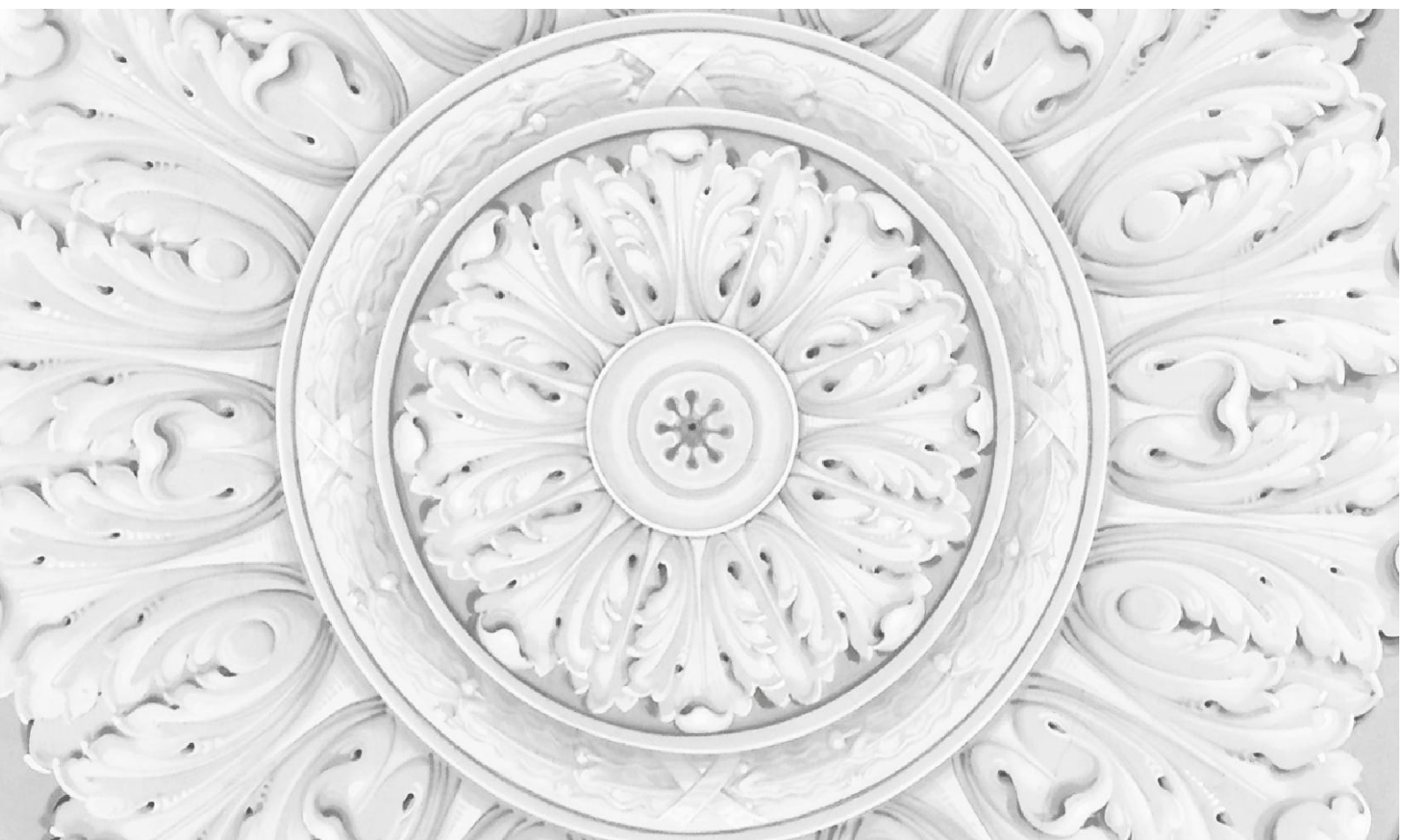# Bank of Russia
The Central Bank of the Russian Federation

TALKING TRENDS

Macroeconomics and markets

February 2017

**Research and Forecasting
Department Bulletin**

No. 1 (13)

CONTENTS

Executive summary

1. Monthly summary

- Current inflation developments are in line with the Bank of Russia's official forecast, as external and financial conditions remain moderately favourable. Economic activity over the past few months has demonstrated positive and sustainable dynamics confirming optimistic projections of leading indicators.

  - Inflation has reached the path consistent with the 4% target by the end of 2017. This is partially explained by temporary favourable factors. Inflation risks remain given recent clear signs of economic recovery along with a slow reduction in inflation expectations. The above-mentioned factors keep advocating for moderately tight monetary policy.

  - Economic activity has recently been showing stronger dynamics. Recent revisions in GDP conducted by Rosstat along with short-term macroeconomic indicators and survey data suggest that current economic growth may slightly exceed the Bank of Russia's expectations.

  - Monetary conditions remain moderately tight. This will ensure that the Finance Ministry's purchases of foreign currency in the FX market do not create additional inflation risks.

2. Outlook

- Model estimates of real GDP growth for Russia in 2017 Q1 and Q2 based on a large set of short-term macroeconomic indicators have been considerably revised upwards, pointing to a continuation of economic growth.

- Analysts' inflation forecasts for the end of 2017 have become closer to 4% YoY, as this reflects growing credibility of the Bank of Russia's monetary policy under the conditions of higher oil prices.

- Leading indicators point to a continuing growth of the US economy along with some positive growth prospects in the eurozone.

3. In focus. Consumption: evidence for decline or growth?

- Rosstat official methodology may currently underestimate the volumes of retail sales turnover which may bring about undervaluation of final consumption as a component of GDP.

1. Monthly summary

1.1. Inflation

Inflation continued to decline in line with the Bank of Russia's forecast, as this is partially attributed to ruble appreciation. Financial analysts' expectations of price growth in the end of 2017 have decreased which suggests growing credibility of the Bank of Russia's anti-inflationary policy. Inflationary pressure still remains high. Underlying inflation goes down at a moderate pace. Additional inflation risks may arise by the end of 2017 against the backdrop of higher inflation expectations, as temporary favourable factors become exhausted and the economy sets on a path towards growth. Therefore, the current inflation risk balance still advocates for moderately tight monetary policy.

1.1.1. Temporary factors held back price growth to the level consistent with the inflation target

- Price growth over the past few months has set on a path towards the 4% target in 2017 slowing largely due to temporary factors.

- Inflation risks persist, in particular, taking account of the potential impact of the improved economic activity amid elevated inflation expectations.

- Favourable food price dynamics offset transport tariff indexation and petrol price growth.

Seasonally adjusted consumer price growth stood at 0.2% MoM in December 2016. Over the last two months of 2016, actual inflation was below the target (Figure 1). This slowing in price growth is partially explained by temporary factors and largely by food price dynamics (Figure 2). In December, seasonally adjusted food price growth equalled zero due to extremely low price growth for fruit and vegetables. Seasonally adjusted prices for fruit and vegetables dropped by an estimated 3.2% MoM. Food price growth, excluding vegetables and fruit, stood at the November level of 0.4% MoM. Accelerated ruble appreciation and a good harvest of domestic producers were the most likely reasons for stronger reduction in prices for fruit and vegetables. The effect of the changed market structure (a decline in imports, growth in hothouses-produced vegetables, and an increase in storage capacity) on seasonal prices for fruit and vegetables is not ruled out either. Such changes in seasonality cannot be calculated with the help of standard statistical approaches.

