National Bank of Romania

Inflation Report

February 2019

Year XV, No. 55

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NOTES

Some of the data are still provisional and will be updated as appropriate in the subsequent issues.

The source of statistical data used in charts and tables was mentioned only when they were provided by other institutions.

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Foreword

The primary objective of the National Bank of Romania is to ensure and maintain price stability, with monetary policy being implemented under inflation targeting starting August 2005. In this context, active communication of the monetary authority to the public at large plays a key role, and the major tool that the central bank uses to this end is the *Inflation Report*.

Apart from analysing the most recent economic, monetary and financial developments and explaining the rationale and the manner of implementing monetary policy in the previous period, the *Report* includes the National Bank of Romania's quarterly projection on inflation over an eight-quarter horizon, including the associated uncertainties and risks, and a policy assessment built upon the recent and future macroeconomic context from the perspective of the monetary policy decision.

By drafting and publishing the *Inflation Report* on a quarterly basis, in accordance with the frequency of the forecasting cycle, the National Bank of Romania aims to provide all those interested with the opportunity of best comprehending its analytical framework and hence the reasons underlying the monetary policy decisions. Securing a transparent and predictable monetary policy is meant to strengthen monetary policy credibility and thus help achieve an effective anchoring of inflation expectations and lower the costs associated with ensuring and maintaining price stability.

The analysis in the *Inflation Report* is based upon the most recent statistical data available at the date of drafting the *Report*, so that the reference periods of indicators herein may vary.

The *Inflation Report* was approved by the NBR Board in its meeting of 7 February 2019 and the cut-off date for the data underlying the macroeconomic projection was 1 February 2019.

All issues of this publication are available in hard copy, as well as on the NBR website at http://www.bnr.ro.

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Summary

Developments in inflation and its determinants

In line with its anticipated trajectory, the annual CPI inflation rate saw a steeper downward path in the last quarter of 2018. The indicator went down to 3.4 percent in November and subsequently decelerated to 3.3 percent in December, thus moving deeper into the band associated with the flat target of 2.5 percent ±1 percentage point. Both in November and December, the actual annual inflation rates were below the benchmark projection set out in the November 2018 *Inflation Report*, reflecting primarily supply-side shocks associated with falling international oil prices, as well as with the decline in citrus prices amid the bumper crop at a European level. The downward trend of the annual inflation rate in Q4 was driven by developments in all consumer basket components, including those in the adjusted CORE2 index, whose dynamics came in at 2.5 percent in December 2018, decelerating from 2.8 percent in September. At the same time, however, the average annual CPI inflation rate continued to rise from 4.5 percent in September to 4.6 percent in December. The average annual HICP inflation rate followed a similar path, adding 0.3 percentage points from 3.8 percent in September to 4.1 percent in December. The differential versus the EU average remained high, i.e. above 2 percentage points.

Processed food items continued to make a decisive contribution to the further downward trend of the annual adjusted CORE2 inflation rate in Q4 – visible ever since mid-2018 –, as main international commodity prices recorded significantly slower dynamics in October-December 2018 as compared to the same period of the previous year. Despite its favourable evolution, in the last three months of 2018 the quarterly growth rate of core inflation stood above its multi-annual average for 2010-2017, against the background of further labour market tightness – as reflected in the marked advance in unit labour costs – and of the persistent excess demand in the economy. Under the circumstances, in spite of reaching 2.5 percent in December, this component continues to be subject to latent pressures that may lead to rekindled price increases in the coming period.

The annual dynamics of economy-wide unit labour costs remained fast in 2018 Q3 (14.6 percent in annual terms), down by only 1 percentage point from the first two quarters. Industry reported a similar evolution, with the growth of unit wage costs[1] stagnating at about 6 percent both in Q3 and in October-November. Nevertheless, the steadily elevated levels of the unit labour cost dynamics over the last three years indicate a build-up of adverse pressures on the economy's competitive position, additionally eroded by the shortage of skilled labour – the obstacle most frequently cited by companies in the way of business expansion.

1 Values excluding the effect of fiscal changes implemented at the beginning of 2018.

Monetary policy since the release of the previous *Inflation Report*

In its meeting of 6 November 2018, the NBR Board decided to keep the monetary policy rate at 2.5 percent per annum and leave unchanged the deposit facility rate and the lending facility rate at 1.5 percent and 3.5 percent per annum respectively. The annual CPI inflation rate dropped to 5.03 percent in September 2018 from 5.06 percent in August, standing slightly above the forecast, as a result of a faster growth of vegetable prices in annual terms. By contrast, the other CPI components posted slower annual growth rates. In turn, the annual adjusted CORE2 inflation rate continued to decline to 2.8 percent in September from 2.85 percent in August. The decline was mainly caused by processed food items, under the impact exerted by the dynamics of the international prices of some agri-food items. The latest forecast reconfirmed the outlook for the annual inflation rate to return, at the end of 2018, to the vicinity of the upper bound of the target band, before dropping and remaining in the upper half of the band until the end of the forecast horizon.

The uncertainties and risks associated with the inflation outlook stemmed mainly from the developments in fuel prices worldwide, administered prices (gas and electricity) and the prices of food items and tobacco products, as well as from labour market conditions and the fiscal and income policy stance. Further relevant were also the growth rate of euro area and global economies in the context of protectionist tendencies and uncertainties surrounding Brexit, as well as the monetary policy stance of the ECB and the central banks in the region.

Subsequently, statistical data confirmed the evolution of the annual CPI inflation rate for the first two months of Q3 overall as being in line with expectations. Thus, the indicator went down to 4.25 percent in October and 3.43 percent in November 2018, returning faster than expected into the variation band of the flat target. The main drivers of this evolution were once again some base effects, as well as the carefully calibrated monetary policy stance. Stronger disinflationary base effects affected the developments in volatile prices and administered prices, also influenced by the November declines in fuel prices and the prices of fruit and vegetables. The annual adjusted CORE2 inflation rate followed a slightly sharper downward path to reach 2.6 percent in November from 2.8 percent in September amid the deceleration posted by prices of processed food items and services, under the influence of base effects and the developments in the leu exchange rate against the euro in November. Provisional data indicated a slight re-acceleration, in annual terms, of economic growth in 2018 Q3 to 4.3 percent from 4.1 percent in the previous quarter, solely on account of agricultural output increasing significantly above expectations. On the demand side, the change in inventories continued to make the largest contribution to GDP growth, followed by household consumption. Net exports had a larger negative contribution to GDP dynamics against the background of a relatively more pronounced slowdown in the growth rate of exports of goods and services, thus causing a faster widening of the current account deficit from the same year-earlier period.

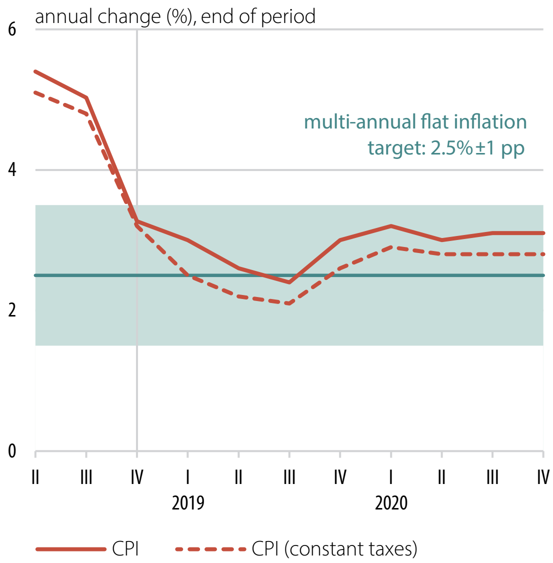
In the NBR Board meeting of 8 January 2019, the latest assessments reconfirmed the medium-term forecast in the previous *Inflation Report*. The assessment was further surrounded by significant risks and uncertainties related to the growth rate of euro area and global economies, as well as to the monetary policy stance of the ECB and of the central banks in the region. The risks posed by the fiscal and income policy stance were further relevant, given inter alia the still pending 2019 budget, as well as the hasty nature and the contents of the set of fiscal and budgetary measures effective 1 January 2019.

Based on the data available at that time and in the context of the identified risks and uncertainties, the NBR Board decided to keep the monetary policy rate at 2.5 percent per annum. Moreover, the NBR Board reiterated that the balanced macroeconomic policy mix and the implementation of structural reforms designed to foster the growth potential over the long term are of the essence in preserving a stable macroeconomic framework and strengthening the capacity of the Romanian economy to withstand potential adverse developments.

Inflation outlook

According to the baseline scenario, the annual CPI inflation rate will reach 3.0 percent at end-2019 and 3.1 percent at end-2020. Compared to the previous *Inflation Report*, the updated scenario revises the projection slightly upwards for this year-end, by 0.1 percentage points, on the back of a larger contribution from the annual adjusted CORE2 inflation rate, whereas the contributions of some of the other consumer basket components offset each other. For December 2019 and December 2020, the cumulated contribution of exogenous components to the annual CPI inflation rate is expected to decline significantly compared to the end-2018 value (i.e. 1.8 percentage points), to 0.9 percentage points and 1 percentage point respectively.

Inflation forecast



Source: NIS, NBR projection

In the course of 2019, the larger increases in tobacco prices, stemming from the newly-enacted excise duty set by Government Emergency Ordinance (GEO) No. 114/2018, are offset by slower dynamics of prices of fuels and VFE (the sharp reduction in citrus prices at a European level). In the course of 2020, exogenous components' contribution was revised downwards, chiefly on the back of reassessing the path of natural gas prices by incorporating the effects of provisions of GEO No. 114/2018 on imposing price ceilings on the chain ending in the final selling price for households. Given the further adjustment in excise duties on fuels and tobacco products during the forecast interval, the annual CPI inflation rate at constant taxes will post lower values than the projected headline inflation, by 0.4 percentage points at end-2019 and by 0.3 percentage points at end-2020 respectively.

The baseline scenario of the projection reconfirms the slowdown of economic growth in 2018, although its dynamics were marked, according to the latest statistical data, by a large supply-side shock to agri-food production. Subsequently, in 2019 and 2020, economic growth is projected to decelerate further. The path of the GDP is affected by the gradual fading-away, during the above-mentioned two years, of the effects from the favourable dynamics of households' real disposable income, chiefly on the back of the wage component of the index, thereby impacting households' solvent demand. At the same time, the baseline scenario envisages an improvement in gross fixed capital formation following a likely contraction of this component in 2018, yet the annual dynamics appear set to remain below the post-crisis average. A contribution to this trajectory also comes from the package of fiscal measures effective 1 January 2019, which could prompt economic agents to postpone part of their planned investment over the short term and, should uncertainty persist, even to reduce its total amount over the medium term. Faster dynamics of gross fixed capital formation, which are of the essence for boosting the economy's productive capacity in the medium run, are strictly conditional on achieving a higher EU funds absorption rate, increasing public investment and ensuring predictability of regulations governing the business environment. The contribution from net exports is projected to stay in negative territory throughout the reviewed interval.

In line with recent historical developments and the baseline scenario assumptions, in 2019 the current account deficit will remain on the upward trend that began in 2015 and is envisaged to reach levels that may exceed, as early as this year, the 4 percent-of-GDP threshold set by the European Commission as a scoreboard indicator for EU Member States[2]. Against this background, the divergence between the positioning of this indicator in a regional context (deficit versus surplus) is expected to persist, hinting at a faster build-up of external imbalances for Romania. Sustainability of current account deficit performance is problematic also in terms of the likely persistence of the recent trend of this deficit being only partly financed from stable, non-debt creating capital inflows, i.e. EU structural and investment funds under the 2014-2020 Multiannual Financial Framework and foreign direct investment inflows.

Compared to the previous *Inflation Report*, the output gap was subject to a slightly downward reassessment throughout 2018, given the revision of the historical data series by the NIS and the assessment of the impact of fundamentals on the output gap. To these added a stronger contribution from the agricultural sector – that was hit by supply-side shocks, reflected directly in the potential GDP estimate – to the pick-up in economic growth in the latter half of the year. Starting from this reassessed level, in the course of 2019, the output gap follows a slightly upward path, similarly to that projected in the previous *Report*, before flattening out somewhat in the latter part of the forecast interval. The new values are higher, at the horizon of 2020, than those in the previous *Report*, with differences mirroring the additional fiscal stimuli[3]

2 Calculated as an average for the past three years. For further details, see the European Commission website, the section on Macroeconomic Imbalance Procedure Scoreboard.

3 According to the new provisions of the pensions law, the pension point is envisaged to be raised in September 2019 and September 2020 to lei 1,265 and lei 1,775 respectively.

to aggregate demand, with an impact on the dynamics of households' disposable income. Against this backdrop, the output gap is estimated to make a positive contribution to economic growth in 2019 and a close-to-neutral one next year.

The current projection in the baseline scenario places the annual adjusted CORE2 inflation rate at 3.3 percent at end-2019 and 3.4 percent at end-2020. Starting from the level of 2.5 percent in December 2018, inflationary pressures that have been building up within this component will intensify, alongside the rise in excess aggregate demand in the economy and amid stronger external inflationary pressures on the leu-expressed prices of imported goods.

Against this background, the monetary policy stance is shaped with a view to ensuring and maintaining price stability over the medium term, in a manner conducive to achieving sustainable economic growth and preserving macroeconomic stability. The effectiveness and flexibility of monetary policy could be affected by the provisions of GEO No. 114/2018 via the manner in which the "tax on bank assets" is calculated.

The balance of risks to the annual inflation rate projection is assessed as being tilted to the upside compared to its path in the baseline scenario. Relevant risks to the current projection stem further from both domestic and external sources.

The risks specific to this round are associated mainly with the fiscal and income policy stance, as no Parliament-approved government budget for 2019 was available when the baseline scenario of the macroeconomic projection was completed. In addition, the package of fiscal and investment measures that entered into force on 1 January 2019 is likely to generate ambiguity, thereby hindering the comprehensive assessment of their impact on the business environment and the financial and banking system over both the short and medium term. An adverse effect of enforcing the "tax on bank assets" would be a possible slowdown in the dynamics of loans to the private sector, also with consequences for the potential GDP, by putting a drag on the volume of fundable investment in the economy. Additional effects, already visible to some extent early this year, could be related to a shift in investor sentiment towards making both portfolio investment and foreign direct investment in Romania, with an impact on the leu exchange rate, expected to pass through to producer costs and consumer goods prices. Illustrative for the significantly adverse effects of the implemented measures is the evidence on similar episodes that left an imprint on other European economies (e.g., Hungary) as well.

At the same time, the possible reconfigurations of the dynamics of exogenous components of the consumer basket appear to be extremely relevant. Specifically, in the case of electricity and natural gas prices, uncertainty surrounds the manner in which the general provisions of GEO No. 114/2018 will be transposed into detailed norms of the competent authorities and, in turn, the indirect influence these provisions may exert on the production costs of non-household consumers and, hence, on consumer goods prices.

A risk factor whose relevance was reconfirmed in the current round refers to developments in the labour market, due to the still elevated level of tightness associated with the lingering structural drawbacks, on the one hand, and amid the uncertainties about the scheduling and magnitude of wage adjustments provided by law to public sector employees, on the other hand. Considering their potential impact on households' real disposable income growth, any deviations from the assumptions in the baseline scenario would influence the projected trajectories of inflation and economic growth rates.

Turning to the external sector, heightened uncertainties are associated with a sharper slowdown in global economic activity, likely to also stem from the risks triggered by the escalating trade protectionism, heightened uncertainty about the final configuration of Brexit, and the divergence of monetary policy stances pursued by the ECB and other major central banks. The materialisation of some of these risks could entail portfolio shifts in the region and/or worldwide, with implications for the future path of the leu exchange rate and, implicitly, for the projected inflation rate.

At the same time, another risk factor reconfirming its relevance refers to international commodity prices, energy prices in particular, in light of the recent developments and elevated volatility of oil prices. Their dynamics are marked by heightened uncertainty, conditional on both demand and supply-side factors, with a potential to affect the inflation rate forecast in both directions.

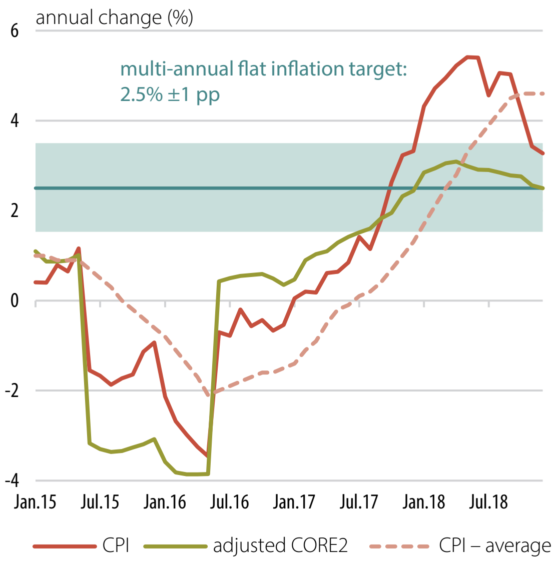
Monetary policy decision

In view of the characteristics of the inflation outlook and the related uncertainties and risks, stemming from the new set of fiscal and budgetary measures effective 1 January 2019, the still pending budget programme and the future fiscal and income policy stance, as well as the pace of euro area and global economic growth, the Board of the National Bank of Romania decided, in its 7 February 2019 meeting, to keep the monetary policy rate at 2.50 percent. Moreover, the NBR Board decided to leave unchanged the deposit facility rate at 1.50 percent and the lending (Lombard) facility rate at 3.50 percent. In addition, the NBR Board decided to maintain the existing levels of minimum reserve requirement ratios on both leu- and foreign currency-denominated liabilities of credit institutions.

1. Inflation developments

In line with its anticipated trajectory, the annual inflation rate further followed a downward path in the last quarter of 2018, returning inside the variation band of the flat target of 2.5 percent ±1 percentage point. Specifically, the indicator fell below the upper bound of the interval in November and stood at 3.3 percent at end-2018. The disinflationary trend seen in 2018 H2 was mostly the result of falling international oil prices, the favourable base effects related to several supply-side shocks that marked the same period of 2017, as well as of the prudent monetary policy conduct (Chart 1.1). Adjusted CORE2 inflation saw similar developments, ending the year at 2.5 percent (annual change, 0.3 percentage points below the level recorded in September), given the fading effect of the rise in prices of some agri-food items a year earlier, and the relative strengthening of the leu against the euro at end-2018. However, some influencing fundamentals, such as the still high excess demand and robust wage dynamics, confirm the persistence of an inflationary risk in the local economy.

Chart 1.1. Inflation developments

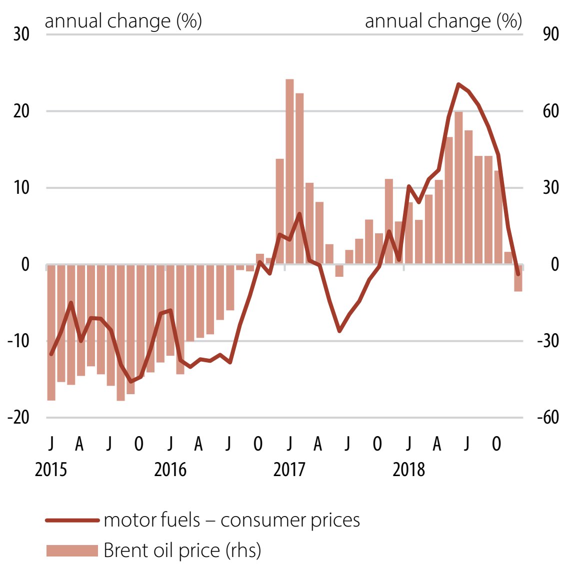


Source: NIS, NBR

Almost half of the loss of momentum witnessed in 2018 Q4 by the annual CPI inflation rate is attributable to fuel prices. Apart from the dropping-out from the calculation of the second hike in the excise duty on motor fuels implemented on 1 October 2017, fuel prices decreased considerably over the current period, in correlation with the movement of the crude oil price on international markets. Specifically, although a four-year high was reached in the first 10-day period of October, subsequently the Brent oil price saw a substantial correction (i.e. over 25 percent by the end of the year), following the greater supply from the main global suppliers and the signs of world demand weakening (Chart 1.2).

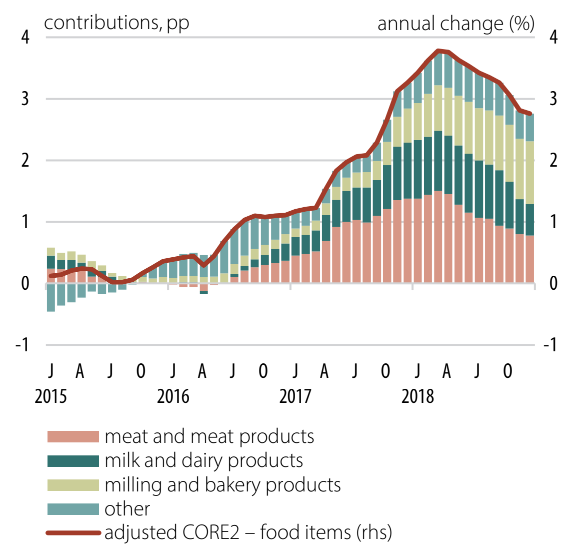
At the same time, CPI disinflation was also ascribable to administered prices, yet the main driver was the base effect associated with the sharp increase in electricity prices in 2017 Q4, given that there were only marginal price changes in the current interval. The most significant change stemmed from the rise in the contribution for high efficiency cogeneration implemented by the Regulatory Authority for Energy in Romania (ANRE) in mid-November. However, on the competitive market, the prices of both electricity and gas followed an upward path in 2018 H2 and in the first month of 2019. Even though these fluctuations did

Chart 1.2. Oil and motor fuel prices



Source: NIS, Bloomberg

Chart 1.3. Food component of core inflation*



*) excluding the direct effects of VAT rate changes

Source: NIS, NBR calculations and estimates

not pass through into end-user prices, they might become a source of inflationary pressures in the coming period.

The slowdown in annual inflation was also supported by volatile food prices of eggs and fruit. In the former case, the effect of the fipronil crisis, which had determined major price hikes in 2017 Q4 (around 40 percent), dropped out from the calculation of the annual indicator. In the latter, the significant decline in fruit prices in the current period was prompted by the expanded production of citrus fruit at a European level.

