transactions in Bulgarian levs on the Interbank Market, which will replace the LEONIA index from 1 July 2017 (for further details, see http://www.bnb.bg/PressOffice/POPpressReleases/POPDate/PR_20170316_EN).

Changes in Demand and Credit Standards

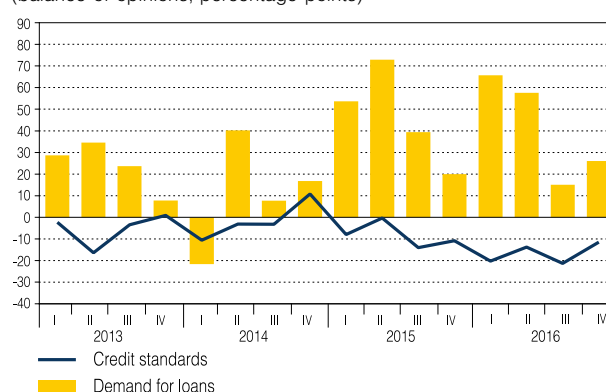
a) corporate loans

(balance of opinions; percentage points)



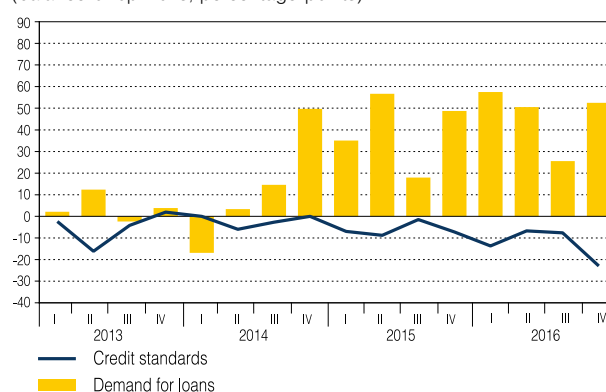
b) consumer loans

(balance of opinions; percentage points)



c) housing loans

(balance of opinions; percentage points)



Note: As regards credit standards, the above charts present banks' balance of opinions defined as a difference in percentage points between the percentage of banks responding 'tightened' ('considerably' and 'somewhat'), and the percentage of banks responding 'eased' ('considerably' and 'somewhat'). As regards credit demand, the balance of opinions is defined in percentage points as a difference between the percentage of banks responding 'increased' ('considerably' and 'somewhat') and the percentage of banks responding 'reduced' ('considerably' and 'somewhat'). All opinions are weighted by the bank's market share in the relevant credit segment.

Source: the BNB.

value reaching -0.34 per cent from -0.11 per cent in December 2016. The value of LEONIA in March was close to that of EONIA, their spread coming to 1 basis point.

In the first quarter of 2017 Bulgarian lev interbank money market rates, having an indicative value, without concluded real transactions, remained close to their levels of December 2016. In March unsecured three-month lev deposit rates³⁰ declined by 1 basis point from December 2016 to reach 0.11 per cent, with decreases in six-month and 12-month horizons coming to 8 and 3 basis points to 0.72 per cent.

Interest rate dynamics in the lev interbank money market in Bulgaria corresponded to that in the euro area, with spreads of interbank money market quotations in Bulgaria *vis-à-vis* the euro area remaining almost unchanged. In March the spread between unsecured deposit rates in levs and those in the euro area was 44 basis points in three-month deposits and 83 basis points in 12-month deposits.

The downward trend in interest rates on new time deposits was retained in the first two months of 2017. Its main drivers were the high liquidity in the Bulgarian banking system despite the accelerated credit growth over the period. In February the average weighted interest rate on new time deposits of non-financial corporations and households declined by 16 basis points from the end of 2016 to 0.4 per cent. Declines in interest rates on new time deposits of households were comparable to those in corporate deposit rates.

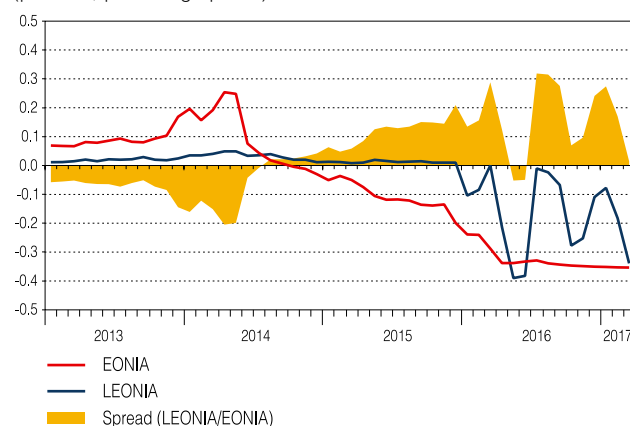
Interest rates on new time deposits in levs and euro posted more essential declines than those in US dollars. The share of deposits in levs in the total amount of deposits attracted from households and non-financial corporations continued to increase and reached 60.7 per cent in February 2017.

In February the breakdown of average weighted interest rates on new time lev deposits of

³⁰ At its 16 March 2017 meeting, the BNB Governing Council decided to discontinue, as from 1 July 2018, the activities in relation to the calculation and publication of the SOFIBID and SOFIBOR reference rates (for further details, see http://www.bnb.bg/PressOffice/POPressReleases/POPRDate/PR_20170316_EN).

Overnight Interbank Money Market Rates

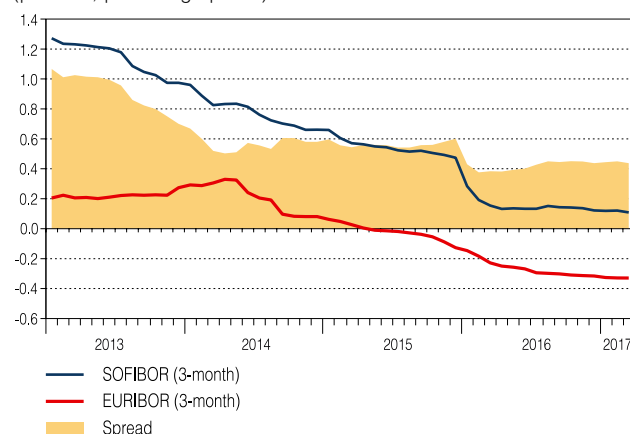
(per cent, percentage points)



Source: the BNB.

Interest Rates on Three-month Deposits

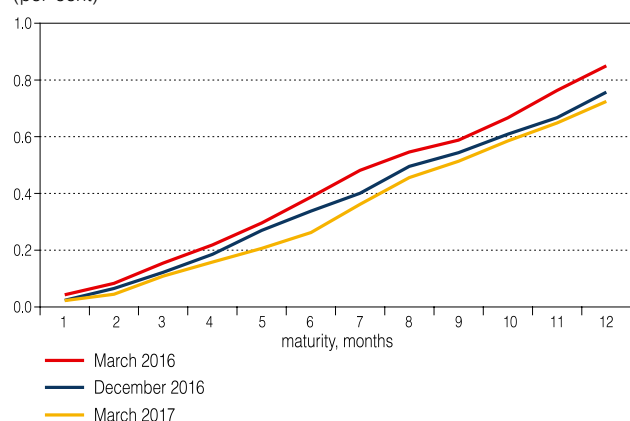
(per cent, percentage points)



Sources: the BNB, the ECB.

Yield Curve of Interbank Money Market Instruments

(per cent)



Source: the BNB.

households by bank showed an increase in the number of banks offering average rates in the lower ranges: up to 0.5 per cent. Fewer banks offered rates in the 1.0 to 1.5 per cent range and 1.5 to 2.0 per cent range. The standard deviation continued to contract (6 basis points between December 2016 and February 2017), which is indicative of the convergence of bank interest rates on new time lev deposits of households.

The downward trend in interest rates on newly extended loans was sustained in the first two months of 2017, reflecting the large volume and low costs of attracted funds, high liquidity, competition within the banking sector and the overall improvement in the macroeconomic environment contributing to the decreased credit risk assessment.³¹

In January and February interest rates on new corporate loans declined by 18 basis points for euro-denominated loans and 12 basis points for those denominated in levs. USD-denominated interest rates posted a 20 basis point increase. As of February 2017 interest rates on new corporate loans in the three major currencies were 4.3 per cent in levs, 5.2 per cent in euro and 5.8 per cent in US dollars.³²

The annual percentage rate of charge (APRC) on household loans also retained its downward trend over the period, with a stronger decline reported again in housing loans. Declines in both housing and consumer loans were mainly due to the downward dynamics of the interest rate component of charges, while the implicit rate of non-interest service charges was only minor. In February 2017 the APRC applied to housing loans was 5.2 per cent and that applied to consumer loans 10.8 per cent.³³

In February 2017 the breakdown of average weighted interest rates on new housing euro loans showed ranges of up to 4.0 per cent and from 4.0 to 5.0 per cent. In February the

³¹ According to the BNB lending survey, risk assessment is considered to be banks' perceptions of risk and their response to the developments in the economic situation and prospects, the state and expectations about corporations' development, customer solvency and required collateral.

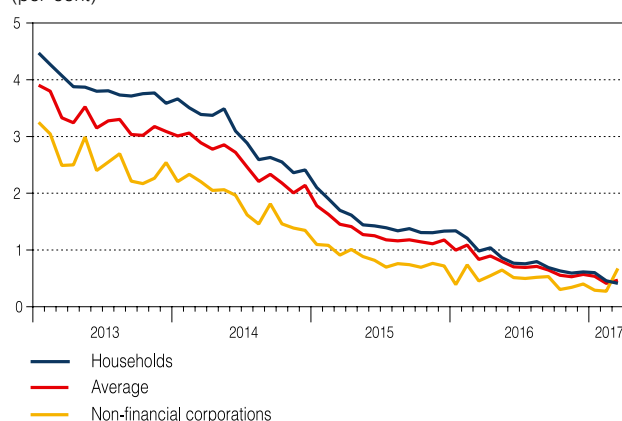
³² The above values of interest rates on loans to non-financial corporations are weighted averages on a 12-month basis.

³³ Values indicating the APRC and interest rates are weighted averages of the interest rates on household consumer and housing loans on a 12-month basis.

Interest Rates on New Time Deposits

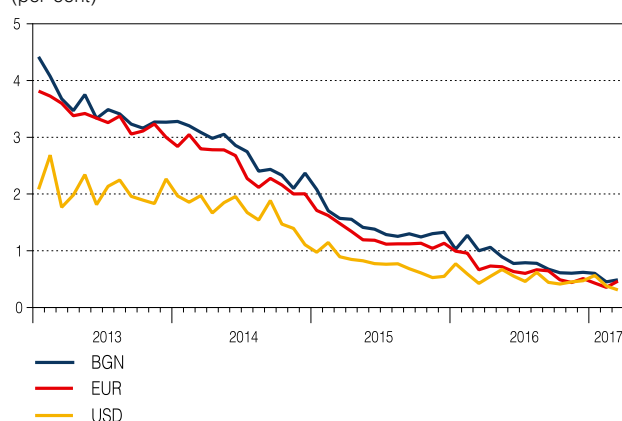
a) by sector

(per cent)



b) by currency

(per cent)

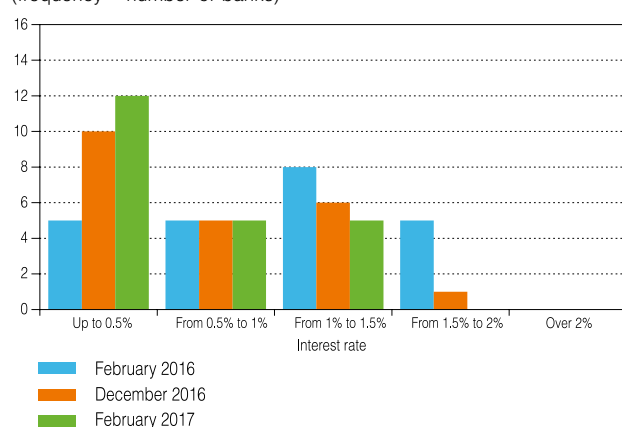


Note: The average interest rate is calculated for all sectors, maturities and currencies weighted by the relevant volumes of new deposits.

Source: the BNB.

Distribution of Interest Rates on New Household Time Lev Deposits

(frequency – number of banks)



Source: the BNB.

standard deviation fell by 30 basis points on December 2016 to 0.9 per cent, a level that is comparable with the average values in the last three years. In February the average interest rate on new housing euro loans rose slightly (8 basis points) compared with end-2016 to reach 4.2 per cent.

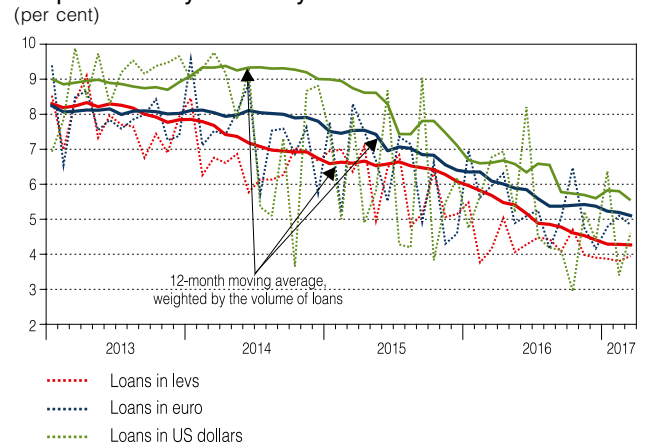
In the second and third quarters of 2017 new time deposit and lending rates are expected to remain at the attained levels. Growth of attracted funds and high banking system liquidity will further favour the retention of achieved interest levels. However, market expectations that this downward trend in the euro area will stop as a result of the expected process of ECB interest policy normalisation are likely to limit any further declines in domestic rates.

In the first quarter of 2017 the downward trend in Bulgarian government securities yields in the primary market was retained. The average annual yield attained at the government bond auctions with a maturity of ten years and six months was the lowest ever for this maturity segment, reaching 1.76 per cent in January and 1.80 per cent in March 2017. In February 2017 the MF offered for the first time an issue with an original maturity of four years, with its average annual yield (0.18 per cent) staying considerably lower than that of the three-year government bond auction (0.36 per cent) in February 2016. The decreased primary market yield reflected enhanced demand for government securities driven largely by the significant excess of maturing government bonds as compared with newly issued government securities.³⁴

Between January and March 2017 yields also continued to decline in the secondary market amid sustained strong demand and limited supply of government bonds. The long-term interest rate used to assess the degree of convergence reached a new minimum of 1.73 per cent (1.80 per cent in December 2016). Over the first quarter a decline was also observed in

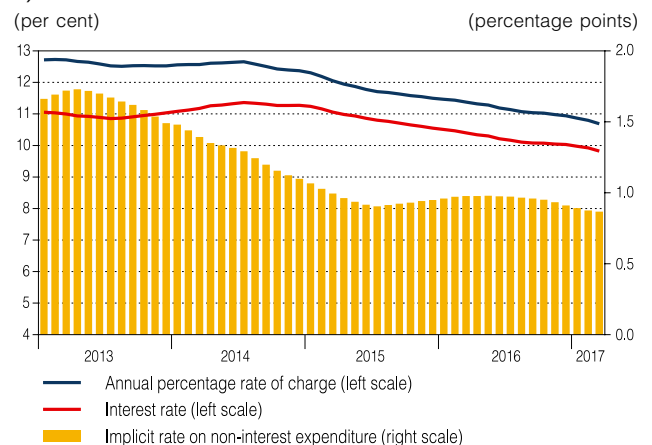
³⁴ In the first quarter of 2017 the negative net issue of government bonds in the domestic market amounted to BGN 574.5 million. For 2017, a negative net issue is also expected (the total amount in the domestic and international capital markets). The liquidity buffer accumulated in the fiscal reserve as of end-2016 will be used to cover the expenditure on maturing Eurobonds in July 2017 to the amount of EUR 950 million. For further information, see the *Basic Parameters of the 2017-2019 Budgetary Framework* box, Economic Review, 4/2016.

Interest Rates on New Loans to Non-financial Corporations by Currency

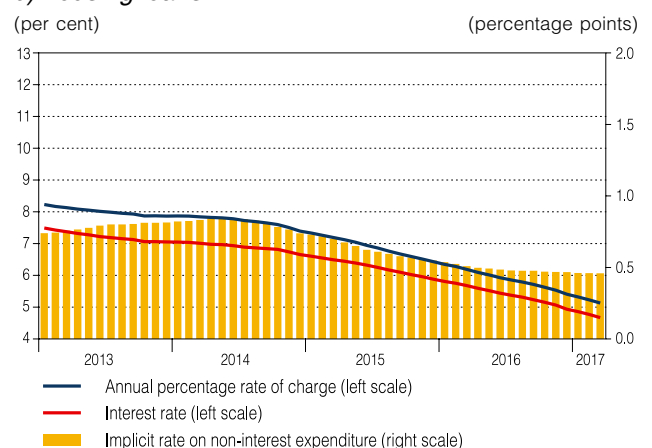


Interest Rates and Annual Percentage Rate of Charges on New Household Loans

a) consumer loans



b) housing loans



Notes: Interest rates in all maturities and currencies are weighted by the relevant volumes of new loans for a 12-month period. The implicit rate is the difference between the APRC and the relevant interest rates and reflects the approximate per cent of all non-interest service charges on loans (including fees and commissions).

Source: the BNB.

Bulgarian Eurobond yields in international capital markets, most pronounced in the long end of the maturity curve. In the context of retained divergent trends in Federal Reserve and ECB monetary policies³⁵ and president and parliamentary elections in some European countries, Eurobond yield developments in EU countries followed no clearly pronounced trend.

In the second and third quarters Bulgarian government bond yields are expected to remain at the level comparable to the end of the first quarter. Mainly domestic factors could bring about a possible decline in yields. Government securities demand will remain enhanced in the context of the current high banking liquidity and additionally released financial resources due to Eurobonds maturing in July 2017, 54 per cent of which held by residents.³⁶ Government bond supply will remain subdued in line with preliminary announced parameters of the issuing policy, stable budget position and high liquidity buffers of the government. At the same time, external factors, as the global political uncertainty and market expectations of trend reversal in euro area interest rates could lead to more strong fluctuations in government debt markets.

Financial Flows between the General Government and Other Sectors of the Economy

Government revenue and expenditure policies and budget financing operations affect the allocation of liquidity among economic sectors.

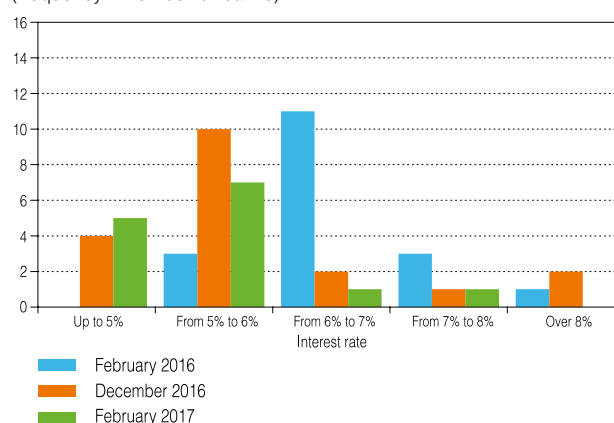
The fourth quarter saw distribution of funds from the budget to the non-government non-bank sector to the amount of 7.3 per cent of GDP. As in previous years, the effect of the conducted fiscal policy on the liquidity of this sector was the most noticeable at the end of the year due to the higher non-interest expenditure over the period. Liquidity was also re-channelled to the non-government non-bank sector through EU payments made in the fourth quarter (BGN 644 million), the bulk of which paid by the government in December under the EU Common Agricultural Policy.

³⁵ For details on US Federal Reserve and ECB monetary policies, see the External Environment Section in Chapter 1.

³⁶ Based on the MF Central Government Debt and Guarantees Monthly Bulletin as of 31 January 2017 concerning Eurobonds with the maturity in July 2017, held by residents.

Distribution of Interest Rates on New Housing Loans in Euro

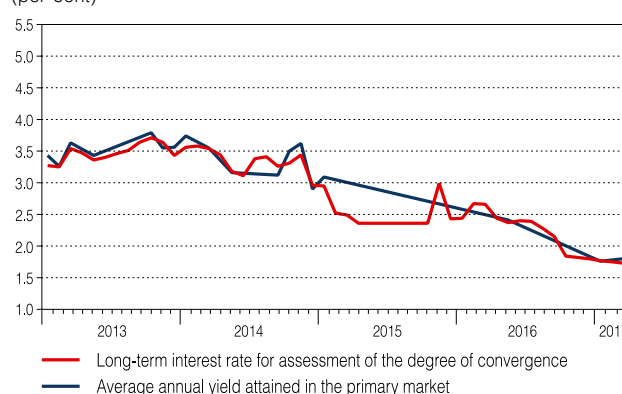
(frequency – number of banks)



Source: the BNB.

Interest Rates on Ten-Year-and-Six-Month Government Securities on the Primary and Secondary Market

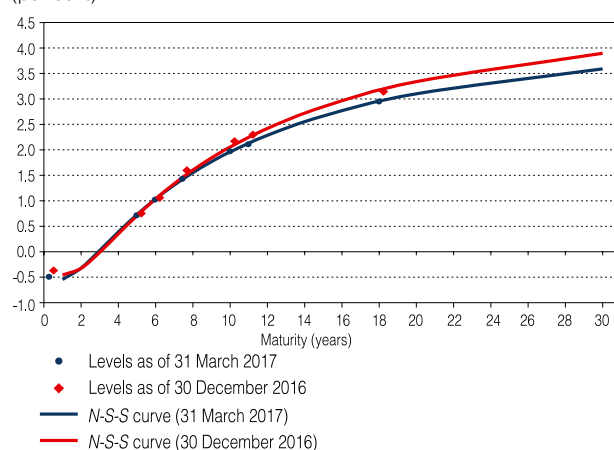
(per cent)



Source: the BNB.

Reference Government Securities Yield Curve in Bulgaria

(per cent)



Notes: The reference yield curve of Bulgarian government securities is based on own calculations of the BNB according to a modified methodology representing the models of Nelson–Siegel–Svensson (1994). The chart shows the change in the yield as compared to the previous quarter.

The chart employs daily data on the yields of Bulgarian government securities issued and traded in international capital markets, published in the MF *Central Government Debt and Guarantees* monthly bulletin.

Sources: the MF and BNB calculations.