Figure 1. Price growth consistent with Bank of Russia target
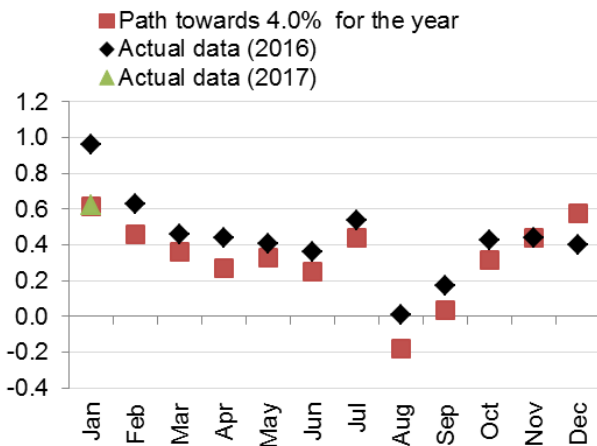
Sources: Rosstat, R&F Department calculations.

Figure 2. Seasonally adjusted inflation, % MoM
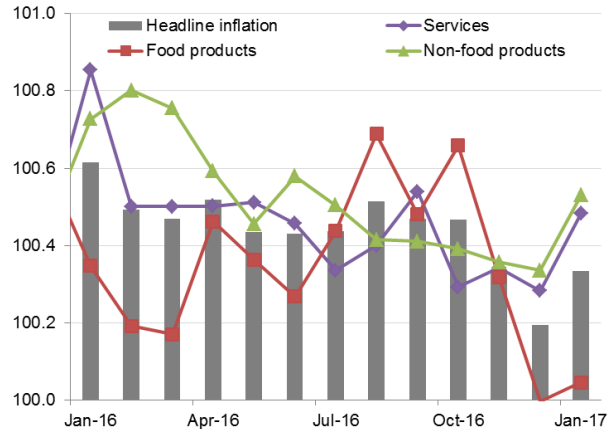
Sources: Rosstat, R&F Department calculations.

Ruble exchange rate dynamics have a favourable impact on inflation reduction along with the slowing of price growth for a number of foodstuffs. Inflation decomposition confirms that the slowing price growth over the past few months is partially attributed to temporary factors, ruble appreciation in particular (Figure 3). Currently, we do not observe any deviations in the exchange rate from its fundamental equilibrium. Given the low probability of further growth in oil prices, the disinflationary effect of the exchange rate is close to its exhaustion.

Prices of certain goods and services within the CPI are implicitly indicative of increased price pressure relative to the target. For example, prices for personal services, which are not strongly dependent on the exchange rate, have grown by 0.45–0.5% MoM[1] over the past six months, with a slight acceleration in December compared with the autumn months.

Consumer price growth stood at 0.62% MoM in January allowing inflation to reduce to 5.0% from 5.4% in December. Monthly price growth in January was within the range corresponding to the annual inflation of 4% (Figure 1). Our estimates suggest that seasonally adjusted price growth in January totalled 0.33% MoM.

The first week of January saw a major contribution to price growth: from 1 to 9 January it stood at 0.3% due to a rather considerable indexation of tariffs of public transportation and price growth for petrol and alcoholic beverages, including due to increased excise duties. The next three weeks saw the average daily price growth stabilise at a level lower than that in January 2013 and 2016, when no significant pro-inflationary shocks were observed (Figure 4).

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[1] Seasonally adjusted.

Figure 3. Decomposition of seasonally adjusted inflation, %
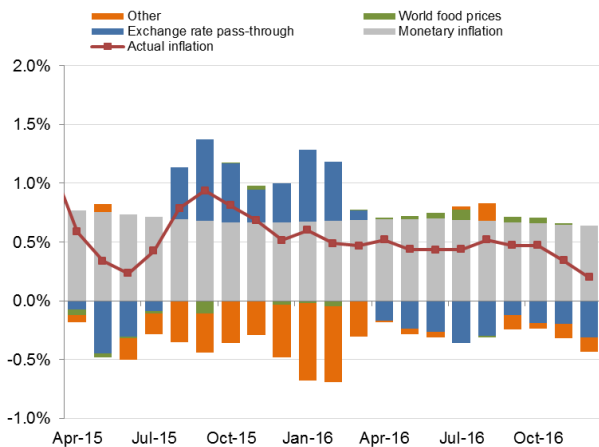
Sources: Rosstat, R&F Department calculations.

Figure 4. Average daily price growth, %

Sources: Rosstat, R&F Department calculations.

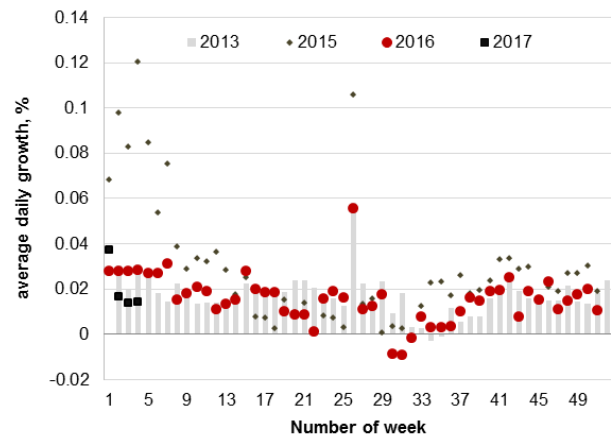The public transport fares[2] increased by over 7% on average, which corresponds to the indexation scale last year and exceeds the inflation target for 2017. Tariffs on long-distance trains also increased; however, the indexation scale was much closer to the Bank of Russia's target. According to Russian Railways data, the price of second-class berth and seat tickets to long-distance trains are adjusted by 3.9%, while that of trips in compartment, sleeper or VIP carriages is subject to 5% indexation from January 2017.

As far as petrol prices are concerned, according to analysts' forecasts, in 2017 the excise duties will rise by an average ☐1.5 per litre of petrol and ☐2.0 per litre of diesel fuel. Over the first four weeks of the year, retail prices for petrol rose by ☐0.3 and for diesel fuel by ☐0.7. In January, petrol prices grew by a total of 0.8% MoM. The burden of increased excise duties is usually shifted onto consumers gradually, which may affect prices in the course of several weeks.

As compared with the previous year, indexation of urban transport tariffs and petrol price growth are offset by slow[3] price growth for certain categories of foodstuffs related to a good harvest of domestic producers. Prices for dairy products, which continue to increase, inter alia, due to global milk prices, are the only exception. The global price index for dairy products[4] rose by 50% over the past six months, while January saw its negligible slowdown of 3.5%.

The slowing of price growth to the level comparable with the target over the past few months suggests an overall reduction in price pressure. Nevertheless, we should not forget about temporary favourable factors, which were conducive to inflation reduction. For example, we have calculated that seasonally adjusted food price growth was close to zero (0.1% MoM) in January reflecting the favourable consequences of a bumper 2016 harvest and the ruble appreciation.

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[2] Metro, bus, tram, and trolleybus.
[3] Relative to standard seasonality.
[4] Trades are conducted on GlobalDairyTrade Marketplace twice a month.

Inflation risks at the end of 2017 still remain elevated. A possible significant demand growth against the backdrop of the recovery in economic activity, unemployment reduction, the continued growth in real wages, the payment of a one-off pension allowance in January and pension indexation in February may lead to an inflationary pressure hampering further inflation slowdown towards the target.

1.1.2. Underlying inflation keeps going down

- Estimated annual rates of underlying inflation[5] in January 2017 were revised downwards to 7.2% from 7.4% in December 2016, reflecting the eased inflationary pressure (Figure 5).

- Underlying inflation goes down at a moderate pace, its slowing is hampered by heterogeneous contributions of various components to disinflation.

- Given the current trends in price and monetary aggregate dynamics, we expect further gradual downgrades in estimates of underlying inflation.

- Such underlying inflation dynamics suggest that risks for inflation to move away from the target are still in place.