The annual dynamics of adjusted CORE2 inflation also followed a downtrend, visible ever since mid-2018. Processed food prices continued to have a major contribution, solely as a statistical result (Chart 1.3). Specifically, supply-side shocks related to goods such as meat, milk and products thereof[4] (covering half of the food component of this indicator), which had governed the end of 2017, did not reappear, the main commodity prices witnessing benign developments October through December 2018. As anticipated, the slaughters carried out following the outbreak of African swine fever generated temporary excess supply, yet an upward pressure on prices is expected to become manifest in the medium term. By contrast, the prices of bakery products increased markedly, as wheat was the only important agri-food commodity whose price sped up. In addition, the segment is strongly affected by the growth of labour costs, amid repeated increases in the minimum wage – approximately two thirds of the employees working for companies operating in bread production earn the minimum gross wage economy-wide[5]. The deceleration in core inflation was also attributable to services, in association with the strengthening of the domestic currency against the euro in the latter part of 2018 Q4.

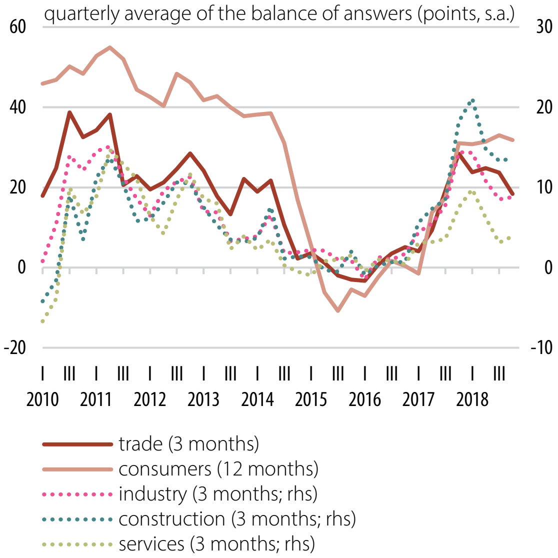
Nonetheless, the quarterly change in core inflation in the last three months of 2018 remained above the average recorded in 2010-2017, revealing some latent pressures that may lead to rekindled price increases in the following period. The economic

4 Meat products and tinned meat, dairy products.

5 The calculations were based on the results of the labour market survey conducted by the NBR in collaboration with the ECB, presented in *Occasional Paper* No. 20/2016.

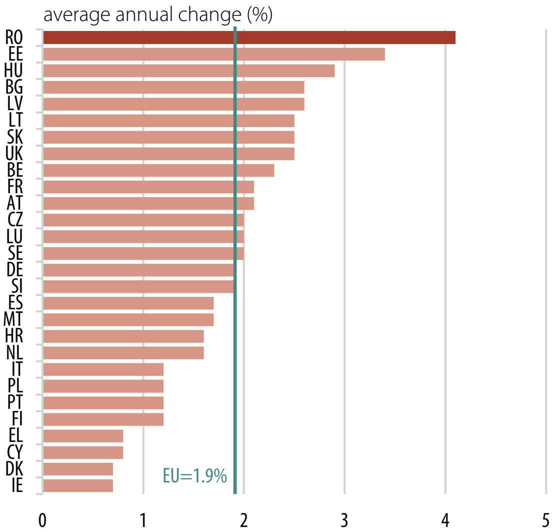
landscape is still marked by labour market tensions, which fuel strong dynamics of net real wage (almost 10 percent in annual terms) and a two-digit advance in unit labour costs, by robust trade activity and substantial excess demand. These attributes are more accurately reflected in the movements of the non-food component of core inflation, the least susceptible to transitory supply or currency shocks, whose annual dynamics further picked up in 2018 Q4, reaching the fastest pace in the past seven years.

Chart 1.4. Expectations on price developments



Source: EC-DG ECFIN

Chart 1.5. Average annual HICP in the EU – Dec. 2018



Source: Eurostat

Inflation expectations are mixed. Specifically, in 2018 Q4, retailers revised downwards their expectations on price developments. The same picture is also painted by financial analysts' opinions, who maintained the anticipated values for the inflation rate inside the variation band of the flat target on all horizons, yet slightly lower than those expected in the previous quarter. Conversely, consumers and economic agents in services, industry and construction were more reserved, the balances of answers further posting similar values to those in July-September 2018 (Chart 1.4).

The more moderate rise in prices recorded in the last three months of 2018 resulted in a slower pace of increase of the annual average. Specifically, based on the national methodology, the average annual inflation rate rose slightly to 4.6 percent in December, while the value calculated in accordance with the harmonised structure reached 4.1 percent, still the highest among EU Member States. Under the circumstances, the difference against the EU average remained high, exceeding 2 percentage points (Chart 1.5).

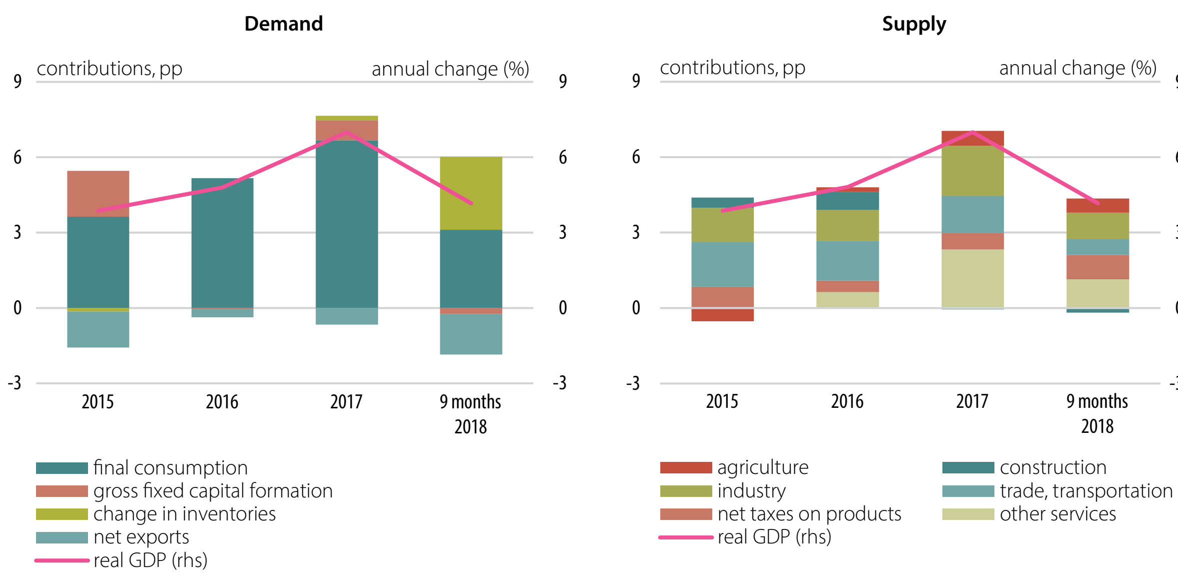
At end-2018, the annual inflation rate stood slightly below the level anticipated in the November 2018 *Inflation Report* (3.3 percent versus a 3.5 percent forecast). The difference was determined by the unexpected substantial drop in the Brent oil price on the international markets. By contrast, the data validated the previously projected level of adjusted CORE2 inflation, i.e. 2.5 percent, annual change.

2. Economic developments

1. Demand and supply

In 2018 Q3, economic activity saw a step-up as against the previous 3-month period, i.e. up 0.3 percentage points to 4.4 percent (annual change). Consumer demand further made a sizeable contribution, on the back of components sensitive to developments in agricultural production, while investment experienced a renewed contraction and net external demand continued to depress real GDP dynamics. Nevertheless, the same as in Q2, the above-mentioned components made a modest cumulative contribution, with the change in inventories accounting for 3.1 percentage points of the GDP expansion (Chart 2.1).

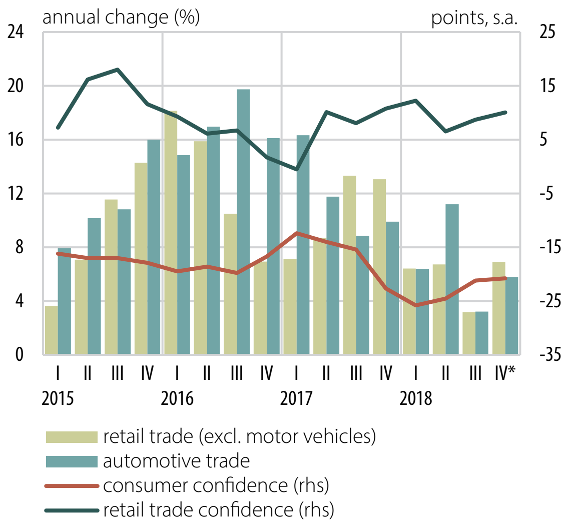
Chart 2.1. Contributions to economic growth



Source: NIS, NBR calculations

Household consumption posted a slightly swifter annual growth in the period from July to September, i.e. up to 3.7 percent, chiefly on the back of developments in agriculture, as 2018 is estimated to be the second consecutive year with a robust increase in agricultural output. In Q3, this evolution was enhanced by the earlier harvesting period, due most likely to more favourable weather conditions as compared to the same year-ago period. Hence, the self-consumption of household-produced agri-foodstuffs and purchases on the agri-food market made a major contribution to the brisker dynamics of private consumption. Conversely, retail purchases saw their advance lose half its value as against Q2, i.e. down to around 3 percent (annual change). This trend was more pronounced in the motor vehicles segment which was affected by the change in the emissions testing procedure for new cars across Europe (effective as of 1 September 2018), as well as in the motor fuels segment, as a result of higher prices in the reviewed period and the base effect associated with the spike in purchases in the months before the rise in the excise duty in the autumn of 2017.

Chart 2.2. Trade and confidence indicators



*) Oct.-Nov. for trade turnover

Source: NIS, EC-DG ECFIN, NBR calculations

Over the period ahead, even though the positive influence of agriculture is expected to shrink noticeably, consumer demand is likely to further report an annual advance. The hints in this respect derive from the stronger increase in the turnover volume of trade and services in October-November 2018, i.e. up to approximately 7 percent (annual change), as also shown by sales of motor vehicles, which seem to have overcome the aforementioned adverse shock[6] (Chart 2.2). Over a longer horizon, consumer demand will be further upheld by the swift pace of household income, also on account of new hikes scheduled for the first part of 2019, an influence that may be moderated by the tightening of credit standards (anticipated by the NBR's November 2018 *Bank Lending Survey*).

In 2018 Q3, the general government budget posted a deficit of lei 1.8 billion, i.e. 0.2 percent of GDP, well below that posted in the prior quarter (lei 10.5 billion or 1.1 percent of GDP). As a result, the intra-annual easing of the budget execution, also in relation to the previous year's pattern, continued in this period, albeit at a slower pace[7]. The narrowing of the deficit reflected particularly the rise in total budget revenues[8], which was mostly underpinned by the expansion in non-tax revenues[9] and VAT receipts. Moreover, total budget spending decreased slightly[10], chiefly on account of the contraction in interest expenses[11], the increase in capital expenditure[12] acting in the opposite direction.

Gross fixed capital formation decreased further in July-September 2018, i.e. down 1.6 percent (annual change). However, the fall was slower than in Q2, due to the quarterly rebound in investment demand, after the successive contractions in 2018 H1. The main driver was the step-up to 15.4 percent (annual change) in equipment purchases (including the transport equipment bought by companies and public institutions). Conversely, new construction works cumulated by capital repairs witnessed a sharper decline, as a result of the adverse developments in the

6 In November 2018, purchases grew by 4 percent as against October, going up for the third month in a row.

7 In 2017 Q3, the general government deficit shrank to lei 0.5 billion (0.1 percent of GDP) as compared with lei 7.8 billion (0.9 percent of GDP) in the previous quarter.

8 The real annual dynamics of total budget revenues stepped up slightly to 10.0 percent from 8.1 percent in the period from April to June 2018.

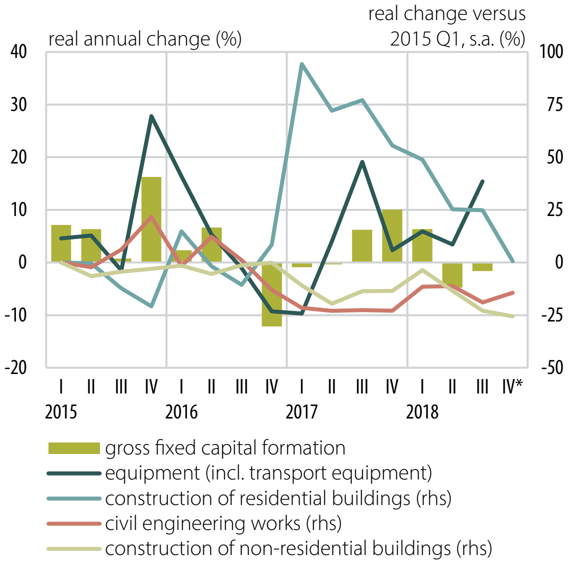
9 Also on account of receipts from dividends from state-owned enterprises.

10 The real annual increase of total budget spending was, however, marginally higher (up to 11.8 percent from 10.4 percent in Q2).

11 However, they rose further in real annual terms.

12 Its real annual dynamics returned to positive territory, acting similarly to those of EU-funded expenditure.

Chart 2.3. Investment



*) Oct.-Nov.

Source: NIS, NBR calculations

period under review (Chart 2.3). For the coming months, signals pointing to a further upward path in technological investments become visible. Mixed developments are foreseen in construction, the favourable prospects for the non-residential segment being countered by the remote likelihood of a recovery in residential and civil engineering construction works.

Technological investments stayed on the uptrend they had posted in 2018 H1, due equally to purchases from the local market and to imports (in Q3, capital goods, except for motor vehicles, witnessed double-digit real annual rates of increase in both cases). The favourable evolution may continue in the following months, as hinted at by the significant advance seen also over the recent period in the domestic order portfolio of industries producing capital goods, except for motor vehicles, i.e. around 23 percent July through November, after an average growth of 19 percent in 2018 H1. Furthermore, as regards the financing sources, corporate loan demand is expected to remain on an upward, albeit slower-paced[13], course in Q4, while net inflows in the form of equity and earnings reinvested by foreign companies[14] recovered somewhat in the July-November period. In 2018 H2, concerns about the completion or unfolding of investment projects aimed at retooling and expanding the existing facilities, as well as at opening new ones (also as a result of foreign investors' participation) were more visible in the industrial subsectors manufacturing motor vehicles and motor parts, industrial equipment, fabricated metal products, building materials.

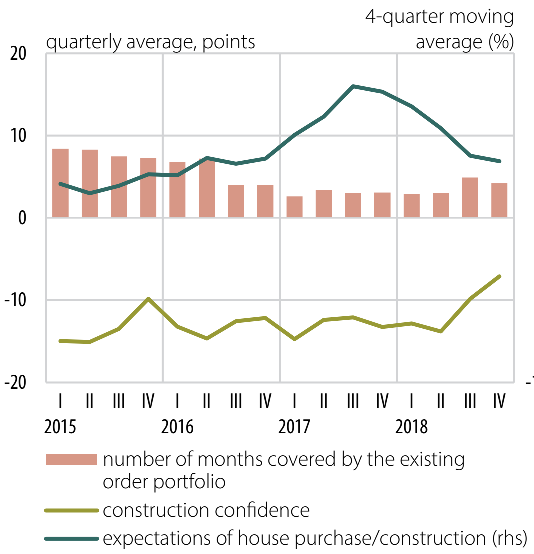
In contrast to the pick-up in equipment purchases, new construction works and capital repairs followed a steeper downward trend, recording a real 9.6 percent contraction in annual terms. Both construction of buildings and civil engineering works posted a weaker performance than in Q2, i.e. a drop of 19.8 percent and an annual rate of increase over four times slower (down to 3.2 percent), triggered largely by the decrease in the period under review. Even though the year end will see a relative revival, the large infrastructure investment projects were not resumed in 2018 either, as illustrated by the lower-than-expected absorption rate of dedicated non-repayable EU funds[15]. A recovery is little likely on the residential construction works segment as well, given the persistence of relatively subdued households' intentions to purchase/build a home over the next 12 months (according to the EC-DG ECFIN Survey for 2018 Q4). A similar outlook emerges also for financing sources, pointing to

13 According to the NBR's November 2018 *Bank Lending Survey*. This outlook is confirmed by the 6.9 percent advance in the real stock of equipment loans in October-November 2018 versus 8.1 percent in Q3 (annual changes).

14 Computed as the sum of the past 12-month corresponding values in the balance of payments.

15 The funds raised by Romania in 2018 under the Large Infrastructure Operational Programme were lower than a year earlier, the absorption rate of 21.5 percent being further relatively modest at regional level, i.e. 6-12 percentage points below the rates reported by Czechia, Poland and Hungary.

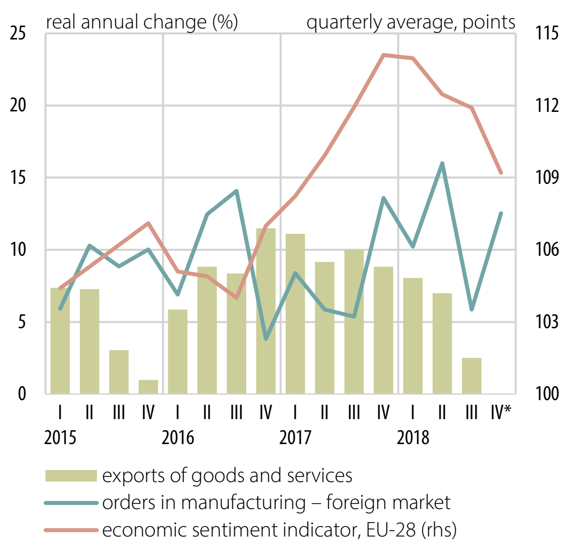
Chart 2.4. Outlook for construction*



*) seasonally adjusted data

Source: EC-DG ECFIN, NBR calculations

Chart 2.5. Exports of goods and services



*) Oct.-Nov. for orders

Source: NIS, EC-DG ECFIN, NBR calculations

a standstill in demand for housing loans anticipated for the fourth quarter (after the sharp reduction in Q3), amid the tightening of banks' credit standards[16]. Conversely, favourable developments are foreseen for non-residential construction, the analysts expecting a faster growth in the supply of new spaces (office, commercial and logistic facilities) in the last part of 2018 and for 2019 (Chart 2.4).

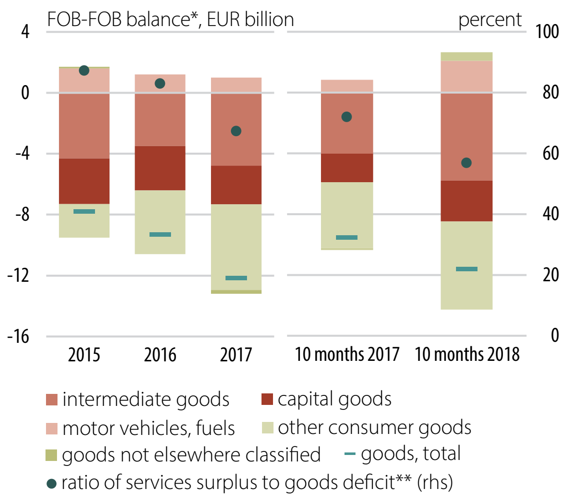
Turning to exports of goods and services, their expansion was again slower than in the previous 3-month period (down 4.5 percentage points to 2.5 percent, annual change), due chiefly to incidental influences. The next period may see, however, a certain recovery, as hinted at by the external orders to local industrial companies, which further posted a rising trend in the recent period (up 8.7 percent July through November 2018, with a visibly stronger pick-up in October-November), and by the upbeat expectations about the bumper crops of maize and sunflower. However, a notable improvement in the annual dynamics of exports is less likely, in view of the moderately optimistic expectations of economic growth in the euro area (Chart 2.5).

The slowdown in the annual dynamics of exports of goods was largely ascribed to sales of motor parts, amid swings in the EU production as a result of the change in the emissions measurement procedure for new motor vehicles as of 1 September 2018. Nevertheless, an improvement is possible, as suggested by the rebound in orders to the local motorcar industry (motor parts included) starting in September. In addition, motorcar exports are expected to stay on the upward course seen since the beginning of the year following the launch of new models – Dacia Duster, Ford EcoSport – in foreign markets, given the intention of the Craiova-based carmaker to start manufacturing the second model.

The deceleration in the retail segment of consumer demand and in the production for foreign markets also mirrored in the evolution of imports (real annual growth of 6.6 percent versus 9.5 percent in 2018 Q2). The main contribution came from intermediate goods, yet a loss of momentum was also manifest in the case of consumer goods, motor vehicles included (down to annual rates of 1.3 percent and

16 According to the NBR's November 2018 *Bank Lending Survey*.

Chart 2.6. Balance on trade in goods



*) excluding goods produced under processing arrangements
**) 11 months 2017, 11 months 2018 for the last two periods

Source: Eurostat, NBR, NBR calculations

1.7 percent respectively). By contrast, imports of capital goods saw a brisker pace of increase, i.e. up to approximately 17 percent, being spurred by technological investment (special mention deserve the imports of measurement and control apparatus, machinery and equipment).

The sharper slowdown in the annual dynamics of exports as compared to those of imports caused the balance on trade in goods to worsen further, the cumulative deficit in the period from January to November 2018 standing EUR 2.5 billion higher than in the same year-ago period (Chart 2.6). In addition, net receipts from international services decreased slightly, with households' increasing preference for foreign travel and transportation services being only partly offset by income from ICT services. Under the circumstances, the counterweight of the services surplus to the external imbalance of trade on goods declined to 56.8 percent (from 72 percent in January-November 2017). The deterioration witnessed by both main current account components caused the widening by about 60 percent of the current account deficit to EUR 8.7 billion.

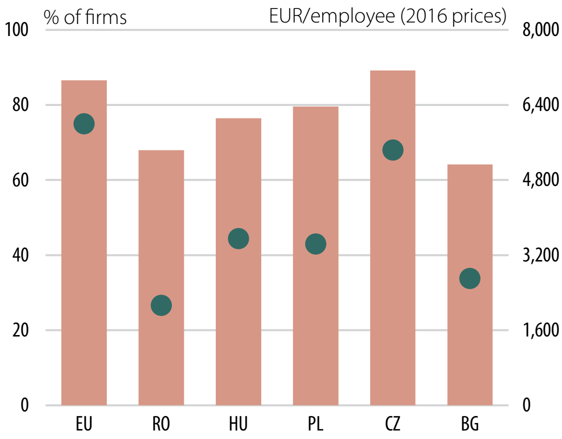
Labour productivity

In 2018 Q3, labour productivity economy-wide saw its growth pace decelerate to 4.2 percent (annual change), i.e. 1.4 percentage points below the previous quarter's reading, owing largely to developments in construction and trade. In the former case, the evolution may be attributed to the contraction in civil engineering works, whereas in retail trade, the decelerating dynamics of sales coincided with a brisk rise in the number of persons employed, amid the further expansion of large chain stores.