The major portion of funds re-channelled to the non-government non-bank sector was financed through the government deposit with the BNB which decreased by 6.6 per cent of GDP. There were also inflows from the external sector, albeit minimal (0.6 per cent of GDP for the quarter). Current and capital grants received under the EU Structural and Cohesion Funds exceeded the contribution paid to the EU budget for the period and interest payments to non-residents. In addition, significant funds attracted from the external sector in the form of a loan to the Bank Deposit Insurance Fund (BDIF) worth EUR 548.5 million³⁷ were entirely offset by the financial resources redirected from the government to the external sector as a result of the repayable financial assistance of EUR 601.6 million provided to the National Electricity Company in December for payment awards under arbitration between the National Electricity Company EAD and ZAD Atomstroieksport.

In the fourth quarter the budget had an almost neutral effect on the liquidity of the financial sector, excluding the BNB (-0.1 per cent of GDP for the quarter), reflecting the lack of government securities issues and repayments made in this period.

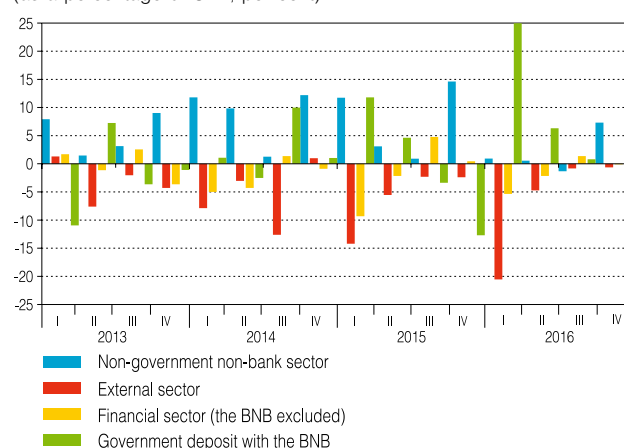
Preliminary monthly data of mid-April 2017 indicate that in the first quarter of the year the external sector is expected be the main source of liquidity for the consolidated state budget. Liquid fund inflows from the external sector are largely explained by the February reimbursements under the EU Common Agricultural Policy (BGN 540 million) and the transfers under the Cohesion and Structural Funds received in the first two months (BGN 202 million). The non-government non-bank sector is expected to be another major liquidity source for the budget thanks to the higher tax and non-tax revenue exceeding the funds re-channelled to this sector in the form of non-interest expenditure.³⁸ The

³⁷ According to the Ministry of Finance information of 19 December 2016 the BDIF used EUR 298.5 million under the government guaranteed loan extended by the European Bank for Reconstruction and Development and EUR 250 million under the government guaranteed loan by the International Bank for Reconstruction and Development (the World Bank). The funds were used to repay the bigger portion of the loan extended by the Ministry of Finance to the BDIF at the end of 2014.

³⁸ Preliminary MF data show that the consolidated fiscal programme surplus was BGN 1062.5 million in March 2017.

Consolidated Budget Effect on Other Sectors' Liquidity (Quarterly)

(as a percentage of GDP, per cent)



Sources: the MF, the BNB.

expected positive net flows from both the external and non-government non-bank sector to the budget explain to a large extent the increase in the government deposit with the BNB (up BGN 744.4 million) over the first quarter. The negative net government bond issue in the first quarter (BGN 574.5 million) is expected to be a main driver for the liquid funds to be redirected from the budget to the financial sector.

Developments in financial flows generated in the process of external and internal economic factor interaction contributed to growth in international foreign exchange reserves. In March 2017 the market value of international reserves (assets on the Issue Department balance sheet) was EUR 24 billion (BGN 47 billion), marking an increase of EUR 145 million from the end of 2016.

According to the currency board principles, the increase in international reserves corresponds to the increase in the Issue Department balance sheet liabilities. In the first quarter the increased government deposit with the BNB, reflecting mainly the accumulated budget surplus and funds reimbursed by the EU under the EU Common Agricultural Policy, had the main positive contribution to the liabilities dynamics in the first quarter *vis-à-vis* the end of 2016.

In the second and third quarters of 2017 bank reserves with the BNB are expected to match those reached in the first quarter. Government deposit dynamics will reflect mainly the government issuing policy on the domestic market and the budget balance over the projection horizon. According to the government plans, part of available funds will be spent on repayments of government securities issued in international capital markets and maturing in July 2017. As a result of the projected acceleration in private consumption growth and retention of deposit rates at their low levels, in the second and third quarters of 2017 currency in circulation is expected to increase at comparatively high rates on an annual basis.

3. ECONOMIC ACTIVITY

In the fourth quarter of 2016 real GDP increased by 0.9 per cent on a quarterly basis. Domestic demand made the major contribution, while net exports' contribution was neutral to the growth.

Short-term economic indicators at the end of 2016 and first quarter of 2017 give mostly positive signs about the economic developments. Still low petroleum prices, improved labour market conditions and growing domestic and external demand for goods and services favour the growth in consumption, investment activity and exports, thus accelerating the increase in imports. The expected positive contribution of domestic demand and exports to real GDP growth will be partly offset by the increased negative contribution of imports. Given these trends, quarterly GDP growth is anticipated to slightly decelerate in the second and third quarters of 2017. The external environment remains a key source of uncertainty, contributing largely to lower than expected real GDP growth in Bulgaria. A possible increase in the external uncertainty can negatively affect both goods and services exports and investment activity in Bulgaria. The EU fund absorption rate is an internal factor creating uncertainty for the baseline scenario. It will act as a driver for higher than expected growth in real GDP, assuming that the absorption rate of EU funds accelerates during the year and therefore government investment exceeds the projected level.

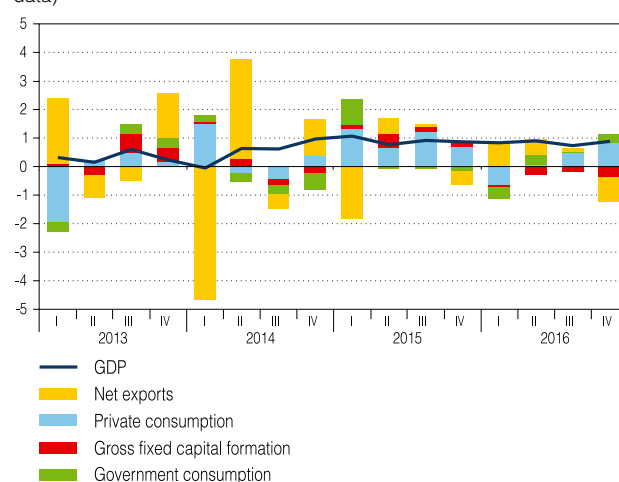
Current Economic Environment

In the fourth quarter of 2016 quarterly growth of real GDP was similar to that reported in the previous quarters of the year amounting to 0.9 per cent.³⁹ Over the year the increasing domestic demand pushed up the growth rate of imports along with continuous growth of exports of goods and services. As a result the contribution of net exports to real GDP growth was gradually contracting, while that of domestic demand increased. In the fourth quarter private consumption, and to a lesser extent government consumption, contributed positively to growth, while net exports and fixed capital investment had a negative contribution. Gross fixed capital formation posted a decrease on a quarterly basis. According to BNB calculations (using quarterly non-financial accounts of the general government sector and reports on the implementation of the Consolidated Fiscal Programme, published by NSI and MF respectively), the fall was largely due to lower private investment over the quarter, while government investment increased on a quarterly basis.

³⁹ The quarter-on-quarter analysis in this Chapter employs seasonally adjusted data, unless otherwise indicated. The seasonal adjustment of indicators, on which the NSI or Eurostat do not officially publish seasonally adjusted data, was made via the TRAMO SEATS or OxMetrics programme by using automated set up for diagnostics and optimisation of adjustment parameters.

Contribution to GDP Growth by Final Use Component

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



Note: Non-additive data due to direct chain-linked and seasonal adjustment of GDP and its components; the contribution of the change in inventories has not been included.

Sources: the NSI, BNB calculations.

Firms and households' sentiment measured by indicators from the NSI business climate and consumer confidence surveys continued to improve in the first quarter of 2017. Expectations of the future economic activity in the total economy remained at relatively high levels, with the services sector exhibiting a stronger improvement. The share of corporations in construction and services planning to increase the number of employees in the following three months also went up.

In the second and third quarters of 2017 the stronger demand for labour by firms, rising labour income of households and the optimistic consumer sentiment are expected to encourage private consumption. Firms are anticipated to expand their investment activity and to hire new employees amid improving economic indicators and high production capacity utilisation. Although the uncertain economic environment remains the major factor hampering firms' activities, its impact is weakening affecting a smaller share of firms compared with the assessments in previous periods. In the services sector competition is becoming a leading factor.

In the second and third quarters of 2017 government investment and consumption are expected to contribute positively to GDP growth.

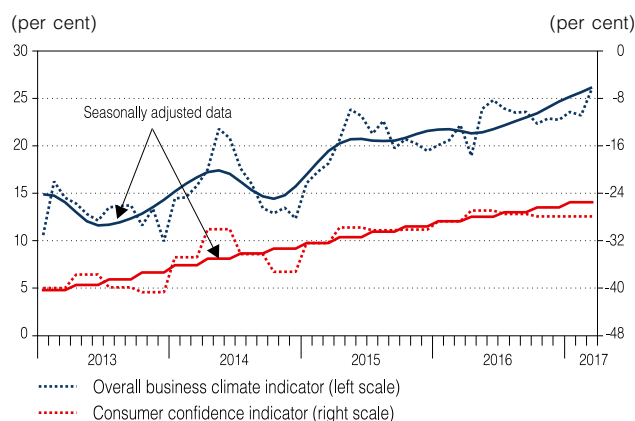
Enhanced demand for goods and services is expected to lead to a gradual decline in the contribution of changes in inventories to growth.

The increasing domestic demand is expected to result in an increase in imports of goods and services and hence, in a lower net exports contribution to economic growth.

Based on these component developments, in early 2017 real GDP growth is anticipated to moderate slightly on both quarterly and annual basis. The higher positive contribution of domestic demand to growth is anticipated to be partly offset by the lower contribution of the changes in inventories and net exports.

The external environment remains a key source of uncertainty, contributing to lower than expected real GDP growth in Bulgaria. A possible increase in the external uncertainty can negatively affect both goods and services exports and investment activity in Bulgaria. The

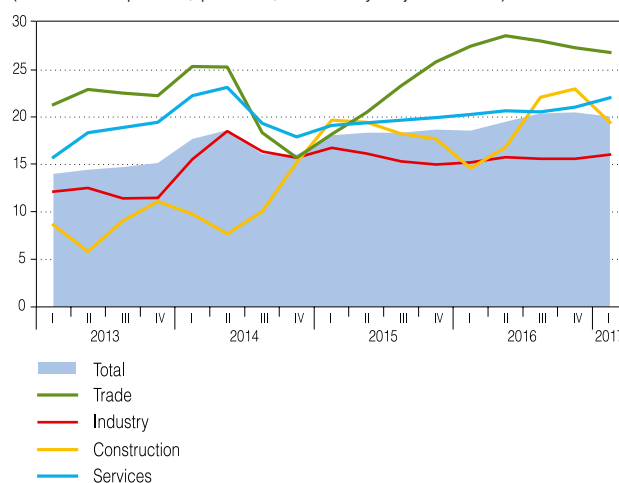
Business Climate and Consumer Confidence



Sources: the NSI, BNB calculations.

Expectations about Future Economic Activity

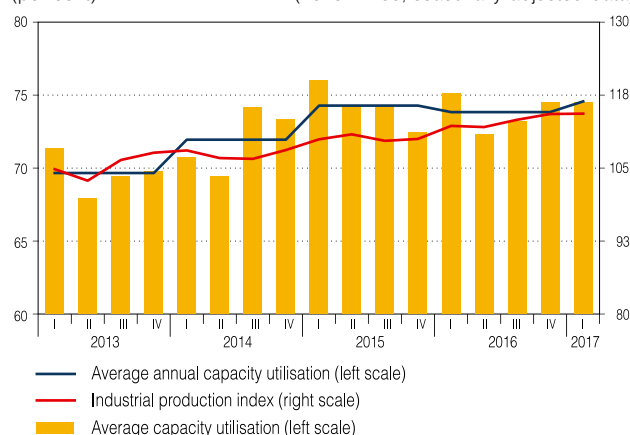
(balance of opinions, per cent; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Industrial Production Index and Production Capacity Utilisation in Industry

(per cent) (2010 = 100; seasonally adjusted data)



Note: Data on the industrial production index for the first quarter of 2017 are averaged for the January–February period.

Sources: the NSI, BNB calculations.

Real GDP Growth by Component of Final Use

(per cent, quarter-on-quarter; seasonally adjusted data)

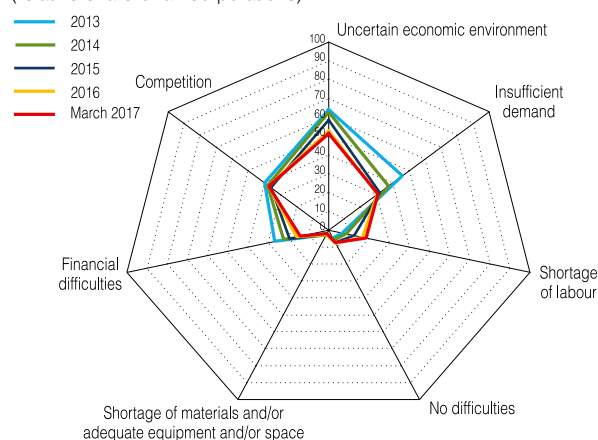
	2014				2015				2016			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Consumption	2.3	-0.7	-1.1	-0.3	2.9	0.7	1.5	0.7	-1.5	0.5	0.5	1.3
incl.												
Household consumption	2.4	-0.3	-0.7	0.6	2.0	1.0	1.8	1.1	-0.9	0.1	0.7	1.3
Government final consumption expenditure	2.7	-2.4	1.2	-5.3	2.7	2.2	-1.6	-0.1	0.1	0.9	0.8	1.4
Collective consumption	-0.4	-0.8	-2.6	-0.9	3.2	-0.9	0.0	-0.5	-2.7	1.1	0.6	1.7
Gross fixed capital formation	0.4	1.3	-0.9	-1.1	0.6	2.3	0.9	0.9	-0.4	-1.4	-0.9	-1.8
Exports of goods and non-factor services	-2.8	5.1	1.6	3.8	1.4	-0.6	-1.7	3.0	1.8	1.4	3.0	0.5
Imports of goods and non-factor services	4.7	-0.7	2.4	1.8	4.2	-1.4	-1.8	3.7	0.5	0.5	2.7	1.7
GDP	0.0	0.6	0.6	1.0	1.1	0.8	0.9	0.9	0.8	0.9	0.7	0.9

Source: the NSI.

higher than expected real GDP growth is likely to materialise in case of better than projected absorption of EU funds and, correspondingly, stronger government investment. Low interest rates and oil prices are another factor which can help achieve higher than expected growth rates in private consumption and private investment.

Factors Limiting Economic Activities of Corporations

(relative share of all corporations)



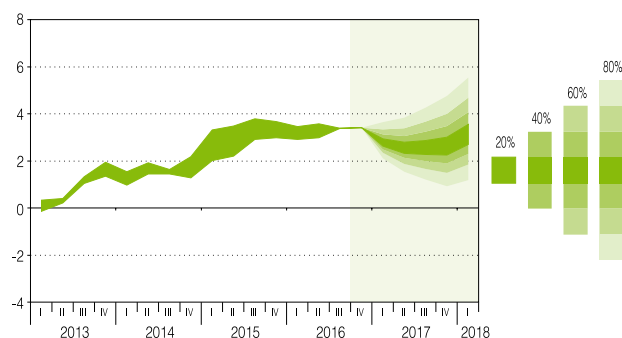
Note: Average for the period calculated as sector-weighted (industry, construction, trade and services).

Sources: the NSI, BNB calculations.

Fan Chart of the Expected Annual Rate of Change of GDP

(per cent, seasonally adjusted data)

(per cent, seasonally adjusted data)



Note: The fan chart shows the expert views of the forecasters on the uncertainty surrounding the projected value based on a probability distribution. The reporting period shows revisions of GDP growth estimates. The middle band of the chart, depicted in the darkest colour, includes the central projection and the probability distribution shows 20 per cent probability for the actual value to fall in this band in each of the quarters. If neighbouring bands (in the same brighter colour) are added to the middle band, there would be a 40 per cent coverage of the probability mass. Thus, by adding each same colour couple of bands, the probability for the value to fall there would be increased by 20 percentage points to reach 80 per cent. The probability for the value to remain outside the coloured part of the chart is 20 per cent based on the distribution chosen.

Source: the BNB.

Exports and Imports of Goods and Services

In 2016 nominal exports of goods increased by 2.6 per cent on an annual basis and nominal imports of goods decreased by 1.0 per cent.⁴⁰ According to non-seasonally adjusted GDP data, in 2016 real annual growth in exports of goods came to 6.6 per cent on an annual basis, while real imports of goods increased by 3.8 per cent. Cross-checking the changes in exports and imports of goods in nominal and real terms suggests that the dynamics of global prices continued limiting nominal growth of international trade flows throughout the year. The balance of payments data signal a recovery in nominal growth of imports of goods and accelerated growth in exports of goods on an annual basis in early 2017.

In the second and third quarters of 2017 real exports and imports of goods are expected to continue increasing year on year, with growth in imports outpacing that in exports. The dynamics of real exports will be in line with the expectations of increasing external demand. Concurrently, real imports of goods will reflect the expected recovery of investment growth in Bulgaria and the projected increase in private consumption. The anticipated increase in global prices of major commodity groups in the second half of 2017 will have a positive effect on nominal exports and imports growth.

According to the balance of payments data for 2016 exports and imports of services increased compared with the corresponding period of 2015. According to national accounts data for 2016 this was mainly due to increased real volumes and prices of exported goods, while in imports this reflected increased price component of imported services. In early 2017 nominal exports of services decreased on an annual basis, while imports of services increased from early 2016.

The upward trend in the number of visits of foreign tourists in Bulgaria is expected to be sustained in the second and third quarters of 2017 which will prompt an increase in real exports of services on an annual basis. Concurrently, the average real imports of services is expected to increase over the projection horizon in line with

Net Exports of Commodity Groups by Use, January–December 2016

	Balance (EUR million)	Change* (EUR million)	GDP growth** (per cent)	Growth of imports** (per cent)
Consumer goods	327.4	-169.0	3.0	6.3
Raw materials	-127.9	136.6	-1.8	-3.2
Investment goods	-1551.4	318.4	13.8	5.3
Energy resources	-1069.3	579.8	-4.0	-16.2
Other exports	-93.1	-5.8	10.9	8.0
Total	-2514.3	859.9	2.6	-1.0

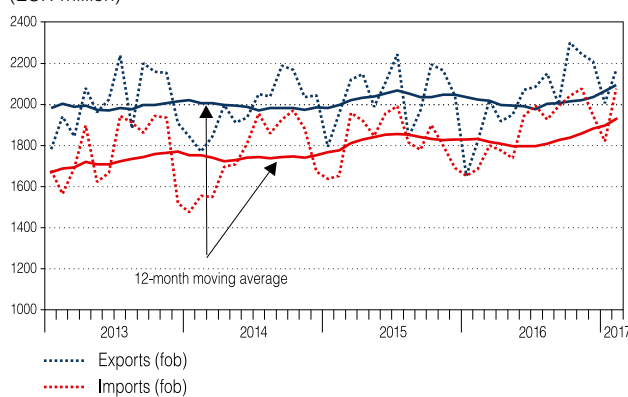
* Balance change on same period of previous year.

** Exports and imports growth for the period on an annual basis.

Source: the BNB.

Exports and Imports of Goods Dynamics

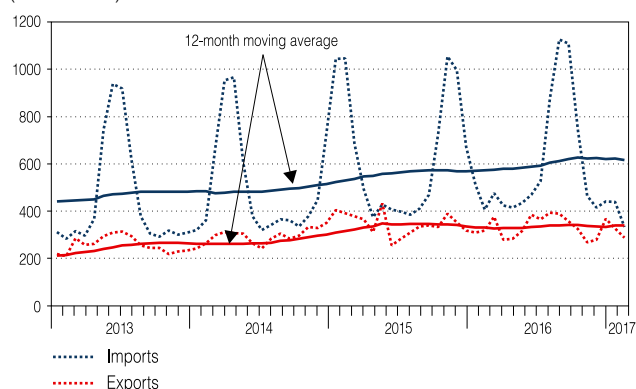
(EUR million)



Source: the BNB.

Exports and Imports of Services Dynamics

(EUR million)



Source: the BNB.

⁴⁰ Foreign trade data.

the upward trend in Bulgarians' visits abroad recorded in 2016 and as a result of projected acceleration of domestic demand.

In 2016 exports of goods to EU Member States increased by 7.2 per cent on an annual basis reflecting the improvement of EU economic activity. Exports to Germany, Romania and Greece contributed most markedly to growth. Exports of animal and plant products, and machines contributed most significantly to the dynamics of exports to EU Member States by commodity group. In the course of 2016 annual nominal growth of exports to EU Member States accelerated, and in January 2017 exports growth to the EU Member States came to 7.2 per cent. In 2016 exports to non-EU countries decreased by 5.9 per cent on an annual basis, with exports to Turkey and China contributing most substantially to this fall. By the end of 2016 and early 2017 annual growth of exports to non-EU countries recovered, with higher exports of mineral fuels being the major factor behind the recovery.

In 2016 the share of exported goods to EU Member States increased at the expense of that to non-EU countries to reach 67.6 per cent. On the other hand, as a result of higher annual exports of mineral products and base metals to non-EU countries, in January 2017 the share of exports to non-EU countries increased compared with January 2016.

Nominal exports of all commodity groups under the Combined Nomenclature, excluding energy products⁴¹ and metals,⁴² posted an increase on an annual basis in 2016. Exports of machines and animal and plant products had the most sizeable positive contribution to overall exports growth in 2016. In January 2017 the downward trend in exports of energy products and metals was reversed and these groups had the most significant positive contribution to overall exports growth.

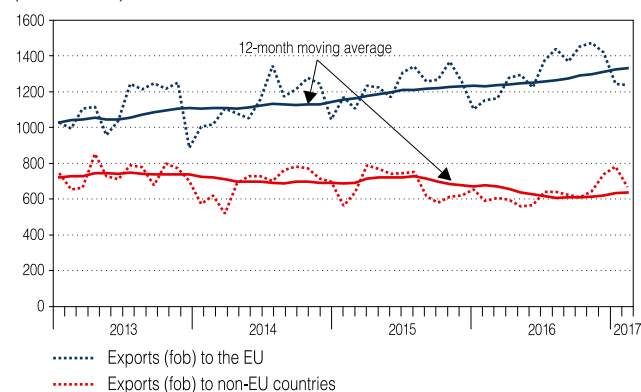
In 2016 exports of machines continued to increase year on year. This trend reflected both the increase in the exported volumes and

⁴¹ In this chapter it should read mineral products and fuels group under the Combined Nomenclature.