Figure 5. CPI, core CPI and historical estimates for underlying inflation, % YoY
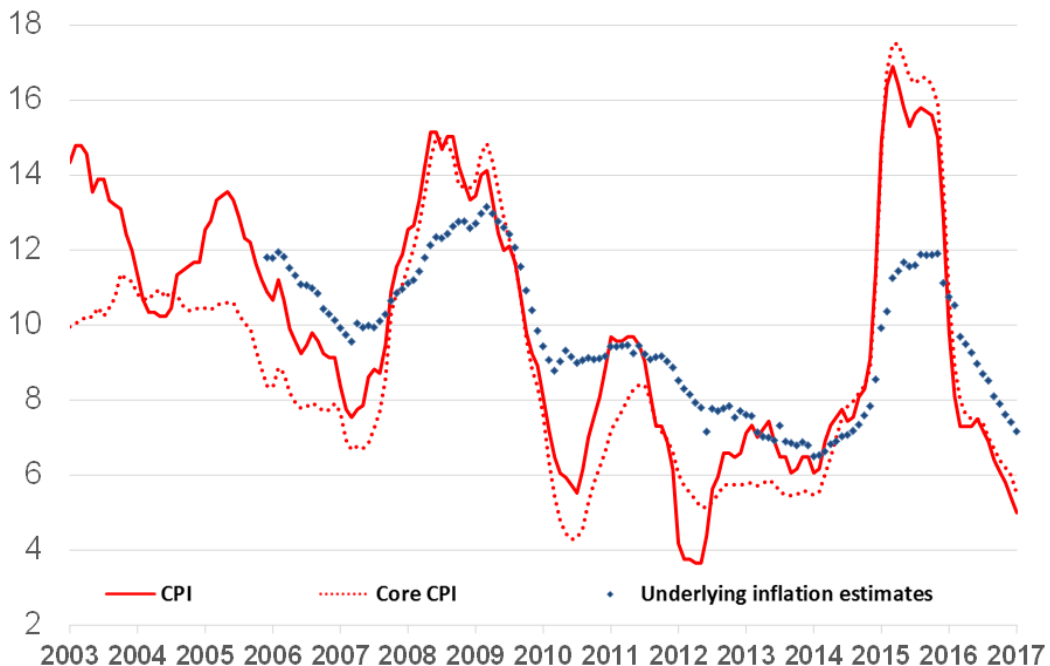
Sources: Rosstat, R&F Department calculations.

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[5] The underlying inflation is understood to be the median value of the three estimates based on the identification of the unobserved general component in the set of price indicators, enabled by dynamic factor models. This method of measuring underlying inflation is detailed in the Bank of Russia's economic research papers: E. Deryugina, A. Ponomarenko, A. Sinyakov, K. Sorokin 'Evaluating the underlying inflation measures for Russia', *Working Paper Series*, March 2015, No. 4 and R&F Department Analytical Note 'Measuring Domestically Generated Inflation', May 2016, No. 2.
Starting from October 2016, underlying inflation indicators have been calculated for the moving five-year period. The previous estimates presented on the figure were not recalculated.

1.1.3. PMIs in January: moderate price dynamics

- Despite economic activity recovery in the manufacturing sector, the PMI of output prices in the sector went down to 51.8 points, the minimum value since the mid-2015.

- Moderate output price dynamics are largely explained by the ruble appreciation observed in the past few months, as well as the decline in inflation expectations.

PMIs continue to point to growth in both input and output prices, although the rates of growth slowed down in January, despite economic activity recovery (see Section 1.2.4. 'PMIs in January: obvious improvement in early 2017'). The output price index in the manufacturing industry went down to 51.8 points, the minimum value since November 2015. The input price index also fell (Figure 6). The service sector observed a slight increase in the output price index; however, it still remains at the historically low level (Figure 7).

The ruble appreciation, which continues off and on from April 2016, is now a major factor contributing to price growth slowing. The past three-year experience shows that the price situation is rather sensitive to ruble exchange rate fluctuations. Nevertheless, stabilisation and a decline in inflation expectations of businesses could also make their contribution to price growth slowing.

Figure 6. Manufacturing PMI, points
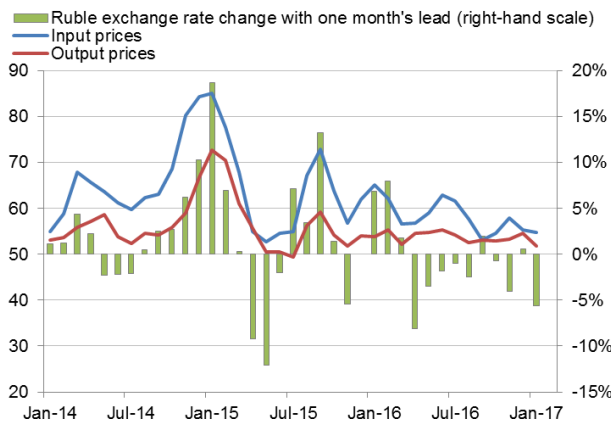
Source: Bloomberg Finance L.P.

Figure 7. Services PMI, points
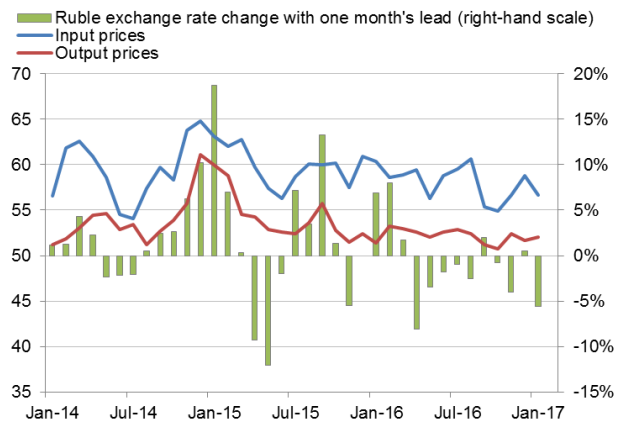
Source: Bloomberg Finance L.P.

1.1.4. Analysts' forecasts for 2017 inflation came closer to 4%

- Financial analysts polled by Bloomberg in January continued to revise their 2017 inflation forecasts downward to 4.4% from 4.5% in December (Figure 8). A similar poll by Reuters showed a decline in inflation expectations to 4.3% in January (from 4.9% in December).

- The decline in inflation expectations of financial analysts shows that the monetary policy pursued by the Bank of Russia continues gaining confidence.

- However, the majority of analysts still predict 2017 inflation to exceed the target.

- As of 27 January, the Bloomberg consensus forecast for the key rate in late 2017 stands at 8.0% p.a. (Figure 9).

Figure 8. Analysts' expectations for inflation, % YoY
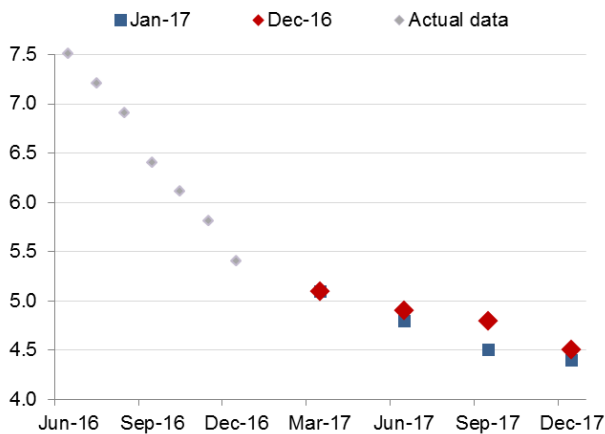
Source: Bloomberg Finance L.P.

Figure 9. Analysts' expectations for the BoR key rate

Source: Bloomberg Finance L.P.