On the other hand, labour productivity in manufacturing recovered marginally July through November 2018, i.e. up 0.5 percentage points versus Q2 to 4.1 percent (annual change), in association with investment made and the favourable demand conditions in several key economic sectors. Specifically, in the automotive industry[17], apart from the robust demand that pushed the 2018 car production up to a new record high, surpassing by about 32 percent the previous year's readings, the Craiova-based plant started the investment necessary for manufacturing a second model. Moreover, in the fabricated metal products subsector, significant investments in new production facilities were completed, while in the manufacturing of other transport equipment (except for road transport equipment) the production increase was ascribed to substantial foreign orders to the rolling stock subsector.

[17] In terms of labour productivity (production volume/number of employees), the automotive industry witnessed in 2018 Q3 the best performance over the past 8 years, i.e. up 18.1 percent versus the same year-ago period, given that the rise in production overlapped the downsizing in terms of personnel numbers (possibly associated with investment in automation projects).

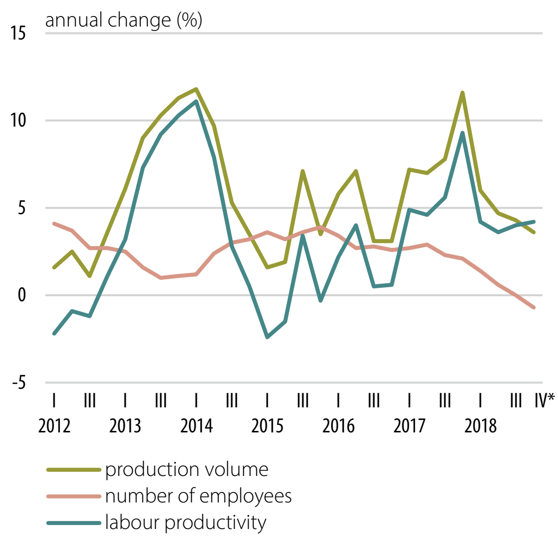
Chart 2.7. Investment activity



*) firms which spent at least EUR 500 per employee on investment activities are included

Source: EIBIS 2018

Chart 2.8. Labour productivity in manufacturing



*) Oct.-Nov.

Source: NIS

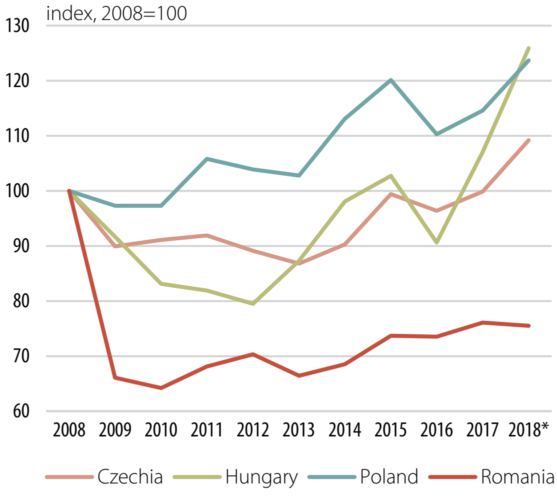
Despite some favourable signals relating to capital investment in the industrial sector, the results of the latest *EIB Investment Survey* indicate that the investment climate for Romania's economy in 2018 was similar to that seen in the previous year and, as a result, Romania further ranks last among EU Member States in terms of investment intensity of firms (investment per employee). Additionally, according to the same survey, only 68 percent of local firms invested as compared with 87 percent of firms EU-wide and only 3 percent of investments were made in research and development, which is less than half of the EU average (Chart 2.7). In fact, investment performance in Romania was subdued in the last 10 years, with the recovery in demand conditions since 2014 failing to push firms' capital investment up to the pre-crisis peak (Box 1. Recent developments in investment: several coordinates). Relevant to the weak investment activity at national level and to the low attractiveness of domestic economy to large investors are the recent decisions of two major manufacturers of premium cars to invest EUR 1 billion each in opening new production facilities in Hungary, the two projects adding to the list of massive investments in the automotive industry that skipped Romania over the past years. Among other factors with a persistent influence was the further widening of the negative unemployment gap, in parallel with the reduction in the number of employees in the automotive industry for the first time in the post-crisis period, which suggests that labour market tightness reached a critical level, the inadequacy and the shortfall of remaining human capital representing the obstacle in the way of economic expansion most often cited by companies (Chart 2.8).

Box 1. Recent developments in investment: several coordinates

Investments in Romania have been rather fragile over the past years, their level currently remaining well below the 2008 peak, in contrast to the other emerging economies in the region (Chart A). Since 2014, once demand conditions started to improve, the construction of buildings has seen a recovery which has only succeeded in limitting the differential of investment in construction against its pre-crisis high to around -10 percent in 2017[18], given the absence of traction from

[18] AMECO data.

Chart A. Developments in gross fixed capital formation



*) 9 months

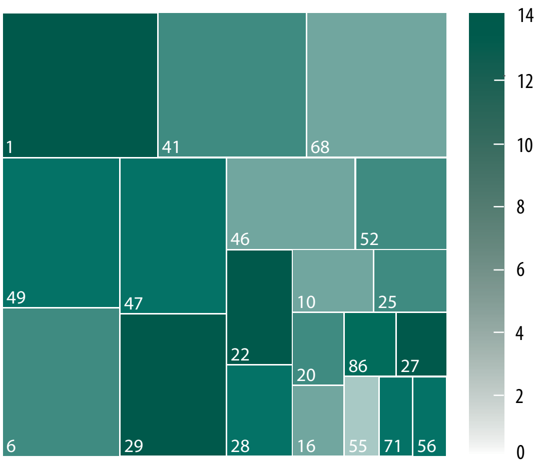
Source: Eurostat

civil engineering works. Moreover, the situation seems to remain the same in 2018, as the volume of new construction works and capital repairs decreased by over 6 percent January through November. The picture is even less bright for investment in equipment, as its level stood about one third lower in 2017 than in 2008 (the difference growing larger after 2013) and it is quite hard to believe that the advance in equipment purchases in the first three quarters of 2018 was high enough to close the gap. This analysis aims to provide several coordinates regarding the investment made locally in the period from 2014 to 2017, on the basis of disaggregated data.

Investment profile by sector[19]

The boom in the construction of buildings in the 2014-2017 period led to notable increases in tangible fixed assets in both construction and the real estate transactions sector (while also fuelling a step-up in investment in the related fabricated metal products subsector). In the above-mentioned period, the two sectors provided a gradually larger support to economy-wide gross fixed capital formation – they ranked among the industries with the highest levels of gross investment (Chart B), cumulating about one quarter of the total figure in 2016-2017.

Chart B. Gross investment in 2014-2017 – the most relevant sectors



1. Agriculture
6. Extraction of crude oil and gas
10. Food industry
16. Manufacture of wood
20. Chemical industry
22. Manufacture of rubber
25. Fabricated metal products
27. Electrical equipment
28. Machinery and equipment
29. Motor vehicles
41. Construction of buildings
46. Wholesale trade
47. Retail trade
49. Transport
52. Warehousing
55. Accommodation
56. Food and beverage services
68. Real estate activities
71. Architecture and engineering
86. Healthcare

Note: The listed sectors cover approximately 80 percent of total gross investment in the economy. In the chart, the share of each sector (corresponding to the size of the associated square) was normalised based on the cumulative share of the respective sectors. The colour intensity relates to the gross investment rate, the darker shades indicating higher values.

Source: MPF, NBR calculations

19 This section relies on microeconomic data on corporate capital investment aggregated by NACE division, which cover the period until 2017 and have been made available by the Ministry of Public Finance. The focus is on gross investment, calculated as the difference between the values of tangible fixed assets at the beginning and the end of the year, and net investment, further excluding depreciation and impairment charges. The data breakdown did not allow for the developments in intangible fixed assets relevant for investment to be taken into consideration, which may underestimate the importance of investment in some sectors (e.g., in information and communications technology – ICT).

Agriculture also benefited from robust investment (spurred by the absorption of EU funds and the domestic presence of major international companies that sought to improve their logistics capacity), accounting, on average, for around 9 percent of gross fixed capital formation in the economy in the period from 2014 to 2017. Additionally, investment in agriculture saw a generally less fluctuating path in the wake of the economic crisis outbreak, revealing its lower sensitivity to the cyclical factor.

Furthermore, substantial investments were also made in industrial subsectors posting favourable developments in the post-crisis period in several areas (production, exports and/or employment), such as transport equipment, electrical equipment, machinery and equipment and rubber and plastic products. Capital investment has started to rise gradually since 2014 so that, at-end 2017, these industries held approximately 15 percent of total gross investment. This evolution is linked to the improved external conditions (the economic growth in the euro area was 2 percent, on average, in the 2014-2017 period, as compared with 0.6 percent in 2010-2013), given the export orientation of these activities.

Capital investment in other industrial subsectors was generally more moderate over the past years (in the context of rather low investment rates[20]) or had a lower impact overall. Specifically, in the chemical industry, after the investment spree in 2014-2015, on the back of technological overhauling made by a major company, efforts in this direction were overshadowed, inter alia amid the absence of a stimulus from international price developments. The last factor seems to also have had an impact on mining and oil and natural gas extraction, the contraction in investment appetite as of 2015 coinciding with the drop in Brent oil price, whereas the fixed capital investment started to worsen even earlier in the production and supply of electricity, against the background of legislative changes in this field.

Apart from these influences, the lack of buoyant investment is surprising in some industrial subsectors that should be more sensitive to the recovery of demand conditions and the improvement in economic sentiment. A noticeable example is that of food industry, which accounts for approximately 10 percent of Romania's industrial output. Despite the opportunity created by significant fiscal stimuli (including the measure directly targeting this segment to broaden the scope of the reduced VAT rate to all food items as of June 2015), the investment rate in food industry witnessed a modest rise, i.e. 1-2 percentage points to an average of around 5 percent/year in the 2016-2017 period for gross investment and 1.4 percent respectively for net investment. The picture contrasts with that painted by retail trade, where favourable demand conditions were also in place and where the gross investment rate almost trebled from 4 percent in 2014 to 11 percent in 2017 (and the net investment rate went up gradually from 3 percent in 2014 to 7 percent in 2017). In fact, in 2017, approximately 16 percent of domestic investments were made across the trade sector[21]. Explaining these differences

20 Investment rate is the ratio of investment value to the initial capital value.

21 NACE divisions 45 (retail trade of motor vehicles), 46 (wholesale trade) and 47 (retail trade).

implies the investigation of other potential determinants of investment based on econometric estimations using firm-level data.

Determinants of investment: microeconomic analysis

Theoretical considerations

No doubt, the investment made by an economic agent depends also on its financial standing – investment opportunities may arise, but the firm may not be able to pursue them because it lacks internal resources and the access to external financing may be limited, possibly because of previously incurred debts. Obviously, these debts may have been beneficial when they arose and may have even facilitated investments. Nevertheless, they have currently turned into a restrictive factor, leading to a contraction in internal resources due to interest expenses and to a reduction in the firm's capacity to take new loans, given the rise in financing costs triggered by a higher default risk. Although it should be plausible that indebtedness be an actual constraint solely in cases where debt levels are higher[22], Gebauer *et al*. (2017) show that an increase in debt in post-crisis years had an investment-dampening effect not only when the leverage ratio was excessive, but also when debt levels were lower (even though the magnitude of the effect was smaller). At the same time, keeping a lower leverage ratio for a longer time period creates the financial space allowing for the subsequent pick-up in the capital expenditure of firms (Ferrando *et al.*, 2014). Some studies (e.g., Beck *et al.*, 2005 or Ferrando and Mulier, 2015) have further refined the debate on the effects of financial constraints using surveys that provide more in-depth information about the bank-firm relationship. Specifically, there are various forms of access limitation to finance from external sources, i.e. rejected loan applications, smaller-than-requested loan amounts or even the so-called "discouraged borrowers" – firms that need external finance, but do not even apply for a bank loan because they fear that their application will be rejected anyway. In some cases, these frictions can lead to a shift in focus to trade credit (Petersen and Rajan, 1997; Casey and O'Toole, 2014).

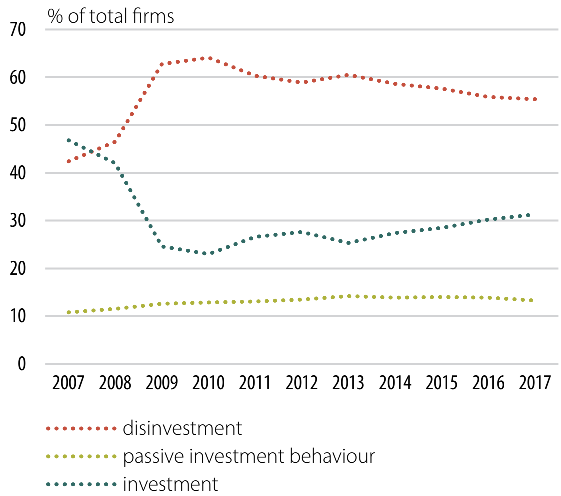
A favourable financial situation, backed by favourable demand conditions, may be, however, insufficient for making an investment when firms act in an environment surrounded by increased uncertainty about future developments (Fuss and Vermeulen, 2004; Bloom, 2009). Adjusting the estimates on expected revenues for a higher risk premium may push into negative territory the net discounted value of the project, which is an essential indicator for assessing any investment. In addition, the firm age and firm size (usually determined based on the number of employees) are frequently used in the literature as potential determinants of investment behaviour.

[22] Some papers highlighted the importance not only of the level, but also of the structure of indebtedness – e.g., Kalemli-Özcan *et al.* (2018) notice, in a post-crisis context, a negative effect of the share of short-term debt on investment – as well as of the characteristics of the bank that the firm has a relationship with.

Empirical exercise

In this analysis, modelling the link between investments and their determinants takes into account the fact that capital accumulation is in itself a very uneven process. In fact, firms' investments are often characterised by periods of modest changes, followed at times by spikes, a pattern that is less frequently incorporated into theoretical macroeconomic models in which trajectories are less volatile and more persistent (hence, the investment response to a shock is hump-shaped). As a matter of fact, studies based on microeconomic data showed that economy-wide developments in investment may be explained accurately enough looking at the frequency with which investment spikes occur (Nilsen and Schiantarelli, 2003; Gourio and Kashyap, 2007). In this context, it is recommended to use econometric methods that assess the probability of occurrence of these spikes (Grazzi *et al.*, 2016). Based on these considerations, information on the change in the stock of local companies' tangible fixed assets was used in order to construct a discrete variable with three possible values, signalling as many regimes (states) of capital accumulation: disinvestment, passive investment behaviour and investment, respectively[23] (Chart C).

Chart C. Distribution of companies by investment regime*



*) net investment

Source: MPF, NBR calculations

Afterwards, this variable was included in an ordered probit model, which allows for the assessment of factors leading to a firm shifting from one state to another. Generically, the model may be formulated as follows:

$$\Delta K^*_{i,j,t} = \beta X_{i,t} + \theta Z_{i,t} + \phi Q_{j,t} + \alpha_j + \iota_t + \epsilon_{i,t}$$

The latent variable $\Delta K^*_{i,j,t}$ represents the investments of firm *i*, in sector *j*, at the moment *t*, and reflects its investment regime (namely disinvestment, passive investment behaviour or investment), as previously described.

The vector $X_{i,t}$ contains characteristics of economic agents, such as age and size (4 classes of firms were defined depending on the number of employees, with limits of 10, 50 and 250 employees respectively). Moreover, the relevance of exports is included among the explanatory variables (making a distinction between non-exporters, exporters for which the ratio of external sales to turnover is lower than a third, between a third and two thirds, and greater than two thirds), as it is plausible for the exposure to foreign opportunities to impact investment policy. In addition, the estimation takes into account the type of economic agent

23 To construct a discrete variable, the change in the stock of tangible fixed assets was compared against a level of ±5 percent, as selecting a smaller threshold value could have led to interpreting regular maintenance operations as investments.

depending on ownership, with the majority of cases featuring limited liability companies or joint-stock companies.

The vector $Z_{i,t}$ groups together economic agents' financial position indicators – leverage (calculated as a ratio of total debt to total assets), turnover dynamics, rate of return (gross profit-to-turnover ratio) as well as labour costs dynamics, given that a rise in these costs (or in operating expenses in general) may influence firms' plans on increasing operational efficiency and, implicitly, their investments for this purpose.

The vector $Q_{j,t}$ contains three variables assessed at sectoral level (NACE division), specifically: (i) expectations on developments over the next three months, according to the EC-DG ECFIN business Survey[24], (ii) a measure of uncertainty, calculated based on the volatility of shares of firms listed on the Bucharest Stock Exchange (starting from the daily share price movements, the annual value at sectoral level was calculated as an arithmetic mean of the monthly standard deviation for all the firms operating in a sector[25]), and (iii) the foreign direct investment stock, whose expansion can generate a pick-up in investment, as potential spillover effects that may stem from the presence of foreign-owned firms pass through to the variable.

Lastly, α_j represents sector-specific fixed effects, their role being to capture shocks specific to the scope of activity, ι_t are fixed effects associated with every year in the estimation sample, and $\epsilon_{i,t}$ is the unobserved (error) term, whose variance may differ between firms.

Microeconomic indicators were sourced from the Ministry of Public Finance, the Trade Register (data on the firm's year of establishment) and the NIS (data referring to international trade flows)[26]. The sample contains economic agents with majority private capital, excluding firms operating in the mining sector, the energy sector (in both cases, the capital stock shows wide fluctuations that cannot be explained by the variables included in the model) and the financial sector (financial intermediation and insurance). In order to identify the investment regimes, only firms that had submitted reports for at least three consecutive years were kept. Moreover, outliers were eliminated (2 percent of the remaining observations), symmetrically located at the tails of the distribution of each variable at sector-year level.

24 The survey includes firms operating in manufacturing, construction, retail trade and services, using indicators that refer to developments in production, orders and demand, respectively (in the last two cases). The values for the other sectors were approximated using the mean corresponding to related activities.

25 For sectors without listed firms, the values used were determined based on those corresponding to related sectors. The sample comprises 376 firms and excludes firms that do not have the registered headquarters in Romania. The data were sourced from the Bucharest Stock Exchange, and the information was taken from the Bloomberg app.

26 The data used in the estimation cover the period 2005-2017.

Table A. Results of estimations

	Gross investment				Net investment			
	Coefficients	Marginal effects			Coefficients	Marginal effects		
		Disinvestment	Passive investment behaviour	Investment		Disinvestment	Passive investment behaviour	Investment
Firm age	-0.0197***	0.0033***	0.0026***	-0.0059***	-0.0057***	0.0010***	-0.0001***	-0.0009***
	(0.00033)	(0.00003)	(0.00003)	(0.00006)	(0.00038)	(0.00007)	(0.00001)	(0.00006)
Firm age × Uncertainty	0.1222***				0.0060***			
	(0.00968)				(0.00067)			
Firm age × Leverage	0.0005***				0.0008***			
	(0.00005)				(0.00008)			
Small firms	0.3311***	-0.0613***	-0.0618***	0.1231***	0.4226***	-0.1548***	0.0141***	0.1407***
	(0.00603)	(0.0005)	(0.00065)	(0.00111)	(0.00592)	(0.0011)	(0.00009)	(0.00105)
Medium firms	0.5494***	-0.0914***	-0.1223***	0.2137***	0.5997***	-0.2255***	0.0134***	0.2121***
	(0.01401)	(0.00099)	(0.00243)	(0.00339)	(0.01260)	(0.00296)	(0.00016)	(0.00307)
Large firms	0.7608***	-0.1078***	-0.1724***	0.2801***	0.6923***	-0.2636***	0.0109***	0.2527***
	(0.03363)	(0.00182)	(0.00643)	(0.00822)	(0.02889)	(0.00718)	(0.00062)	(0.00779)
Small firms × Uncertainty	-0.0202**				-0.0604***			
	(0.01001)				(0.00976)			
Medium firms × Uncertainty	-0.0021				-0.0518***			
	(0.01962)				(0.01764)			
Large firms × Uncertainty	-0.0825*				-0.0339			
	(0.04388)				(0.03604)			
Small firms × Leverage	-0.0218***				-0.0117***			
	(0.00239)				(0.00266)			
Medium firms × Leverage	-0.0929***				-0.0764***			
	(0.01237)				(0.01164)			
Large firms × Leverage	-0.0883***				-0.0627**			
	(0.02808)				(0.02684)			
Leverage	-0.0148***	0.0038***	0.0031***	-0.0069***	-0.0257***	0.0094***	-0.0012***	-0.0082***
	(0.00119)	(0.00021)	(0.00018)	(0.00039)	(0.00117)	(0.00034)	(0.00004)	(0.0003)
Uncertainty	-0.0813***	0.0034***	0.0027***	-0.0062***	-0.0497***	0.0037*	-0.0005*	-0.0032*
	(0.00781)	(0.00102)	(0.00082)	(0.00185)	(0.00860)	(0.00209)	(0.00026)	(0.00183)
Foreign direct investment	0.0106***	-0.0022***	-0.0018***	0.0040***	0.0187***	-0.0074***	0.0009***	0.0064***
	(0.00200)	(0.00042)	(0.00034)	(0.00075)	(0.00218)	(0.00086)	(0.0001)	(0.00075)
Demand expectations	0.1149***	-0.0240***	-0.0192***	0.0432***	0.0726***	-0.0286***	0.0035***	0.025***
	(0.01308)	(0.00272)	(0.0022)	(0.00493)	(0.01344)	(0.00529)	(0.00065)	(0.00464)
Low export intensity	0.0461***	-0.0094***	-0.0081***	0.0175***	0.0875***	-0.0346***	0.0038***	0.0308***
	(0.00651)	(0.00129)	(0.00119)	(0.00248)	(0.00580)	(0.00231)	(0.00022)	(0.00208)
Medium export intensity	0.0118	-0.0025	-0.0020	0.0045	0.0375***	-0.0148***	0.0018***	0.0131***
	(0.01440)	(0.00297)	(0.00246)	(0.00544)	(0.01286)	(0.00509)	(0.00057)	(0.00452)
High export intensity	0.0624***	-0.0126***	-0.0111***	0.0237***	0.0522***	-0.0206***	0.0024***	0.0182***
	(0.00976)	(0.0019)	(0.00184)	(0.00374)	(0.00908)	(0.0036)	(0.00039)	(0.00321)
Δ Labour costs	0.0349***	-0.0073***	-0.0058***	0.0131***	0.0264***	-0.0104***	0.0013***	0.0091***
	(0.00084)	(0.00018)	(0.00014)	(0.00032)	(0.00075)	(0.0003)	(0.00004)	(0.00026)
Δ Turnover	0.0603***	-0.0126***	-0.0101***	0.0227***	0.0586***	-0.0231***	0.0028***	0.0202***
	(0.00074)	(0.00015)	(0.00013)	(0.00028)	(0.00070)	(0.00028)	(0.00004)	(0.00024)
Internal rate of return	0.0004	-0.0001	0.0000	0.0001	0.0002	-0.0001	0.0000	0.0001
	(0.00031)	(0.00006)	(0.00005)	(0.00012)	(0.00029)	(0.00011)	(0.00001)	(0.0001)
Constant 1	-1.1819***				0.1328***			
	(0.03886)				(0.03651)			
Constant 2	0.2975***				0.5069***			
	(0.03885)				(0.03651)			
Observations	1,890,592				1,784,632			
Pseudo R^2	0.0292				0.0309			

Note: Except for the indicator variables, all other variables were included in the model with a lag, in order to avoit endogeneity issues. Robust standard errors are shown between the brackets.