⁴² In this chapter, it should read the base metals and their products group under the Combined Nomenclature.

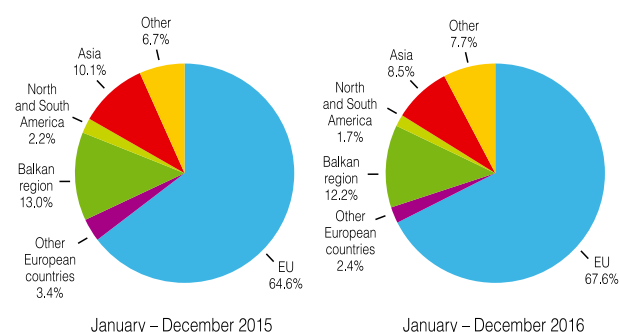
Dynamics of Exports to EU and non-EU Countries

(EUR million)



Source: the BNB.

Exports of Goods Geographical Breakdown



Source: the BNB.

Exports by Commodity Group, January–December 2016

	EUR million	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Wood products, paper, ceramics and glass	1 240.0	38.1	3.2	0.2
Machines, vehicles, appliances, instruments and weapons	6 123.8	589.0	10.6	2.6
Mineral products and fuels	2 815.0	-277.6	-9.0	-1.2
Base metals and related products	3 159.5	-468.4	-12.9	-2.0
Animal and vegetable products, food, drinks and tobacco	4 037.0	306.1	8.2	1.3
Textiles, leather, clothing, footwear and other consumer goods	3 261.3	241.3	8.0	1.0
Chemical products, plastics and rubber	2 939.1	165.0	5.9	0.7
Total exports	23 575.8	593.5	2.6	

* Change on the corresponding period of previous year.

** Growth/contribution to growth of total exports over the period on an annual basis.

Source: the BNB.

price rises.⁴³ A sizeable increase in the nominal exports of this group was observed in exports to both EU and non-EU countries. Despite the slight decline in nominal exports of machines reported in January 2017, in the second and third quarters of 2017 exports of machines are expected to increase driven by growing external demand.

Nominal exports of energy products posted a decline on an annual basis in 2016 reflecting the fall in international oil prices. Concurrently, exported physical volumes rose⁴⁴ on 2015. A year-on-year decline was reported in exports to both EU Member States and non-EU countries. Over 2016 the annual decrease in nominal exports of mineral products tended to slow down, and in the fourth quarter of 2016 and in early 2017 exports posted an increase driven by the recovery of petroleum prices. In the second and third quarters of 2017 exported mineral products are expected to continue to increase against the background of increasing global prices of petroleum products,

In 2016 exports of base metals declined compared with 2015 reflecting mainly the dynamics in the first half of the year and the temporary contraction in manufacturing of copper products due to renovation and extension of production capacities in a key sector undertaking.⁴⁵ With the recovery of the production, exports of base metals increased at the end of 2016 and in early 2017. Metal prices, rising at the close of 2016, had an additional positive effect.⁴⁶ By geographical breakdown a decline in exports of metals in 2016 was reported in both to EU and non-EU countries. Data for January 2017 suggest a parallel increase in the group exports to both EU Member States and non-EU countries. In the second and third quarters of 2017 nomi-

⁴³ The quarterly export deflators for the machines, equipment and vehicles group under the Standard International Trade Classification (SITC) were used to estimate the price effect in 2016.

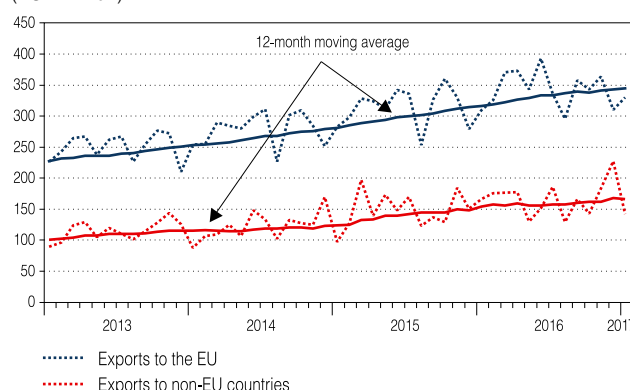
⁴⁴ According to the Balance of Payments of Bulgaria, January 2017, p. 56 and using the quarterly export deflators of the mineral fuels, oils and related products group under the Standard International Trade Classification (SITC) in 2016.

⁴⁵ According to the press release published on 10 May 2016 on the Aurubis website: <http://bulgaria.aurubis.com/bg/novini-i-publikacii/sobshchenija-za-mediite/aurubis-otchita-dobri-rezultati-za-shestmesechieto/>

⁴⁶ The quarterly export deflators for the precious and other non-ferrous metals under SITC were used to estimate the price effect in the fourth quarter of 2016.

Exports of Machines, Vehicles, Appliances, Instruments and Weapons

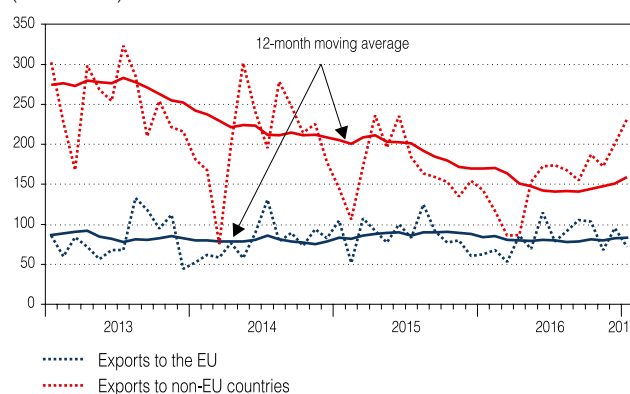
(EUR million)



Source: the BNB.

Exports of Mineral Products and Fuels

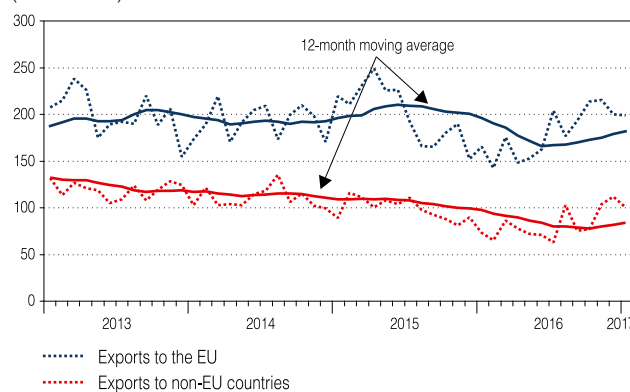
(EUR million)



Source: the BNB.

Exports of Base Metals and Related Products

(EUR million)



Source: the BNB.

nal exports of metals are expected to continue to increase due to the projected year-on-year price rise in metals.

The nominal exports of animal and plant products increased in 2016 due to the higher exported physical volumes. Concurrently, lower year-on-year prices had a dampening effect on the group's nominal exports.⁴⁷ By geographical breakdown, growth in exports of animal and plant products was due mainly to higher exports to EU Member States. By the end of 2016 year-on-year growth in nominal exports of animal and plant products slowed down. The early 2017 saw a slight decline reflecting mainly lower annual exports to non-EU countries, with the strongest decrease reported in exports to Turkey and Iran. Over the projection horizon, nominal exports of the group are expected to increase driven by higher external demand and the expected hike in international food prices in euro.

In 2016 and early 2017 exports of chemical products⁴⁸ rose markedly on an annual basis, with exports to EU Member States contributing most substantially to this growth. Larger physical volumes exported had the major positive contribution to nominal growth of exports in this group.⁴⁹ In the second and third quarters of 2017 exports in the group are expected to continue growing year on year supported by higher exported physical volumes.

According to balance of payments data, exports of services rose by 7.7 per cent in 2016. Higher year-on-year earnings from visits of foreign tourists in Bulgaria contributed most strongly to growth in exports of services. In 2016 travel earnings grew by 15.7 per cent on an annual basis, with NSI data showing an increase of 13.8 per cent in foreign tourists in Bulgaria compared with 2015. Growth was mainly due to the visits from Romania, Germany and Greece. In the beginning of 2017 exports of services declined markedly on an annual basis in all subitems except for the travel subitem.⁵⁰

⁴⁷ The quarterly export deflators for the food and live animals group under SITC were used to estimate the price effect in 2016.

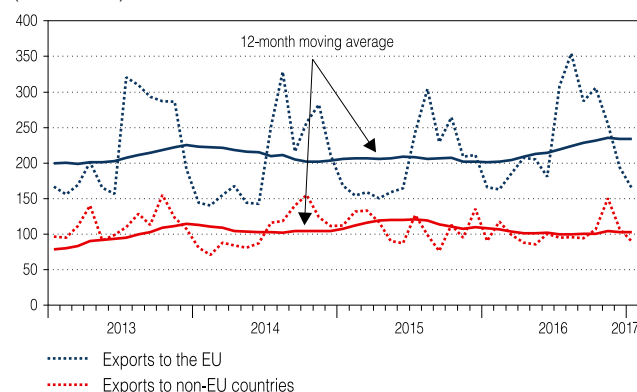
⁴⁸ The chemical products, plastics and rubber group under the Combined Nomenclature.

⁴⁹ The quarterly export deflators for the chemicals and chemical products group under SITC were used to estimate the price effect in 2016.

⁵⁰ Preliminary data subject to revision.

Exports of Animal and Plant Products, Food, Drinks and Tobacco

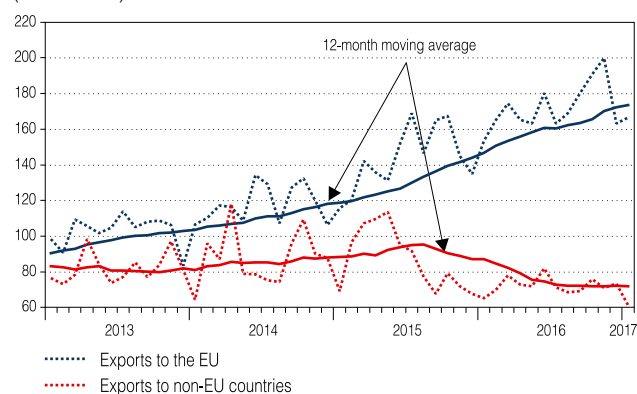
(EUR million)



Source: the BNB.

Exports of Chemical Products, Plastics and Rubber

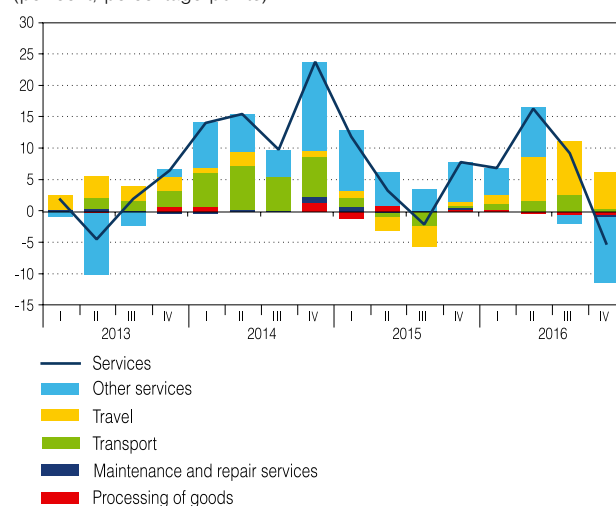
(EUR million)



Source: the BNB.

Annual Change of Exports of Services and Contribution by Subcomponents

(per cent, percentage points)



Source: the BNB.

Nominal imports of goods posted a decline on an annual basis in 2016 due to lower import prices. Energy resources, followed by raw materials, contributed most markedly to the nominal decline in imports by use. Although total imports of goods declined in 2016, the second half-year saw an increase on an annual basis. In the beginning of 2017 there were indications that this trend will be sustained, with imports of energy resources and raw materials in January having the most sizeable positive contribution to growth, which could be explained by the rising international prices of major commodity groups.

Imports of goods from EU Member States increased by 2.6 per cent on an annual basis over 2016, and the trend was sustained also in January 2017. Imports from Germany, Poland and Italy had the largest positive contribution to growth. Imports from non-EU countries recorded a 5.1 per cent fall in 2016 compared with 2015, with imports from Russia contributing mostly to the decline. Imports from Russia are almost entirely made up of petroleum products and the reported decline was due to the falling international prices of petroleum products in most months of the year. The quarter-on-quarter downward trend in imports from non-EU countries was reversed in the fourth quarter and in January 2017 imports from non-EU countries grew by 16.0 per cent on an annual basis. In 2016 the share of imports from EU Member States increased on an annual basis (to 54.9 per cent), while in January 2017 the share of imports from non-EU countries rose at the expense of that from the EU Member States.

In 2016 imports of energy resources reported the strongest decline on an annual basis which was entirely due to lower prices,⁵¹ while imported physical volumes posted growth. As a result of higher international prices of petroleum products at the end of 2016 and in early 2017 imports of energy resources increased on an annual basis in January 2017. Reflecting the expectations of increasing petroleum prices in US dollars and in euro, the nominal imports of energy products are expected to continue growing on an annual basis in the second and third quarters of 2017.

⁵¹ According to the Balance of Payments of Bulgaria, January 2017, p. 56.

Imports of Commodity Groups by Use, January–December 2016

	EUR million	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Consumer goods	5 954.5	354.8	6.3	1.3
Raw materials	9 367.6	-306.1	-3.2	-1.2
Investment goods	7 108.0	357.3	5.3	1.4
Energy resources	3 521.2	-682.8	-16.2	-2.6
Other imports	139.0	10.3	8.0	0.0
Imports (CIF)	26 090.1	-266.4	-1.0	

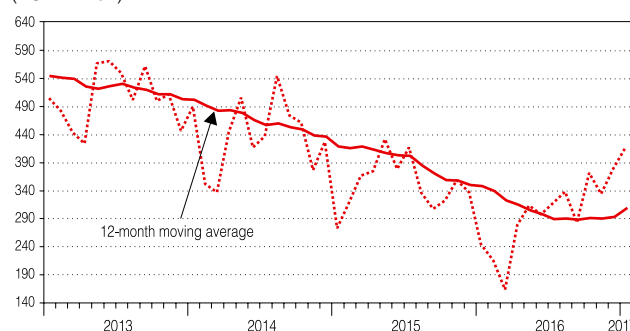
* Change on the corresponding period of previous year.

** Growth/contribution to total import growth over the period on an annual basis.

Source: the BNB.

Imports of Energy Resources

(EUR million)



Source: the BNB.

Imports of the raw materials group also went down on an annual basis in 2016 and had a significant negative contribution to the decline in overall nominal imports. The assessment of price changes shows that the drop in the group's imports was due to the fall in import prices.⁵² Imports of metal ores had the largest negative contribution in nominal terms which was ascribable to lower production in a key undertaking for the sector due to repair works and expansion of production capacity.⁵³ Despite the decline reported in total group's imports for 2016, the output recovery and higher international prices of major commodity groups pushed up nominal imports of raw materials on an annual basis at the end of 2016 and early 2017. In the second and third quarters of 2017 imports of raw materials are expected to continue recovering driven by increasing international prices of major commodity groups.

Imports of consumer goods rose in 2016 on an annual basis in line with increasing domestic demand. Clothing and footwear and food, drinks and tobacco subgroups contributed most markedly to growth. In early 2017 this group's imports continued to grow and the annual growth rate accelerated. Imports of the group are projected to grow in the second and third quarters of 2017 supported by the expected increase in private consumption.

In 2016 nominal imports of investment goods increased on 2015 and had the largest positive contribution to the change in total imports of goods. Given the year-on-year decline in government investment in real terms over 2016, it is assumed that the dynamics of imported investment goods throughout the year is in line with the estimated annual growth of private investment. In 2016 group's imports growth was driven by higher imported physical volumes, while prices posted a decrease on an annual basis.⁵⁴ The trend toward an annual increase in the imports of investment goods was sustained

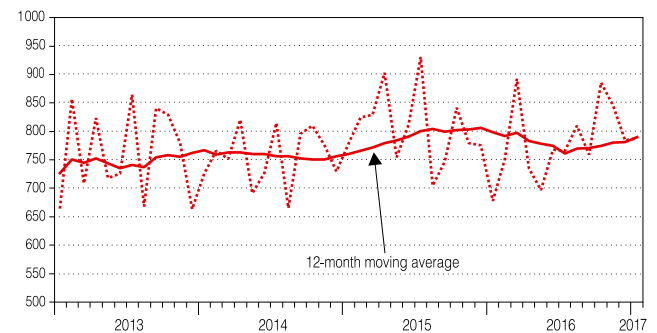
⁵² The quarterly import deflators of the groups of food and live animals, inedible (crude) materials (excluding fuels); chemicals and chemical products and manufactured goods classified chiefly by materials under the SITC were used to estimate the price effect in 2016.

⁵³ See footnote 45.

⁵⁴ The quarterly import deflators for the machines, equipment and vehicles group under SITC were used to estimate the price effect in 2016.

Imports of Raw Materials

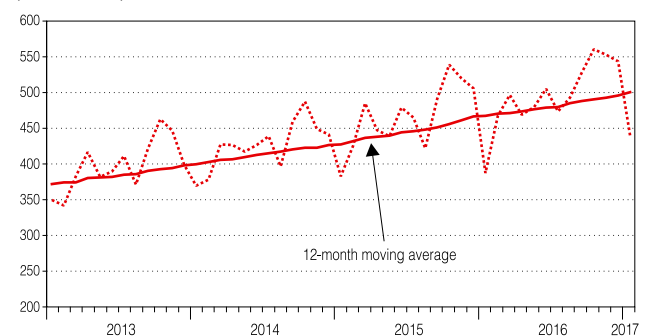
(EUR million)



Source: the BNB.

Imports of Consumer Goods

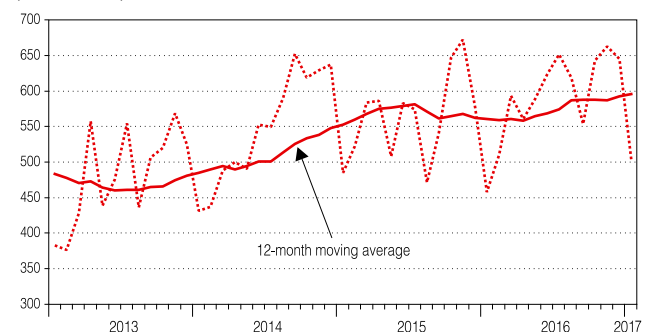
(EUR million)



Source: the BNB.

Imports of Investment Goods

(EUR million)



Source: the BNB.

in January 2017, with the spare parts and equipment and machines, vehicles and appliances subgroups having the main positive contribution in the beginning of the year. As a result of the expected investment growth dynamics, the projections for the second and third quarters of 2017 point to an increase in investment goods' nominal imports.

According to balance of payments data, in 2016 imports of services rose by 2.3 per cent year on year, a trend which was also observed in early 2017. Higher expenditures on travel of residents abroad contributed most significantly to growth of imported services. According to NSI data, Bulgarians' visits abroad in 2016 increased by 16.4 per cent on an annual basis, with the visits to Greece, Romania and Serbia having the most significant contribution to this growth.

Behaviour of Firms and Competitiveness

Real value added in total economy accelerated its growth rate in the fourth quarter of 2016 increasing by 0.9 per cent on a quarterly basis (0.6 per cent in the previous quarter). The services and industry sectors contributed positively to growth over the quarter, while construction and agriculture had a negative contribution.

The value added in industry increased by 0.9 per cent, with the trends in the national accounts data being also supported by the short-term statistics according to which the growth rate of industrial turnover gradually accelerated in 2016.

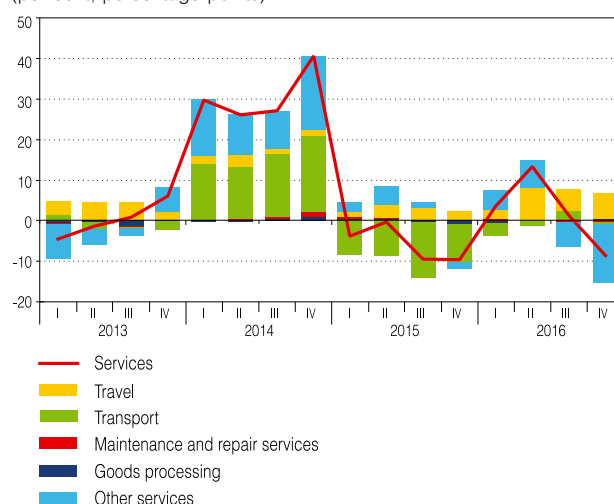
The value added in services rose by 1.1 per cent. All subsectors exhibited positive rates of change on the previous quarter, with the trade subsector contributing most markedly.⁵⁵ Value added growth in trade was accompanied by the continuous upward trend in the retail trade turnover, suggesting enhanced demand in the fourth quarter of 2016.

Real value added in construction posted a quarter-on-quarter decline based on national accounts data, while the construction production index slightly increased on the previous quarter, entirely due to the contribution of building con-

⁵⁵ Trade, repair of motor vehicles and motorcycles, transport, storage and mail services, hotels and restaurants sector by A10 breakdown of economic activities.

Annual Change in Imports of Services and Contribution by Subcomponents

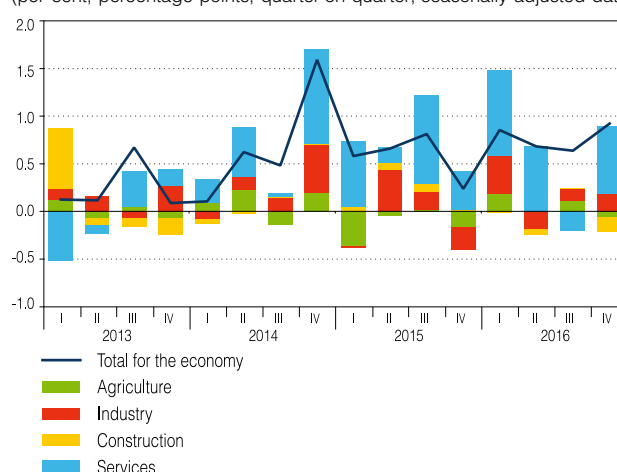
(per cent, percentage points)



Source: the BNB.