Inflation expectations estimates by central banks of different countries

Inflation expectations are a key factor determining future inflation. This indicator is especially important for the central banks operating under inflation targeting framework. However, estimates of expectations are not an easy task and the experience of central banks of other countries speaks about a large number of options to settle it. In particular, it is important to estimate the inflation e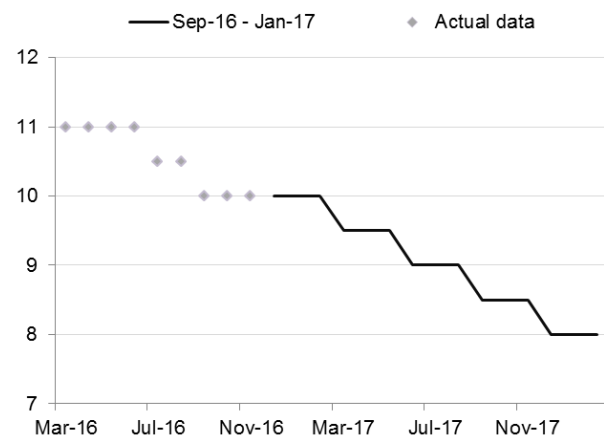xpectations component, which determines the actual model of household decision-making and leads to demand-pull inflation requiring the monetary policy response.

The University of Michigan started conducting surveys of households regarding inflation expectations more than half a century ago. The main question in the questionnaire covers inflation expectations over a one-year horizon and the period of five to ten years. Inflation expectations estimates are calculated as a median value and they are not definitionally susceptible to influence of extreme answers. New Zealand and a number of other countries also use median estimates.

Modified average estimates are also wide-spread methods of calculation. For example, in the Czech Republic 5% of household maximum and minimum answers are removed from calculations, while expectations are calculated as an arithmetic mean of the remainder 90% of observations. Household inflation expectations in Australia are also estimated as a truncated average; however, the country's central bank does not cite an exact percentage of truncated values, which should not be considered while carrying out an analysis.

A simple arithmetic mean of forecasts is used when calculating expectations of professional market participants and companies supposing that the share of 'extreme'

answers among experts will be low.

Methodology for calculating household inflation expectations in certain countries

	Czech Republic	Australia	USA	New Zealand
Method	Questionnaires; households communicate with a marketing company's employees	-	Questionnaires (by phone)	Interviews by phone. Phone number is selected at random
Participants	600 households	1,200 households	500 households	750-1,000 households
Period	Quarterly	Monthly	Monthly	Quarterly
List of questions	Inflation expectations for 12 and 36 months ahead	Expected inflation for a year ahead	Expected inflation for a year ahead and for a period of five to ten years	Estimates of observed inflation and expected inflation for a year and five years ahead
Estimate	5% of maximum and 5% of minimum answers are removed; expectations are calculated as an arithmetic mean of the remainder 90%	Truncated average	Median	Median/average
Source	https://www.cnb.cz/docs/ARADY/MET_LIST/infloc_en.pdf	http://www.rba.gov.au/statistics/tables/xls/g03hist.xls	Household description: https://data.sca.isr.umich.edu/fetchdoc.php?docid=24774 Estimate description: https://data.sca.isr.umich.edu/fetchdoc.php?docid=24772	http://www.rbnz.govt.nz/statistics/m13

1.2. Economic activity

Macroeconomic statistics and survey data increasingly suggest that the economy is setting on a path towards growth. Production shows signs of a rebound across a broader range of industries, while consumer demand increases. The moderately tight monetary policy pursued by the Bank of Russia has a positive impact on economic growth making macroeconomic uncertainty subside.

1.2.1. 2016 GDP: recession's depth and length might be overestimated

- Rosstat revised its estimate of GDP growth in 2015 upward to -2.8% from -3.0% in late December and also published its first estimate for 2016 at -0.2%, which exceeded expectations.

- The revision is largely explained by the inclusion of military hardware expenditures in gross fixed capital formation in compliance with the new methodology of the national account system.

- According to the updated estimates of the R&F Department, the economy saw a recession for seven quarters in a row: from 2014 Q3 till 2016 Q1.

- The 2016 GDP estimate revised by Rosstat largely corresponds to short-term economic indicators and leading indicators expressed in the GDP index estimate calculated by the R&F Department.

According to Rosstat, GDP in constant prices fell by 0.2% in 2016 as compared with 2015. The annual estimate for 2015 was specified: a decline of 2.8% (previously, in late December, the 2015 GDP estimate was revised upward to -3.0% from -3.7%).

The key conclusion from the new data boils down to the fact that the fall in final consumption expenditures (primarily household consumption) in Rosstat statistics for consumption GDP turned out to exceed preliminary estimates (contribution to GDP of -2.6 pp). Although this does not run counter to the recently published (and also weak) results of the consumer services and retail sales turnover. Such a situation differs a lot from, for example, real wage growth, rather good indicators of consumer confidence, an estimated decline in inflation expectations, and other consumer survey results. These results were mitigated at the general consumption level owing to the improved estimate of a reduced consumption in the public sector.

The new estimates prompt an important conclusion from the consumption components' point of view, i.e., the 2016 GDP estimate increased largely due to the improved indicators of gross fixed capital formation. Rosstat registers a decelerating decline in fixed capital investments along with a large-scale recovery in inventories. According to our estimates, the positive effect of these factors' influence on GDP equalled

about 3 pp. One can suppose that these dynamics are already a reflection of the improved expectations of producers and investors. It is quite possible that the recovery in inventories is to a lesser extent a sign of false estimates regarding demand for products and largely reflects the start of positive trends in economic activity. Given the lower Rosstat estimates for 2015 investments, which mark a shift in comparison to a quicker recovery in investments in 2016, fixed capital investments improved considerably. This is confirmed by investment data comparison in nominal terms.

Net exports contribution remained positive in 2016; however, this trend should change soon given the imminent acceleration in imports recovery.

There are also a few technical specifics for revising GDP estimates from the retrospective. Given the traditional immunity of net export indicators to adjustment, the structure of consumption and inventories is subject to major changes due to methodological specifics. If the inventories revaluation is an integral part of updating investment data, the adjustment of consumption indicators is quite less obvious. It should be noted that the estimate of household consumption was repeatedly revised towards a more profound fall, which is finally balanced by the column *'Errors and omissions'*. This factor may implicitly confirm that statistics for retail trade and consequently household consumption in consumption GDP understate real consumer activity indicators. This may lead to underestimating GDP improvement.

The estimate of seasonally adjusted quarterly GDP growth was based on the previously published data for quarterly GDP dynamics and reviews of annual data for 2016. According to the updated estimates of the R&F Department, the Russian economy saw a recession for seven quarters in a row: from 2014 Q3 till 2016 Q1 (Figure 10). For the sake of comparison, the grey area of the figure shows a range of estimates with due account of various specifics of seasonal adjustment and also possible scenarios with the rounding of Rosstat new annual estimates. The range demonstrates that seasonally adjusted estimates turn out to be rather stable to statistical adjustments[6] in terms of content.

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[6] It should be noted that the current seasonally adjusted GDP estimate does not account for the actual quarterly dynamics corresponding to Rosstat revision for 2014 and 2015 and also the updated GDP dynamics for 2016 Q1-Q3 corresponding to annual GDP decline of 0.2%. When making a seasonally adjusted estimate, annual GDP revisions were tentatively broken down by quarter evenly. According to Rosstat, the updated quarterly breakdown for 2014-2016 will be published no earlier than March 2017 simultaneously with GDP breakdown for the whole of 2016 by component.