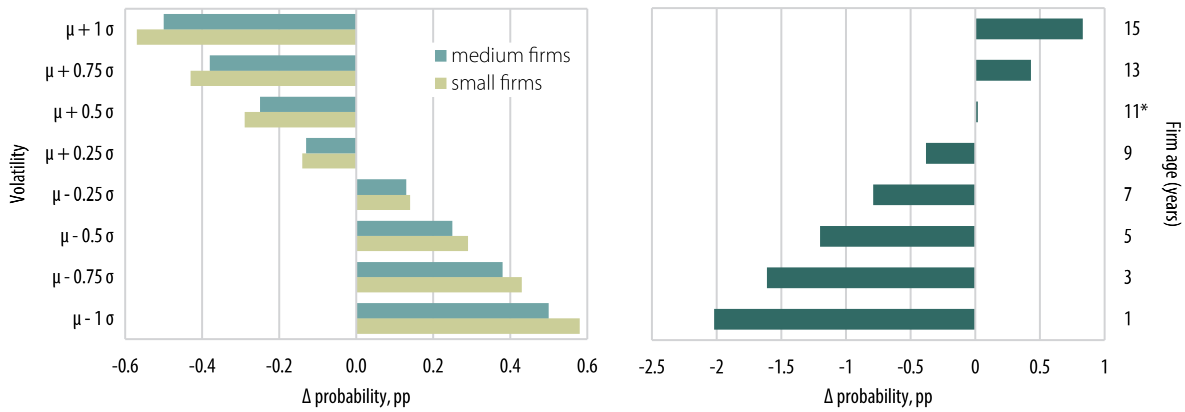
*** p<0.01; ** p<0.05; * p<0.1

Source: MPF, NTRO, NIS, BSE, EC-DG ECFIN, NBR calculations and estimates

All these adjustments carry the potential to distort the representativeness of the estimation results, along with the generally uneven nature of the correctness of reports (larger firms tend to have more accurate reports, while in the case of small firms, the relative frequency of reporting errors is higher). Tackling this issue involved reweighting accordingly the variables defined at firm level, based on the comparison between the sample used and the information in the annual structural business survey conducted by the NIS among firms.

As expected, the results of the estimation (Table A) show the importance of companies' expectations on demand developments when starting the investment process – if a firm foresees more favourable conditions in the coming period, the probability that it enters the investment regime increases by 4.3 percentage points for gross investment (2.5 percentage points for net investment). By contrast, a rise in uncertainty in the economy dampens the advance in investment, with relevant nonlinearities depending on firm size and age being detected – a more volatile economic environment mainly affects small and medium-sized firms, for which the likelihood to fall into lower investment regimes is greater by approximately 0.5 percentage points, in the case of an increase by one standard deviation in sectoral volatility (Chart D). For large firms, uncertainty has a weaker impact, a possible explanation lying with their capacity to formulate more precise forecasts in spite of expectations fluctuating widely. Moreover, microenterprises also witness a limited volatility impact. At the same time, young firms' investments seem more exposed to stronger uncertainty, while the exact opposite is true for economic agents operating for at least 13 years – due to the experience gained, it is likely that they are more capable to capitalise on investment opportunities arising in an uncertain environment.

Chart D. Uncertainty sensitivity of investment probability, depending on firm size and age



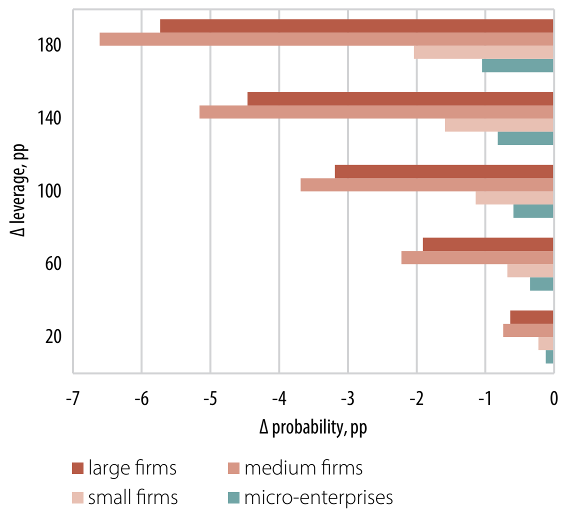
*) statistically insignificant effect

Note: μ is the annualised volatility average in 2017 and σ is the historical average (2005-2017) of the standard deviation. Sensitivities are based on estimates that use net investment data. The influence of uncertainty is negligible in the case of microenterprises and large firms.

Source: MPF, NTRO, NIS, BSE, EC-DG ECFIN, NBR calculations and estimates

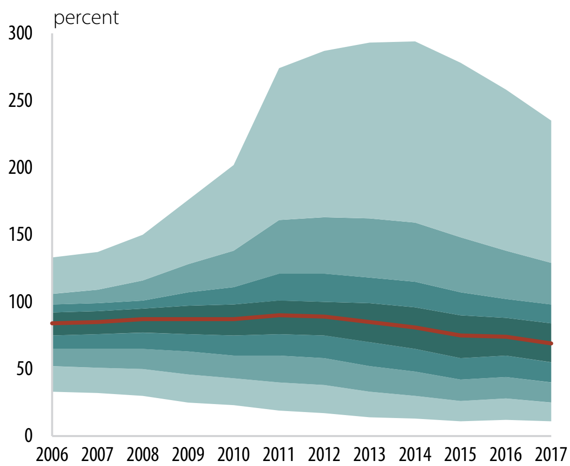
In line with the results in the literature, estimations show that debt has a significant impact on the decision to invest – a 1-percentage point rise in leverage lowers

Chart E. Leverage sensitivity of investment probability, depending on firm size



Source: MPF, NTRO, NIS, BSE, EC-DG ECFIN, NBR calculations and estimates

Chart F. Leverage distribution



Note: The chart shows the deciles of firms' distribution depending on their leverage (for the sectors used in the estimation); the red line represents the median.

Source: MPF, NBR calculations

the probability of the firm being placed into the investment regime by around 0.7 percentage points for gross investment and 0.8 percentage points for net investment. At the same time, debt affects firms to different extents (Chart E), as medium-sized and large firms are more vulnerable in the event of an increase in indebtedness. Specifically, assuming a 20 percentage point boost in leverage, the probability that a large firm remains in the investment regime is 0.6 percentage points lower, as opposed to a drop of only 0.1 percentage points in the case of microenterprises, maybe because the latter tend to supplement the necessary investment funds from informal sources. From this perspective, the context seems to have improved in the post-crisis period (Chart F) – in 2017 the median leverage is approximately 18 percentage points lower than in 2008, yet stronger heterogeneity is visible at firm level.

Furthermore, estimates indicate that, as firms get older, investment activity diminishes – a one-year increase in age lowers the investment probability by approximately 0.6 percentage points for gross investment and by 0.1 percentage points for net investment. Concurrently, the opportunity to make (net) investments grows depending on firm size (large firms have a higher probability by around 25 percentage points compared to microenterprises), and engaging in foreign trade operations favours capital accumulation (a probability approximately 2 percentage points higher on average).

The empirical analysis also confirms the relevance of foreign direct investment (FDI) for sectoral investments. For example, the discrepancy between capital accumulation in the food industry and in retail trade appears in the context of higher FDI stocks in the latter, so that in 2017, their share in gross capital stock was around 42 percent in the retail sector versus 23 percent in the food industry. In this respect, the natural tendency, up to a point, for favourable demand conditions to attract foreign capital especially towards nontradable sectors, such as retail – sectors with no foreign competition, which increases the benefits related to that conjecture – overlapped with the weak competitiveness in the food industry[27], which discouraged the establishment of

[27] As a result of the upward trend in unit labour costs, the lack of improvement in infrastructure, the shortage of skilled workforce, etc. – for further details, see the Box entitled "Sources of trade deficit in food products" in the February 2018 *Inflation Report*.

local production facilities. Even if food production has been on the radar of foreign investors over the past years, many of them preferred to capture the benefits stemming from greater demand only through exports to the local economy.

The poor competitive position of the food industry, reflected in the erosion of the domestic market share of local producers, also had an impact on the financial standing of Romanian food companies, whose revenues grew more slowly than those of retailers, offering an additional coordinate for explaining the more sluggish evolution of capital accumulation in the above-mentioned industry.

At the same time, the results of the empirical exercise give an idea on the reasons for the difference between Romania's performance and that of the other emerging economies in the region in terms of gross fixed capital formation, based on[28] the determinants identified in the econometric estimation. Specifically, local investments do not seem to be put at a disadvantage by firms' profitability, which is broadly similar to that seen in the other countries in the investigated group. For example, in 2015, profitability relative to asset value was almost 8 percent in Romania (corresponding to the median of the distribution), while in Hungary, Czechia and Poland it was slightly lower (following the previous year when Czechia and Hungary had higher profitability ratios). By contrast, firm size (depending on workforce) seems to favour somewhat investments in Czechia and Poland – in 2015, the firm placed at the median of the distribution based on the number of employees had 42 employees in Czechia and 44 in Poland, as opposed to 38 employees in Romania and 37 in Hungary (the differences increasing for higher deciles), as larger firms are more likely to engage in an investment process. The local economy is also in a less advantageous position in terms of firms' debt, which, despite the posted downtrend, generally stands above the readings in the other three countries (at the same time suggesting overly low equity), as well as in terms of foreign direct investment, Czechia, Poland and Hungary appearing to be more attractive destinations.

Conclusions

The rebound in demand conditions starting with 2014 brought about an improvement in investment, which, however, remains below the 2008 level. Among the sectors that saw their investment activity following a favourable path were those related to construction, agriculture, industries with notable developments throughout the pre-crisis period (mainly automotive production and the related industries), as well as the trade sector, while other fields posted less convincing performances, one notable example being the food industry.

The empirical estimations showed the positive influence that foreign direct investment flows and demand expectations have on capital accumulation, highlighting at the same time the inhibitive role played by uncertainty, which primarily affects small and medium-sized firms. Moreover, economic agents with

[28] The analysis uses the dataset compiled under the Competitiveness Research Network (CompNet – 6th vintage). In order for all the four countries to be included in the discussion, the information pertaining to firms with over 20 employees was taken into account, the data covering 2015 at the latest. The comparison referring to FDI is based on Eurostat data.

a better financial standing have a higher probability of launching investment projects, while the level of debt is a deterrent especially in the case of medium-sized and large firms.

The differences in investment activity between the food and the trade sectors, both of which benefited from a context of strong demand over the past years, ultimately illustrates the effect of the former's weak competitive position. The erosion in competitiveness acted to the detriment of foreign investors' presence and of a stronger pick-up in revenue dynamics that were further reflected in an investment activity less brisk than expected, which fails to offer a solid basis for a rebound in the sector in the coming period.

The overall more unfavourable position of the Romanian economy compared to other emerging economies in the region in terms of foreign direct investment inflows or the leverage ratio (determinants of capital accumulation identified in the empirical exercise) helps to explain the weaker-than-expected performance of local investments over the past ten years.

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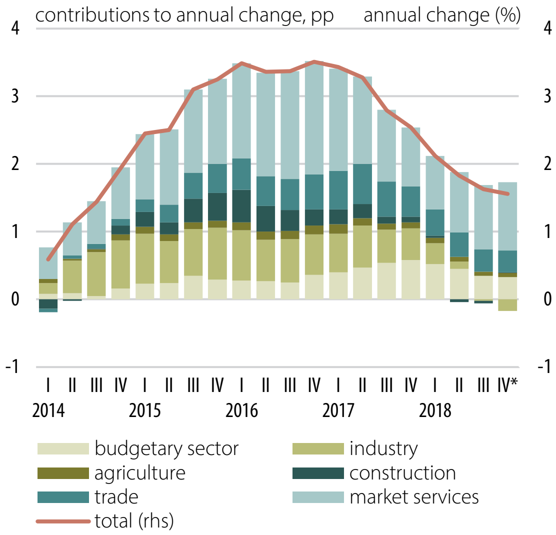
Labour market developments[29]

In 2018 Q3, the number of employees economy-wide rose to a post-2000 high, although the annual increase slowed down further for the seventh quarter in a row (to 1.6 percent), this trend being also confirmed by the data available for October-November. The loss of momentum was due to developments in both the budgetary sector (visible particularly in healthcare in the context of the law stipulating for 2018 the rule according to which only one in two job vacancies should be filled) and the private sector, where the downsizing was more pronounced in the automotive industry, most likely in association with the unfolding automation process (Chart 2.9).

Chart 2.9. Number of employees economy-wide

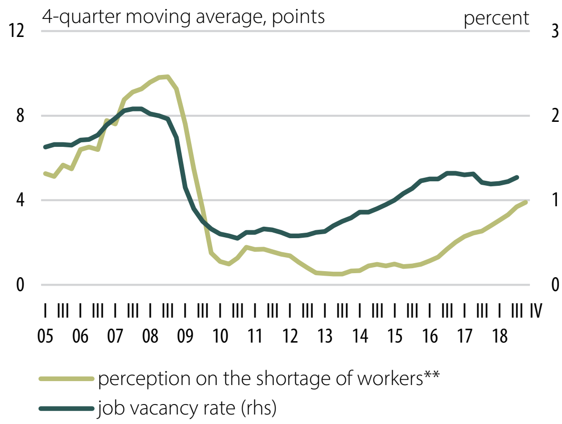


*) Oct.-Nov.

Source: NIS, NBR calculations

In addition, the excess labour supply continued to follow a downward trend, the registered unemployment rate and the ILO unemployment rate hitting 15-year lows of 3.3 percent and 3.9 percent respectively in November 2018. Furthermore, demand for labour witnessed a slight, renewed acceleration, with a boost from job vacancies in ICT, construction and public administration. Specifically, labour market tensions rose further in an environment governed by intense emigration and skill mismatch that have been manifest since 2016. These coordinates of the recruitment process are also shown by the increasingly high share of private companies considering the shortage of jobseekers as one of the major factors hindering their activity, according to the EC-DG ECFIN Survey (Chart 2.10).

Chart 2.10. Shortage of workers and job vacancies*



*) seasonally adjusted data

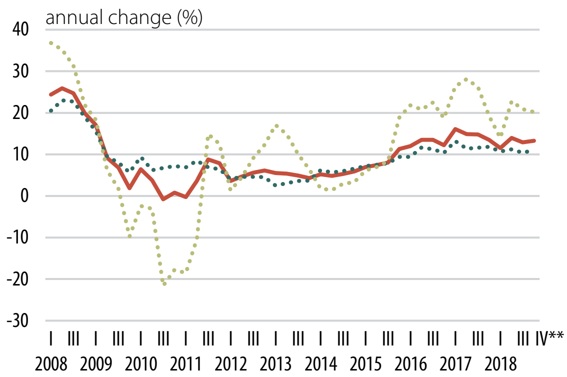
**) companies in the private sector (industry, construction, services) which consider the workforce shortage as a deterrent to activity

Source: NIS, EC-DG ECFIN, NBR calculations

For end-2018 and 2019 Q1, both the Manpower Survey and the EC-DG ECFIN Survey foresee a moderate rise in hiring, albeit at a slower pace than in the previous period. At sectoral level, both sources confirm this trend for the manufacturing subsector. The companies analysed in the Manpower survey consider, however, that hiring intentions will also weaken in construction, while the EC-DG ECFIN Survey additionally puts services on the list of worsening employment plans.

29 The analysis is based on seasonally adjusted data; the main sources are NIS, Eurostat and NEA.

Chart 2.11. Nominal gross wage earnings*



economy-wide
private sector
budgetary sector

*) excluding the effect of the transfer of social security contributions starting with 2018

**) Oct.-Nov.

Source: NIS, NBR calculations

Average gross wage earnings continued to grow at a still fast pace in 2018 Q3 and in the October-November period (by around 36 percent in annual terms[30]). The slight deceleration versus the second quarter was primarily based on the pay rises seen in public administration in July 2017 dropping out of the calculation of the annual rate. The high annual dynamics mirror, apart from the transfer of social security contributions payable by the employer to the employee, the difficulties facing companies in attracting candidates, given the severe shortage of workforce (Chart 2.11). A swift pace is expected to remain in place in the period ahead as well, in view of the increase in the minimum wage economy-wide implemented as of 1 January 2019, differentiated depending on the business sector and the level of education, as well as of the hikes set forth by the unified wage law applicable in the public sector.

2. Import prices and producer prices on the domestic market

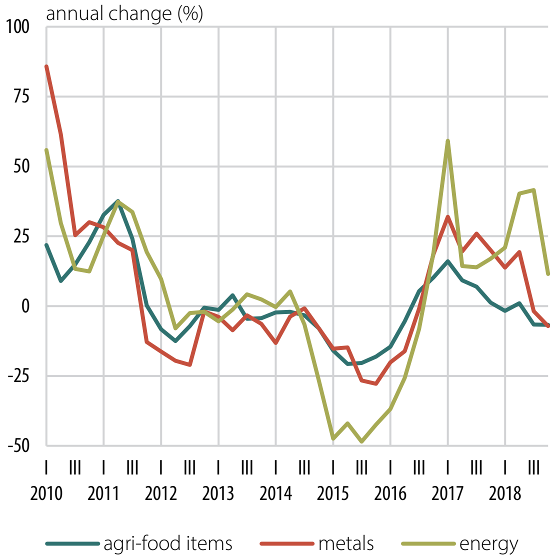
The surge in Brent oil price past USD 85/barrel in early October 2018 and the uptrend in the domestic wholesale electricity prices pushed industrial producer prices on the domestic market to a 6-year record high in annual terms, i.e. 6.4 percent October through November. No changes were reported for consumer goods, the annual dynamics of their producer prices stabilising at around 2.1 percent since the beginning of 2018 Q2, amid contained pressures from agri-food commodity costs.

2.1. Import prices

The sharp upward trend followed by energy commodity prices starting with 2017 H2 came to a halt and 2018 ended with sizeable corrections (Chart 2.12). Specifically, after the Brent oil price peaked at a 4-year high in the first 10-day period of October 2018, i.e. USD 86.3/barrel, on account of market expectations regarding the effects of the enforcement of sanctions against Iran, the oil price took a plunge. This was due to the significantly higher supply from the main global producers (Russia, the US and Saudi Arabia) and to the unfavourable signals relating to global demand developments.
A new OPEC+ agreement foreseeing a cut in oil production by 1.2 million barrels/day was concluded in early December 2018, yet this measure had a relatively weak impact on the evolution of Brent oil price until the end of the year. In this context, the annual dynamics of energy commodity prices decelerated sharply to 11.5 percent in 2018 Q4, losing 30 percentage points from the previous quarter.

30 Approximately 13 percent, net of the effect of fiscal changes at the beginning of 2018.

Chart 2.12. International commodity prices



Source: World Bank, FAO, NBR calculations

Moreover, the signals hinting at the loss of momentum of industrial output in China and in some advanced economies, as well as the uncertainties surrounding the configuration of international trade relations caused a steeper contraction in metal prices October through December 2018 (down to -7 percent, annual change). Prices of agri-food commodities continued to decline as compared with a year earlier, i.e. -6.7 percent in the last quarter of 2018. Upward pressures persisted only on the grains segment, under the influence of weaker global crops as well as of expectations on international demand, fuelled by the larger use of cereals in the industrial sector as well. As for meat products, the robust world supply put prices on a downward path. Pigmeat prices also fell in the reviewed period, yet the beginning of 2019 may witness hikes, given expected cuts in pork production, especially in China, owing to the decline in livestock for food security reasons.

The annual unit value index of imports[31] (UVI) stepped up to 103.9 percent in 2018 Q3, broadly reflecting the evolution of energy commodity prices and the stronger US dollar in euro terms. Specifically, significant contributions were made by mineral products (up 9 percentage points to 129 percent), chemical products (up 9.5 percentage points to 105.7 percent) and, to a lower extent, rubber and plastic products. Nevertheless, this trend may see a reversal towards the year end, given the recent movements in international energy prices. Conversely, the UVI of base metals posted a further slowdown in 2018 Q3, which is expected to continue in the last months of the year as well.

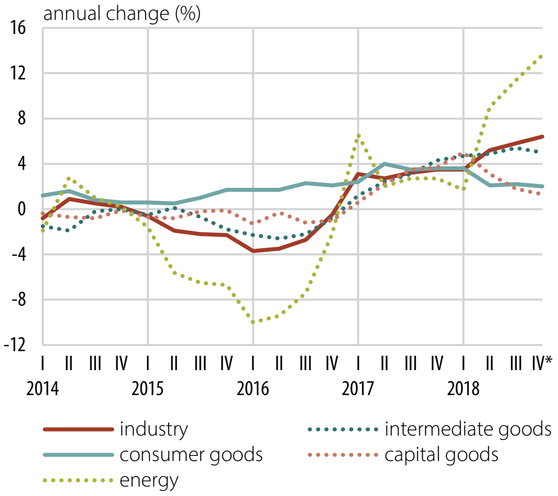
In line with the movements of international agri-food prices, the UVI decreased in the case of meat products, sugar and animal or vegetable fats and increased in that of fruit, vegetables and grains. As regards non-food consumer goods, the UVI further recorded mixed developments, i.e. increases for transport equipment, footwear and pharmaceutical products and declines for wearing apparel and hygienic articles.

2.2. Producer prices on the domestic market

In October-November 2018, the annual dynamics of industrial producer prices on the domestic market accelerated to 6.4 percent, up 0.5 percentage points versus the Q3 average (Chart 2.13). The faster pace was due solely to energy prices, under the influence of the Brent oil price rising strongly in the first days of October (even though it saw a sharp correction afterwards). The effect was enhanced by the significant advance in producer prices for the supply of electricity and heating,

31 Expressed in EUR.

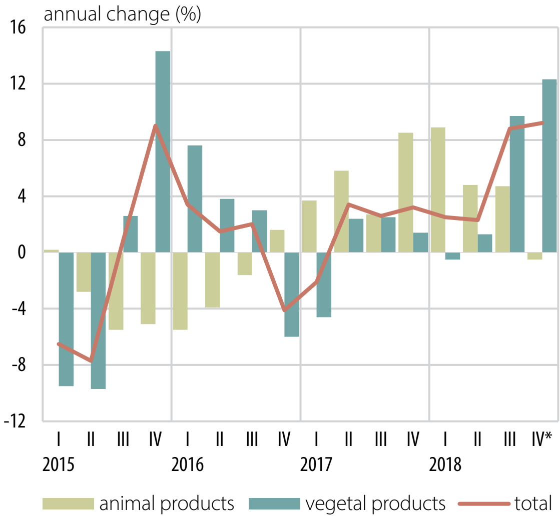
Chart 2.13. Industrial producer prices on the domestic market



*) Oct.-Nov.