Value Added Growth and Contribution by Sector

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

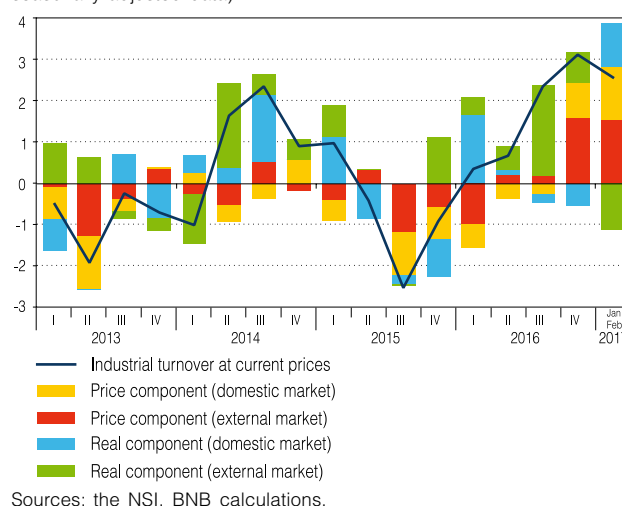


Note: Non-additive data on contributions due to direct seasonal adjustment of value added and its components.

Sources: the NSI, BNB calculations.

Industrial Turnover Dynamics

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



Sources: the NSI, BNB calculations.

struction. A significant rise was reported in the number of permits for construction of new buildings, reflecting mainly the increase in residential and other buildings.

The NSI short-term business statistics data on production and turnover in industry, trade and construction production in January and February gave positive signs of the change in gross value added in the first quarter of 2017. On average over the period, the nominal industrial turnover increased on both the external and domestic market. Quarterly changes in the price component and the real turnover on the domestic market contributed positively to this effect, while the real turnover on the external market had a negative contribution. The growth rate in retail trade in 2016 was sustained in early 2017, the index posting an average increase of 0.7 per cent in the January–February period as compared with the previous quarter. The construction production index slightly decreased over the reviewed period.

Firms' optimistic assessment of the expected business situation in early 2017, improving economic indicators and the weaker effect of the uncertain economic environment, as a factor limiting corporations' activities, are supposed to preserve the positive rates of real growth in the economy in the second and third quarters of 2017.

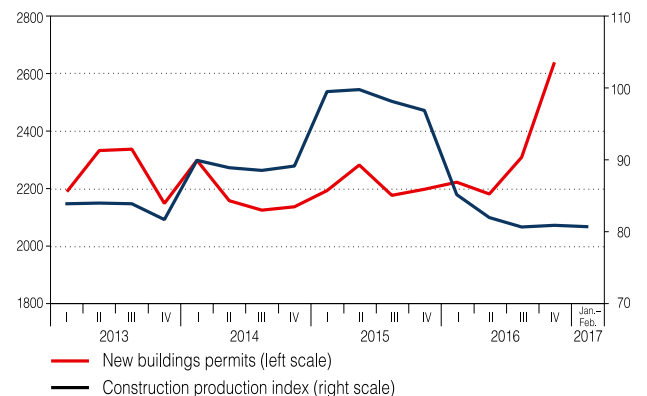
Over the fourth quarter of 2016 overall employment in the economy rose by 0.5 per cent on the previous quarter. Agriculture alone had a positive contribution to employment growth, while the contribution of other sectors was negative. Within the services subsectors trade contributed most markedly to the overall decline in employment, while the information and communication sector⁵⁶ and the general government sector⁵⁷ had a positive contribution. The gradual increase in the number of available jobs coupled with the improving firms' expectations for the staff and future business climate in Bulgaria are indicative of retaining the longer upward trend in labour demand by firms and an increase in employment in 2017, accordingly.

⁵⁶ Information and communication sector by A10 breakdown of economic activities.

⁵⁷ Public administration, education, human health and social work activities sector by A10 breakdown of economic activities.

Construction Production Dynamics and New Buildings Permits Issued

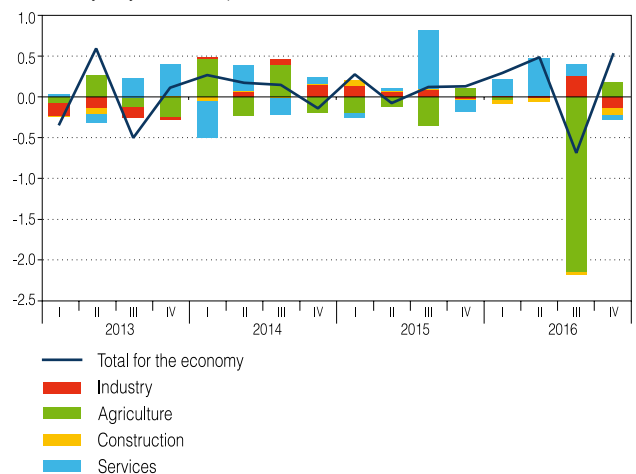
(number of buildings; seasonally adjusted data) (2010 = 100; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Contribution to Changes in the Number of Employed by Economic Sector

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

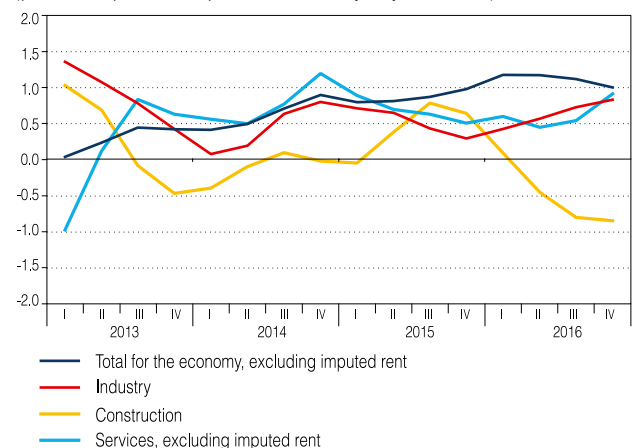


Note: Non-additive data on contributions due to direct seasonal adjustment of the total amount and its components.

Sources: the NSI, BNB calculations.

Labour Productivity Developments (Value Added per Employee)

(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Labour productivity in the total economy continued to increase on a quarterly basis in the fourth quarter of 2016. A decline was reported only in construction, while productivity growth in industry and services has accelerated since early 2016.

In the fourth quarter of 2016 the compensation *per* employee in the total economy remained relatively unchanged in nominal terms compared with the previous quarter as a result of divergent sector developments. In industry and in most services subsectors the indicator posted an increase on a quarterly basis, while construction, financial and insurance activities, and trade reported a decrease.

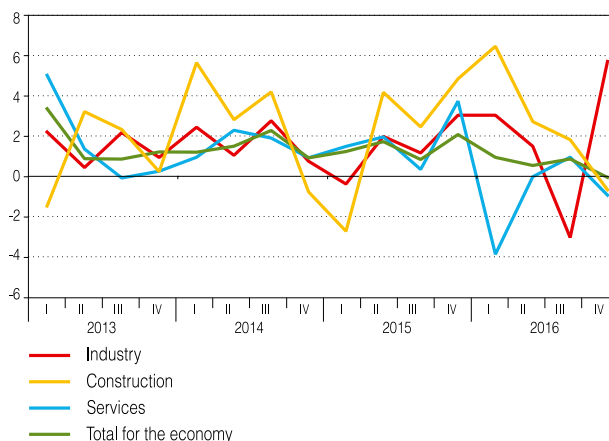
The relatively stable growth rate of compensation *per* employee and increasing labour productivity prompted a decline in both nominal and real unit labour costs in the total economy over the fourth quarter of 2016. Over the same period the industrial indicator rose, reflecting the enhanced growth rate in unit labour costs of the sector.

As a result of optimised labour cost policies the operating surplus of firms increased by 2.5 per cent on a quarterly basis in the total economy over the fourth quarter of 2016. Services subsectors, which balanced developments in other economic sectors, contributed most significantly to growth in the quarter.

The growth breakdown by production factor suggests that the major contribution of the total factor productivity was sustained in the fourth quarter of 2016. As a result of high capacity utilisation rates the contribution of capital was also positive. The low but positive contribution of labour reflects the upward employment dynamics in the total economy.

Compensation *per* Employee at Current Prices

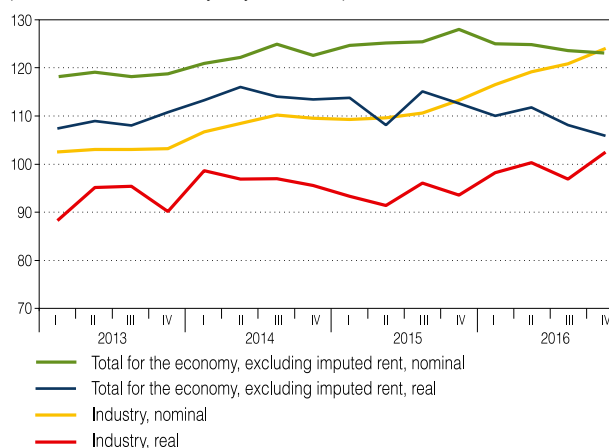
(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Unit Labour Costs

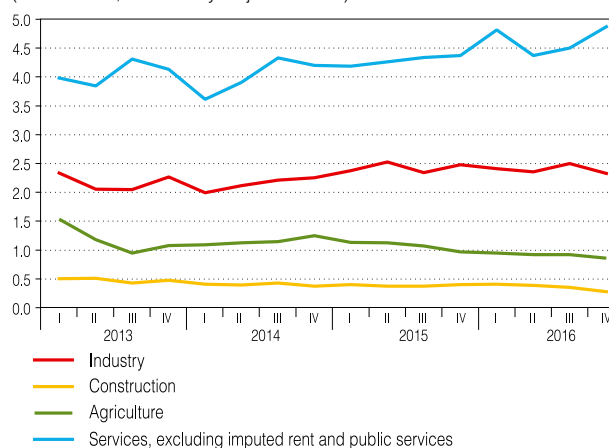
(2010 = 100; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Gross Operating Surplus at Current Prices

(BGN billion; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Gross Value Added Growth

(per cent, quarter-on-quarter; rate, seasonally adjusted data)

	2014				2015				2016			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Agriculture, forestry, hunting and fishing	2.0	4.8	-3.0	4.1	-7.6	-1.1	0.4	-3.8	4.4	-0.2	2.6	-1.5
Mining and quarrying, manufacturing; electricity, gas and water supply	-0.4	0.6	0.7	2.4	-0.1	2.0	0.9	-1.1	1.9	-0.8	0.6	0.9
Construction	-0.7	-0.4	0.2	0.2	0.9	1.1	1.3	0.4	-0.3	-0.9	0.1	-2.5
Wholesale and retail trade; repair of motor vehicles and motorcycles, transportation and storage; accommodation and food service activities	-1.0	1.4	0.2	1.7	1.7	1.8	1.8	0.9	1.9	1.1	0.8	1.5
Information and communications	0.1	0.3	0.6	1.5	-0.1	0.2	-0.4	1.0	2.9	3.5	-0.1	0.9
Financial and insurance activities	0.9	2.1	-3.3	0.3	1.2	-6.4	5.4	0.4	1.3	1.3	-4.2	1.3
Real estate activities	0.7	-0.9	1.4	1.9	0.6	1.3	1.1	0.1	1.2	1.1	0.0	1.0
Professional, scientific and technical activities; administrative and support service activities	1.7	-1.0	0.4	1.5	3.7	2.5	0.6	2.0	0.3	-1.5	-0.6	1.8
Public administration and defence; compulsory social securities; education, human health and social work activities	2.0	1.1	-0.1	1.4	-0.1	-0.3	0.3	-0.3	0.0	0.1	0.0	0.1
Arts, entertainment and recreation, repair of household goods and other services	-2.7	2.5	2.4	1.2	0.2	0.6	-0.8	2.0	2.6	3.6	-0.5	0.8
Gross value added, total for the economy	0.1	0.6	0.5	1.6	0.6	0.7	0.8	0.2	0.9	0.7	0.6	0.9

Source: the NSI.

Household Behaviour

In the fourth quarter of 2016 consumer demand continued to increase driven by the improved consumer sentiment and increasing labour income. The household savings rate remained at the high levels attained and labour supply declined.

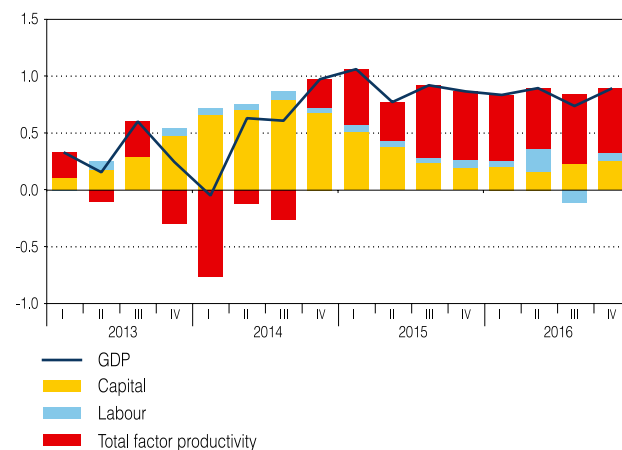
The NSI Labour Force Survey⁵⁸ shows that in the fourth quarter of 2016 labour supply, as measured by the labour force, continued to decrease accompanied by an increasing number of persons not in the labour force. Persons who do not want to work due to personal reasons contributed most markedly to the increased number of persons not in the labour force by reason for inactivity. The labour force participation rate⁵⁹ declined on the previous quarter as people exited the labour force. The recovering demand for labour, measured by the improved business expectations about the number of personnel coupled with the higher minimum wage and the gradually increasing contributory service at retirement are expected

⁵⁸ The labour force (currently economically active population) comprises persons aged 15 and older who provide or supply labour for the production of goods or services. Labour force includes both employed and unemployed persons.

⁵⁹ The labour force participation rate is the proportion between economically active persons (labour force) and the population of the same age.

Contribution of Changes in Production Factors to GDP Growth

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

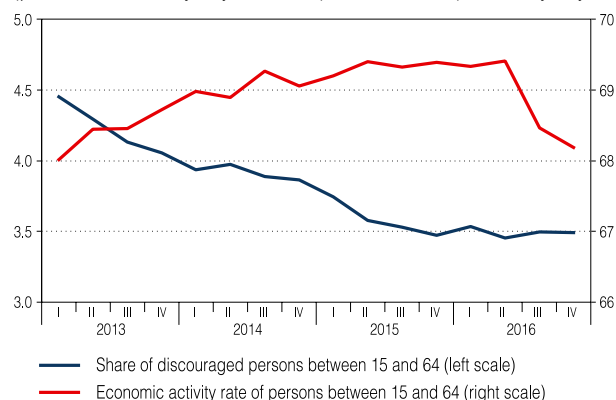


Sources: the NSI, BNB calculations.

Economic Activity and Share of Discouraged Persons

(per cent; seasonally adjusted data)

(seasonally adjusted)



Sources: NSI Labour Force Survey, BNB calculations.

to motivate working-age persons to join labour force in the following quarters.

The Labour Force Survey shows that in the fourth quarter of 2016 the unemployment rate⁶⁰ continued to decline and reached 6.7 per cent (the seasonally adjusted unemployment rate also came to 6.7 per cent). A decline was reported both in short-term unemployed and unemployed for more than two years. The seasonally adjusted unemployment rate⁶¹ calculated using the Employment Agency data also continued to decrease, reaching 7.3 per cent in March 2017 (8.0 per cent according to non-seasonally adjusted data).

Higher employment rates and wage growth contributed to the further increase in household labour income in the fourth quarter of 2016 (both annually according to non-seasonally adjusted data on wage bill and average wage *per* employee, and quarterly according to seasonally adjusted national accounts data). Concurrently, the consumer confidence indicator went up in January 2017 due to prevailing better expectations of households for their financial position and the level of unemployment reported in the NSI Consumer Survey.⁶² High levels of consumer confidence and the increasing labour income had a positive effect on consumer demand.

According to national accounts data, household consumption continued to increase both on annual and quarterly basis in the fourth quarter of 2016. Retail trade turnover also increased over the reviewed period, with the data reported in the first two months of 2017 indicating a continuing moderate growth in private consumption. The trends in consumer lending remained

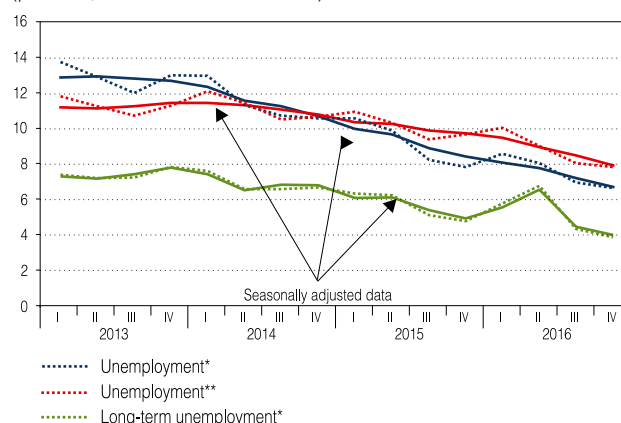
⁶⁰ Unemployment rate is the proportion between the number of unemployed and the labour force based on Labour Force Survey data.

⁶¹ The definition of the unemployment rate according to the Employment Agency corresponds to that referred to in footnote 60, but using a constant rate of labour force comprising the number of persons in the respective age group since the last census of the population.

⁶² Final results of the Consumer Survey represent balances of opinions calculated as a difference between the relative shares of positive and negative opinions on raised issues. The composite consumer confidence indicator is calculated as the arithmetic mean of expectation balances in the following 12 months for the development of: financial position and savings of households, the overall economic situation in the country and unemployment (the latter with the sign reversed).

Unemployment Rate

(per cent, share of the labour force)



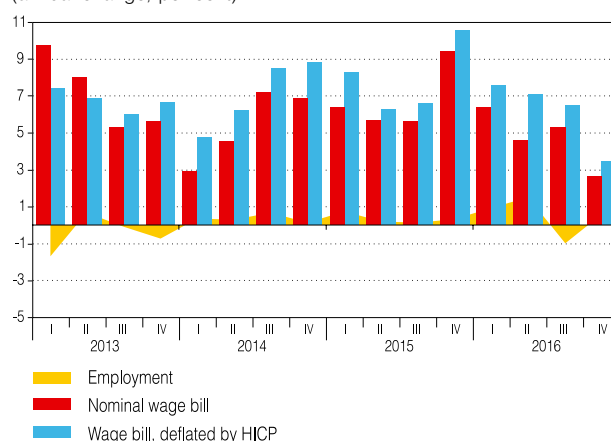
* NSI data.

** Employment Agency data.

Sources: NSI Labour Force Survey, Employment Agency, BNB calculations.

Employment and Nominal Wage Bill

(annual change, per cent)

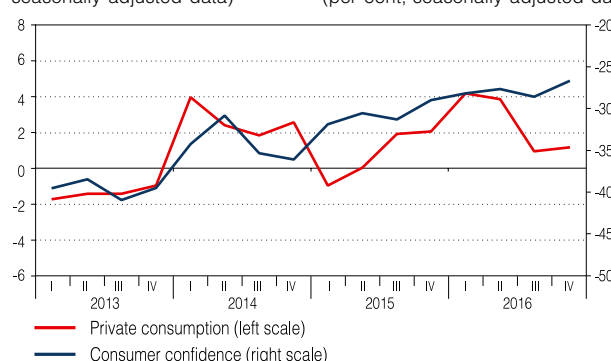


Sources: the NSI – SNA, BNB calculations.

Private Consumption and Consumer Confidence

(annual change, per cent;
seasonally adjusted data)

(per cent, seasonally adjusted data)



Sources: the NSI, BNB calculations.

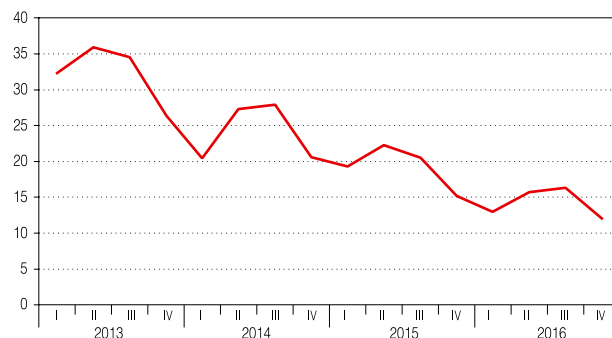
positive, with the amount of new consumer loans growing further in early 2017.

These factors combined with improving labour market conditions are expected to push up further private consumption in the second and third quarters of 2017.

The household savings rate increased slightly in the fourth quarter of 2016 and remained comparatively high. The NSI Household Budget Survey data show that the share of savings in household disposable income continued to increase. The share of households which intend to increase their savings in the following 12 months (according to the Consumer Survey of January 2017) remained also high. Net assets of households measured by their net position *vis-à-vis* the banking system (based on BNB monetary statistics data) continued to increase over the fourth quarter of 2016.

Household Unemployment Expectations in the Following 12 Months

(balance of opinions, per cent; seasonally adjusted data)

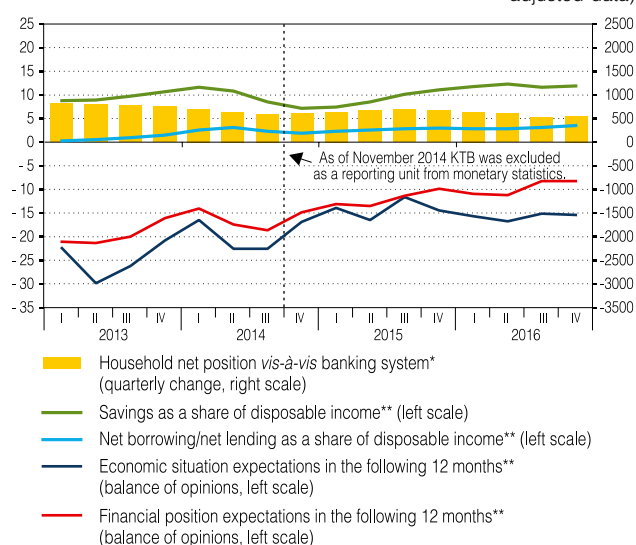


Source: NSI Consumer Survey.

Household Propensity to Save and Expectations

(per cent; seasonally adjusted data)

(BGN million; seasonally adjusted data)



* BNB data.

** NSI data.

Sources: NSI Household Budget Survey, NSI Consumer Survey, the BNB.