Figure 10. GDP in constant prices, % QoQ (seasonally adjusted)
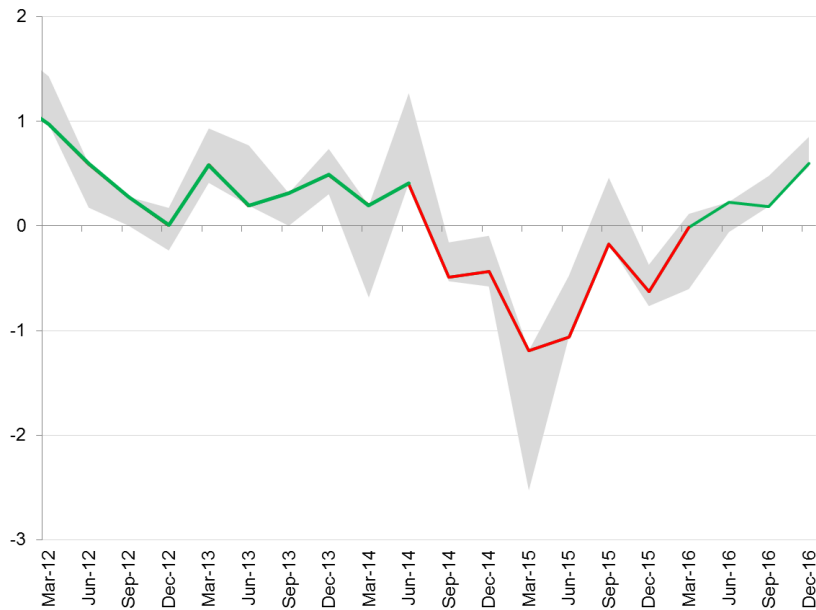
Sources: Rosstat, R&F Department calculations.

Starting from 2016 Q2, GDP growth rates were in positive territory accelerating considerably to 0.6% QoQ in 2016 Q4 (following 0.2% QoQ in Q3). These results notably contrast with our estimates, which preceded the first GDP estimate for 2016 published by Rosstat and proceeded from the previous year's slump of 0.5–0.6%. The recession at that time was estimated to be long-term, i.e., till 2016 Q3.

More optimistic dynamics of economic activity in 2016 were reflected in short-term statistical indicators, as is proved by GDP index estimates calculated by the R&F Department based on a dynamic factor model using over 100 short-term statistical indicators and also leading indicators. In 2016 Q1-Q3, the R&F Department's model estimates of GDP quarterly growth adjusted for seasonality turned out to be systematically higher than seasonally adjusted growth based on earlier GDP estimates by Rosstat published approximately at the same period (Figure 11).

Figure 11. Seasonally adjusted GDP and real-time index estimate by R&F Department, % QoQ
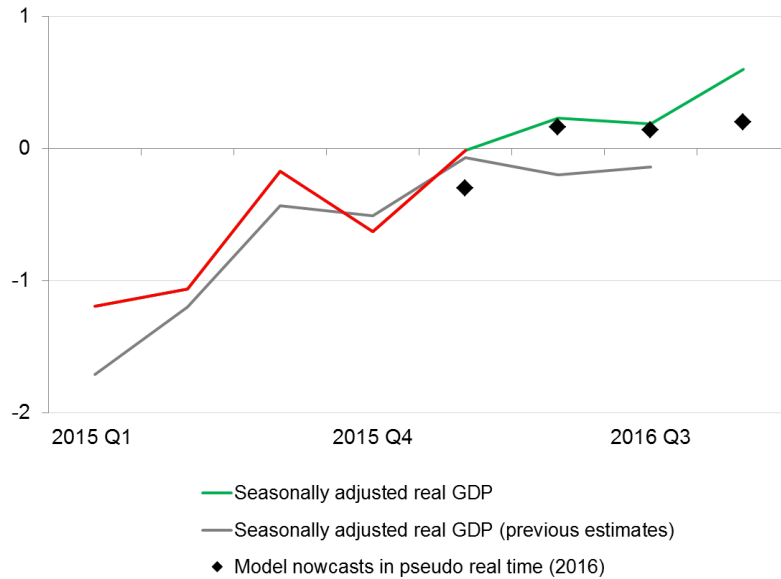
Sources: Rosstat, R&F Department calculations.

As a result, a wide range of monthly statistical data, in a certain degree, turned out to be more informative in terms of prompt GDP estimates, as compared with data and statistical approaches used by Rosstat when making earlier estimates of indicators of the national account system.

If we try to analyse the reasons for more successful GDP forecasting at earlier stages with the help of model calculations, attention should be paid to a considerable contribution made by survey indicators to the R&F Department's index estimate. In particular, tentative quarterly GDP estimates for 2016, seasonally adjusted, are in good correlation with PMIs.

Following the Rosstat estimate publication, positive economic activity better correlates with survey results covering a wider range of enterprises. Therefore, the results of surveys carried out by the Gaidar Institute for Economic Policy (IEP) point to a noticeable growth in balance-sheet estimates of production volumes (see Figure 12). Following the IEP survey results, a trend towards increased loan accessibility for enterprises also implicitly suggests an improved economic situation (Figure 13).

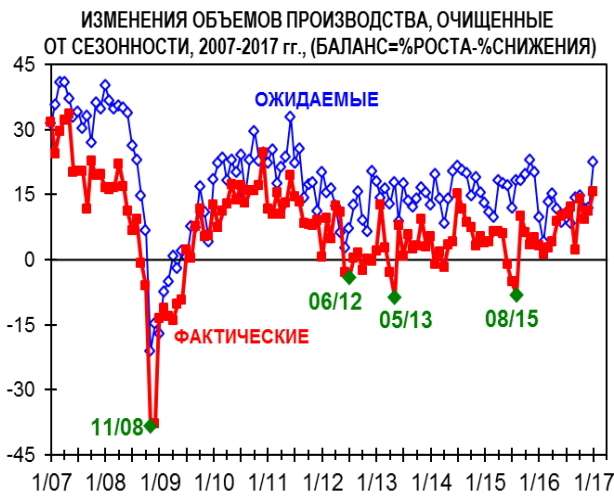**Figure 12. Seasonally adjusted production volumes in 2007-2017 (balance = % of growth - % of decline)**

ИЗМЕНЕНИЯ ОБЪЕМОВ ПРОИЗВОДСТВА, ОЧИЩЕННЫЕ ОТ СЕЗОННОСТИ, 2007-2017 гг., (БАЛАНС=%РОСТА-%СНИЖЕНИЯ)

ОЖИДАЕМЫЕ

ФАКТИЧЕСКИЕ

06/12 05/13 08/15

11/08

Source: IEP.

Figure 13. Loan accessibility for Russian industry in 2007-2017, %

УРОВЕНЬ НЕДОСТУПНОСТИ КРЕДИТОВ ДЛЯ РОССИЙСКОЙ ПРОМЫШЛЕННОСТИ, 2000-2017 гг., %

65%, 12/08

45%, 02/15

8%, 06/07   7%, 06/11   12%, 08/14

Source: IEP.

It should be noted that we did not observe systematically increased GDP growth within the model estimates by the R&F Department in 2016, according to our preliminary seasonal adjustment of GDP. Therefore, accounting for additional components in GDP structure in compliance with the new methodology of the national account system is fully reflected in short-term indicators used for making GDP index estimates.

1.2.2. The task of accelerating Russian economic growth to that of the global economy is feasible, but takes efforts

- On the instruction of the Russian President, the Government develops a plan for economic growth acceleration which envisages that Russia should follow the global economic growth path in 2019–2020.

- The historical average growth rate in other countries over the first five years after reaching GDP comparable with that of Russia equalled 3.4%, which suggests that the task of accelerating Russian economic growth is feasible.

- However, large-scale reforms, drastic transformation and improvement of business conditions and investment climate will be needed to solve the task.

In his Address to the Federal Assembly the President of the Russian Federation instructed the Government to develop a plan for economic growth acceleration till 2025. The plan implementation will allow the Russian economy to achieve growth rates no lower than the world ones in 2019-2020 and to surpass them afterwards.