Source: Eurostat

Chart 2.14. Agricultural producer prices



*) Oct.-Nov.

Source: NIS

which were sensitive to price movements on the domestic wholesale market. The determinants of this evolution were the lower share of electricity from renewable sources concurrently with higher consumption and, possibly, the more expensive carbon dioxide emissions certificates[32].

By contrast, the annual growth rate of prices for intermediate goods slowed down, in correlation with the downward adjustments in international metal prices seen in the previous months, as a result of the worsening investor sentiment. These external developments, together with the fading-out of pressures from the EUR/RON exchange rate, also fed through gradually into the dynamics of capital goods prices (-0.4 percentage points to 1.4 percent). The rise in producer prices for consumer goods remained moderate, stabilising at around 2.1 percent April through November 2018, due to contained pressures exerted by costs of agri-food commodities. Price increases were further visible on the grains market alone, given lower crops in Europe and the tendency of domestic prices to get in line with external developments (according to Bloomberg data, prices of wheat and maize posted annual changes of 26 percent and 13 percent respectively in 2018 Q4).

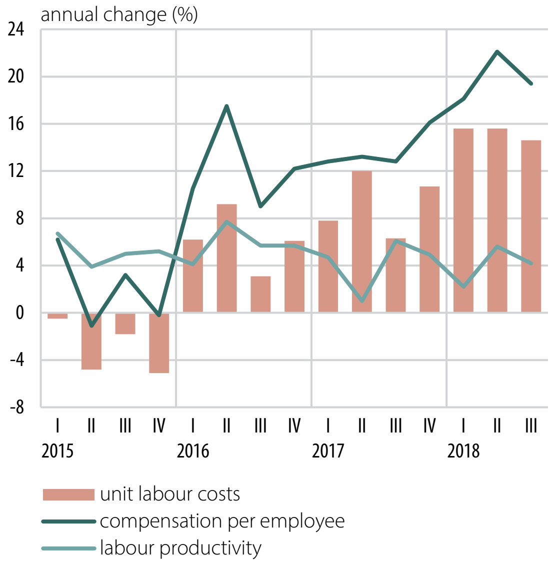
Therefore, the annual dynamics of agricultural producer prices on the domestic market picked up slightly in October-November 2018 to 9.2 percent, adding 0.4 percentage points from Q3 (Chart 2.14). The evolution was attributable to vegetal products, the faster-paced price hikes being more pronounced for wheat and potatoes, with prices of sunflower seeds making the only exception as they decreased further. Conversely, the annual rate of change of prices for animal products slowed down to the point of entering negative territory, i.e. -0.5 percent, amid the slacker pace of increase of prices for beef and poultry as well as for cow's milk, and the drops in prices of pork and eggs.

32 Towards end-August 2018, the price of a carbon dioxide emissions certificate at EU level exceeded EUR 20, subsequently fluctuating around this threshold (up by 130 percent in the period under review versus the beginning of 2018). This hike affects thermoelectric power plants (e.g., Oltenia Power Plant), which must purchase these certificates depending on the quantity of energy produced and are likely to transfer the rise in costs into prices.

Unit labour costs

The same as in 2018 H1, unit labour costs economy-wide grew at a brisk pace in 2018 Q3, i.e. 14.6 percent in annual terms, down by only one percentage point. The substantial increases in unit labour costs over the past three years (averaging out at around 10 percent) carry the potential to affect the external competitiveness of exports, an adequate correlation in the medium and long run between remuneration and productivity being also crucial for strengthening price stability (Chart 2.15).

Chart 2.15. Unit labour costs



Source: NIS

Additionally, unit wage costs[33] in industry highlight the persistent pressures from labour costs in 2018 Q3 as well as in October-November (5.9 percent and 5.7 percent respectively, annual change), a slight deceleration compared with H1 being also visible in this case. Over the entire period under review, developments were similar in manufacturing, the main industrial sector, i.e. annual dynamics of 5.3 percent, only 0.2 percentage points lower than in Q2. Specifically, the corrections recorded in food industry, fabricated metal products or transport equipment, except motor vehicles, due to the faster advance in production, were offset by the worsening seen in the light industry and the manufacture of machinery and equipment. By contrast, wage costs and productivity are kept in balance in the automotive industry and the related subsector of electrical equipment, their activity being supported by robust external demand.

33 Excluding the effect of the fiscal changes implemented at the beginning of 2018.

3. Monetary policy and financial developments

1. Monetary policy

November 2018 through January 2019, the NBR kept the monetary policy rate at 2.50 percent and left unchanged the deposit facility rate at 1.50 percent and the lending facility rate at 3.50 percent. Moreover, the central bank maintained the minimum reserve requirement ratios on both leu- and foreign currency-denominated liabilities of credit institutions at 8.0 percent. The measures aimed to ensure adequate monetary conditions from the perspective of bringing the annual inflation rate back into line with the flat target of 2.5 percent ±1 percentage point and keeping it there, inter alia via the solid anchoring of inflation expectations over the longer time horizon, while safeguarding financial stability.

In the November meeting, the NBR Board took the decision on the status quo of the monetary policy rate in a context in which the annual inflation rate had re-embarked on a downward path in September[34] and, according to the new medium-term forecast, it was seen declining markedly during Q4 (to 3.5 percent in December 2018), before decreasing but at the same time remaining in the upper half of the target band across the projection horizon, on a downward path until 2019 Q3[35]. The significant downward correction of the annual inflation rate trajectory was anticipated to be especially the result of supply-side factors, primarily of base effects associated with increases seen in all exogenous CPI components starting 2017 H2. Core inflation was also expected to stick to a downtrend over the months ahead[36,37], before regaining momentum starting 2019 Q1[38], amid simultaneous, gradually rising inflationary pressures. These pressures were projected to stem from the cyclical position of the economy – given that the positive output gap would likely continue to widen until 2019 Q1 and then remain above the previously-projected values –, as well as from short-term inflation expectations and import prices.

Behind the likely developments in excess aggregate demand stood the prospects for a more modest slowdown in economic growth in 2018 than in the prior forecast, associated with economic expansion gathering momentum again in 2019, markedly exceeding its potential rate, before returning to a pace in line with the potential one

34 The annual inflation rate fell to 5.03 percent in September from 5.06 percent in August.

35 However, the updated path of the forecasted annual inflation rate was slightly higher than previously projected, to reach 2.9 percent in December 2019 and 3.1 percent at the end of the projection horizon, compared to 2.7 percent and 2.8 percent respectively in the prior forecast.

36 In 2018 Q3, the annual adjusted CORE2 inflation rate went down from 2.9 percent in June to 2.8 percent in September.

37 The annual adjusted CORE2 inflation rate was forecasted to fall to 2.5 percent in December 2018.

38 Adjusted CORE2 annual dynamics were expected to climb to 3.3 percent at the end of the projection horizon (2020 Q3).

in 2020. The projection implied an abatement of the expansionary nature of fiscal policy in 2018, which was then seen remaining unchanged in 2019 and becoming quasi-neutral in 2020, as well as a deceleration in the dynamics of households' real disposable income. The outlook also assumed less accommodative monetary conditions over the projection horizon and a probable improvement in EU funds absorption, together with still robust economic growth in the euro area/EU and globally, only slightly slower than in the previous forecast. However, the outlook for Europe's economy was surrounded by higher uncertainty, given the heightened risks posed by the protectionist trade policies, the UK's exit from the EU, the political tensions in some European countries, and by international financial market volatility. Domestically, the uncertainties and risks stemmed also from the behaviour of consumer confidence, as well as from labour market conditions and the fiscal and income policy stance. At the same time, the ECB's monetary policy stance continued to be particularly relevant, also in relation to the decisions taken by central banks in the region.

According to subsequently released statistical data, the annual inflation rate declined in the first two months of 2018 Q4 even slightly faster than forecasted, down from 5.03 percent in September to 3.43 percent in November, i.e. inside the variation band of the target, due mainly to the action of supply-side factors[39]. Core inflation also made a slight contribution to the correction[40], largely attributable to the base effects associated with the hike in some agri-food prices towards the end of 2017 and somewhat to the relative strengthening of the leu against the euro in November. However, economic growth picked up further in Q3 in annual terms[41], and especially in quarterly terms, solely on account of agricultural output increasing way above expectations. The evolution made it likely for the significant excess aggregate demand to see a near-halt in its rise and thus stand marginally below the forecast for that period. Moreover, on the demand side, the major contributor to GDP growth was further the change in inventories, while the relatively higher contribution made by household consumption was entirely attributable to the considerable step-up in self-consumption. Labour market tightness continued, however, to increase and reached a new post-crisis high[42], while the annual growth rate of average gross nominal wage earnings stuck to the two-digit range in Q3 and in October.

Key interbank money market rates saw their positive spread vis-à-vis the monetary policy rate narrow in the last two months of 2018, primarily amid the change in liquidity conditions and the likely adjustment in banks' expectations on the outlook of some monetary policy parameters. Nevertheless, the differential of interest rates on the local market versus those prevailing in Europe and regionally remained wide, contributing to the relative stability of the EUR/RON exchange rate until towards end-2018, the deepening of the current account deficit notwithstanding.

[39] Consisting especially in the disinflationary base effects associated with the evolution of the dynamics of volatile and administered prices and, to a lesser extent, the change in tobacco product prices; additional influences stemmed from the decreases seen in November by fuel prices and prices of fruit and vegetables.

[40] The annual adjusted CORE2 inflation rate saw a slightly steeper downward path, in line with forecasts, to reach 2.6 percent in November.

[41] To 4.3 percent from 4.1 percent in the earlier quarter.

[42] In the context of a slightly faster decline in the ILO unemployment rate to a new historical low of 3.9 percent.

At the same time, in the first two months of 2018 Q4 overall, the advance in credit to the private sector continued at a sustained pace, marginally above the Q3 average in annual terms, driven by the recovery in the dynamics of credit to non-financial corporations – on account of the foreign currency component –, as well as by the further robust increase in loans to households. The share of the domestic currency component in total private sector credit widened further, to 65.6 percent in November. However, the annual growth of liquidity in the economy moderated in October as well, before regaining momentum in November[43], solely on the back of the most liquid component (M1), amid the relative step-up in money creation owing to the budget execution, public debt financing and to EU funds.

The assessments conducted in this context indicated the outlook for the annual inflation rate to decline further and thereafter remain over the very short time horizon slightly below the upper bound of the variation band of the target, in line with the medium-term forecast published in the November 2018 *Inflation Report*. The assessments also pointed to prospects for a very slight step-up in economic growth in annual terms 2018 Q4 through 2019 Q1, amid a marked deceleration in quarterly GDP dynamics in 2018 Q4 – owing exclusively to the likely contraction in agricultural output after the exceptional rise seen in the previous period –, followed by a regain of momentum in the first quarter of this year. This implied a widening of the positive output gap during the two quarters, to values only marginally below those in the medium-term forecast.

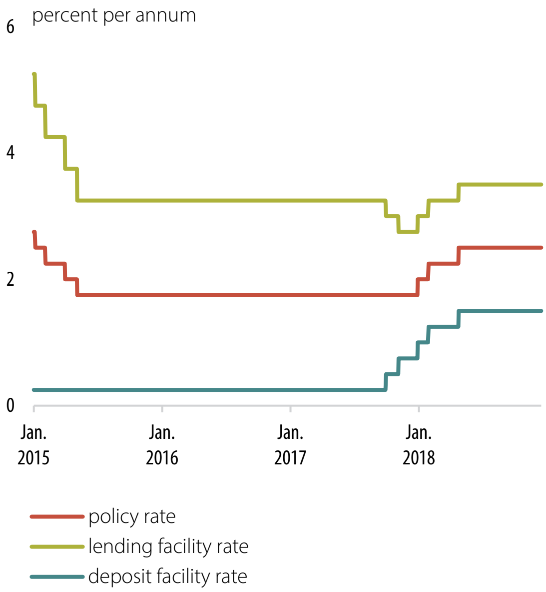
However, the uncertainties and risks surrounding the latest medium-term forecast were substantially compounded by imponderables from the external environment, as well as by domestic actions/developments. A major source was the fiscal and income policy stance, given inter alia the still pending 2019 budget and especially the fiscal and budgetary measures effective 1 January 2019[44], likely to affect future inflation – both directly, via the prices of some services and utilities, and indirectly, by influencing economic activity and the economy's growth potential –, but also with possible implications on monetary policy and lending, as well as on financial stability and macro-stability in general. Rising uncertainties also stemmed from the external environment, amid the slower pace of euro area and global economic growth, to which added the heightened risks to growth prospects. These risks were posed by the trade row and the UK's exit from the EU, as well as by the tightening trend of financial conditions and the international financial market volatility. Under the circumstances, the monetary policy stance of the ECB and of other major central banks, as well as the probable stance of central banks in the region were further relevant.

Against this background, ensuring adequate monetary conditions with a view to anchoring medium-term inflation expectations and keeping the annual inflation

43 In nominal terms, it reverted to two-digit levels (namely 10.9 percent in November, from 9.4 percent in the previous month).

44 The main measures consist in: a tax on credit institutions' financial assets; changes in the regulation of private pension funds; introducing a 2 percent turnover tax for companies operating in the electricity and heating sectors; introducing a tax applicable to gambling operators; increasing the monitoring tariff paid to the ANCOM regulator by telecom companies; setting the selling price of natural gas from domestic production at lei 68/MWh in the period from 1 April 2019 to 28 February 2022; exempting construction employees from paying income tax during 1 January 2019 – 31 December 2028; increasing by 15 percent the value of the pension point as of 1 September 2019; creating/broadening the scope of some financing funds.

Chart 3.1. NBR rates



rate in line with the current medium-term forecast, while safeguarding financial stability, warranted the status quo of the monetary policy rate. Therefore, in its meeting of 8 January 2019, the NBR Board kept unchanged the monetary policy rate at 2.50 percent, the deposit facility rate at 1.50 percent and the lending facility rate at 3.50 percent (Chart 3.1). Moreover, the central bank maintained the current levels of the minimum reserve requirement ratios on both leu- and foreign currency-denominated liabilities of credit institutions.

At the same time, given the reoccurrence and the widening of a net liquidity surplus on the money market, the NBR resumed in January the one-week deposit-taking operations via auctions conducted at a fixed rate (equal to the monetary policy rate) and with full allotment.

2. Financial markets and monetary developments

In 2018 Q4, longer-term interbank money market rates followed a generally downward path, while the EUR/RON exchange rate was quasi-stable until towards end-2018. Credit to the private sector extended its robust growth into October and November 2018, whereas the dynamics of liquidity across the economy continued to decelerate during the period as a whole.

2.1. Interest rates

After a temporary rise towards end-October, the daily average interbank money market rate re-embarked on a downward path, returning and remaining in November close to the monetary policy rate, before running mostly in the lower half of the corridor defined by interest rates on the central bank's standing facilities around the policy rate in December. Its average for Q4 shed 0.21 percentage points, to 2.38 percent, the reduction being of a similar magnitude to the increase posted a quarter earlier.

Liquidity conditions on the interbank money market witnessed heightened volatility in Q4, under the impact of stronger fluctuations of autonomous factors. The NBR continued the supply of reserves to credit institutions in the form of 1W repos conducted via fixed-rate tenders with full allotment, holding such auctions at the beginning and at the end of October[45] respectively and then for most of November[46].

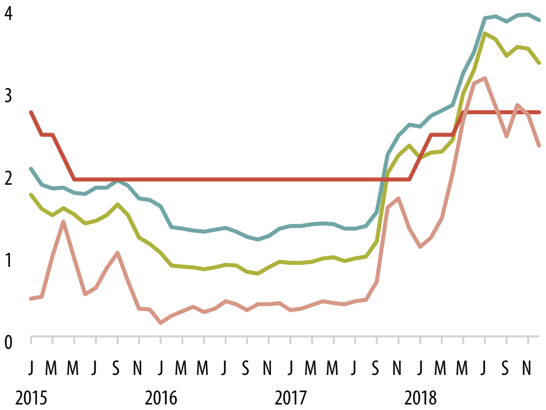
45 Owing to the tightening of liquidity conditions on the money market under the contractionary impact of autonomous factors, some credit institutions resorted during this period to the central bank's lending facility.

46 The average monthly balance of repos rose to lei 8 billion in November, from lei 3.8 billion in the previous month and an average of lei 5 billion August through September.

In December, monetary policy operations shifted from liquidity provision to absorption, given that the resumption and the substantial increase in the Treasury's liquidity injections[47] led to the re-emergence of a net reserve surplus on the money market, mopped up by the central bank exclusively via the deposit facility. Against this backdrop, ON rates on the interbank money market saw a temporary rise towards end-October, then returned close to the monetary policy rate, before falling in the lower half of the interest rate corridor in December, reverting to the vicinity of the policy rate in the closing 10-day period of the month.

Chart 3.2. Policy rate and ROBOR rates

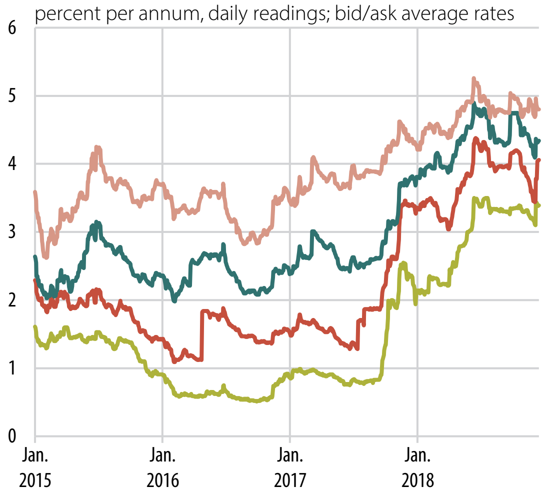
percent per annum, period average



*) end of period

Chart 3.3. Reference rates on the secondary market for government securities

percent per annum, daily readings; bid/ask average rates



In turn, 3M-12M ROBOR rates rose temporarily in the latter part of October, probably due to credit institutions' expectations of a persistent restrictiveness of liquidity conditions. Afterwards, however, they re-embarked and remained on a downward path – posting towards the end of the quarter the lowest readings for the past approximately six months and hence seeing their positive spread versus the monetary policy rate narrow –, amid the easing of liquidity conditions and, thereafter, the likely readjustment of banks' expectations on the evolution of some monetary policy parameters. Under these circumstances, average ROBOR rates in December fell versus those recorded in the closing month of Q3 in the case of 3M and 6M rates (down 0.08 percentage points, to 3.05 percent, and 0.03 percentage points, to 3.34 percent respectively) and remained relatively unchanged for the 12-month maturity at 3.53 percent (Chart 3.2).

The government securities market reflected in this period both the influences of domestic factors, including the NBR's monetary policy decisions and actions, and those stemming from international financial markets[48]. Thus, reference rates on the secondary market[49] witnessed a relatively steep advance at the onset of October, before embarking on a downtrend towards the end of

47 Also amid the repayment by the MPF of a government bond series worth lei 8 billion on 28 November.

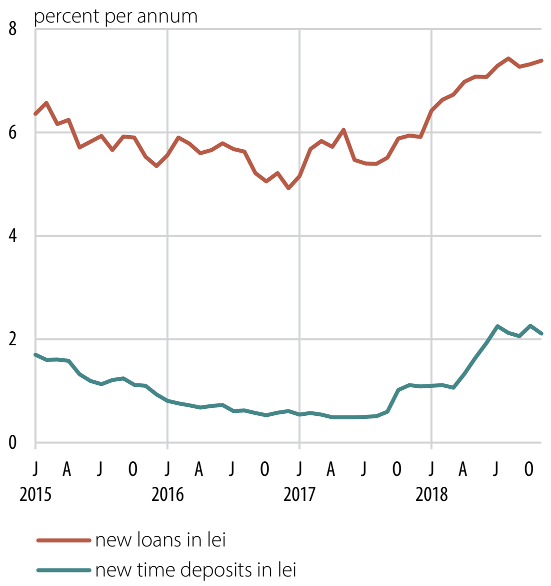
48 Long-term government security yields in the US and the euro area tended to go up at the beginning of October and then posted fluctuations, before embarking on a downward path in the second 10-day period of November, given primarily the expectations on the moderation of the pace of economic activity, with implications on the future conduct of monetary policy (a context in which the Fed signalled a slowdown in its monetary policy normalisation). Long-term yields at a regional level witnessed somewhat similar developments.

49 Bid/ask average rates.

the month, which persisted until the end of the second 10-day period of December (Chart 3.3). Afterwards, they posted an abrupt upward adjustment across the entire maturity spectrum, amid the announcement of the new set of fiscal measures, stabilising towards end-Q4 in the vicinity of the higher levels thus reached. Their December averages declined, however, against those recorded in September by up to 0.1 percentage point for the 6- to 12-month maturities (to 3.04 percent and 3.26 percent respectively), as well as for the 5-year maturity (to 4.25 percent), while increasing slightly on the 10-year maturity (up 0.04 percentage points, to 4.82 percent)[50].

On the primary market[51], the average accepted rates at the auctions conducted in December decreased versus the readings in the final month of Q3 for most of the maturities[52], by around 0.2-0.4 percentage points. However, their evolution was not constant during the quarter; in particular, they rose in October (by up to 0.4 percentage points for the 5-year maturity), before declining in both November (by up to 0.45 percentage points for 3-year securities) and December (by up to 0.27 percentage points for the 10-year maturity). Investor interest in government securities picked up significantly versus the previous three months, even amid the upturn in the scheduled volume of issues. Hence, the ratio of the amounts of bids submitted to the announced volume hit a five-quarter high of 1.9, while the ratio of the volume of issues to the announced volume remained at 105 percent[53]; moreover, the average maturity of securities issued increased to 4.9 years, from 4.3 years in July-September 2018.

Chart 3.4. Bank rates



In spite of some monthly fluctuations, average interest rates on non-bank clients' new loans and new time deposits saw their upturn come to a halt in the period from September to November 2018, with the former inching down (-0.04 percentage points, to 7.39 percent) and the latter remaining almost unchanged at 2.11 percent (Chart 3.4). However, developments were heterogeneous across the two customer sectors. Specifically, the average lending rate on new business to households shed 0.17 percentage points (to 8.34 percent), reflecting the decline in the average interest rate on new consumer loans and the larger share in the flow of household credit held by housing loans, whose average rate of interest continued, nevertheless,

50 Nevertheless, the adjustment reflected inter alia the effect of replacing, in November, the series of benchmark government bonds with a series at a longer maturity.