Employment and Income Dynamics

	2014				2015				2016			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
(per cent, quarter-on-quarter; seasonally adjusted data)												
Employed persons	0.3	0.2	0.2	-0.1	0.3	-0.1	0.1	0.1	0.3	0.5	-0.7	0.5
Nominal wage <i>per</i> employee*	1.0	1.6	2.3	0.6	1.5	1.7	0.8	2.1	0.7	0.5	1.2	-0.1
Real wage <i>per</i> employee**	1.5	2.2	2.5	1.1	1.9	1.4	1.4	3.0	0.6	0.8	0.8	-0.2
Wage bill, nominal terms	0.8	1.9	2.1	0.6	2.2	1.8	1.2	2.3	0.8	1.2	1.4	0.5
Wage bill, real terms**	1.3	2.5	2.2	1.1	2.5	1.5	1.8	3.1	0.7	1.5	1.1	0.4
(per cent, on corresponding quarter of previous year, non-seasonally adjusted data)												
Employed persons	0.3	0.3	0.7	0.1	0.8	0.2	0.2	0.3	0.9	1.5	-1.0	0.6
Nominal wage <i>per</i> employee*	3.5	4.3	7.3	7.3	5.5	5.1	4.2	8.1	4.8	2.5	3.7	0.6
Real wage <i>per</i> employee**	5.4	6.1	8.5	9.2	7.4	5.8	5.2	9.2	5.9	5.0	4.9	1.4
Wage bill, nominal terms	2.9	4.5	7.2	6.9	6.4	5.7	5.6	9.5	6.4	4.6	5.3	2.7
Wage bill, real terms**	4.8	6.3	8.5	8.8	8.3	6.3	6.6	10.6	7.6	7.1	6.5	3.5

* The wage is calculated according to NSI data (SNA), with social security contributions paid by the employer deducted from the compensation per employee. The difference is divided by the number of employees.

** Data deflated by HICP.

Sources: NSI – SNA, BNB calculations, Eurostat.

Retail Trade Turnover

(per cent, quarter-on-quarter; seasonally adjusted data at constant prices)

	2014				2015				2016				2017
	I	II	III	IV	I	II	III	IV	I	II	III	IV	January-February
Retail trade, excluding motor vehicles and motorcycles incl.	6.7	-0.8	1.8	1.8	11.0	-2.6	0.6	1.7	1.4	1.2	0.9	0.8	0.7
Food, drinks and tobacco products	14.0	2.9	2.2	0.9	1.7	1.8	2.1	2.6	3.9	2.0	1.2	1.5	1.3
Textile, clothing, footwear and leather	-10.0	9.7	7.6	-1.0	-5.5	3.4	2.7	5.5	0.2	3.8	-0.3	3.1	1.8
Household appliances, furniture and other household goods	-0.7	0.6	0.1	1.9	1.4	-0.4	0.9	-1.0	0.1	-0.2	-0.9	-0.3	0.4
Computer and communication equipment	-3.1	-3.1	-0.8	-1.7	16.6	-3.5	-0.2	-3.8	-8.7	8.1	2.0	5.9	-1.1
Pharmaceutical and medical goods, cosmetics and toiletries	3.7	1.9	1.9	3.3	2.4	2.0	1.7	2.0	-2.4	4.3	3.4	0.0	2.2
Unspecialised shops with different kinds of goods	1.7	1.9	0.6	-1.0	2.5	1.0	1.9	2.2	-10.5	2.1	1.6	0.8	3.9
Automobile fuels and lubricants	12.0	-3.6	7.3	-4.4	46.2	-8.9	-1.5	4.5	2.1	-1.2	-2.5	-3.0	-2.4

Source: the NSI, short-term business statistics.

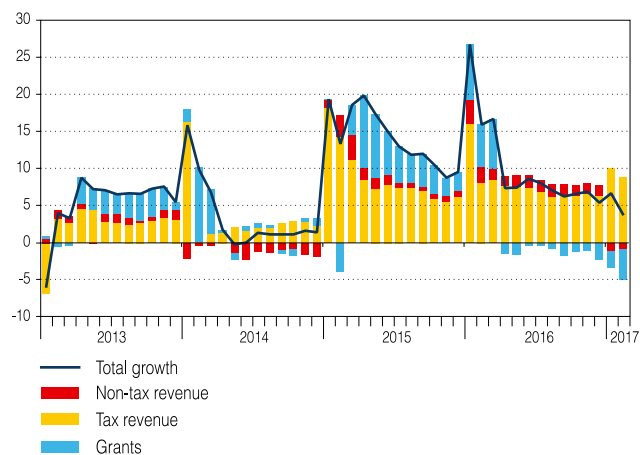
Impact of Fiscal Policy on the Economy

As of December 2017, cash surplus under the Consolidated Fiscal Programme amounted to BGN 832 million (0.9 per cent of projected GDP),⁶³ an insignificant worsening of the budgetary position by BGN 83 million (0.1 per cent of GDP) compared with the corresponding period of 2016.

The growth rate of total revenue and grants in the first two months of 2017 slowed down to 3.9 per cent as a result of reduced receipts from grants, which were not entirely offset by accelerated growth of tax revenue (11.5 per cent annual growth). The dynamics of tax revenue reflected both continuous growth of domestic demand and the increase in pension contributions, tobacco excise duties and minimum wage, effective since the beginning of 2017.⁶⁴ As a result of these changes in the tax and social security policies the growth rate of revenue from excise duties and social security contributions accelerated contributing most markedly to tax revenue growth compared with end-2016. Higher international prices, particularly petroleum prices, at the end of 2016 and in early 2017 had a positive effect on indirect tax revenue, with receipts from import VAT reporting positive year-on-year growth. Their growth entirely offset the slower increase in VAT

Contribution of Major Groups of Revenue to Growth in Total Revenue and Grants, Cumulatively (on an Annual Basis)

(per cent; percentage points)



Sources: the MF, BNB calculations.

⁶³ GDP forecasts of the Ministry of Finance for 2016 of the revised autumn macroeconomic forecast for the 2016–2019 period, published in November 2016.

⁶⁴ See the Basic Parameters of the 2017–2019 Budgetary Framework box, Economic Review, 4/2016.

receipts from domestic transactions and intra-Community acquisitions (net) due to the high base⁶⁵ since early 2016.

In the January–February 2017 period receipts from grants were funds received from the EC based on expenditure on EU programmes incurred at the end of 2016. They were much lower as compared with those in the corresponding period of the previous year, when a portion of the sizeable spending made at the end of 2015 on finalising the projects of the 2007–2013 programming period had been refunded.

In the first two months of the year total expenditure on the Consolidated Fiscal Programme posted an increase of 6.4 per cent reflecting mainly the rise in current expenditure. Social and health insurance payments contributed most markedly to total expenditure growth, with the enhanced increase reflecting partly the higher benefits for children with disabilities, effective as of 1 January 2017. The previous year's positive contribution of these transfers to growth of household disposable income was sustained. Subsidies also contributed significantly to accelerated growth of total expenditure in the first two months of 2017. However, the increase was temporary and reflected mainly the time difference in subsidy payments by the Security of the Electricity System Fund in the current and previous year.⁶⁶

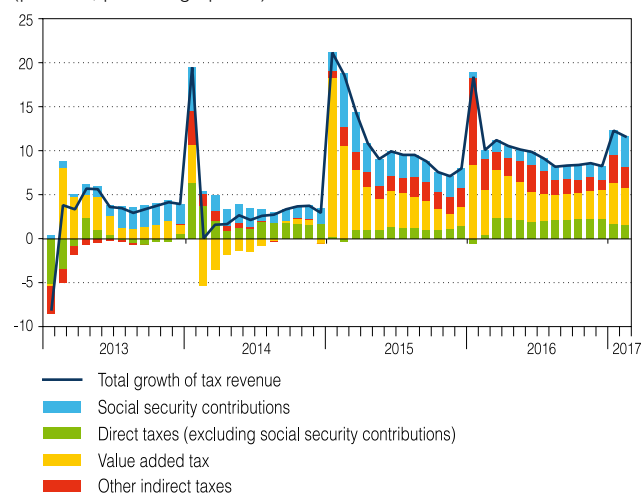
The upward dynamics of current non-interest government expenditure at the end of 2016 added to the positive contribution of government consumption to quarterly growth of GDP in the fourth quarter of 2016. In the first two months of 2017 the annual growth rate of both operating expenditure (7.2 per cent) and compensation of employees (6.8 per cent) accelerated significantly. Increased personnel costs were mainly due to higher pension contributions effective since the beginning of 2017. The wage and operating expenditure dynamics in the first two months of 2017 indicates a positive contribution

⁶⁵ See Economic Review, 1/2016.

⁶⁶ The Security of the Electricity System Fund is included in the CFP single budgetary classification as a budget spending entity under Article 13, paragraph 4 of the Law on Public Finance of 2015. Based on the Security of the Electricity System Fund data no subsidies were paid from the Fund in the January–March 2016 period, while in January and February 2017 payments amounted to BGN 69.7 million and BGN 46.1 million respectively. Regular monthly payment of subsidies from the Fund started from April 2016.

Contribution of Major Tax Groups to Tax Revenue Growth, Cumulatively (on an Annual Basis)

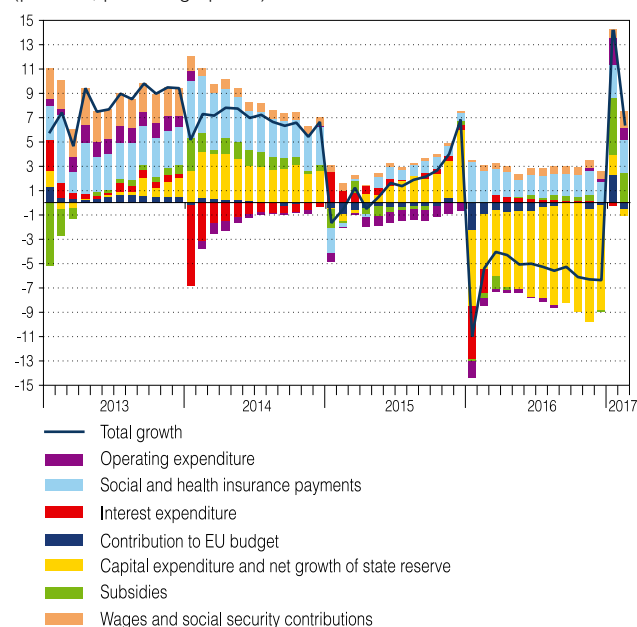
(per cent; percentage points)



Sources: the MF, BNB calculations.

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

(per cent; percentage points)



Sources: the MF, BNB calculations.

Key Budget Indicators Performance for 2016–2017

Consolidated Fiscal Programme	2016 January – February ¹		2017 January – February ¹	
	BGN million	per cent ²	BGN million	per cent ²
Total revenue and grants	5,519	15.9	5,732	3.9
Tax revenue	4,234	10.0	4,721	11.5
incl. social security and health social contributions	1,107	3.2	1,253	13.2
Non-tax revenue	775	15.8	726	-6.4
Grants	510	111.1	285	-44.2
Total expenditure (incl. the contribution to EU budget)	4,604	-5.4	4,900	6.4
Wages and social security contributions	963	2.2	1,028	6.8
Operating expenditure	587	-4.7	629	7.2
Interest	117	-45.9	119	1.5
Social security, assistance and social care	2,343	5.9	2,467	5.3
Subsidies	185	-9.8	297	60.9
Capital expenditure and reserves of the general government sector	230	-48.7	206	-10.5
Contribution to general budget of the European Union	180	-20.6	154	-14.1
	BGN million	difference ³ (BGN million)	BGN million	difference ³ (BGN million)
Budget balance, on a cash basis	915	1,021	832	-83
Tax revenue under the state budget	2016 January–February ⁴		2017 January–February ⁴	
	BGN million	per cent ²	BGN million	per cent ²
Tax revenue	3,017	12.4	3,349	11.0
Corporate tax	56	-27.3	67	21.1
Income tax for individuals	428	7.3	477	11.6
Value added tax	1,697	12.9	1,869	10.1
Excise duties	787	21.0	880	11.8
Customs duties	26	-0.3	28	9.6
Insurance premia tax	6	25.3	8	30.5
Other taxes	17	-28.7	19	12.7

Note: The difference between the sum of individual components and total sum is due to rounding.

¹ Based on monthly reports on cash-based implementation of the Consolidated Fiscal Programme.

² Annual rate of change on the same period of previous year.

³ The change of the budget balance in million levs on the corresponding period of the previous year.

⁴ Based on monthly reports on cash-based implementation of the state budget.

Source: The MF.

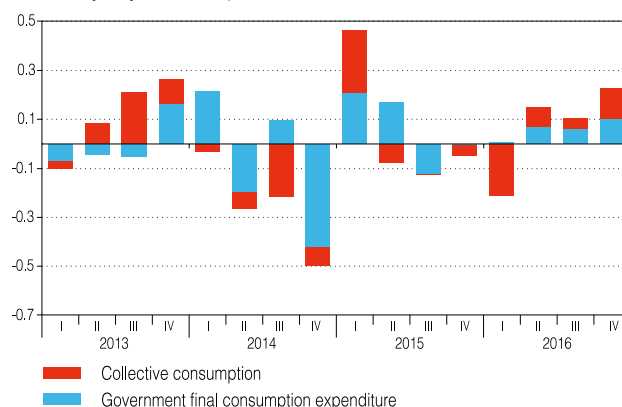
of government consumption to GDP growth in the first quarter of the year.

Following the reported quarter-on-quarter increase in public investment over the last quarter of 2016 capital expenditure posted a decrease on an annual basis in the first two months of 2017, reflecting mainly lower national investment. Concurrently, investment under EU programmes posted an increase but remained at relatively low levels with no signs of significant acceleration in absorbing funds under the 2014–2020 programming period compared with the first two months of 2016.

In the second and third quarters of 2017 the effective tax revenue implementation is expected to be sustained, which will continue to reflect both the favourable domestic demand dynamics

Contribution of Government Consumption Components to Real GDP Growth

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



Sources: the NSI, BNB calculations.

and the effects of the changes to the tax and social security policies. Social expenses are anticipated to further contribute to household disposable income growth due mainly to higher pension expenditure.⁶⁷ Government consumption is also expected to contribute positively to GDP growth as a result of higher wage costs and operating expenditure. In the second and third quarters of 2017 public investment is expected to grow more markedly due to both higher national capital expenditure in line with the government plans and accelerated absorption of funds under EU programmes.

⁶⁷ As a result mainly of the indexation of the average pension of 1 July 2016 by 2.6 per cent and the 2.4 per cent increase in the weight of one year of pensionable service in the pension calculation formula from 1 January 2017 for new pensions and from 1 July 2017 for pensions granted by the end of 2016.

4. INFLATION

In the first quarter of 2017 the deflationary trend was reversed, and annual inflation reached 1.0 per cent in March. The main contributor to this were rising international oil and food prices in euro since the second half of 2016. Another factor behind unprocessed food price rises were the unfavourable weather conditions in Bulgaria in early 2017 which boosted expenditure on domestic production and transport of vegetables. Administratively controlled prices were another group with a positive contribution to inflation over the first three months of the year, reflecting mainly higher tobacco excise duties. Deflation in core HICP components continued to be mostly driven by declining prices of durable goods, telecommunication and transport services.

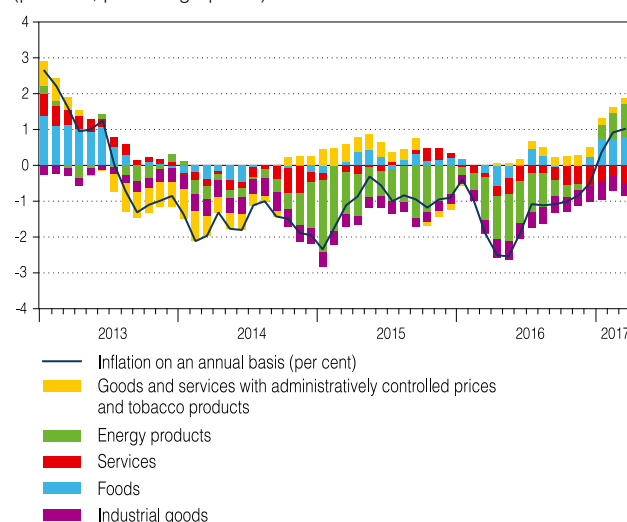
In the second and third quarters of 2017 inflation is expected to pick up gradually as a result mainly of projected strong increases in international euro prices of oil and commodities on an annual basis. The pass-through effect of higher fuel prices onto natural gas, heating and electricity prices will be an additional factor for the increase in consumer prices over the coming months.

In the first quarter of 2017 annual inflation was positive, reaching 1.0 per cent in March (from -0.5 per cent in December 2016).⁶⁸ This reflected the sizeable year-on-year increase in international crude oil prices (in euro) in the beginning of the year and their pass-through into domestic fuel prices. Both the upward trend in food prices in euro of the second half of 2016 and the unfavourable weather conditions in Bulgaria in the beginning of 2017 which resulted in an increase in unprocessed food prices acted in the same direction. Specific factors related to the price decrease in the prices of telecommunication and transport services (mainly air transport services), as well as the continued decline in durable goods prices contributed to retaining the deflationary trend in core HICP components.

In the fourth quarter of 2016 imports of goods deflator reported a -1.7 per cent decline on an annual basis against -5.6 per cent on average for the 2013–2016 period.⁶⁹ The trend toward curbing import goods deflation was underpinned by the price hike in imported fuels,⁷⁰ food⁷¹ and other raw materials, which was rapidly translated through the supply chain into domestic producer prices, and hence, on consumer goods prices.

Annual Inflation and Contribution of Major Commodity and Services Groups to It

(per cent; percentage points)



Notes: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately. The index of goods and services with administratively controlled prices is calculated through the elementary aggregates level in the consumer basket.

Sources: the NSI, BNB calculations.

⁶⁸ The analysis in this Section employs NSI HICP data.

⁶⁹ Import data under the Standard International Trade Classification (SITC).

⁷⁰ This refers to the oil and refined petroleum products group.

⁷¹ This refers to the food and live animals and animal and vegetable fats, oils and waxes groups.

The first quarter of 2017 saw deflationary effects of domestic factors related mainly to the fall in goods and services prices, forming the core HICP components. Telecommunications and transport services prices continued to follow a downward trend on an annual basis driven by enhanced competition in these sectors and the widespread introduction of low-cost airlines in Bulgaria over the recent years.⁷²

Non-food goods continued to contribute negatively to overall inflation, reflecting mainly the sustained long-term downward trend in durable goods prices.

Firms' cautious labour cost policy was a factor contributing to the limited pass-through of higher import fuel and commodity prices to the prices of non-food goods and services in the consumer basket.⁷³ In the fourth quarter of 2016 final household consumption expenditure increased by 2.9 per cent on an annual basis (2.1 per cent on average in 2016), whereas unit labour costs reported a decline of 2.0 per cent (0.3 per cent on average in 2016).

In the first quarter of 2017 tobacco excise duties, raised for the second consecutive year, together with the higher urban public transport fares since June 2016 were the reasons for tobacco prices and administratively controlled prices to make a positive contribution to overall inflation.

Since the year-start the total producer price index (PPI) in the domestic market largely followed the upward international oil and metal price developments.⁷⁴ Between January and February 2017 PPI started to increase on an annual basis at a rapid pace, reaching 2.9 per cent in February 2017 (compared with 0.6 per cent at the end of 2016). An increase in producer prices was observed mainly in the manufacturing and, to a lesser extent, in the mining and quarrying subsectors. Higher industrial production prices associated with the manufacture of refined petroleum products, metals, food

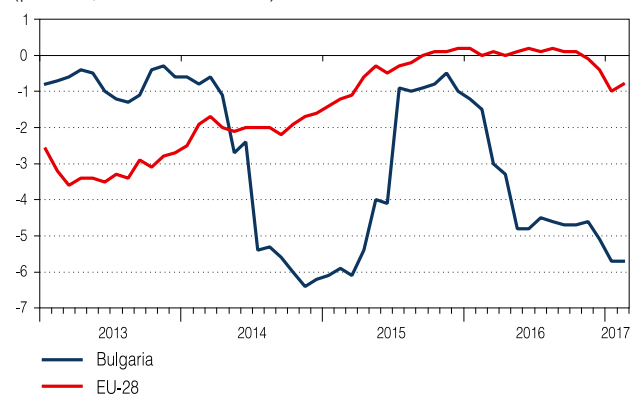
⁷² For more details, see Chapter 4 Inflation, in the Economic Review, 4/2016.

⁷³ For more details, see the Behaviour of Firms and Competitiveness section in Chapter 3.

⁷⁴ For more details on price developments in major raw materials, see the International Commodity Prices section in Chapter 1.

Rate of Change of the Telecommunications Price Index in Bulgaria and the EU.

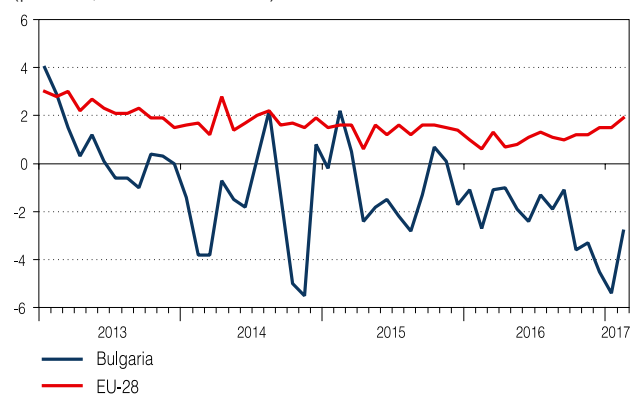
(per cent; on an annual basis)



Source: Eurostat.

Rate of Change of the Transport Price Index in Bulgaria and the EU.

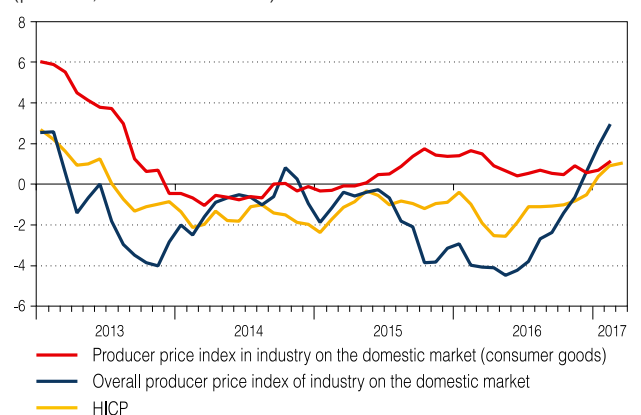
(per cent; on an annual basis)



Source: Eurostat.