According to the World Bank, Russian GDP per capita (PPP based) in 2012–2014 was recorded at $25,000 (in 2011 prices). Judging by this indicator, Russia outpaces the

majority of emerging market economies, including all the BRICS members. We estimated the dynamics demonstrated by GDP per capita in other countries after its reaching the Russian level in 2012–2014. According to the 1980-to-date IMF and World Bank data, the analysis covered 19 countries, including Japan, the United Kingdom, Spain, France, Singapore, South Korea, Australia, New Zealand, Israel and other countries. Over the next 10 to 15 years, all the countries retained GDP per capita. Growth rates were around 3.4% on average in the first five years and 3.1% in the first ten years (Figure 14). Following the average dynamics of other countries may bring Russian GDP per capita in 10 years to the level exceeding $30,000, which is comparable with the current indicators in Italy and Spain (Figure 15).
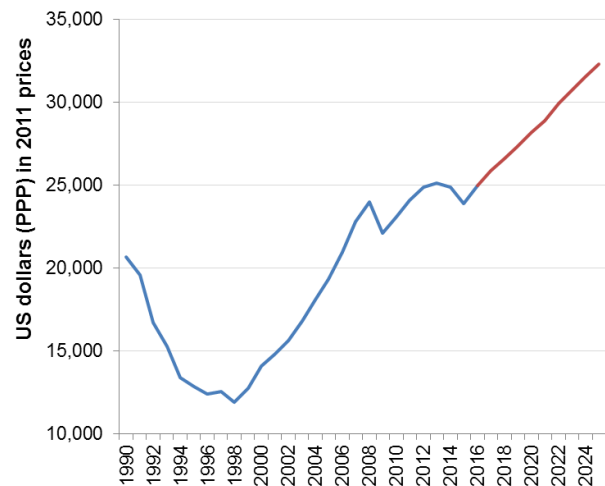
Figure 14. Average growth in GDP per capita (PPP) in countries after reaching the level of Russia in 2012–2014, in constant prices
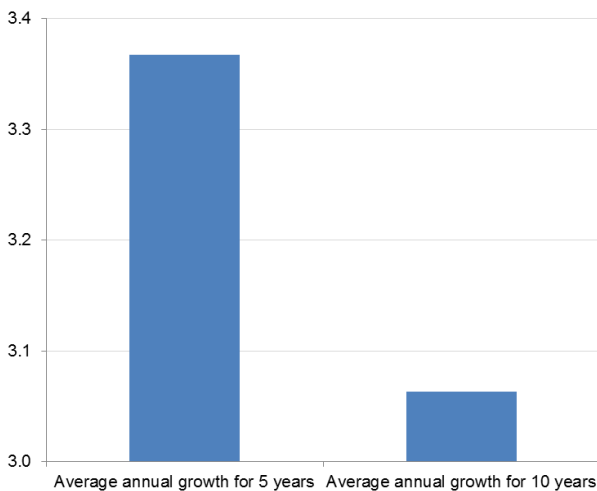
* The analysis covered 19 countries.

Sources: IMF, World Bank.

Figure 15. Russian GDP per capita in constant prices of current level following other countries' average dynamics

Sources: IMF, World Bank, R&F Department calculations.

According to the IMF, the global economy's growth rates in 2019–2020 will stand at 3.7%. The population size in Russia will be stable[7] during this period. That is why GDP growth and GDP per capita growth in Russia will be almost the same. Taking into account that the countries historically showed growth of 3.4% on average in the first five years from the current GDP levels, the task for Russia to achieve global growth rates in 2019–2020 looks ambitious, but feasible. However, large-scale and comprehensive reforms, drastic transformation of business conditions and investment climate, stability and predictability of the government's macroeconomic policy will be needed to solve the task.

1.2.3. Industrial production in 2016: confirming optimism of leading indicators

- Industrial growth in November and December 2016 largely corresponded to PMIs of manufacturing industries…

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[7] Rosstat forecast. The number of working-age population will be observed to decrease.

- …which suggest the likely continuation of positive dynamics in early 2017.

- The record-high oil production for the entire post-Soviet period was conducive to industrial growth: 549 million tonnes and +2.6% YoY.

In December 2016, industrial production grew by 0.4% MoM[8] (adjusted for seasonal and calendar factors) and 3.2% YoY. However, Rosstat comments on the November and December data rule out unambiguous interpretation of the indicator's dynamics over the past few months of 2016. Rosstat reflected the *most considerable* changes made by respondents to the data provided since the start of 2016 in the estimates of the industrial production index for January-November and January-December 2016.

For the aforementioned reason, industrial growth in November and December accelerated to +2.7% MoM and +2.7% YoY and +7.4% MoM and +3.2% YoY respectively against the backdrop of stagnation in industry in January-October 2016 (+0.3% YoY). Annual and monthly growth rates for January-October 2016 were not revised. According to Rosstat, *all* the changes alongside with the retrospectively revised data by month for 2015 and 2016 will be reflected in further industrial production index estimates. It should be noted that industrial production data update for 2015 and 2016 together with the downward revision of GDP growth from 3.7% YoY to 3.0% YoY in 2015 may lead to a revision of GDP quarterly dynamics in 2016.[9]

According to preliminary estimates, industrial growth in 2016 stood at 1.1% YoY. The mining and quarrying industry made a major contribution to this growth (+2.5% YoY) owing to the record-high oil production during the entire post-Soviet period (549 million tonnes, +2.6% YoY) and the continued rise in coal production (+3.4% YoY). Gas production in 2016 remained at the 2015 level (0% YoY).

The manufacturing industry in 2016 grew by a mere 0.1% YoY. According to the published output breakdown, industry dynamics turned out to be heterogeneous. Both domestically oriented industries and certain export-oriented industries registered growth in production volumes. Foodstuff production increased due to the good harvest and Russian counter sanctions, while export expansion prospects and federal budget subsidies supported the chemical industry and machinery and equipment production. However, further growth in the said industries may be hampered by the high utilisation and a share of non-competitive capacities (see also Section 1.2.5. 'Manufacturing in 2016: the majority of industries registered growth').

It should be noted that the updated industry data for November and December 2016 largely correspond to the manufacturing PMIs. Moreover, January PMIs and IEP survey

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[8] Rosstat and R&F Department estimates coincide.
[9] Therefore, the analysis of annual growth in industrial production is currently not quite correct. Monthly growth estimates adjusted for seasonal and calendar factors will distort industrial dynamics due to data incompatibility in January-October and November-December 2016. Moreover, in January 2017 Rosstat will switch to estimating the industrial production index in accordance with new classifiers of types of economic activity (OKVED2) and products (OKPD2). This will hinder the analysis of seasonally adjusted industrial growth in 2017 until the retrospective revision of data for a long period of time sufficient to reveal seasonal patterns.

data suggest that positive dynamics in the manufacturing industry will continue in early 2017 (for details see Section 1.2.4. 'PMIs in January: obvious improvement in early 2017').

The implementation of the agreement to decrease oil production by Russian oil companies will have an adverse impact on industrial production volumes. A preliminary estimate plan developed by the Ministry of Energy will withhold 1.3% from oil production growth in 2017 Q1 and 2% in 2017 Q2.

1.2.4. PMIs in January: obvious improvement in early 2017

- In January, business activity PMIs in manufacturing and services hit the local maximums once again.

- The improved market situation in a large number of companies suggests that the economy is currently growing quicker than the Bank of Russia expected.

- The current oil prices are indicative of further economic growth.

- Positive economic dynamics of major trading partners should support growth in Russia.

Business activity PMIs in January pointed to a vigorous beginning of 2017 (Figure 16). Manufacturing PMIs reached 54.7 pp (53.7 pp in December), the maximum improvement of the market situation over a six-year period. PMIs in services increased to 58.4 pp (56.5 pp in December), the maximum for eight and a half years.