51 On 4 October, the MPF issued on the external market Eurobonds worth EUR 1.75 billion, in two series with maturities of 10 years (EUR 1.15 billion at a 3.029 percent rate) and 20 years (EUR 0.6 billion at a 4.234 percent rate). On the domestic market, the MPF conducted auctions for 5-year EUR-denominated bonds on 6 November and 11 December respectively, fully rejecting the banks' bids (EUR 289.4 million) in the former case and accepting bids totalling EUR 251.5 million, at an average rate of 0.95 percent, in the latter case.

52 Except for the average rates on 15-year government bonds, which were on the rise (up 0.10 percentage points).

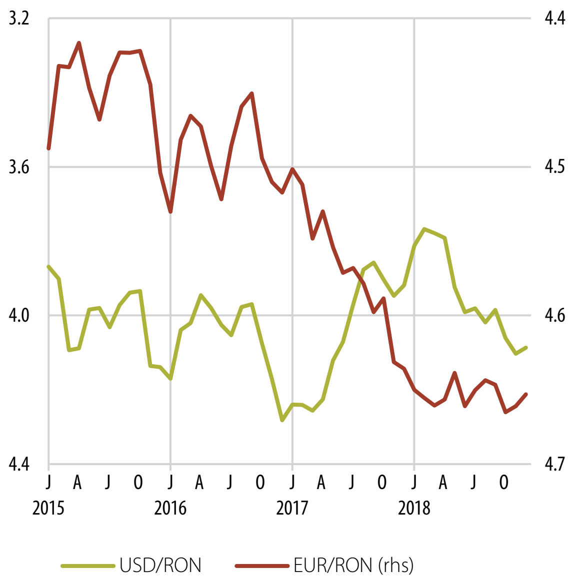
53 As the MPF partly/fully rejected the bids submitted at two auctions held in October and two in December.

to go up. The average lending rate on new business to non-financial corporations trended further upwards, adding 0.10 percentage points (to 6.12 percent), driven this time solely by the average interest rate on loans below EUR 1 million equivalent, as that on loans above this threshold went down during the period as a whole. At the same time, the average remuneration of new time deposits continued to grow in the case of households (up 0.29 percentage points, to 1.76 percent – witnessing in November the fourteenth successive monthly rise), but declined in the case of non-financial corporations (down 0.13 percentage points, to 2.27 percent).

2.2. Exchange rate and capital flows

The EUR/RON saw the upward path it had embarked on in September come to a halt at the beginning of Q4 and afterwards remained quasi-stable until towards the end of the year, as the overall influence of domestic factors counterbalanced that stemming from the external environment (Chart 3.5).

Chart 3.5. Nominal exchange rate



The EUR/RON exchange rate saw the uptrend it had embarked on in the earlier month come to a halt in the early days of October, but stuck thereafter to those higher readings[54] until mid-Q4, given that the local financial market attractiveness – amid the considerable interest rate differential and the expectations on exchange rate developments – temporarily dampened the influences from the widening of the current account deficit, as well as those from the external environment (Table 3.1). The latter was marked by episodes of dwindling global risk appetite, due to the escalating trade row between the US and China and to stronger expectations on the Fed continuing to increase the policy rate[55], conducive to fuelling financial investors' concerns about the global growth outlook[56]. Fears also stemmed from the uncertainties surrounding Brexit[57] and from the disputes between the Italian government and the European Commission on the former's draft budgetary plan for the period ahead[58].

Nonetheless, starting with the closing 10-day period of November, the EUR/RON trended slightly downwards, the same as the exchange rates of the other currencies in the region, thanks to the improvement in global financial market sentiment

54 Close to the historical high.

55 Given the further favourable performance of the US economy, as well as the signals conveyed by the Fed, including in the minutes of the end-September monetary policy meeting.

56 Furthermore, data released in November indicated a higher-than-expected quarterly GDP contraction in Germany and Japan.

57 Related mainly to the political tensions following the conclusion at negotiators' level of the UK withdrawal agreement.

58 A context in which the US dollar strengthened significantly versus the euro.

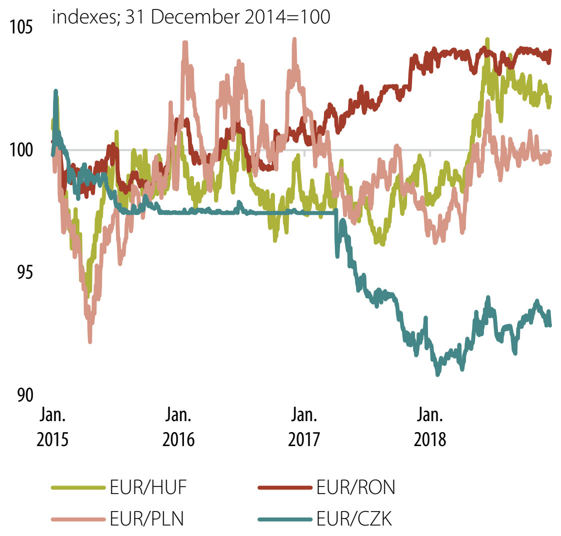
Table 3.1. Key financial account items

EUR million

	11 mos. 2017			11 mos. 2018		
	Net acquisition of financial assets*	Net incurrence of liabilities*	Net	Net acquisition of financial assets*	Net incurrence of liabilities*	Net
Financial account	3,413	7,413	-4,000	2,442	8,105	-5,663
Direct investment	157	4,694	-4,537	759	5,596	-4,837
Portfolio investments	485	3,188	-2,702	410	3,023	-2,612
Financial derivatives	x	x	-64	x	x	81
Other investment	2,972	-469	3,440	2,623	-514	3,136
– currency and deposits	2,292	-891	3,183	1,193	-487	1,680
– loans	66	-1,021	1,087	53	-1,615	1,668
– other	614	1,443	-830	1,377	1,588	-212
NBR's reserve assets, net	-137	0	-137	-1,431	0	-1,431

*) "+" increase/"-" decrease

Chart 3.6. Exchange rate developments on emerging markets in the region



Source: ECB, NBR

following signals from the Fed on slowing down its monetary policy normalisation[59], as well as given the endorsement by the European Council of the Brexit agreement and the breakthrough in the Italian draft budget standoff. Towards the end of 2018, the exchange rate of the domestic currency witnessed, however, an abrupt trend reversal, also in the context of the new set of fiscal and budgetary measures announced by the government, likely to affect the risk perception of the local economy and financial market (Chart 3.6).

The interbank forex market saw a substantial improvement in the overall balance of transactions starting mid-October, even though residents' net demand for foreign currency turned to a significant surplus in this period.

During 2018 Q4 as a whole, the leu weakened versus the euro by 0.1 percent[60] in nominal terms and strengthened by 0.4 percent in real terms. In relation to the US dollar, the domestic currency depreciated 2.5 percent in nominal terms and 2.0 percent in real terms, given that the former strengthened against the euro on international markets. Looking at the average annual exchange rate dynamics in Q4, the leu saw its nominal depreciation versus the euro slow down and posted the largest nominal depreciation against the US dollar in the past seven quarters.

2.3. Money and credit

Money

October through November 2018, broad money (M3) dynamics[61] continued to decelerate, although sticking to a two-digit level (10.2 percent versus 10.7 percent in Q3; Table 3.2)[62]. However, this masked uneven developments, with the October slowdown – due mainly to the decline in annual terms in public spending for projects

59 Also by revising in December the forecast on the policy rate trajectory, implying a slower pace of monetary policy tightening.

60 The Czech koruna witnessed a sharper depreciation during this period (0.5 percent), whereas the Polish zloty and the Hungarian forint strengthened against the single currency by 0.1 percent and 0.8 percent respectively.

61 Unless otherwise indicated, percentage changes in this section refer to the average of annual growth rates in nominal terms.

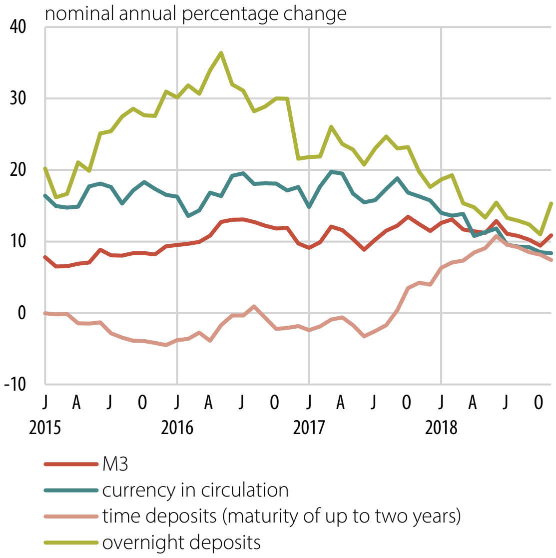
62 In real terms, the average annual dynamics of M3 posted a renewed pick-up (from 5.6 percent in 2018 Q3 to 6.1 percent October through November).

Table 3.2. Annual growth rates of M3 and its components

nominal percentage change

	2017	2018				
	IV	I	II	III	Oct.	Nov.
	quarterly average growth					
M3	12.4	12.4	11.8	10.7	9.4	10.9
M1	19.0	16.6	13.5	11.8	10.2	13.2
Currency in circulation	16.3	13.8	11.3	9.3	8.5	8.4
Overnight deposits	20.2	17.8	14.5	12.9	11.0	15.3
Time deposits (maturity of up to two years)	3.9	6.9	9.4	9.1	8.2	7.4

Chart 3.7. Main broad money components



financed from non-repayable external funds[63] and in spending on social benefits, as well as to the likely increase in non-bank clients' holdings of alternative financial instruments[64] – being followed by a step-up in the growth rate that reflected especially the renewed rise in disbursements from the government budget to recipients of EU funds (including for agriculture).

During the period as a whole, the loss of M3 momentum was primarily induced by the softening in narrow money (M1) growth, albeit not as visible as in the previous quarters, given that the deceleration in October (to a new 4-year low) was followed by a renewed pick-up (Chart 3.7). Behind these developments stood the performance of ON deposits from both main categories of holders – the changes in dynamics being relatively more conspicuous in the case of non-financial corporations' deposits –, whereas the growth rate of currency in circulation moderated steadily. The advance of time deposits with a maturity of up to two years also slowed further, largely on the back of the dynamics of corporate deposits remaining on a downward path, albeit still very high for the post-2008 period. By contrast, similar household deposits grew at a faster pace in this period as well (to a new 5½-year high), as the rate of change of the domestic currency component re-entered positive territory for the first time in the past 18 months, amid the uptrend in applicable interest rates, and that of the foreign currency component remained relatively stable, at a very high level. Against this background, the share of M1 in broad money widened to a new record high for the post-December 1994 period, i.e. 61.0 percent in November.

Total M3 deposits also witnessed opposite developments across main holders. Specifically, non-financial corporations' deposits posted slower dynamics, visible in October and attributable to higher payments by economic agents to the government budget on account of corporate income tax and other taxes[65], but especially to the decline in annual terms in public spending for projects financed from non-repayable

63 According to monthly data from the general government budget execution.

64 October through November, the annual pace of increase of leu-denominated government securities held by non-bank clients was the fastest after 2017 H1.

65 According to the monthly data on general government budget execution, the annual dynamics of payments for the corporate income tax and property taxes increased in October 2018 versus Q3.

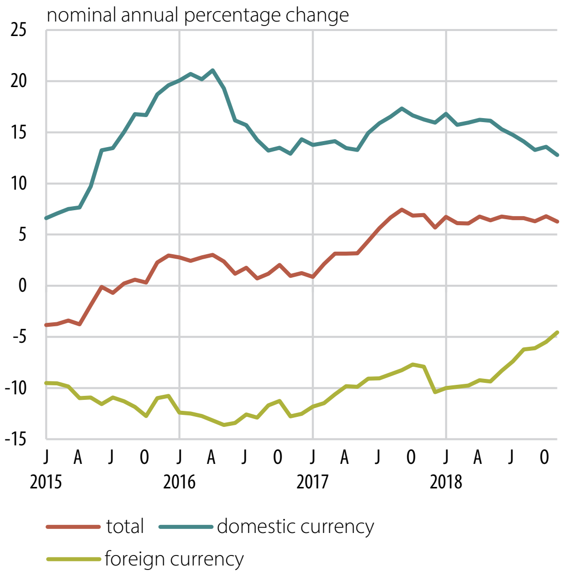
external funds. In November, however, the latter saw a renewed substantial rise, prompting – alongside the faster dynamics in government spending on goods and services and on subsidies respectively – a rebound in the growth rate of corporate deposits. Conversely, household deposits posted a steadily faster advance, amid the raise in some income categories (wages[66], disbursements to farmers[67]), whose impact more than offset that of the slight deceleration, during the two months as a whole, of the pace of increase of social security spending.

From the perspective of broad money counterparts, the evolution of its average dynamics October through November reflected primarily the slower decline of central government deposits[68], along with the step-up in the rate of change of the net foreign assets of the banking system[69].

Credit to the private sector

In the first two months of 2018 Q4, the average annual growth rate of credit to the private sector remained constant[70] at 6.5 percent, given that the faster dynamics in October were followed by a decline, in correlation with developments in the annual rate of change of the credit flow (Chart 3.8). The advance in the leu component moderated further, while the decline in foreign currency component continued at a slower pace. Against this backdrop, the share of domestic currency loans in total private sector credit widened only marginally during this period, to a post-September 1996 high of 65.6 percent in November.

Chart 3.8. Credit to the private sector by currency



Looking at institutional sectors, the increase in loans to non-financial corporations continued to slightly gain traction[71] (Chart 3.9), but this time as well on the back of the foreign currency component, whose dynamics (when expressed in euro) entered positive territory in November for the first time in the past six years. This reflected the faster growth rate of overdraft loans and the weaker influence exerted by the volume of loans removed from banks' balance sheet, due to a

66 In the period from October to November, the average annual dynamics of the average net wage earnings picked up slightly against Q3.

67 According to APIA press releases, October saw the start of disbursements for state subsidies in the zootechnics, winegrowing and apiculture sectors, for the reduction of the excise duty on diesel and for the agricultural annuity, as well as disbursements made for advance subsidies under the 2018 Campaign. The breakdown of these amounts by group of recipients is not possible.

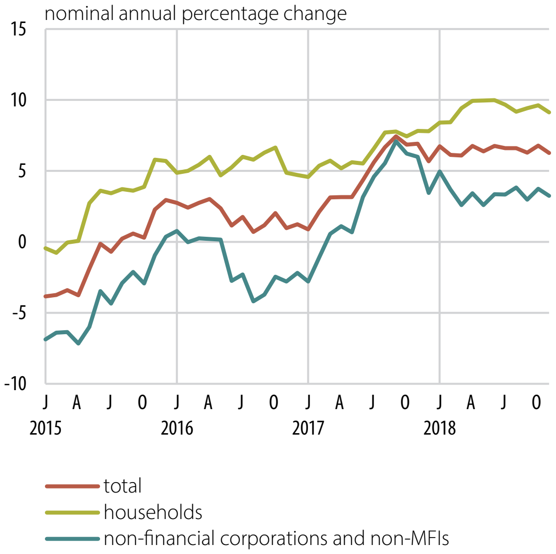
68 An unfavourable effect also stemmed from the increase in the revaluation account of the NBR's forex-denominated assets/liabilities, included under long-term financial liabilities, capital accounts item, whereas the faster growth rate of banks' government security holdings acted in the opposite direction.

69 Both being affected by the settlement of the Eurobond issue by the MPF in October, worth EUR 1.75 billion.

70 In real terms, the rate of change of credit to the private sector picked up again (2.6 percent, from 1.5 percent July through September 2018), as a result of the significant decline in the annual inflation rate.

71 In real terms, its annual rate of change further posted less negative readings.

Chart 3.9. Credit to the private sector by institutional sector



base effect. At the same time, the dynamics of leu-denominated loans stuck to a downward path, prompted by the slacker advance in overdraft loans and the lower November volume of new business versus the previous year. By contrast, the average pace of increase of household credit remained robust during the two reported months overall[72]. Its monthly pattern (advance in October and decline in November) was ascribable to the rate of change of the foreign currency component expressed in lei[73], whereas the growth rate of domestic currency loans saw a renewed deceleration. However, this slowdown was less pronounced than in the previous quarter and manifest this time only in the case of housing loans; conversely, consumer credit and other loans grew at a faster pace again, amid the significantly brisker dynamics of the credit flow.

[72] In real terms, the average dynamics of household credit picked up October through November against the previous three months.

[73] When expressed in euro, forex loans to households further recorded a slower annual decline.

4. Inflation outlook

The annual CPI inflation rate forecast envisages the downward trend that started in the latter half of 2018 to continue until 2019 Q3, before the indicator returns into the upper half of the variation band of the target. The projected values are 3 percent and 3.1 percent for end-2019 and end-2020 respectively. The projection of a relatively steady path of the CPI inflation rate relies on forecasting balanced and declining contributions from exogenous components of the consumer basket over the next two years compared to the recent figures, but given the historical sources of forecast errors these developments are particularly marked by heightened uncertainties. The annual core inflation rate is foreseen to revert its downward course seen in the latter part of 2018. The annual dynamics of the adjusted CORE2 index are seen following an upward path starting in 2019 Q2, at a relatively faster pace this year and somewhat slower next year, stabilising in the latter half of the projection interval at levels higher than those anticipated for the annual CPI inflation rate, yet relatively similar to those in the previous Inflation Report. The evolution owes chiefly to the persistence of domestic inflationary pressures associated with excess demand. To these adds the projected swifter growth in import prices, under the impact of the domestic currency depreciation at the beginning of 2019 and the gradual rise in external inflation. Starting from relatively high levels, inflation expectations follow a slight downtrend, remaining however in the upper half of the target band. The balance of risks to the annual inflation projection is assessed to be tilted to the upside compared to its path in the baseline scenario, with the sources of risks being associated with the domestic and international environment.

1. Baseline scenario

1.1. External assumptions

Over the projection interval, external demand, assessed based on the effective EU GDP (EU-28 excluding Romania), is envisaged to decelerate further, being marked at the same time by the significant revisions of the levels foreseen in the previous round (Table 4.1). The new configuration of external demand reflects mostly the weaker performance of euro area economies (given their slowing export dynamics on the back of the repositioning of global economic growth), with projected values for annual rates nearing the potential levels. Private consumption will continue to be the major driver of economic growth, benefiting from the ECB's accommodative

Table 4.1. Expectations on the developments in external variables

annual averages

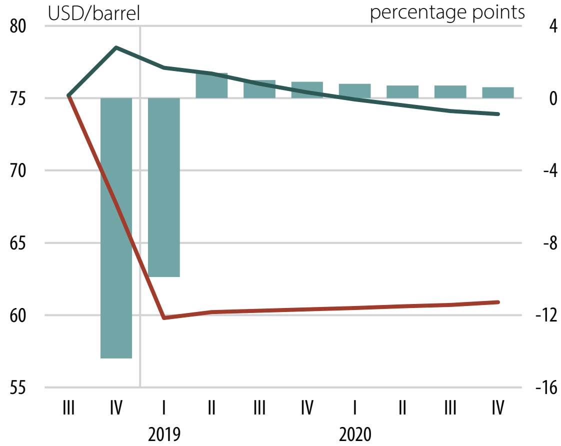
	2019	2020
Effective EU economic growth (%)	1.9	1.7
Annual inflation rate in the euro area (%)	1.6	1.7
Annual inflation rate in the euro area, excluding energy (%)	1.3	1.7
Annual CPI inflation rate in the USA (%)	2.1	2.3
3M EURIBOR (% per annum)	-0.3	-0.1
USD/EUR exchange rate	1.16	1.19
Brent oil price (USD/barrel)	60.2	60.7

Source: NBR assumptions based on data provided by the ECB, European Commission, Consensus Economics and futures prices.

monetary policy[74], the still elevated levels of consumer confidence, improvements in labour market conditions and, against this background, the stronger advance in real wage. The cyclical component of economic activity in Romania's main trading partners, reflected in the effective EU GDP gap, will increase over the projection interval, yet reaching lower-than-previously-foreseen levels.

The average annual HICP inflation rate in the euro area is forecasted to stand at values relatively similar to those in the previous *Report* and therefore remain below the ECB's 2 percent benchmark. The average annual HICP inflation rate excluding energy in the euro area – the relevant measure for shaping the path of prices of imported goods – will follow an upward path over the projection interval, from 1.3 percent in 2019 to 1.7 percent in 2020, amid further labour market tightening, with a bearing on the expected pay rises. Nevertheless, the levels have been revised downwards compared with the previous *Report*, in correlation with the slower advance in economic activity. Annual inflation rate in the USA is foreseen to run higher than in the euro area and above the 2 percent level in both years.

Chart 4.1. Brent oil price scenario



Source: U.S. Energy Information Administration, NBR assumptions based on Bloomberg data

Against the background of the ECB's persistently accommodative monetary policy, the nominal 3M EURIBOR rate is further anticipated to stick to negative values, yet their magnitude is seen to decline in the latter half of the projection interval.

After the euro lost some ground at the end of 2018, the forecast for the EUR/USD exchange rate shows a path consistent with an appreciation of the euro over the projection interval. Given, however, the recent swings in the currency pair, this assumption is marked by elevated uncertainty.

The scenario for the developments in the Brent oil price is based on futures prices and foresees the downward course seen at the end of 2018 to continue during 2019 Q1, before stabilising around USD 60 per barrel until the end of the forecast horizon (Chart 4.1). Its expected dynamics are further characterised by high uncertainty[75], as mirrored in the revised trajectories of

[74] In its meeting of 24 January 2019, the ECB's Governing Council decided to leave unchanged the interest rates on the main refinancing operations, the marginal lending facility and the deposit facility. At the same time, the key ECB interest rates are expected to remain unchanged at their present levels at least through the summer of 2019, and in any case for as long as necessary to ensure the convergence of inflation to targeted levels that are below, but close to, 2 percent.

[75] For further details, see Chapter 4, Section 1.4. Risks associated with the projection.

futures prices in the successive projection rounds, underscoring the high volatility on this market.

1.2. Inflation outlook

The updated macroeconomic projection places the annual CPI inflation rate at 3 percent at end-2019 and 3.1 percent at end-2020, inside the upper half of the ±1 percentage point variation band of the 2.5 percent flat target (Table 4.2, Chart 4.2). The projection of a relatively steady path of the CPI inflation rate relies on forecasting balanced and declining contributions from exogenous components of the consumer basket over the next two years compared to the recent figures, but given the historical sources of forecast errors these developments are particularly marked by heightened uncertainties (Box 2. Assessment of forecast errors for the December 2018 annual CPI inflation rate). By contrast, the dynamics of the adjusted CORE2 index are seen picking up gradually starting in 2019 Q2 and posting higher levels than those anticipated for the CPI rate, yet relatively similar to those in the previous *Inflation Report*.