Rate of Change in Manufacturing PPI and HICP

(per cent; on an annual basis)



Source: the NSI.

and tobacco products contributed most to this.⁷⁵ Higher prices of processed petroleum products translated rapidly into final transport fuel prices. As a result, annual inflation in this group accelerated to 18.2 per cent in March 2017 (from -0.4 per cent at the end of 2016).

In the first two months of 2017, prices in the subsector related to the production of electricity, heating and gas⁷⁶ continued to fall on an annual basis, but their negative contribution to the change in the total producer price index tended to decrease. This reflected the increase in the prices of alternative fuels to gas on the international markets, on the basis of which the Energy and Water Regulatory Commission (EWRC) approved an increase from 1 January 2017⁷⁷ in the final price of natural gas, which it sells to the public supplier Bulgargas. The increase in the administratively controlled price of natural gas underpinned the contained negative contribution of these administratively controlled prices to annual inflation observed in March 2017. The sustained upward dynamics of international fuel prices in the following months will help boost producer prices of these services, as well as final consumer prices of electricity, heating and natural gas.

According to the end-use classification, the increase in the PPI in the January to February 2017 period was mainly driven by higher energy products and intermediate consumption products prices which (together with labour costs) account for a substantial part of firms' production costs. Even though this growth was mainly driven by international metal prices, an year-on-year increase in February 2017 was also recorded in some producer prices related to the production of non-metal raw materials. Retention of the upward trend in energy products and intermediate consumption products prices in the following months will be a precondition for the occurrence of an upward pressure on final consumer prices.

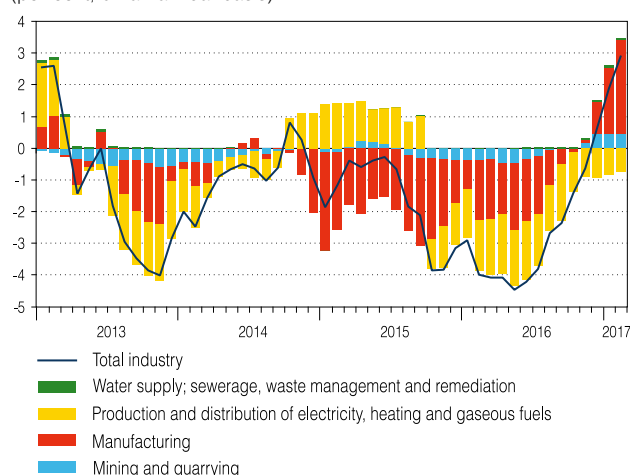
⁷⁵ This refers to the production of coke and refined petroleum products, the manufacture of basic metals and fabricated metal products, except machinery and equipment, and the manufacture of food products, beverages and tobacco groups.

⁷⁶ This refers to the production and distribution of electricity, heating and gas group.

⁷⁷ For more details, see: <http://www.dker.bg/newsbg.php?n=2846>

Rate of Change in HICP on the Domestic Market and Contribution by Major Subsectors

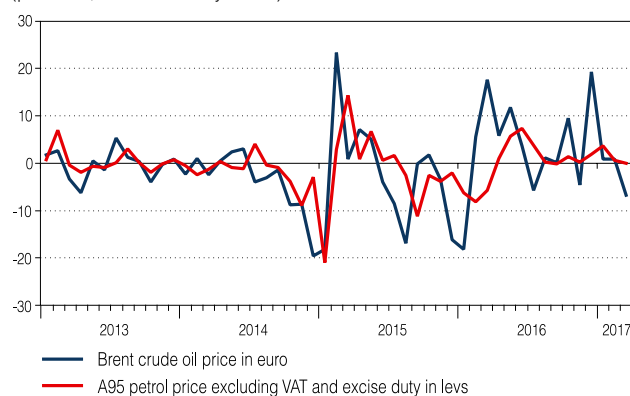
(per cent; on an annual basis)



Source: the NSI.

Rate of Change in the Prices of Brent Crude Oil and A95 Petrol

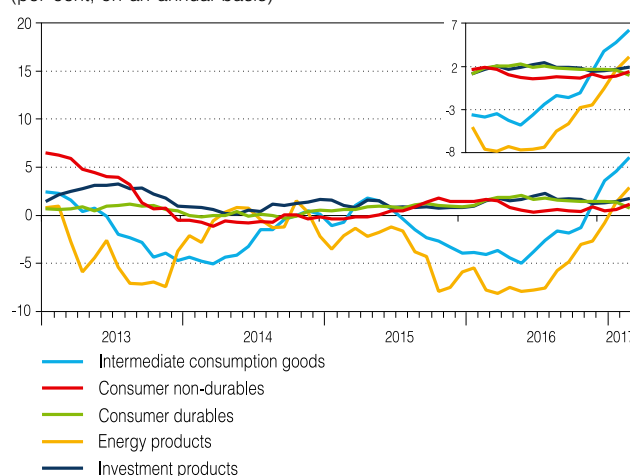
(per cent; on a monthly basis)



Sources: the ECB, the NSI, BNB calculations.

Rate of Change in Producer Prices on the Domestic Market by Major Industrial Groupings

(per cent; on an annual basis)



Source: the NSI.

In the first two months of 2017 a slight increase in producer prices of consumer non-durables and durables continued to be observed in the manufacturing sector. Consumer non-durables price rise was largely due to the increase in the prices of some food and drinks, tobacco products, and partly of clothing. Higher producer prices of food products and drinks were passed on to final consumer prices of processed food which reported a slight increase of 1.5 per cent on an annual basis in March 2017 (0.5 per cent at the end of 2016). Sugar and confectionery⁷⁸ had the largest positive contribution to the annual inflation by March 2017, resulting from upward developments in import prices and wholesale prices in this sector.⁷⁹

The heavy dependence of unprocessed food prices on the weather conditions in Bulgaria and import price dynamics underpinned the strong increase in prices in this group observed since the year-start. In March 2017 unprocessed food inflation was 6.9 per cent (1.9 per cent at the end of 2016), mainly due to the price increase in vegetables and fruit, and partly due to meat and meat products price rise. Higher prices of imported products and increased costs of domestic production and transport related to the unfavourable winter weather conditions in Bulgaria in the beginning of the year contributed to the increase in vegetables prices.⁸⁰ Higher meat and meat products prices was in line with the increase in the import prices of these products which started in the second half of 2016.

In 2017 producer prices of durable goods on the domestic market also reported low positive year-on-year growth but did not affect final prices of non-food goods whose inflation was negative at -1.6 per cent in March (against -1.9 per cent at the end of 2016). Since the year-start a comparatively high negative contribution to annual inflation continued to be observed in automobile, computer and television equipment, furniture and furnishings prices. The fall in

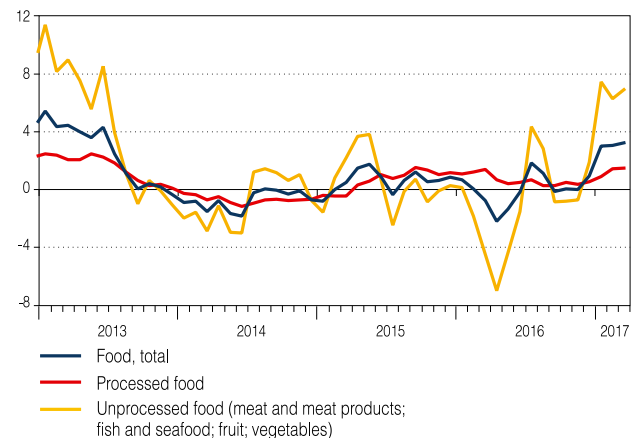
⁷⁸ Sugar, jams, honey, chocolate and confectionery.

⁷⁹ The analysis employs data on imports under SITC for the January to December 2016 period and Commodity Exchange and Wholesale Markets State Commission data on wholesale prices of basic foodstuff, fruit and vegetables for the January to March 2017 period.

⁸⁰ The analysis employs Commodity Exchange and Wholesale Markets State Commission data on wholesale prices of basic foodstuffs, fruit and vegetables for the January to March 2017 period.

Rate of Change of Food Price Index

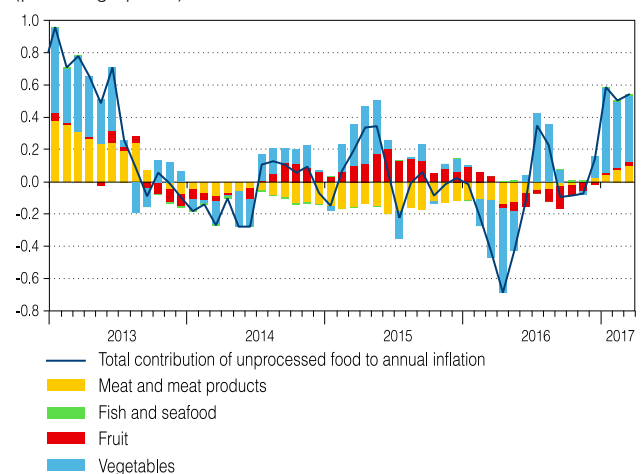
(per cent; on an annual basis)



Sources: the NSI, BNB calculations.

Contribution of Major Subgroups of Unprocessed Food to Overall Inflation

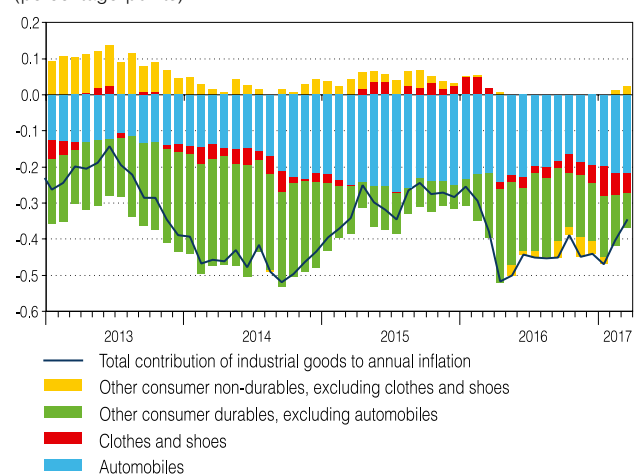
(percentage points)



Sources: the NSI, BNB calculations.

Contribution of Non-food Goods (Excluding Energy Products) and Major Goods Subgroups to Overall Inflation

(percentage points)



Sources: the NSI, BNB calculations.

the prices of these goods, most of which are imported in Bulgaria, reflects the downward trend in the prices of imported durable goods outlined in 2016. Retail trade turnover, an indicator for consumer demand, signals an increase in household consumption in the January–February 2017 period (retail trade turnover at constant prices of non-food goods⁸¹ reported an increase of 9.0 per cent on an annual basis).

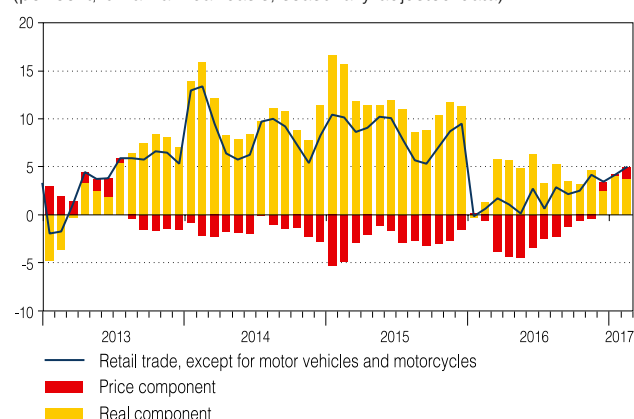
Core inflation, including services and non-food goods prices, was negative in the first quarter of 2017 and came to -1.8 per cent in March (-2.1 per cent at end-2016). Both services and non-food goods groups contributed to the negative core inflation in the first three months of 2017.

In March 2017 inflation in services (excluding those with administratively controlled prices) came to -1.9 per cent (-2.1 per cent at the close of 2016). This reflected the price drop in transport services resulting primarily from air transport price declines underpinned by low cost airlines' price developments. The accelerated long-term trend toward cheaper telecommunications services was an additional factor which contributed to the occurrence of deflation in the services group in March 2017. Catering prices saw low positive inflation throughout the first quarter of 2017 in line with the reported growth in food products prices.

In the first quarter of 2017 administratively controlled prices continued to increase on an annual basis, albeit at a slower pace compared to the end of 2016. This was driven mainly by the fading-out of the effect of increased road fees by 47.4 per cent on average since the beginning of 2016. The January–March 2017 period saw a continued positive contribution of tobacco prices to annual inflation which reflected the increased excise duty on tobacco products⁸² since early 2016 and the firms' policy toward a gradual translation of the higher excise duty into consumer prices. The new increase in the excise duty on cigarettes made by the

Growth Rate of Nominal Retail Trade Excluding Trade in Motor Vehicles and Motorcycles

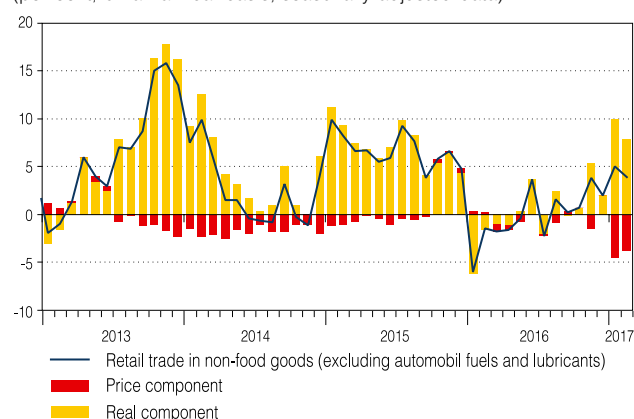
(per cent, on an annual basis; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Growth Rate of Nominal Retail Trade in Non-food Goods Excluding Trade in Automobile Fuels and Lubricants

(per cent, on an annual basis; seasonally adjusted data)



Sources: the NSI, BNB calculations.

⁸¹ Retail trade in non-food goods excluding automobile fuels and lubricants.

⁸² Since early 2016 the minimum overall excise duty (specific and ad-volarem) on cigarettes was raised by 8.8 per cent.

government since the year-start⁸³ will be a condition for a continued positive contribution of this group to overall inflation over the following months. The June 2016 60 per cent price rise of urban public transport fares in Sofia was another reason behind the positive contribution of this group to overall inflation since the beginning of 2017. In the first quarter of 2017 administratively controlled prices of heating and natural gas continued to fall on an annual basis, tending, however, to stabilise due to the fading-out of the effect of previous declines in those prices and of the increase in the final price of natural gas made by the Energy and Water Regulatory Commission (EWRC) in January 2017.

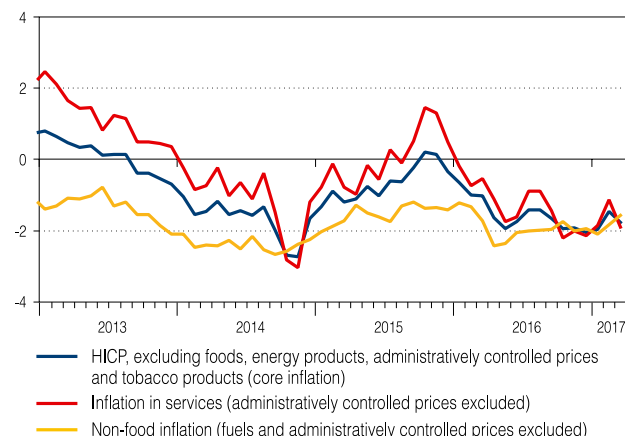
In March 2017 the diffusion index, showing the share of groups of goods and services with falling prices on an annual basis, declined to 32.3 per cent from 38.7 per cent at the end of 2016. This reflected the reduced number of food subgroups recording a price fall and was in line with the reported positive inflation in this group in March 2017. The decline in the diffusion index signals that we can expect the upward trend in consumer prices outlined in the beginning of the year to continue over the coming months. Furthermore, in the first quarter of 2017 the number of goods and services with rising prices increased and that of groups with more than 2 per cent price growth went up, which is a precondition for retaining the overall positive inflation.

According to the NSI business survey, in March 2017 most managers in industry (92.3 per cent), services (92.4 per cent) and retail trade (91.3 per cent) expect selling prices to remain stable over the coming three months. However, since the beginning of 2017 the balance of opinions in all three sectors was positive and follows an upward trend due to the larger share of managers expecting price rises as compared with that of managers expecting price declines. As regards selling prices in the coming months, in March 2017 managers' sentiments are likely to reflect the increase in intermediate consumption goods and energy product prices observed since the year-start and the related possible increase in some administratively con-

⁸³ From the beginning of 2017 the *ad-volarem* excise duty on cigarettes was raised from 25 to 27 per cent along with a 4.3 per cent increase in the minimum amount of the overall excise duty (specific and *ad-volarem*).

Core Inflation

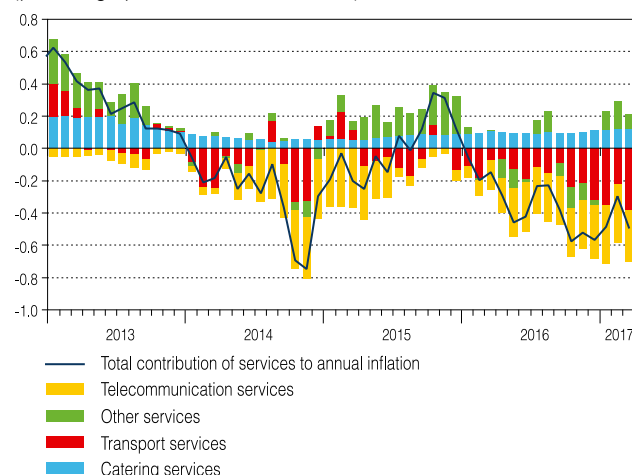
(per cent; on an annual basis)



Sources: the NSI, BNB calculations.

Contribution of Services and Major Services Subgroups to Overall Inflation

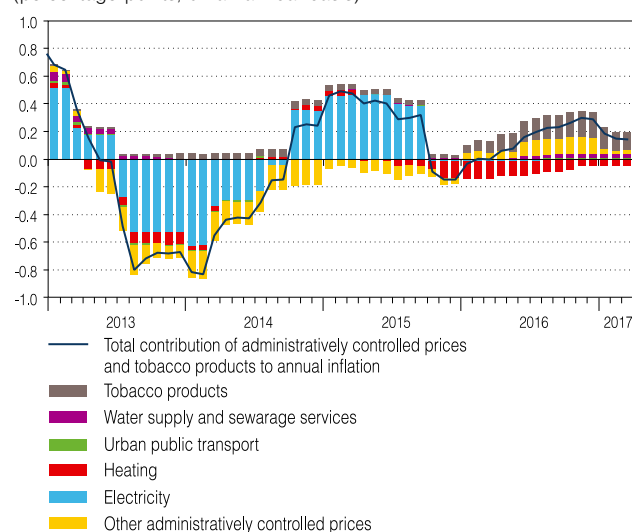
(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

Contribution of Tobacco Products and Major Subgroups of Goods with Administratively Controlled Prices to Overall Inflation

(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

trolled prices of goods and services which are indirectly affected by fuel prices. According to the NSI business surveys, potential factors containing the rise in consumer prices in the first quarter of 2017 relate to the continuous economic uncertainty in Bulgaria and the insufficient demand in some firms. Over the first quarter of 2017 the relative share of managers in services and industry outlining insufficient demand as an obstacle to the business activity remained unchanged from the end of 2016. Concurrently, in the retail trade sector, which is the closest to end-users in the supply chain, a slight increase was reported in the relative share of managers pointing to insufficient demand as a factor limiting their activities.

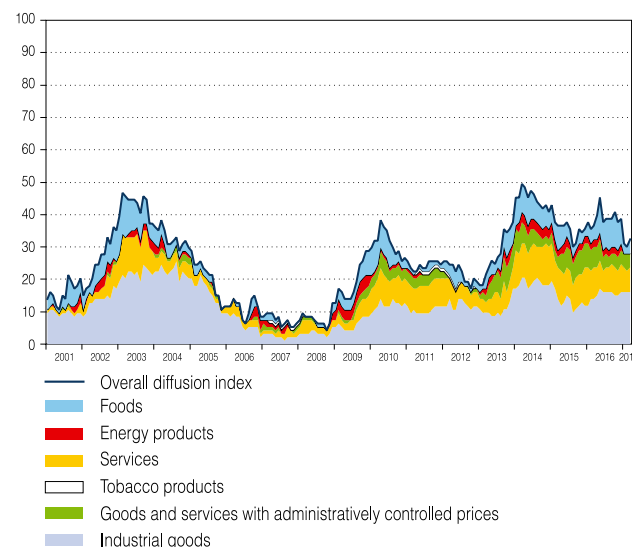
Inflation expectations for the second and third quarters of 2017 and related uncertainty are presented in the fan chart on the annual rate of HICP changes.⁸⁴ Inflation is expected to remain positive and follow a gradual upward trend in the following two quarters. This will reflect the projected substantial increase in international crude oil and food prices in the following months and their pass-through into domestic fuel and food product prices. It is expected that administratively controlled prices will continue to make a positive contribution to overall inflation, reflecting largely the effect of the increased excise duty on tobacco products since early 2017 and, to a lesser extent, the January 2017 natural gas price rise. Over the first five months of the year a base effect of administratively raised urban transport prices since June 2016 will further push up inflation. Core inflation is anticipated to continue to have a negative contribution to overall inflation which will depend on the long-term downward trend in the prices of some goods and services having a relatively high weight in the consumer basket (telecommunication services, durable goods).

Risks to the inflation forecast are assessed as shifted to higher inflation compared with the baseline scenario. The main factors that will influence inflation relate to global crude oil and food price developments and the effect of their pass-through into domestic goods and services prices that are influenced by oil prices such as automobile fuels, transport services, natural gas. The EWRC decisions of the end of March

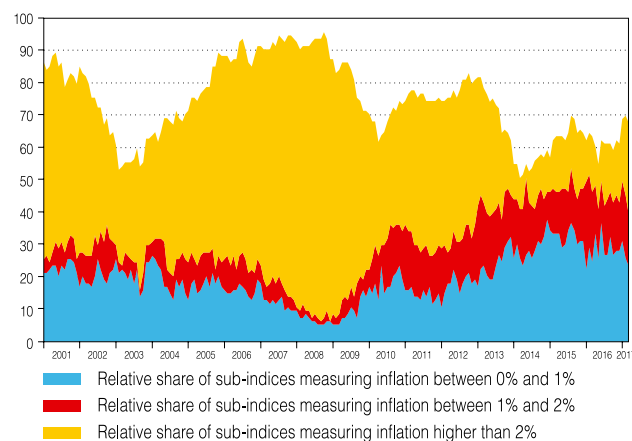
⁸⁴ For further details, see the box entitled Measurement and Presentation of Uncertainty in Forecasting Economic Indicators, *Economic Review*, 1/2012.