Figure 16. PMIs, points
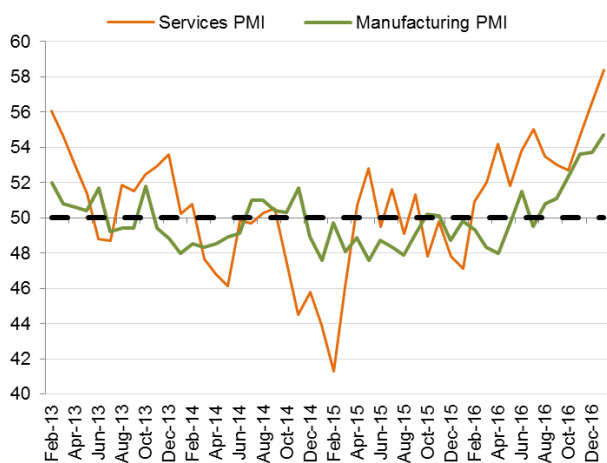
Source: Bloomberg Finance L.P.

Figure 17. Employment PMIs, points
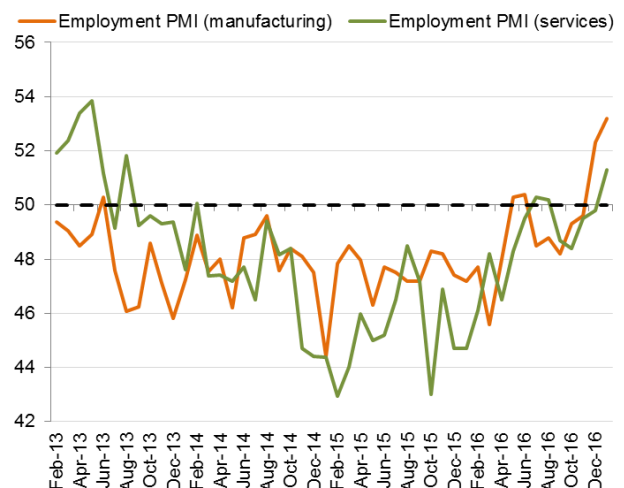
Source: Bloomberg Finance L.P.

A considerable improvement of business climate in the private sector of the Russian economy is attributable to sustainable growth in new orders from the domestic market. In

January, their growth rates in both manufacturing and services exceeded the historical average. New export orders are still on the rise.

Figure 18. Quarterly GDP growth and aggregate output PMI

Sources: Bloomberg Finance L.P., Rosstat, R&F Department calculations.

The continued reduction in inventories and growth in work in progress encouraged employment recovery. In January, employment in manufacturing industry companies showed the maximum growth rates since March 2011 and in services companies – the maximum rates for almost three and a half years (Figure 17). Increased demand upholds production volumes at their many-year highs providing the basis for the Russian companies to be optimistic. In January, business expectations of Russian services companies reached a 44-month high reflecting the prospects of business activity growth related to the launch of new types of services.

The composite output index in January 2017 increased to 58.3 pp reaching the maximum value since June 2008 (Figure 18). The proximity of current PMIs to the levels when the economy grew by ~1.5% QoQ (exceeding the growth envisaged by the official Bank of Russia forecast) should not be misleading and anticipate similar economic growth at present. *On the one hand,* the current index growth to the maximum values since 2008 may indicate that a rather large number of companies note an improved market situation. Therefore, this is evidence that the economy has reached a U-turn switching from stagnation to growth.

On the other hand, there is a certain relationship between PMIs and actual GDP growth. High PMI readings can be explained by the fact that the economy may temporary achieve higher growth rates than those envisaged in the Bank of Russia's baseline scenario with the price of Urals crude set at $40 per barrel. Therefore, the realisation of the central bank's scenario assuming oil prices in excess of $50 per barrel (irrespective of the sustainability of these levels) may have a deferred (within two quarters) positive effect on

GDP. Positive economic activity dynamics in Russia's major trading partners may also lend a hand to Russian economic growth (see box 'Composite PMI in Russia and the world'). However, the current estimates of potential GDP suggest that it is premature to expect the economy to achieve sustainable growth rates corresponding to early 2008.

Composite PMI in Russia and the world

Considerable growth in the composite PMI in Russia in the past few months was partially influenced by global trends.

In late 2014 – early 2015, the Russian economy experienced a decline in oil prices (Figure 19). However, the situation stabilised soon and the second wave of falling prices in late 2015 – early 2016 was much less painful for the economy. Russian PMI dynamics resembled those of developed countries and emerging market economies: slow lowering with recurrent index fluctuations around the downward trend. Business activity growth acceleration in Russia started somewhat earlier than in developed and emerging market countries. By that time the economy had adapted to shocks and oil prices started to pick up.

Figure 19. Composite PMI, points
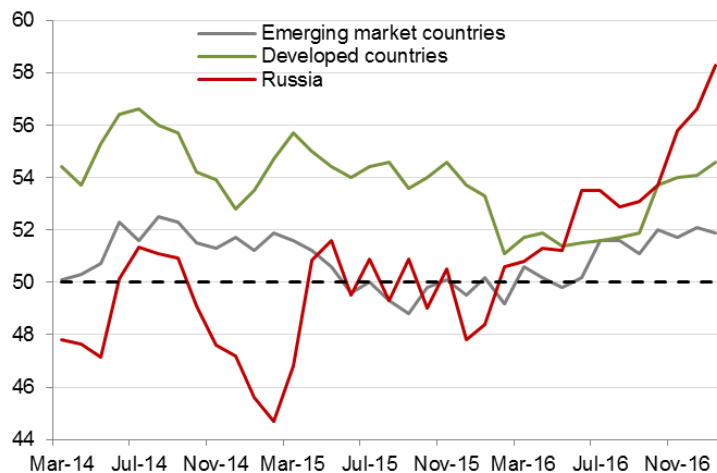
*Sources: Bloomberg Finance L.P., Rosstat, R&F Department calculations.*

The general economic recovery in developed and emerging market countries started in the second half of 2016 could have supported positive economic dynamics. It should be noted that Russian composite PMI dynamics are co-directional with similar indicators for China and the eurozone, which are in the lead in the Russian foreign trade turnover. The Russian PMI cumulative growth surpasses that of other countries. Optimism among developed and emerging market countries returned PMIs of the respective countries to the 2014–2015 levels, while Russia registered a maximum since 2008 (Figure 20 and Figure 21).

Figure 20. PMIs, points

USA
Eurozone
Russia
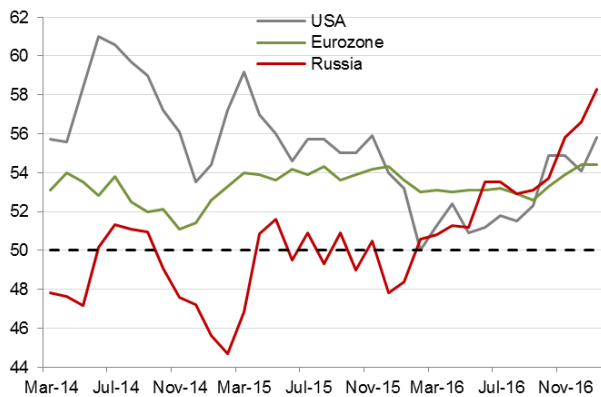
Source: Bloomberg Finance L.P.