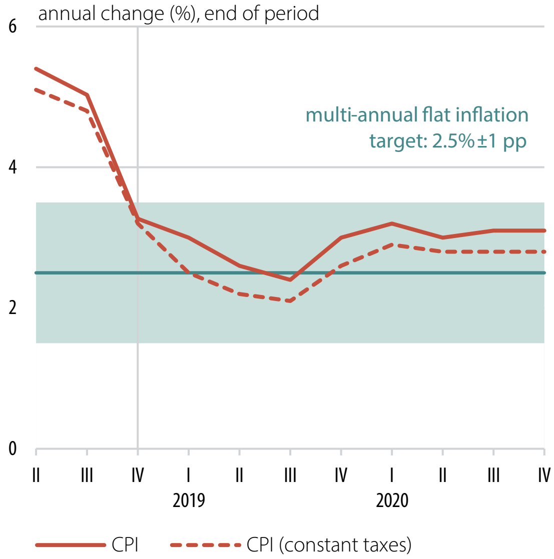
Table 4.2. The annual inflation rate in the baseline scenario

annual change(%), end of period

	2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Central target	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
CPI projection	3.0	2.6	2.4	3.0	3.2	3.0	3.1	3.1
CPI projection*	2.5	2.2	2.1	2.6	2.9	2.8	2.8	2.8

*) calculated at constant taxes

Chart 4.2. Inflation forecast



Source: NIS, NBR projection

The annual CPI inflation rate will stay on the downward trend that started in the latter half of 2018 until 2019 Q3, when it is expected to reach 2.4 percent following the lower inflationary contribution from exogenous components of the consumer basket at this horizon. Subsequently, the annual CPI dynamics will gather momentum, partly due to the fading-away of favourable effects associated with end-2018 developments in prices of some exogenous components (supply-side shocks translating into lower fuel and citrus prices). To this adds the growing inflationary contribution from core inflation. Specifically, starting 2019 Q4, the annual CPI inflation rate will return to the upper half of the target band and run at values close to 3 percent.

Compared to the previous *Inflation Report*, the forecasted annual CPI inflation was revised marginally upwards, i.e. by 0.1 percentage points, for the end of 2019, amid larger inflationary contributions from tobacco product prices and items included in the adjusted CORE2 basket, while the dynamics of volatile food prices (vegetables, fruit, eggs) were revised downwards, given the impact of supply-side shocks.

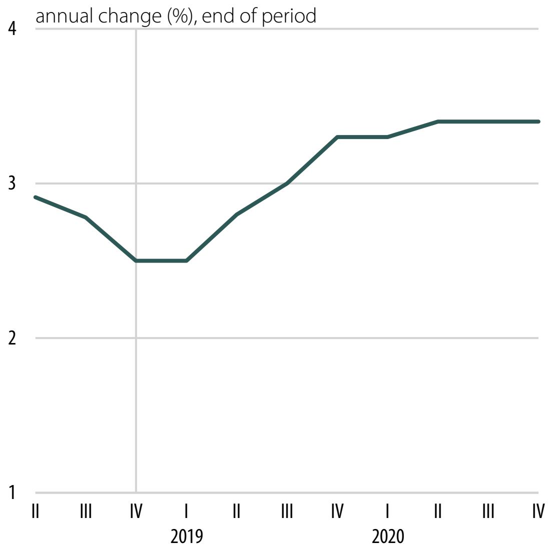
The annual core inflation is forecasted to reverse the downtrend it has embarked on in the latter part of 2018. After being expected to remain unchanged at 2.5 percent

Table 4.3. Annual adjusted CORE2 inflation rate in the baseline scenario

annual change (%), end of period

	2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Adjusted CORE2	2.5	2.8	3.0	3.3	3.3	3.4	3.4	3.4

Chart 4.3. Annual adjusted CORE2 inflation



Source: NIS, NBR projection

Table 4.4. Components' contribution to annual inflation rate*

percentage points

	2019	2020
Administered prices	0.3	0.4
Fuels	0.2	0.2
VFE prices	0.0	0.2
Adjusted CORE2	2.0	2.1
Tobacco and alcoholic beverages	0.4	0.2

*) end of period; values have been rounded off to one decimal place

at end-2019 Q1, a level similar to that recorded in December 2018, the indicator is projected to go up to 3.3 percent in December 2019. Subsequently, the advance in core inflation will abate, its annual rate being envisaged to reach 3.4 percent at end-2020 (Table 4.3, Chart 4.3). The evolution will mainly reflect the persistence of domestic inflationary pressures associated with excess demand. To these adds the anticipated faster growth of import prices, under the impact of the domestic currency depreciation at the beginning of 2019[76] and the gradual rise in external inflation. Starting from relatively high levels, inflation expectations follow a slightly downward path, but remain in the upper half of the variation band of the target.

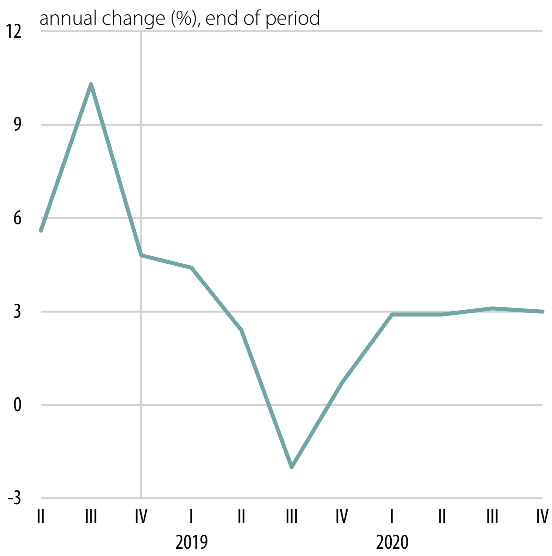
Compared to the November 2018 *Inflation Report*, the annual adjusted CORE2 inflation rate was marginally revised upwards, i.e. by 0.1 percentage points, for end-2019, amid higher inflation expectations and the less favourable evolution of prices of imported consumer goods at this horizon, strictly as a result of the domestic currency depreciation at the beginning of the year. Opposite influences come mainly from the revision of the output gap to slightly lower levels.

Inflation components beyond the scope of monetary policy, i.e. administered prices, volatile food prices, fuel prices, tobacco product and alcoholic beverage prices, are projected to make a cumulated contribution to the annual CPI inflation rate of 0.9 percentage points for end-2019 (similarly to the previous *Inflation Report*) and 1 percentage point for end-2020 (Table 4.4).

The exogenous scenario on volatile food (VFE) prices foresees increases of 0.7 percent at end-2019 (2.3 percentage point lower than in the previous *Inflation Report*) and 3 percent at end-2020. Their path over the projection interval is affected by the gradual fading-out of the negative shock on the domestic supply of vegetables and the favourable shock from the bumper crop of citrus fruits at a European level during 2018 and reflects, in the absence of other information, the assumption of normal agricultural years domestically in 2019 and 2020 (Chart 4.4).

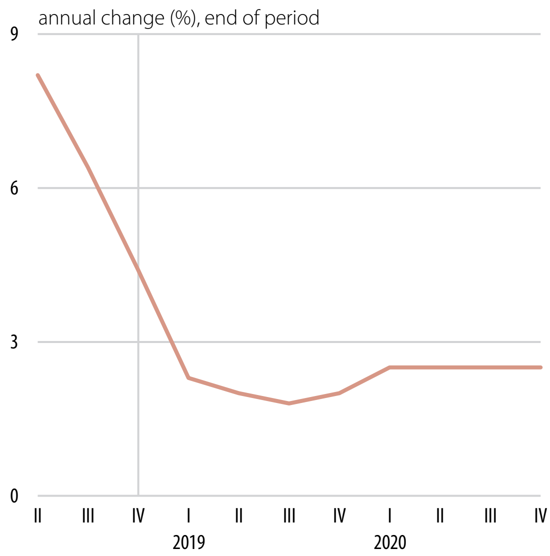
[76] The estimates indicate that changes in the nominal exchange rate on the core inflation rate have a pass-through of approximately 10 percent at a one-quarter horizon and approximately 25 percent at a one-year horizon. For further details, see Stoian, A. and Murarașu, B. (2015) – "On the exchange rate pass-through in Romania", NBR *Occasional Paper* No. 18. The services included in the adjusted CORE2 index show increased sensitivity to exchange rate changes, given that some prices are expressed in foreign currency (e.g. prices of telephony services).

Chart 4.4. VFE prices annual inflation



Source: NIS, NBR projection

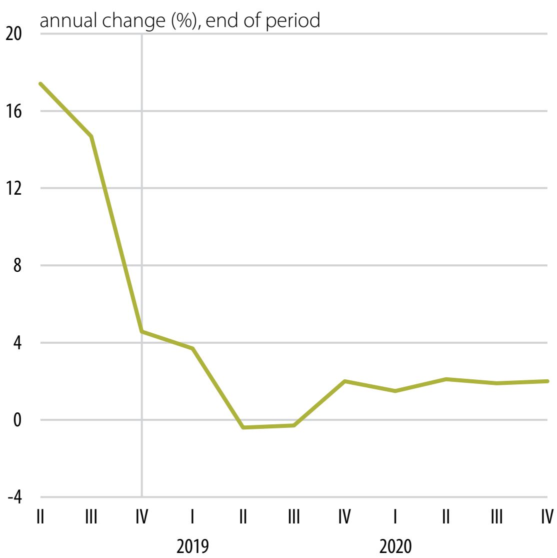
Chart 4.5. Administered prices annual inflation



Source: NIS, NBR projection

The annual dynamics of administered prices are expected to reach 2 percent and 2.5 percent at the end of 2019 and 2020 respectively (Chart 4.5). Their trajectory is marked by high uncertainty surrounding the electricity and natural gas prices, given the absence of detailed norms of the competent authorities for the transposition of the general provisions of GEO No. 114/2018 upon the completion of the baseline scenario of the macroeconomic projection. As compared to the previous *Inflation Report*, the value for end-2019 was marginally revised downwards by 0.1 percentage points. The downward revision of the natural gas price, in the context of GEO No. 114/2018[77], is partly offset by the upward revision of electricity prices in the first part of this year, amid increases in distribution service prices[78], in the mandatory quota for green certificates estimated for 2019 and in excise duties, as well as by the postponement of the measure to cut the VAT rate for heating previously envisaged for January 2019[79].

Chart 4.6. Fuel prices annual inflation



Source: NIS, NBR projection

The scenario on fuel price developments foresees annual increases of 2 percent in the last month of both 2019 (marginally revised upwards by 0.1 percentage points) and 2020 (Chart 4.6).

77 It refers to imposing price ceilings on the chain ending in the final selling price for households.

78 Following the meeting of 14 December 2018, the Regulatory Committee of the Romanian Energy Regulatory Authority decided to endorse the raise in the price of electricity distribution services provided by concessionaires in 2019. For further details, see the Romanian Energy Regulatory Authority press release of 14 December 2018, available at: https://www.anre.ro/ro/presa/comunicate/comunicat-14-12-2018-stabilirea-tarifelor-de-distributie-a-energiei-electrice (Romanian only).

79 This measure is further on the agenda of the Chamber of Deputies.

The inflation path of this group is influenced by the annual dynamics of oil prices, which are expected to be negative throughout 2019 and slightly positive afterwards (amid the drop in oil prices at end-2018, which is anticipated to continue in 2019 Q1 and then be followed by a relative stabilisation). The group dynamics will also be influenced by the downward path of economic agents' CPI inflation expectations and the weaker leu in US dollar terms (the currency in which oil prices are expressed), as a result of the depreciation of the US dollar versus the euro and of the leu against the euro in the first part of 2019.

The annual growth rate of prices of tobacco products and alcoholic beverages is forecasted at 4.8 percent at end-2019 and at 2.8 percent at end-2020. For 2019, it is higher by 1.6 percentage points than that anticipated in the previous round, after being updated with the information laid down in GEO No. 114/2018 on the larger increase in the excise duty per 1,000 cigarettes. Furthermore, the trajectory of these prices is also affected by the earlier implementation of the excise duty hike (in January 2019 instead of April 2019), as well as by the behaviour of economic agents in this field with regard to the rise in the final price following changes in the fiscal legislation.

1.3. Demand pressures in the current period and over the projection interval[80]

Output gap

In 2018 Q3, real GDP saw a new notable and larger-than-expected advance in quarterly terms (1.9 percent, after 1.5 percent in Q2), which led to a slight step-up in its annual dynamics to 4.4 percent[81]. The quarterly GDP growth benefited from an unexpected outstanding increase in agricultural output, with an impact also on individual household consumption (via the self-consumption and purchases on the agri-food market component). Under the circumstances, the quarterly GDP growth mirrored the substantial contribution from domestic demand, mainly that of consumption, while the contribution of GFCF returned to positive, yet small values (following the first half of the year contractions). Concurrently, given the persistent divergence between quarterly developments in exports (decline) and in imports (rise), net exports had a negative contribution, albeit slightly lower.

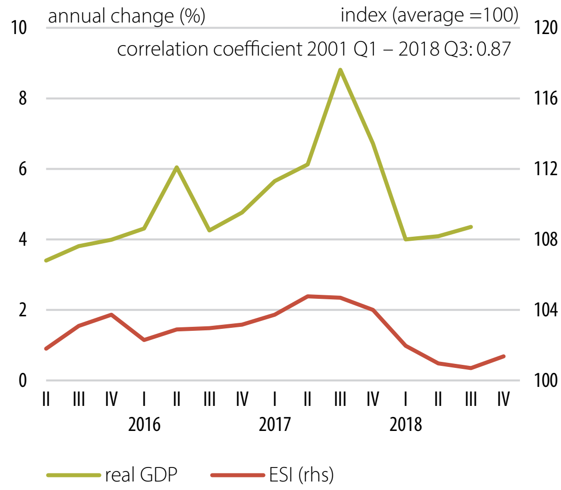
In the next two quarters, the quarterly GDP growth is, however, foreseen to be modest. On the one hand, the 2018 Q4 GDP growth versus the earlier period is assessed to incorporate an unfavourable contribution from the agricultural sector[82], affecting also the quarterly developments in household consumption. As for the 2019 Q1 anticipated GDP growth, it includes some headwinds mainly to investment, associated with lending and with the uncertainty stemming from the (enforcement of) provisions adopted pursuant to GEO No. 114/2018. Additionally, the business

80 Unless otherwise indicated, percentage changes are calculated based on seasonally adjusted data series. Source: NBR, MPF, NIS, Eurostat, EC-DG ECFIN and Reuters.

81 NIS Press Release No. 9 of 11 January 2019. Annual dynamics are calculated based on gross data series.

82 Reflecting a likely base effect of the 2018 Q3 exceptional advance.

Chart 4.7. Economic sentiment indicator* and economic growth



*) seasonally adjusted data

Source: NIS, EC-DG ECFIN

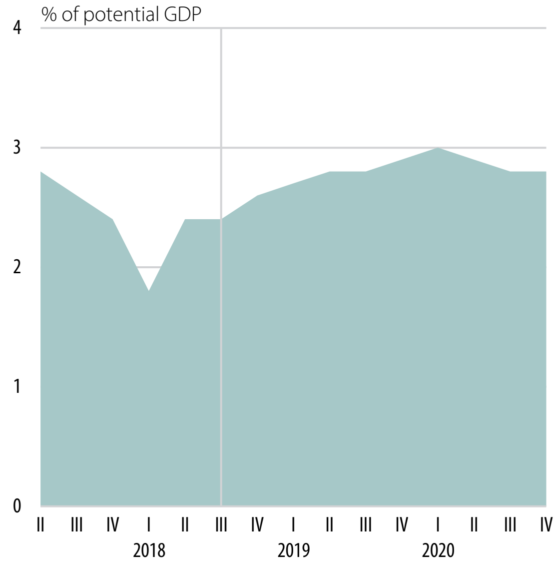
survey[83] for January-March 2019 reveals a relative stabilisation of economic activity in industry and services, but a downward trend in construction and retail trade. On the other hand, favourable signals come from high-frequency indicators (industrial output, retail trade turnover volume and real net wage earnings, influencing domestic demand), which witnessed an upward trend throughout 2018 Q4 compared to the previous quarter. An improvement in the economic sentiment indicator adds to these, chiefly due to the services and consumer components – Chart 4.7; nevertheless, in January 2019, the indicator came to a near standstill, as a result of a worsening in the consumer and construction components. Thus, quarterly GDP growth is foreseen to continue to be driven by domestic demand (consumption, in particular), but its rates are expected to be considerably slower than that in 2018 Q3. At the same time, net exports of goods and services are forecasted to further make a slightly negative contribution, somewhat lower compared to Q3.

The baseline scenario of the projection reconfirms the slowdown in GDP dynamics in 2018, followed by new losses of momentum in 2019 and 2020, with the foreseen economic growth nearing its potential rate at the projection horizon. In the current round, the forecast is surrounded by heightened uncertainties associated with the assessment of the impact made by the provisions of GEO No. 114/2018 and with the lack of the final version, approved by the Parliament, of the government budget law for 2019 at the time of drafting the baseline scenario of the projection. By comparison with 2017, a lower traction of domestic demand is forecasted, mainly due to a deceleration in consumption growth, correlated with that of real disposable income, chiefly on the back of the wage component of the index. The GFCF contribution is expected to be slightly negative in 2018 (visibly affected by the contractions recorded in the first two quarters). Over the remainder of the forecast interval, the developments in this component are foreseen to improve, albeit the annual dynamics appear set to remain below the post-crisis average, in the context of an anticipated adverse impact from the measures stipulated by GEO No. 114/2018. Given the stronger growth rate of imports of goods and services compared to that of exports thereof, the contribution from net exports is projected to stay in negative territory, posting a more negative value in 2018 and becoming less negative thereafter.
For 2018, mention should also be made of the substantial contribution of the change in inventories, accumulated almost exclusively on the back of developments in the first half of the year, this component making difficult to clearly identify the structure of economic growth in terms of consumption, investment and net exports.

[83] NIS Press Release No. 22 of 28 January 2019.

The assessment of potential GDP indicates a deceleration in its dynamics throughout the current year, followed by only slightly faster rates in the next years, below those previously assessed for this time horizon. The projected deterioration of potential growth reflects the smaller contributions coming from all production factors. Capital accumulation is influenced by the lack of a rebound in the annual dynamics of investment, adversely impacted recently by the effects of GEO No. 114/2018. This could delay, in the short term, or even diminish, in the medium term, the volume of investment projects carried out especially by companies in the banking, telecommunications and electricity and natural gas sectors, given the direct impact of the legal provisions on their profitability; moreover, the effects of the stock market falls at the end of 2018 and in January 2019 and the tax on bank assets point to the possible decline, from a broader perspective, in the volume of investment projects that can be financed via the capital market or bank loans. The TFP trend is assessed to post relatively levelled-off dynamics[84], which mirror structural aspects such as the modest allocation of resources for innovation, the poor quality of infrastructure and the lingering deficiencies in the management of EU-funded projects[85], as well as the unfavourable developments in investment amid the uncertainty generated by the hasty nature of the most recent legislative measures. Labour reflects the constraints stemming from the persistently high skill mismatch[86], which overlaps the multi-annual unfavourable trend of demographic factors.

Chart 4.8. Output gap



Source: NBR assessments based on data provided by the NIS

The output gap (Chart 4.8) is anticipated to follow a slight upward path until the beginning of 2020, before flattening out somewhat for the remainder of the forecast interval. This trajectory reflects: (i) the persistently accommodative nature, yet on the decrease, of real broad monetary conditions, (ii) the stimuli from the economic activity of foreign trading partners, expected to weaken in the latter part of the projection interval, (iii) the constraints (on economic activity) generated by the provisions of GEO No. 114/2018; adverse effects of enforcing the "tax on bank assets" could consist in a possible slowdown in the dynamics of loans to the private sector and/or in a shift in investor sentiment regarding investments made in Romania. Mention should be made that the path of excess aggregate demand incorporates an assessment of the discretionary fiscal policy stance[87], which

84 Additional evidence is brought by the *European Innovation Scoreboard* analysis of the EC, the *Ease of Doing Business* ranking of the World Bank or the *Global Competitiveness Report* of World Economic Forum.

85 During the last two years, the absorption of EU structural and investment funds is assessed to have stood well below that of 2013-2016.

86 In 2019 Q1, the Manpower Group Survey shows positive net employment prospects, mainly for large and medium-sized companies. However, the employment pace is seen to be slower compared to the previous period.

87 Approximated based on the fiscal impulse.

is forecasted to become pro-cyclical again in 2020, due to the new provisions of the pensions law[88]. From the perspective of aggregate demand components, the output gap path is projected to be shaped by the developments in the gap of actual individual consumption of households, while the GFCF cyclical component is forecasted to remain in negative territory. In turn, the gaps of exports and imports of goods and services are assessed at positive values, yet their net contribution to the output gap remains negative. The assessment of the output gap and of the gaps of GDP components is surrounded by a degree of uncertainty mirroring their relatively high volatility, as well as the frequency and size of the revisions of historical series.

Compared to the previous *Inflation Report*, the output gap was revised downwards for the current year and is expected to reach slightly higher values in 2020, due to: (i) the adjustments related to the exclusion of the exceptional contribution of the agricultural sector[89] in the latter half of 2018, with a persistent impact on the future path of the variable, (ii) the adverse effects generated by the provisions of GEO No. 114/2018, via lending, and (iii) the updating of information comprised in the set of determinants, out of which noticeable changes (compared to the previous assessment) refer to the stimulative nature of real broad monetary conditions, abating more gradually in 2019 and more visibly in 2020, on the one hand, and to the fiscal stimuli from the discretionary component of fiscal policy, projected at lower levels in 2019 and at higher levels in 2020, on the other hand.

Aggregate demand components

The quarterly dynamics of actual final consumption posted an increase up to 3.5 percent in 2018 Q3, on the back of improved consumer confidence and favourable developments in real net wages[90]. In the short term, the upward trend of this component is anticipated to slow down, mainly due to the contribution coming from the dynamics of households' real disposable income.

Given the expected close-to-zero contributions from the GFCF and the negative ones from net exports, the actual final consumption is projected to remain the key driver of economic growth over the projection interval. The robust growth rates of the component anticipated in the baseline scenario are correlated with the dynamics of real disposable income, which are forecasted to remain strong. The latter's trajectory is shaped both by the expected increases in net wage and the foreseen improvement in budget transfers, against the backdrop of the pensions law provisions. Albeit gradually decelerating over the following quarters, the wage dynamics will be favourably influenced by the further relatively high degree of labour market tightness, amid the persistent constraints of structural factors. At the same time, mention should be made about the inherent uncertainties related to assessing the adverse impact on loans – including consumer credit – associated with the introduction of the "tax on bank assets".