Diffusion Index of Major Goods and Services Groups

a) relative shares of declining HICP subindices on an annual basis (per cent)



b) relative shares of increasing HICP subindices on an annual basis (per cent)



Note: Data on the HICP 4-digit level subindices (subclasses according to the NSI methodology) have been used. The diffusion index shows the share of subindices reporting a change in value on an annual basis. When calculating the relative shares, the weight of the relevant subindices in the consumer basket is not taken into account. Sources: the NSI, BNB calculations.

and the beginning of April 2017 on the increase of administratively controlled prices of gas, heat, electricity in Bulgaria, and water supply in the city of Sofia could result in higher than projected inflation.⁸⁵ Additional uncertainty to the projection emerges from the second round effects related to the possible pass-through of higher administratively controlled prices into the prices of other goods and services in the consumer basket. The possibility for a slower than expected increase in household consumer expenditure in the following two quarters and a sustained deflationary trend in some services and durable goods may result in lower than projected inflation. Measures taken by the European Commission to remove roaming charges in EU countries as of June 2017 are likely to create conditions for a further sizeable fall in telecommunication services prices and lower than projected inflation.⁸⁶ The quality of agricultural harvests in Bulgaria and the region will be another important potential factor which will affect domestic food prices over the following months.

House price dynamics is closely related to macroeconomic and financial conditions in Bulgaria and the related changes in demand and supply. New housing demand is affected by household expectations of the economic situation in Bulgaria, their sentiments for savings and decisions for loans. On the other hand, house prices form the value of collateral against the volume of bank lending. The resulting changes in the amount of loans have an impact on investments in real estate. Supply of new housing reflects firms' expectations of house price developments, construction costs dynamics and access to financing.⁸⁷

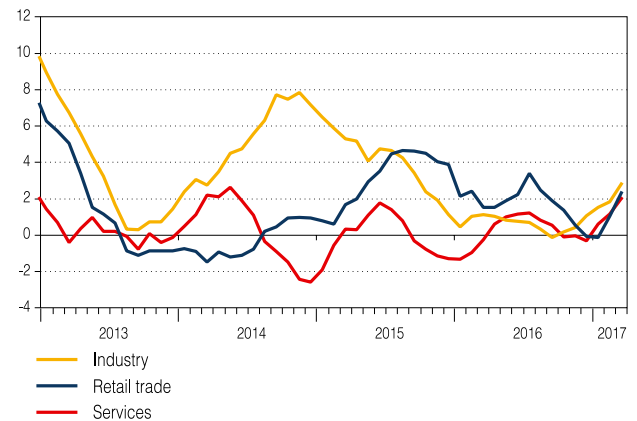
⁸⁵ On 29 March, 31 March and 7 April 2017 the EWRC decided to increase the administratively controlled prices of the following: natural gas (by 29.64 per cent), heating (by between 17.91 and 25.61 per cent for most of the heating companies in Bulgaria and by 37.4 per cent for Pleven Heating Company); electricity for households (by 0.95 per cent) and for business customers on the free market (by around 1 per cent), water supply in Sofia (by around 18 per cent). For more details see: <http://www.dker.bg/newsbg.php?n=2872>, <http://www.dker.bg/newsbg.php?n=2869>, http://www.dker.bg/files/DOWNLOAD/res_bp-c-1_17.pdf

⁸⁶ <http://www.consilium.europa.eu/en/press/press-releases/2017/01/31-roaming-charges/>

⁸⁷ For more information on the factors affecting house price developments in Bulgaria see Kotseva, P., M. Yanchev. Analysis of the Housing Market Developments and the Underlying Macroeconomic Fundamentals in Bulgaria. Bulgarian National Bank, Discussion Papers No 103, 2017.

Selling Prices Expectations in Industry, Retail Trade and Services over the Next Three Months

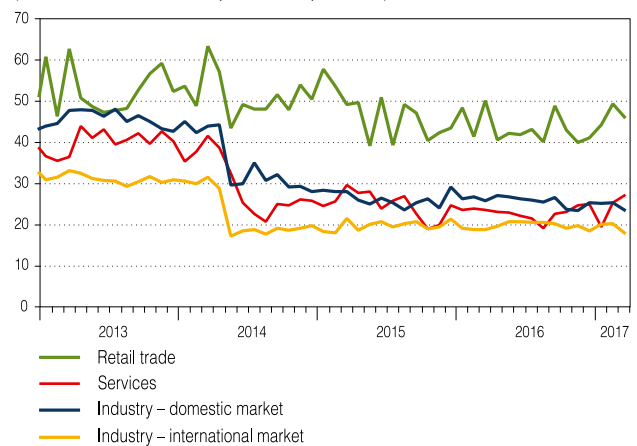
(balance of opinions, per cent, 6-month moving average)



Source: the NSI.

Share of Firms by Sectors Pointing to Insufficient Demand as a Factor Limiting Their Activity

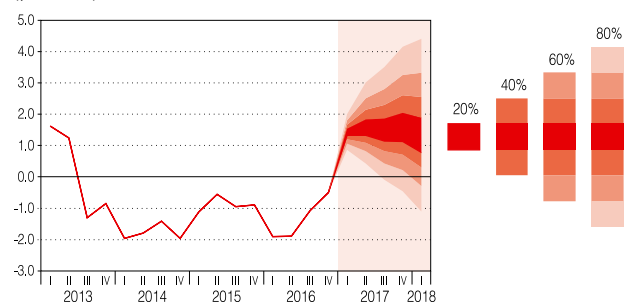
(relative share of all corporations, per cent)



Sources: the NSI, BNB calculations.

Fan Chart of the Expected Annual Rate of Change in Inflation at the End of the Corresponding Period

(per cent)



Note: The fan chart shows the expert views of the forecasters on the uncertainty surrounding the projected value based on a probability distribution. The middle band of the chart, depicted in the darkest colour, includes the central projection and the probability distribution shows 20 per cent probability for the actual value to fall in this band in each of the quarters. If neighbouring bands (in the same brighter colour) are added to the middle band, there would be a 40 per cent coverage of the probability mass. Thus, by adding each same colour couple of bands, the probability for the value to fall there would be increased by 20 percentage points to reach 80 per cent. The probability for the value to remain outside the coloured part of the chart is 20 per cent based on the distribution chosen.

Source: the BNB.

In the fourth quarter of 2016 the annual growth rate of house prices accelerated to 8.1 per cent (4.0 per cent at the end of 2015), driven by the price rise in both new and existing housing. Across geographical region a similar dynamics was observed, with higher house prices reported also in the six largest cities in Bulgaria. However, at the end of 2016, house prices remained well below the high levels reported in the third quarter of 2008.

The upward dynamics of house prices was in line with improved consumer confidence and the increased disposable income of households, reflecting favourable labour market developments. High household savings rate and the continued downward trend in interest rates on new fixed-term deposits were the reasons behind enhanced household demand for housing. In 2016 the annual percentage rate of charge (APR) on new mortgage loans declined further, reaching 5.4 per cent at the end of the year (6.4 per cent at the end of 2015), which contributed to the increase in the amount of newly extended housing loans.⁸⁸ Banks' policy towards easing credit standards for households also acted in this direction.⁸⁹

In addition, house price dynamics influenced the behaviour of firms in the construction sector. In 2016 economic activity in the construction sector remained relatively weak, with real value added in the sector reporting a decrease of 2.5 per cent (against a 3.4 per cent increase on average for the economy). However, the higher rate of increase in house prices than in the construction cost index is likely to result in an enhanced economic activity in the construction sector and in higher supply of new housing, which will have a dampening effect on house price dynamics. An indication of that is the higher number of permits for the construction of new buildings, including residential ones.⁹⁰

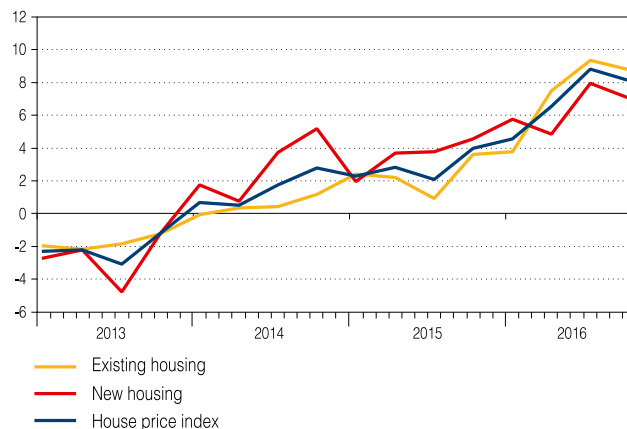
⁸⁸ Values indicating APRC on housing loans to households are averages weighted by the relevant volumes of new loans for a 12-month period.

⁸⁹ For further details, see the Monetary and Credit Aggregates section in Chapter 2.

⁹⁰ For further details on construction production developments and issued permits for the construction of new buildings, see the Behaviour of Firms and Competitiveness section in Chapter 3.

Rate of Change of the House Price Index (HPI)

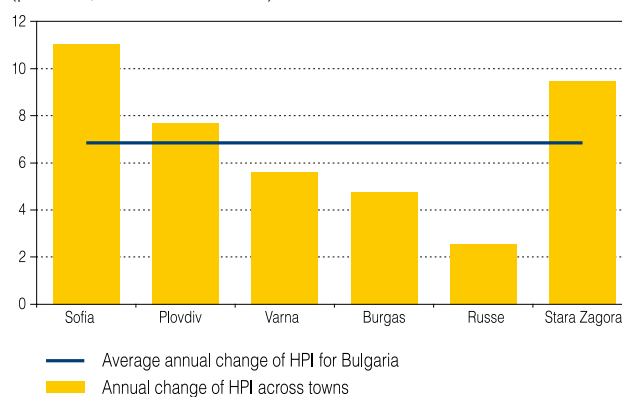
(per cent; on an annual basis)



Source: the NSI.

Rate of Change of the HPI in Cities with More than 120,000 Citizens in 2016

(per cent; on an annual basis)



Source: the NSI.

Key Indicators on the Housing Market Developments in Bulgaria

(per cent; year-on-year change)

Indicators	2013	2014	2015	2016	2016			
					I quarter	II quarter	III quarter	IV quarter
Prices								
House Price Index, total	-2.2	1.4	2.8	7.0	4.6	6.5	8.8	8.1
New housing	-2.7	2.8	3.5	6.4	5.8	4.9	7.9	7.0
Existing housing	-1.8	0.5	2.3	7.3	3.8	7.5	9.3	8.8
Inflation (HICP)	0.4	-1.6	-1.1	-1.3	-1.1	-2.3	-1.1	-0.8
House rentals, paid by tenants (HICP)	0.5	0.2	0.7	0.6	0.2	0.7	0.7	0.8
Lending								
New housing loans	6.0	9.7	39.7	18.9	4.9	11.6	18.5	38.9
Annual percentage rate of charge on new housing loans (per cent, at the end of the period)	7.1	6.7	5.9	4.9	5.7	5.4	5.2	4.9
MFI claims on housing loans	-0.2	-0.1	-1.8	0.5	-0.5	0.2	0.9	1.4
Construction and investment								
Permits issued for the construction of new residential buildings (built area, square meters)	12.0	27.7	13.0	4.8	-9.0	17.9	-2.9	15.1
Value added in construction (at average annual prices for 2010)	1.3	-3.1	2.8	-2.5	1.1	-0.7	-0.1	-10.7
Constriction Production Index, building construction	-1.6	0.4	8.4	-16.5	-18.4	-19.2	-15.3	-13.1
Gross fixed capital investment, residential buildings	-4.0	-3.3	-10.3	-6.2	-1.0	-2.7	-9.1	-9.6
Construction Cost Index	1.7	0.3	2.1	1.5	1.6	1.8	1.6	0.8

Sources: the NSI, BNB, Eurostat.

Growth Rates of Major Goods and Services Groups Prices and Contribution of These Groups to Inflation

	Inflation Accumulated as of March 2016 (December 2015 = 100)		Inflation Accumulated as of March 2017 (December 2016 = 100)		Annual Rate of Inflation as of March 2017 (March 2016 = 100)	
Inflation (per cent)	-1.3		0.2		1.0	
	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)
Food	0.2	0.05	2.5	0.60	3.2	0.78
Processed food	-0.1	-0.01	0.9	0.15	1.5	0.24
Unprocessed food	0.8	0.06	5.8	0.46	6.9	0.54
Services	-2.2	-0.58	-2.0	-0.51	-1.9	-0.49
Catering	0.6	0.03	0.6	0.04	2.0	0.12
Transport services	-7.1	-0.27	-9.0	-0.33	-10.2	-0.38
Telecommunication services	-2.4	-0.13	-2.4	-0.12	-6.1	-0.32
Other services	-1.9	-0.21	-0.8	-0.10	0.8	0.09
Energy products	-10.7	-0.62	4.6	0.32	16.9	0.94
Transport fuels	-11.8	-0.61	4.6	0.28	18.2	0.88
Industrial goods	-1.4	-0.32	-1.1	-0.23	-1.6	-0.35
Goods and Services with administratively controlled prices*	0.5	0.09	0.0	0.00	0.1	0.02
Tobacco products	1.3	0.06	0.0	0.00	2.5	0.13

* The index of goods and services with administratively controlled prices is calculated through the elementary aggregates level in the consumer basket.

Sources: the NSI, BNB calculations.

DYNAMICS OF HOUSE PRICES IN BULGARIA BETWEEN 2000 AND 2016

The dynamics of house prices¹ reflects macroeconomic and financial conditions in Bulgaria and the ensuing changes in demand for and supply of housing. Housing demand is affected by household expectations for the economic situation in Bulgaria, household sentiments for savings and decisions for loans. The inflow of foreign direct investment (FDI) in the real estate activities sector² also puts pressure on prices. The relationship between house prices and demand for housing loans is bilateral: prices form the value of the collateral against which banks extend loans and the amount of extended loans has an effect on prices. Both factors determine the developments of investment in real estate. Supply of new housing reflects firms' expectations of price developments, dynamics of construction costs and their access to financing.

In 2016 the annual growth rate in house prices accelerated to 7.0 per cent compared with 2.8 per cent in 2015 and 1.4 per cent in 2014. The analysis in this research is aimed at identifying the main factors driving house price dynamics in the 2000–2016 period and to present the price developments in the context of macroeconomic and financial conditions in Bulgaria. Based on the identified factors a vector error correction model is designed which allows to determine whether house prices are in line with macroeconomic factors and, if any misalignments have been detected, to measure and evaluate their magnitude and direction.

1. Major Factors Determining the Level of House Prices in Bulgaria

Housing market developments in Bulgaria between 2000 and 2016 can be divided into three sub-periods differing by factors driving house prices and the magnitude of their effect. The first sub-period (from 2000 until the first half of 2003) is characterised by a weak dynamics of the housing market and house prices achieved immediately after macroeconomic and financial stabilisation. The second sub-period (2004–2008) encompasses the time prior to the global financial crisis and is characterised by fast growth rates of the housing market and relatively strong upward price developments. The third sub-period encompasses the time between 2009 and 2016 and shows the adjustment of the housing market to the changed economic environment in Bulgaria after the global economic crisis.

In the period from 2000 until the first half of 2003 the weak house price dynamics in Bulgaria corresponded to the subdued housing market development (see Chart 1). This reflected the macroeconomic instability in Bulgaria since 1991 resulting in a deep financial and economic crisis in the 1996–1997 period, slow restructuring of the economy, low household income and poor development of financial intermediation at that time. Housing investment accelerated only at the end of 2003. Fast growing housing demand, supported by the strong FDI inflow and limited supply of new residential buildings contributed to higher house prices in the period preceding the global financial crisis. In a two-year period (2004–2005) house prices doubled and between 2007 and 2008 they grew by another 60 per cent. The 2009 global financial crisis changed economic conditions in Bulgaria: adjustment of housing market to increased economic uncertainty, lack of FDI and weak economic activity in Bulgaria went through a prolonged period of decline in house prices (2010–2014). After

¹ The analysis is based on the house price index (HPI), published by the NSI.

² In accordance with NACE.BG-2008 the real estate activities sector includes buying and selling of own real estate, renting and operating of own real estate, real estate agencies and management of real estate.

2014 a gradual upward trend in house prices occurred reflecting strengthened economic growth, and the related increase in employment, and improved household expectations. In the analysis below major demand and supply side factors, driving house price developments, are thoroughly examined.

1.1. Demand Side Factors

• Income and lending rate developments

Disposable income and opportunities for using loans were the major factors determining households' house purchases. From 2004 until the first half of 2008 disposable income of households steadily increased in line with the high rates of economic growth and an employment increase. In addition, the entry of foreign banks in Bulgaria and enhanced competition for market shares among them facilitated the access to housing loans and created conditions for decreasing the interest rates on these loans. Over the same period interest rates on housing loans followed a downward pattern of over 12 per cent in early 2004 to reach about 7.8 per cent in early 2008. Concurrently, the volume of these loans started to grow rapidly, indicating an increasing demand for housing, which put upward pressure on prices (see Charts 2, 3 and 4). The temporary slowdown in house price growth, a result of the measures launched in early 2005 by the BNB to limit credit risk and credit growth, was indicative of the effect of bank loans on housing demand.³

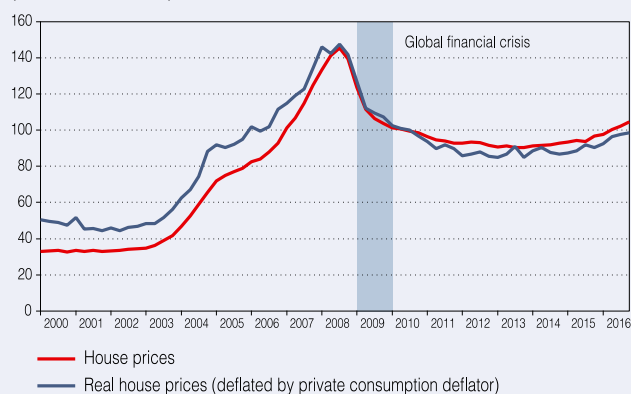
In the post-crisis period the relationship between household income growth and house prices weakened reflecting the enhanced economic uncertainty in Bulgaria, worsened labour market conditions and higher household propensity to save. Between 2014 and 2016 the relationship strengthened again driven by favourable macroeconomic conditions in Bulgaria and the related improvement of household sentiments for house purchases. The increase in the amount of new housing loans due to the downward dynamics in interest rates and eased bank credit standards was an additional factor

³ In April 2005 the BNB introduced administrative credit limits (credit ceilings), which remained effective until January 2007. Banks reporting total quarterly growth of loans exceeding the reference values set by the central bank were required to maintain higher minimum required reserves. After the implementation of credit ceilings credit growth slowed down and credit risk in the banking system subsided.

Chart 1

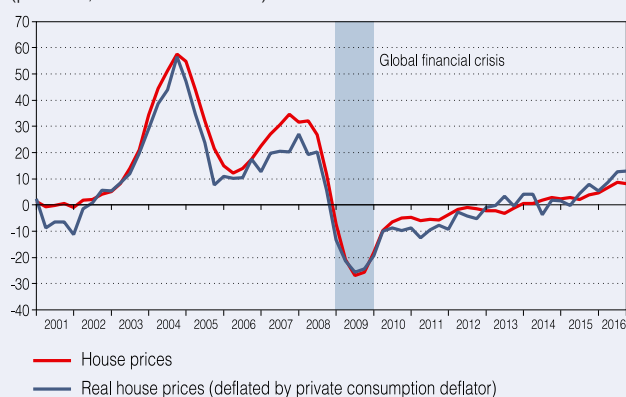
a) Nominal and Real House Prices

(index 2010 = 100)



(b) Annual Growth of House Prices

(per cent; on an annual basis)

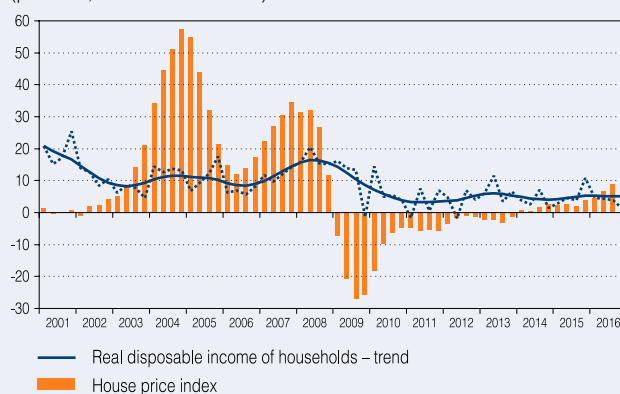


Sources: NSI, Eurostat, own calculations.

Chart 2

Growth of Disposable Household Income (Deflated by Private Consumption Deflator)

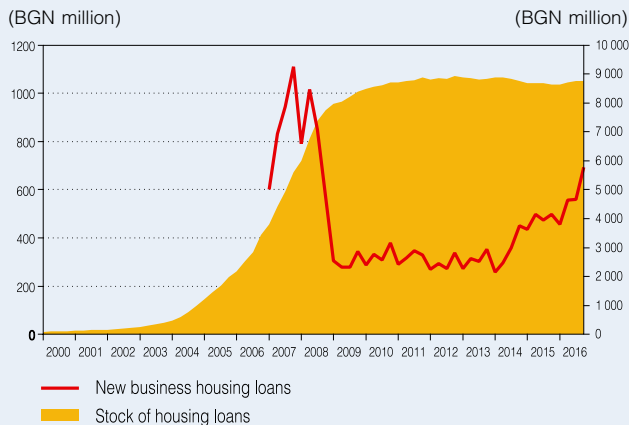
(per cent; on an annual basis)



Sources: NSI, own calculations.

Chart 3

Loans for House Purchases – New Business and Stock



Sources: NSI, own calculations.

encouraging the house demand and house price rises.