88 According to which raises in the pension point are expected in September 2019 and September 2020, respectively.

89 The exceptional agricultural output is assumed to have no impact on the inflationary pressures in the economy, hence its effect is excluded from the output gap assessment.

90 For further details, see Chapter 2, Section 1. Demand and supply.

The quarterly growth rate of GFCF returned to positive territory in 2018 Q3 (2.7 percent), following the drops recorded in the first two quarters. Albeit favourable dynamics are anticipated for 2018 Q4 – mainly due to equipment purchases, with the signals regarding construction activity being mixed –, GFCF is assessed to decline in 2018 as a whole on account of the developments in the first half of the year.

The further path of this component is marked by significant uncertainties attached to public investment dynamics, to the absorption of EU structural and investment funds and to the persistence of structural factors[91] – mentioned as well in the previous *Reports* –, to which add the risks associated with the effects of the recently adopted fiscal and budgetary measures on the investment climate. These carry the potential to affect not only the directly involved economic sectors (banking, telecommunications, electricity and natural gas production), but also, in a larger context, the volume of economy-wide investment projects that can be financed via the capital market or bank loans. The baseline scenario forecasts an improvement in the annual GFCF dynamics compared to 2018, with developments projected to remain, however, below the post-crisis average. Foreign direct investment flows stand out among the factors with a positive influence on GFCF dynamics, given the outlook for economic growth in Romania and the countries of origin, albeit at lower forecasted rates than those seen in the previous years. Adding to these could be the stimulative impact generated by the assumption of the improvement in absorption of EU structural and investment funds[92].

Quarterly exports of goods and services are expected to advance further, yet at a gradually decelerating pace over the forecast interval, amid the projected weakening of external demand. On the one hand, exports will be sustained especially in the sectors integrated in global value chains (such as manufacture of transport equipment and related subsectors). On the other hand, the following are taken into account: (i) the increase in unit labour costs, albeit at slower rates, which is anticipated to also reflect in production cost developments and (ii) a series of dragging structural features of the economy, such as the slow bridging of gaps regarding infrastructure or the sophistication level of production processes, with a direct impact on the structure of value added of the Romanian products targeting external markets.

Over the projection interval, the growth rate of imports of goods and services is forecasted to slow down, in line with the dynamics of domestic demand and exports. In 2018, imports are assessed to rise faster than exports, making a negative contribution to GDP growth that is anticipated to narrow over the remainder of the forecast interval.

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91 Among these continue to stand out the limited predictability of the legislative framework, the relatively poor quality of infrastructure due also to the delayed start of investment projects, the skill mismatch, etc.

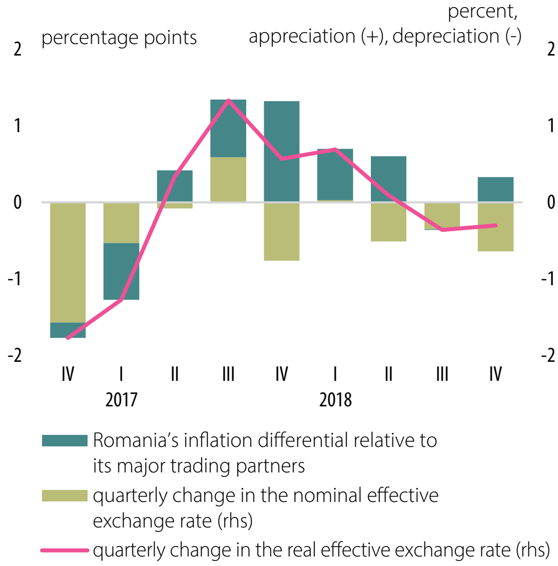
92 The assumptions in the baseline scenario take into consideration the frequent legislative changes aimed at enabling a smoother implementation of projects included in operational programmes, the framework agreement worth EUR 1 billion, signed between Romania and the European Investment Bank for co-financing priority transport projects, as well as the completion by March 2019 of phased projects under the current financial allocation (not completed during the previous financial framework and cumulating approximately EUR 4 billion).

In 2018 Q3, the current account deficit widened further[93], mirroring the increase in the deficit on trade in goods and services and also in income deficit (4-quarter cumulative data). The current account deficit is envisaged to remain on the rising trend that began in 2015 and to reach levels that exceed, as early as this year, the 4 percent-of-GDP indicative threshold set by the European Commission as a scoreboard indicator for EU Member States[94]. The current account deficit financing is anticipated to be only partly covered by stable, non-debt-creating capital flows over the entire projection interval. Although these are expected to gradually pick up in the 2018-2020 period, based on the assumption of the improvement in absorption of EU structural and investment funds, they are still deemed to be insufficient for the full financing of the current account deficit, which is projected to widen significantly compared to 2017. The higher current account deficit carries the potential to act towards worsening the macroeconomic equilibria, with a direct impact on capital flows to the local economy, especially since the position and magnitude of Romania's current account balance are markedly different from those recorded by other emerging economies in the region.

Broad monetary conditions

Broad monetary conditions capture the cumulated impact exerted on future developments in aggregate demand by the real interest rates applied by credit institutions on leu- and foreign currency-denominated loans and deposits of non-bank clients and by the real effective exchange rate[95] of the leu. The exchange rate exerts its influence via the net export channel, as well as via the effects on wealth and balance sheets of economic agents[96].

Chart 4.9. Quarterly change in the effective exchange rate



Source: Eurostat, U.S. Bureau of Labor Statistics, NBR, NBR calculations

The nominal interest rates on new time deposits and new loans in lei are estimated to slightly decline in 2018 Q4. In real terms, the fall in interest rates is more pronounced, on the back of the dynamics in inflation expectations. Starting with 2019 Q1, given the expected nominal developments, real interest rates are forecasted to rise. Under the circumstances, the cumulated impact exerted by real interest rates on economic activity remains stimulative, albeit on the wane throughout the projection interval.

After an anticipated depreciation in 2019 Q1, due to the prevailing effect of the developments in the leu

93 As a share in GDP, its value stood at 4.1 percent (4-quarter cumulative data) as compared to 3.2 percent both in 2018 Q2 and at the end of 2017.

94 Calculated as an average for the past three years. For further details, see the European Commission website, the section on Macroeconomic Imbalance Procedure Scoreboard.

95 The relevant exchange rate for the NBR's macroeconomic model for analysis and medium-term forecasting relies on the EUR/RON and USD/RON exchange rates, with the weighting system mirroring the weights of the two currencies in Romania's foreign trade.

96 The relevance of this channel has declined gradually in recent periods, given the narrowing of the share of foreign currency-denominated loans in total credit to the private sector, amid the faster rise in leu-denominated flows versus those in foreign currency.

exchange rate in nominal terms (against the euro and the US dollar), the real effective exchange rate (Chart 4.9) is assessed to return to a slight appreciation trend over the remainder of the forecast interval, amid the systematically higher domestic inflation rates compared to those of Romania's trading partners, the latter being revised downwards under the impulse of the decelerating economic activity in the euro area. Over the forecast interval, the real effective exchange rate will exert a stimulative impact on economic developments in 2019 and a quasi-neutral one in 2020 via the net export channel.

Looking at 2018 Q4 and 2019 Q1 on the whole, the wealth and balance sheet effect is assessed to exert stimulative influences on the output gap in the periods to come, mainly on account of the real foreign interest rate (3M EURIBOR) standing below the equilibrium level (significant negative gap), given the still markedly accommodative monetary policy stance of the ECB. In the period under review, the contribution from the change in the real effective exchange rate gap is slightly restrictive in 2018 Q4 and close-to-neutral in 2019 Q1. The sovereign risk premium, approximated based on the option adjusted spread (OAS), is assessed to have a slightly restrictive effect, its path being potentially influenced by uncertainties associated with the hasty nature of the recently implemented legislative measures. Over the projection interval, due to the prevailing impact of real foreign interest rate, the wealth and balance sheet effect will further exert a relatively steady stimulative impact on the future economic activity.

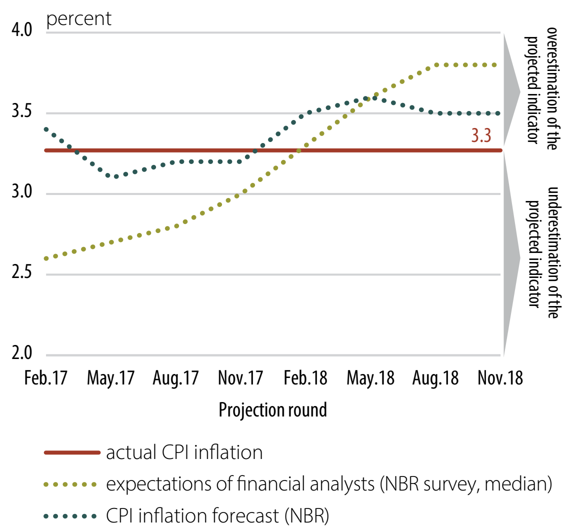
Overall, in 2018 Q4 and 2019 Q1, real broad monetary conditions are assessed to further have a stimulative impact on the aggregate demand in the following quarters, on the wane in 2018 Q4 and on the rise in 2019 Q1. Starting 2019 Q2, real broad monetary conditions are anticipated to decrease their stimulative influence, on the back of the developments in real effective exchange rate – which mirror its impact on price competitiveness of local products diminishing to close-to-neutral levels –, but also as a result of real interest rate dynamics.

The monetary policy stance is shaped with a view to ensuring and maintaining price stability over the medium term, in a manner conducive to achieving sustainable economic growth and preserving macroeconomic stability.

Box 2. Assessment of forecast errors for the December 2018 annual CPI inflation rate

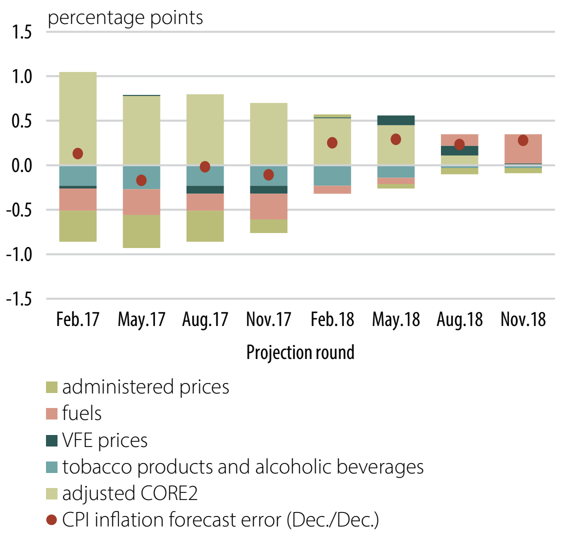
Considering that the central bank's decisions work their way through the economy with specific time lags, macroeconomic forecasts play an essential part in the inflation targeting strategy, especially through the impact on economic agents' and consumers' expectations. The assessment of forecast errors is common practice among central banks with such a monetary policy regime in place, helping improve the forecasting framework. This box aims at assessing the accuracy of the forecasts that the NBR made in successive rounds for the end-2018 annual CPI inflation rate, thus carrying on the assessment process launched in the previous years. Relative to this point of reference, eight projection rounds were identified, corresponding to the *Inflation Reports* published from February 2017 to November 2018.

Chart A. Successive forecasts of annual CPI inflation rate for December 2018



Source: NIS, NBR projections, NBR survey

Chart B. Forecast errors in successive rounds distributed by contribution of CPI components



Source: NBR calculations

The annual CPI inflation rate reported at end-2018 (3.3 percent, according to NIS Release No. 17/ 14 January 2019) fell within the range of values projected by the NBR in the period under analysis. Thus, the forecast errors stood between -0.2 percentage points (for the May 2017 *Inflation Report*) and +0.3 percentage points (for the February 2018 *Inflation Report*), whereas, in absolute terms, the low corresponded to the August 2017 *Inflation Report*. The NBR forecasts were more accurate than the median of financial analysts' inflation expectations, retrieved from the surveys conducted by the NBR in the months when *Inflation Reports* were published, for comparability reasons (Chart A).

The breakdown of the forecast errors for end-2018 annual inflation rate by consumer basket components (Chart B) reveals that over most of the projection interval, to different extents, the tendency to overestimate core inflation was offset by the tendency to underestimate the components beyond the scope of monetary policy. In the first part, the largest contributions to underestimating inflation were made by administered prices, fuel prices and tobacco product prices, subsequently these contributions shrinking or even acting in the opposite direction (for instance, fuel price).

The annual growth rate of administered prices at end-2018 was mainly affected by the unanticipated hikes in natural gas prices implemented during the year[97]. As these hikes were progressively incorporated into the trajectory of administered prices, their contribution to the underestimation of the annual CPI inflation rate diminished. At the same time, the unexpected shock from the fall in the electricity price seen in August 2018 reduced the contribution of administered prices to the forecast errors made in the November 2017 – May 2018 rounds.

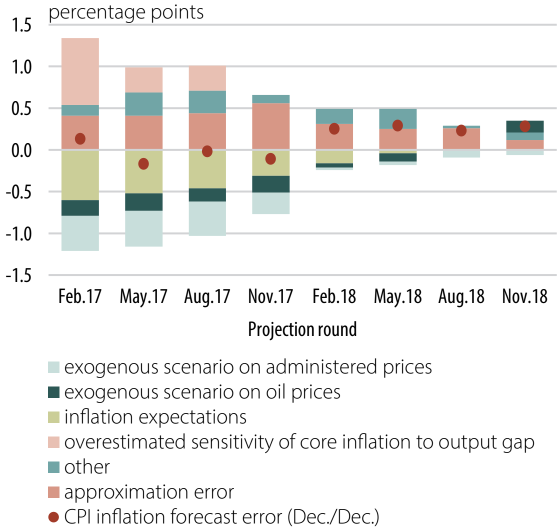
The contribution of the fuel price to the underestimation of CPI inflation rate contracted during the period under analysis and even acted in the opposite direction in the last two rounds under review, in the context of the drop in the Brent crude oil price at end-2018. This evolution, which was not anticipated by the futures

[97] For more details, refer to the Romanian Energy Regulatory Authority press releases issued in 2018 available at: http://www.anre.ro/ro/presa/comunicate (Romanian only).

prices used for the forecast of future spot prices, took place amid the heightened uncertainty about supply-side factors overlapped by demand-side factors.

Tobacco products and alcoholic beverages contributed to the underestimation of the annual CPI inflation rate all through the eight rounds under analysis, in the context of the multiple unanticipated hikes implemented by the economic agents in the tobacco industry. These price increases were higher than those justified by fiscal changes, most likely reflecting the inelastic demand.

Chart C. Forecast errors in successive rounds distributed by contribution of MAMTF factors



Source: NBR calculations

In most forecasting rounds, the contribution of adjusted CORE2 inflation to the CPI inflation forecast errors partly offset the underestimation from exogenous components amid a favourable evolution of the prices of some agri-food commodities especially in the first part of 2018, with an impact on processed food prices. At the same time, the tendency to overestimate the sensitivity of core inflation to output gap relative to external factors led to the overestimation of adjusted CORE2 inflation in the first rounds under review, given the increase in the relative importance of the disinflationary global environment in explaining price dynamics in Romania to the detriment of domestic factors[98]. This matter and the other analytical determinants investigated are presented in Chart C, where forecast errors are decomposed based on the specific factors in the NBR's model for macroeconomic analysis and medium-term forecast (MAMTF)[99].

At the same time, this decomposition highlights the errors owed to developments in the oil price and administered prices, as well as to the inflation expectations of economic agents, who anticipated a lower inflation rate for end-2018 in the first rounds under review. "Other" includes forecasting framework-specific factors (such as the risk premium, the cyclical component estimates for the main macroeconomic variables, historical data revision). Furthermore, re-running projections with updated factors for assessing their contributions to the annual inflation forecast error also involves a shift from the average quarterly inflation (modelled in the MAMTF) to end-of-period inflation, which implies an approximation error.

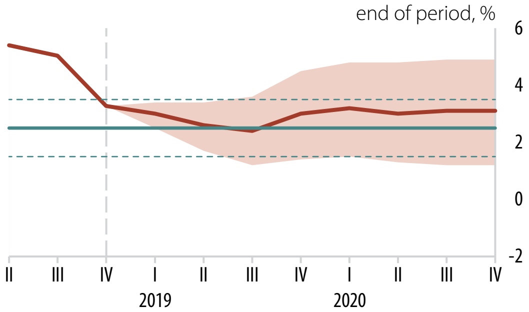
98 This assumption is also supported by the empirical evidence on Romania's higher trade integration with the EU, as well as by consumption being covered to a larger extent from imported goods than from domestically-produced goods, as underlined in Box 2 entitled "The relationship between economic activity and inflation" in the May 2017 *Inflation Report*.

99 This decomposition assumes counterfactual simulations in which projection input data (also called specific factors) are supposed to be exactly known (being assigned the actual historical values). The difference between the inflation projections released in the eight *Inflation Reports* and those resulting from the counterfactual simulations allows for determining the contribution made by each of the specific factors to the total forecast error.

1.4. Risks associated with the projection

The balance of risks to the annual inflation projection is assessed to be tilted to the upside compared to its path in the baseline scenario (Chart 4.10), with risks stemming from both domestic and external sources. At the current juncture, worth mentioning are the uncertainties surrounding the effects of fiscal and budgetary measures enforced on 1 January 2019 and the persistent labour market tightening. On the external front, higher uncertainties relate to the slower growth rate of euro area and global economies.

Chart 4.10. Uncertainty interval associated with inflation projection in the baseline scenario



Note: The uncertainty interval was calculated based on the annual CPI inflation forecast errors in the NBR projections during 2005-2018. The magnitude of forecast errors is positively correlated with the time horizon they refer to.

Source: NIS, NBR calculations and projections

The risks specific to the current round are primarily associated with domestic developments, directly reflecting the fiscal and income policy stance. Uncertainties surround the final version, approved by the Parliament, of the government budget law for 2019[100], heightened by the ambiguity concerning both the implementation and potential effects of the measures that took effect on 1 January 2019. Moreover, additional regulatory steps[101], referred to in the press releases issued by the relevant authorities, act, in the given context, as a source of uncertainty until their adequate clarification through the Romanian Energy Regulatory Authority norms.

The manner of setting the "tax on bank assets" carries the potential, albeit difficult to comprehensively assess at this moment, to affect both the effectiveness and flexibility of monetary policy and, consequently, the macroeconomic environment. Following this measure, the possible adverse effects could be enhanced by those of other legislative initiatives concerning the banking sector[102]. Under the circumstances, there is the risk of a deceleration in the dynamics of lending to the private sector, and implicitly in the growth rate of financing that could be raised in the capital markets or via credit institutions, with unfavourable effects on the volume of investment in the economy. The latter could be affected also as a result of some investment decisions being postponed in the short run or even the volume of the planned investment contracting over the medium term, in the context of the mentioned measures, with an adverse impact on potential GDP growth rate. As pointed out by evidence on similar episodes in other countries (for instance, Hungary), a step-up in cross-border deleveraging could not be ruled out, especially as concerns financial sector entities, but also, more broadly, other investors amid the effects of an unfavourable sentiment directly connected with the volume of investments in Romanian assets. In the event

100 Unavailable until the completion of the macroeconomic projection in the current *Inflation Report*.

101 For instance, those relative to the electricity price adjustment.

102 At end-2018, the Parliament adopted measures on: (i) capping interest rates on household loans, (ii) removing the enforceability of loan contracts, and (iii) the possibility to redeem the loans sold by paying at most double the price for the loan sale.

of such a risk materialising, negative consequences would relate to pressures on the leu exchange rate, with direct effects on the inflationary pressures in the economy.

Looking at the electricity and natural gas prices, uncertainties refer to the final configuration of additional regulatory steps carrying, inter alia, the potential to affect the competitive market[103]. In the context of GEO No. 114/2018, electricity and natural gas licence-holders are facing additional pressures amid the setting forth of a tax payable by the holders of licences released by the Romanian Energy Regulatory Authority in the amount of 2 percent of the related turnover. Under the circumstances, given also the experience of other economies that implemented similar measures, there is an emerging risk of rising prices/tariffs in order to accommodate, in this manner, the higher costs, with a direct impact on non-residential consumers and, indirectly, on final consumer prices.

A risk factor further relevant in the current round refers to labour market conditions, in the context of the degree of tightness remaining relatively high. Additional upward pressures on wages may be induced by the persistent structural deficiencies (skill mismatch, high inactivity rate, intense emigration, etc.).

On the external front, heightened uncertainties are associated with the pace of deceleration of global economic growth amid the risks generated by the possible escalation of trade protectionism. Further relevant are the uncertainties about the unfolding of Brexit, as well as the diverging monetary policy stances pursued by the ECB and other major central banks. At the same time, the risk of higher volatility on international financial markets persists, amid the strengthening of geopolitical tensions. The materialisation of some of these risks could entail portfolio reallocations in the region and/or worldwide, with implications for the future path of the leu exchange rate and, implicitly, for the projected inflation rate.

The balance of risks associated with developments in energy commodity prices is assessed as being tilted to the upside compared to the inflation path projected in the baseline scenario. Uncertainties persist with regard to oil price developments. Looking ahead, their dynamics are conditional on both supply-side factors – lower production from OPEC and the aligned producers, the geopolitical developments in Venezuela, in contrast to the outlook for the US shale oil production –, and demand-side factors, given the uncertainties about the pace of slowdown of global economic growth.

[103] On 29 January 2019, the Romanian Energy Regulatory Authority released an information note on the possibility for residential end-users of electricity and natural gas to shift back from the competitive market to the regulated one, where they find it more advantageous. For details, see: https://www.anre.ro/ro/presa/comunicate/informare-29-01-2019-preturi-consumatorii-casnici-ee-si-gn (Romanian only).

Abbreviations

CCR	Central Credit Register
CPI	consumer price index
DG ECFIN	Directorate General for Economic and Financial Affairs
EC	European Commission
ECB	European Central Bank
ESI	Economic Sentiment Indicator
EU	European Union
Eurostat	Statistical Office of the European Union
FAO	Food and Agricultural Organization of the United Nations
GDP	gross domestic product
GFCF	gross fixed capital formation
HICP	harmonised index of consumer prices
ILO	International Labour Office
IMF	International Monetary Fund
MPF	Ministry of Public Finance
NBR	National Bank of Romania
NIS	National Institute of Statistics
OPEC	Organisation of the Petroleum Exporting Countries
ROBOR	Romanian Interbank Offer Rate
TFP	total factor productivity
VAT	value added tax
VFE	vegetables, fruit, eggs

Tables

Charts