• Household sentiments

Household sentiments and their assessment of the economic development are an essential factor determining housing demand. According to the surveys regularly conducted by the NSI, household intents to purchase or build a home followed a sustainable upward trend in the 2004–2008 period, which was consistent with the positive economic developments in Bulgaria and reflected gradually increasing housing demand. Based on the surveys, the peak in demand over the pre-crisis period was in mid-2007 (see Chart 5), which broadly coincided with the highest value in the house price dynamics. Concurrently, consumer expectations of the overall economic situation in Bulgaria and their financial position followed a downward trend since mid-2005, that is they did not correspond to the increasing household sentiments for house purchases. This was indicative of an irrational household behaviour evidenced by the rapid increase in the price-to-rent ratio.⁴ The latter can be considered as a ratio between the asset price (housing) and financial benefits from it (rent), (see Chart 6). In the economic literature the price-to-rent ratio is considered to be relatively stable in time, with possible deviations in the short run resulting from irrational behaviour. In the 2005–2008 period, the price-to-rent ratio was higher than the long-term (historical) value, indicating that property prices exceeded significantly financial benefits from property acquisitions.

Starting from the fourth quarter of 2008, house prices tended to decline strongly, their cumulative decrease reaching 32 per cent until the end of 2010. Between 2010 and 2013 they continued to fall,

⁴ According to the asset pricing literature, house prices are supposed to reflect the amount of expected capital gains or future economic benefits from the purchase of residential property (income from renting). It is therefore considered that if the price-to-rent ratio is higher than its equilibrium (long-term) value, it indicates an irrational economic agent behaviour and could be interpreted as a sign of overvaluation of house prices. In this case, the house price is higher than the expected economic benefit from the property. For further information, see: Cuerpo Caballero, C., M. Demertzis, L. Fernández Vilaseca and P. Pontuch. 'Focus: Assessing the dynamics of house prices in the euro area'. Quarterly Report on the Euro Area, 11(4), 2012, pp. 7–18.

Chart 4

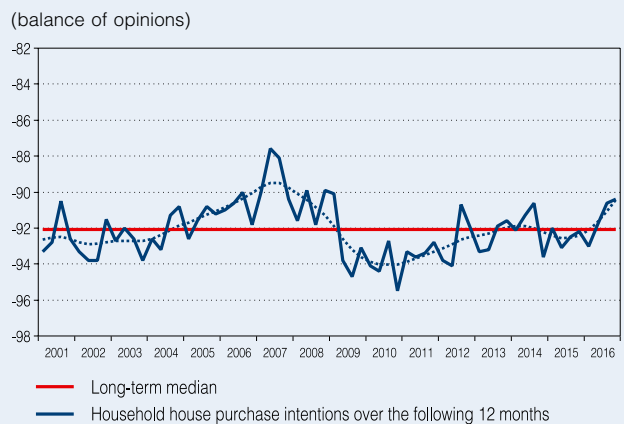
Interest Rates on New Housing Loans



Sources: NSI, own calculations.

Chart 5

Household House Purchase Intentions



Sources: NSI, own calculations.

though at slower rates. This reflected largely a deterioration in consumer confidence of households in the context of economic uncertainty and growing unemployment, as well as the halt in external demand for real estate financed through FDI inflows. The financial crisis affected also dynamics of households' disposable income, albeit less strongly, as compensation per employee continued to grow on an annual basis (though at slower rates). In addition, the savings rate, followed an upward trend in the post-crisis period, indicating availability of funds for financing real estate purchases at macro level, although households refrained from such purchases. Households refrained also from incurring new debt which was evidenced by the low amount of newly extended housing loans in the period after 2009. Quarterly Bank Lending Survey data of the BNB signalled comparatively weak demand for housing loans in the post-crisis period despite the long-term downward trend in interest rates and credit standard easing which started in the middle of 2010 (see Chart 7).

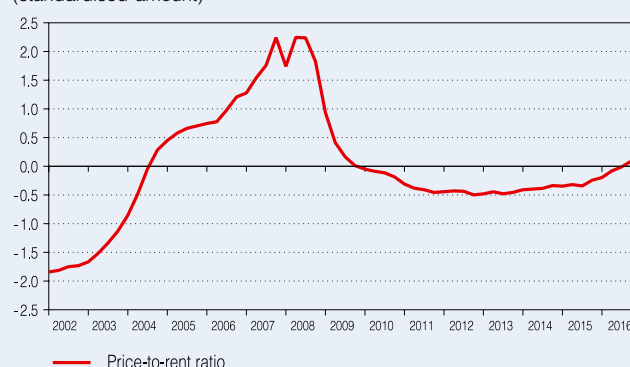
In the 2014–2016 period, the negative effects of the above domestic factors began to weaken, as reflected in a change of household behaviour and strengthened housing demand. Acceleration in GDP growth to 3.4 per cent in 2016 along with the associated increase in disposable income, improved household sentiments, accumulated high savings in the post-crisis period and low interest rates in the economy were the factors which stimulated housing demand and relevant price increases. This was underpinned by the commercial bank policy toward a gradual easing of credit standards.

• Foreign direct investment

Another important factor contributing to the housing market development in the period prior to 2009 was the significant FDI inflow into Bulgaria. Part of it was attracted by the construction sector, leading to greater supply of new residential buildings. Concurrently, the significant FDI attracted by the financial sector provided resources to domestic banks to pursue an aggressive credit policy in competition for a market share. Advantageous conditions offered on the market of housing loans reinforced demand for housing. In the context of relatively low house prices, after 2014 Bulgaria was attracting annually a large FDI inflow into the real estate activities sector (see Chart 8). This inflow started to increase more substantially in the 2006 to 2007 period when positive expectations of Bulgaria's development were formed after EU accession. The positive effects of FDI inflows attracted by other economic sectors, such as industry and transport, storage and communications, contributed to boosting production capacities and economic restructuring, while affecting indirectly housing demand thanks to higher household income.

Chart 6
House Price-to-Rent Ratio

(standardised amount)

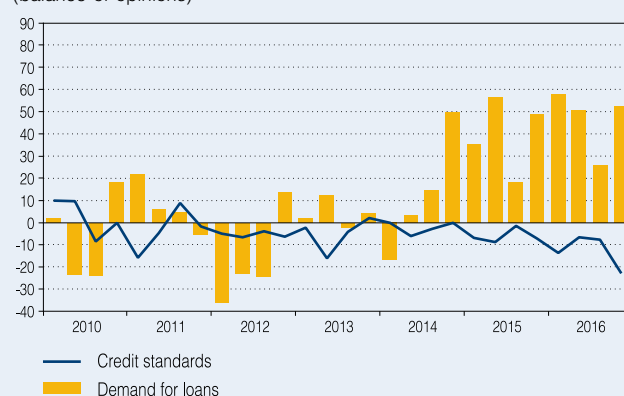


Note: The price-to-rent ratio is calculated based on HICP data on market prices for rents.

Sources: NSI, own calculations.

Chart 7
Changes in Credit Standards and Demand as Applied to Housing Loans

(balance of opinions)



Note: As regards credit standards, the chart presents banks' balance of opinions defined as a difference in percentage points between the percentage of banks responding 'tightened' ('considerably' and 'somewhat'), and the percentage of banks responding 'eased' ('considerably' and 'somewhat'). As regards credit demand, the balance of opinions is defined in percentage points as a difference between the percentage of banks responding 'increased' ('considerably' and 'somewhat') and the percentage of banks responding 'reduced' ('considerably' and 'somewhat'). All opinions are weighted by the bank's market share in the relevant credit segment.

Source: BNB (Bank Lending Survey).

After the global financial crisis, FDI inflows into the real estate activities sector has dried up which weakened the upward pressure on house prices. This corresponded to the overall trend observed in the Central and Eastern European countries in the post-crisis period showing comparatively low FDI inflows due to the increased economic uncertainty in the region, deterioration of economic growth prospects and expected return on new projects along with foreign investors' higher risk aversion.

1.2. Supply Side Factors

Supply side factors can be analysed from several points of view. The housing stock in Bulgaria and construction production index dynamics are fundamental indicators for the changes in housing supply and its reaction to demand. Additional information about future changes in housing supply is contained in the number of newly issued permits for residential buildings and opinions of managers of surveyed construction firms about the future economic activity and major obstacles hindering business activities. Dynamics in firms' profit and expenditure was another factor affecting their decisions to construct new residential buildings.

• Housing stock and construction of new residential buildings

Between 2004 and 2009 new housing supply measured by the number of new residential buildings put in operation increased gradually (see Chart 9). The housing stock grew cumulatively by 2.3 per cent. Under the influence of rising prices and strong demand for housing, the construction production index followed a sustainable upward trend, with building construction contributing most positively⁵ to it (see Chart 10).

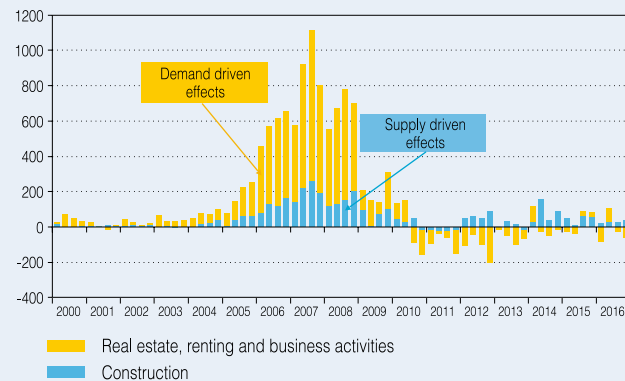
Growing demand for construction production in the period before the global economic and financial crisis allowed firms in this sector to

⁵ Building construction includes construction of residential and non-residential buildings, while civil engineering covers infrastructure construction of roads, bridges, pipes, power lines, gas pipelines, telecommunications and other construction works.

Chart 8

FDI Flows in Sectors Related to Real Estate Market

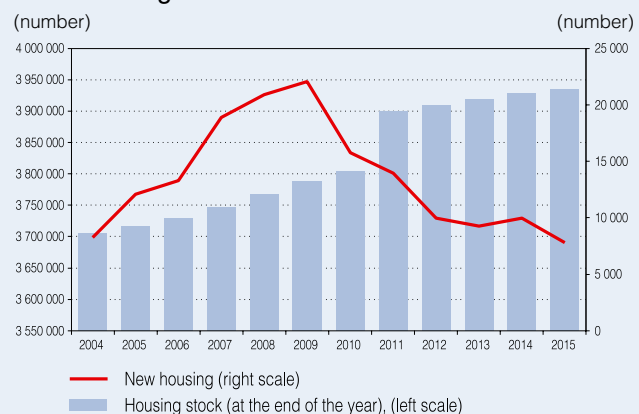
(EUR million)



Sources: BNB, NSI, own calculations.

Chart 9

Housing Stock (Number of Existing Housing) and New Housing

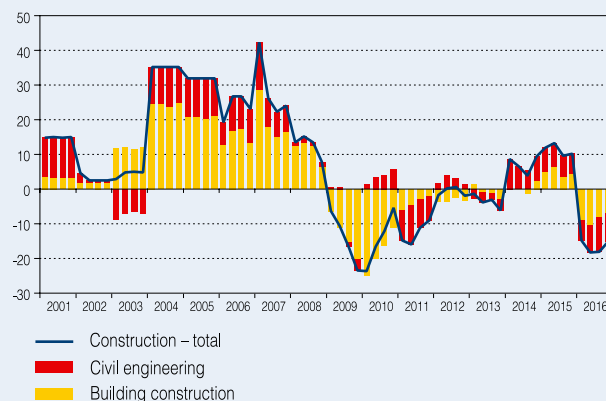


Source: NSI.

Chart 10

Construction Production Index

(per cent, percentage points)



Source: NSI.

achieve a high growth rate of profitability:⁶ a precondition for a housing boom in construction. In the period prior to 2009, an increase in the gross operating surplus was reported in construction, which is an indicator of firms' profit dynamics. The upward trend in gross operating surplus in absolute terms was due to both higher economic activity (measured by value added) and the increasing unit profit (see Chart 11).

Decreased demand for construction production over the 2009–2013 period and limited access to loans pushed down the construction activity which was accompanied by a prolonged period of employee dismissals. As a result, after 2009 the number of new residential buildings began to contract in line with the fall of newly issued building permits (see Chart 12). The upward trend in house prices since 2014 has helped intensify building construction and increase the number of issued residential buildings permits which have, however, remained significantly below the levels achieved prior to the global economic and financial crisis. A factor which is likely to continue limiting economic activity in the construction sector is the persistent downward trend since 2010 toward a decline in unit profits.

• Construction costs

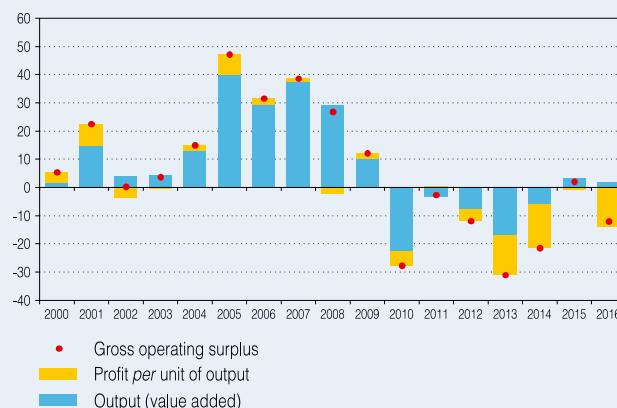
Other factors determining the level of house prices are related to construction costs. Between 2004 and 2009 construction firms expenditure increased, which initially reflected mainly higher prices of input materials (see Chapter 13). In the 2007–2009 period, however, growth in compensation *per* employee in the sector also started to exert upward pressure on costs. This was probably due to the higher demand for labour in construction underpinned by enhanced economic activity in this sector and the overall upward trend in wages observed in Bulgaria.

From 2009 input materials' price dynamics remained relatively subdued and did not result in an increase in house prices. Firms' adjustment to the lower demand conditions and limited access to funding for new projects in the post-crisis period was coupled with a significant reduction in the number of employed in construction (a total of 41.2 per cent less for the period between the end of 2008 and the end of 2013) and a fall in the compensation *per* employee. This contained labour costs. The accumulation of unsold residential buildings built probably at relatively high costs in the pre-crisis period was an additional factor that prolonged and made firms' adjustment to the changed economic conditions after the global financial crisis more difficult. In the 2013–2016 period the downward trend in compensation *per* employee reversed and labour costs started to increase

Chart 11

Contribution to Gross Operating Surplus Growth in Construction

(per cent, percentage points)



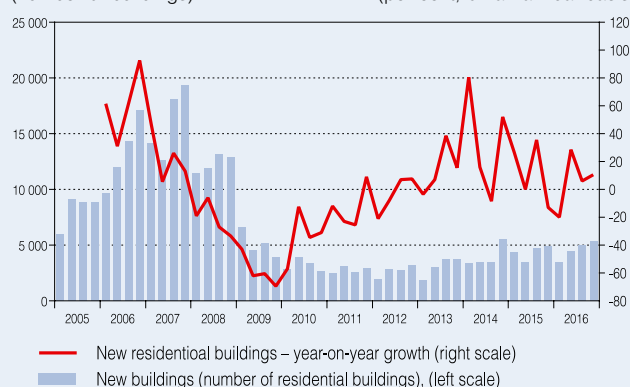
Source: NSI.

Chart 12

Issued Permits of New Residential Buildings

(number of buildings)

(per cent, on an annual basis)



Source: NSI.

⁶ The analysis employs national accounts data on value added dynamics in the construction sector. Although value added and related indicators are comparatively less accurate measures of housing supply compared to the construction production index (building construction) as they include also civil engineering in Bulgaria, they, nonetheless, contain important information about the profits of firms in this sector.

again, albeit at a relatively slow pace, exerting no upward pressure on house prices.

- **Economic uncertainty**

Regular NSI surveys on the business environment in Bulgaria show that economic uncertainty is the key factor hampering construction firms' activities at the end of 2016 and in the beginning of 2017. At the same time, according to the surveys, the adverse effect of factors related to insufficient demand or financial problems has weakened significantly. This gives grounds to believe that in the following months we may expect enhanced economic activity in construction and an increase in the supply of new housing which would have a dampening effect on house price rises.

2. Estimation of the Long-term Level of House Prices

The analysis suggests that the increase in house prices in the 2014–2016 period was mainly due to stronger domestic demand related to the higher consumer confidence, household income growth and enhanced borrowing for house purchases. In contrast to the pre-crisis period, the lack of strong domestic demand for real estate, an indication of which is FDI, and the weak construction costs growth are factors containing house price growth.

A Vector Error Correction Model (VECM) is used for modelling house prices. The merits of this type of model lie in finding a stable long-term cointegration relationship between house prices and the already identified fundamental macroeconomic factors, assuming that in the short-term prices can hover around the so called equilibrium (long-term) level.⁷ In addition to the quantitative assessment of these factors' influence on house price developments in Bulgaria, the model makes it possible to determine to what extent the upward trend in those prices in the 2014–2016 period is in line with the outlined fundamental macroeconomic factors. Upon verification of the statistical characteristics of different specifications⁸, a specification was chosen for which a statistically significant cointegration relation exists between house prices, a synthetic indicator for households' house purchasing power constructed by the authors of the model, and the amount of FDI in the real estate activities

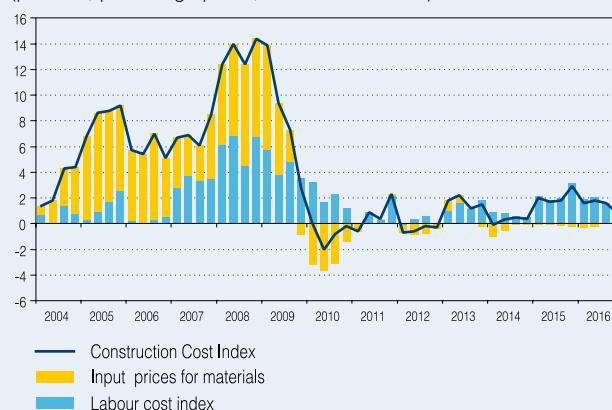
⁷ For more information on this type of models for Bulgaria see Kotseva, P., M. Yanchev. Analysis of the Housing Market Developments and the Underlying Macroeconomic Fundamentals in Bulgaria. Bulgarian National Bank, Discussion Papers No 103, 2017.

⁸ For the purposes of house price modelling different specifications of a vector error correction model were constructed which varied in number of included fundamental macroeconomic factors in the long-term (cointegration) relation equation. Having made different statistical tests, a specification was chosen which includes only demand side variables in the long-term equation: household income, housing loans interest rates and amount of FDI in the real estate activities sector. The factors on the supply side identified in the analysis are not included in the long-term equation of the chosen best specification of the model, as the estimated coefficients preceding these variables are statistically insignificant and with the wrong sign. The Granger causality tests between house prices and supply-side driven factors confirmed that the supply is lagging behind the movement of prices. Given the foregoing, it can be concluded that the dynamics of supply-side driven factors has an impact on house prices only in the short-term and therefore, these are not included in the long-term equation of the chosen best specification.

Chart 13

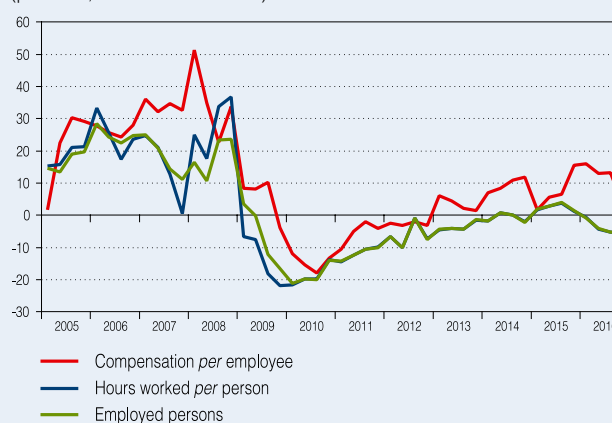
a) Construction Costs

(per cent, percentage points; on an annual basis)



b) Labour Costs in Construction

(per cent; on an annual basis)



Note: The construction cost index (CCI) shows the trend in all costs incurred by the contractor/producer during the construction process and includes costs of labour materials, equipment and overhead.

Source: Eurostat.

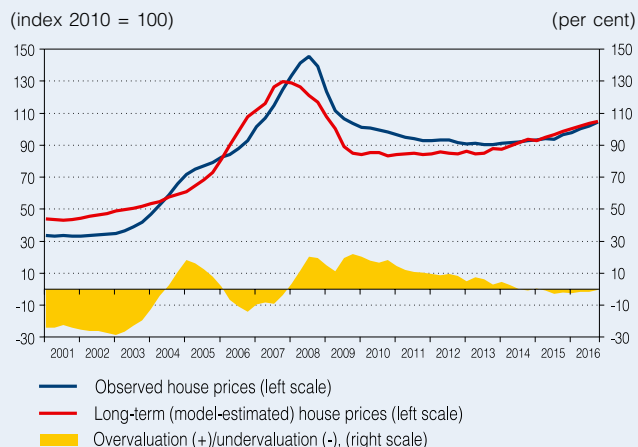
sector. The households' house purchasing power indicator was constructed in line with the Addison-Smyth, McQuinn and O'Reilly's (2009) methodology⁹ and takes into account the effect of the changes in income (GDP *per capita*) and interest rates on housing loans.

The results of the model show that in the period prior to 2004 house prices were significantly undervalued, which is a prerequisite for relatively rapid price changes in the following years (see Chart 14). In the 2004–2008 period an increase in the long-term level as determined by the model is observed in line with the significant FDI inflow, income growth and lower interest rates on housing loans. The factors that were not included in the model possibly related to the overly optimistic household sentiment or higher construction costs underpinned the short-term overvaluation of house prices observed in mid-2008. From 2009 onwards the downward adjustment of households' expectations and the preference for a higher savings rate facilitated the convergence of the prices observed with their estimated long-term values. According to the model results, no over- or undervaluation of house prices was observed by the close of 2016.

The thus constructed model shows that the gradual increase in house prices reported between 2014 and 2016 was mainly due to effects of fundamental factors related to increased domestic demand. These factors include growing household income and the downward trend in housing loans interest rates. The lack of significant external demand due to the lack of FDI in the real estate and construction sector, is the reason behind the expected lower than pre-crisis price rise rates in the following quarters. Price developments will also depend on the speed of adjustment of the supply of new housing to the emerging higher demand.

Chart 14

Observed and Long-term (Model Estimated) House Prices



Source: NSI.

⁹ Addison-Smyth, D., K. McQuinn, G. O'Reilly (2009), Modelling Credit in the Irish Mortgage Market, Central Bank of Ireland Research Technical Paper, 9/RT.

ISSN 2367-4962

ELEMENTS OF THE 20 LEV BANKNOTE, ISSUES 1999 AND 2007, ARE USED IN COVER DESIGN.