Figure 21. PMIs, points

India
China
Russia
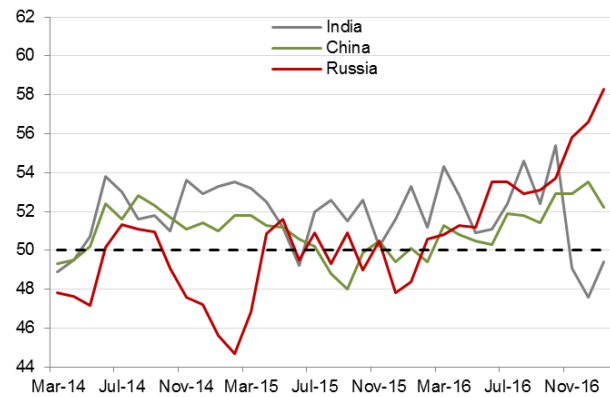
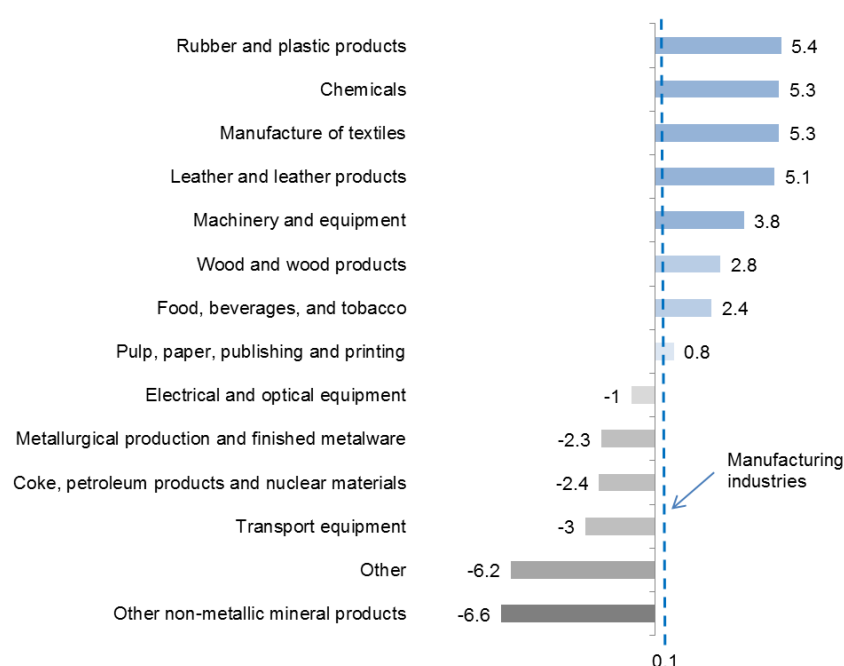*Source: Bloomberg Finance L.P.*

1.2.5. Manufacturing in 2016: the majority of industries registered growth

- Food, light and woodworking industries retain the potential for further growth based on modernised production assets.

- An increase in production potential in other industries with positive dynamics is hampered by high workload of capacities designed for making competitive products (chemical and pulp-and-paper industries, production of rubber and plastic goods, leather and footwear, machinery and equipment).

- Among the industries, which had registered a decline in production last year, prerequisites for growth emerged in low value-added sector (metallurgy) and simple assembly sectors (production of transport, electrical and optical equipment).

In 2016, several groups of industries demonstrated various production dynamics and differed in potential of output growth due to available capacities.

The **first group** comprises industries which increased production last year and have a potential for its further growth due to additional workload of available capacities.

Figure 22. Manufacturing output growth in 2016, YoY

Industry	Value
Rubber and plastic products	5.4
Chemicals	5.3
Manufacture of textiles	5.3
Leather and leather products	5.1
Machinery and equipment	3.8
Wood and wood products	2.8
Food, beverages, and tobacco	2.4
Pulp, paper, publishing and printing	0.8
Electrical and optical equipment	-1
Metallurgical production and finished metalware	-2.3
Coke, petroleum products and nuclear materials	-2.4
Transport equipment	-3
Other	-6.2
Other non-metallic mineral products	-6.6

Manufacturing industries: 0.1

Source: Rosstat.

The food industry is one of the most successful industries in this group. The industry has a good outlook for increased output due to continued import substitution processes. A similar situation is shaping up in the *woodworking industry*. High intensity of capacity renewal is characteristic of these industries. As a result, the average age of equipment in food production and woodworking is low: nine years against 12 years on average in manufacturing.[10] The *textile and clothing industries* register one of the lowest average age of capacities: seven years[11] despite the fact that the volume of capacities in the industry over the past 15 years fell more than twofold due to the retirement of assets.

The share of non-competitive[12] capacities in all the three industries of this group is low (9–14%). Output growth potential due to additional workload totals no less than 10% in the food and woodworking industries and 15% in the textile industry.

Industries of the **second group** also showed growth in 2016. However, an increase in production potential is hindered by insufficient production capacities, which may be loaded when markets grow, or their modernisation only in the segment of low value-added products.

Production of *rubber and plastic goods* grows largely due to increased production of tires for agricultural equipment and cars whose manufacturers are supported by the government. Plastic goods production saw an intensified renewal of production assets over the past five years. This factor may become a driver for further industry growth.

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[10] Here and below, capacity characteristics by type of activities are based on the results of a research (Сальников В.А., Апокин А.Ю., Галимов Д.И. и др. Анализ важнейших структурных характеристик производственных мощностей обрабатывающей промышленности // ЦСР, ЦМАКП, 2017).

[11] Capacity statistics exclude production of clothing.

[12] Capacities exceeding ten years of age and standing idle for at least the past five years are considered to be non-competitive.

Despite the high investment activity in the *chemical industry* against the backdrop of sustainable output growth many enterprises achieved rated capacity their additional workload potential is low compared with other industries. Production growth is characteristic of the chemical industry segments with low value added.

A similar situation is observed in the *pulp-and-paper industry.* Investment activity is concentrated on low value-added production. On the contrary, the final product segment sees a reduction in capacity. The workload ratio is one of the highest among the manufacturing industries (82%), which prevents the industry from retaining stable positive dynamics.

The *leather and footwear industry* in 2016 registered growth largely due to footwear output owing to import substitution processes. The industry development is complicated by the inadequate modernisation of production assets and the retirement of obsolete equipment.

Fixed assets also hamper the development of *machinery and equipment* production since the share of non-competitive capacities equals 26%. The year 2016 saw growth of 3.8% on the back of increased production of agricultural equipment and household appliances. Production of machine tools and mechanical equipment continued to reduce.

The **third group** comprises industries, which registered a decline in production in 2016, but have a potential for future growth.

The year 2016 saw a reduction in *metallurgical production.* However, the last few months of the year registered a surge in production on the back of positive trends in the global market. Potential output growth in the industry due to additional workload is limited: no more than 6–7%. Moreover, modernisation was shifted towards low value-added sectors. The industry comprises large and highly efficient companies, which could have raised funds to expand capacities in case of emergence of new market niches and growing demand in the domestic and global markets.

An intensive renewal of production assets has been observed in *construction materials* production since 2000. As a result, around 70% of capacities had been renewed by 2015, while the share of non-competitive capacities is estimated at a mere 15%. Given the recovery of construction activity, the industry has a potential for output growth.

If the forecasts of the recovery of the Russian economy materialise, *transport equipment* industry is likely to register growth. Despite a 3% decline in the industry in 2016, production of certain goods (cars and railway transport) saw output growth, which may continue in 2017. The industry observed a significant expansion of capacities for these goods, while the capacities for other goods were standing idle due to slack demand.

The **fourth group** includes industries which showed negative dynamics in 2016 and have a bleak outlook for output growth. A possibility for *electrical and optical equipment* production to set on a growth path is limited by non-competitive capacities reaching 30% for certain goods. The industry's modernisation boiled down to building up assembly capacities with a minimum value added. A tax manoeuvre is one of the reasons for negative trends observed in production of *coke and petroleum products.* The capacity

workload is the greatest one (around 90%), which lowers the potential for output increase due to additional workload of equipment.

1.2.6. Consumption: retail sales shrink as consumer sentiment rises

- The decline in retail turnover sped up to 5.9% YoY. Growth in traditional end-of-the-year sales was the lowest in the past eight years.

- Alternative estimates and indirect indicators (including polls) signal better consumption by households than Rosstat-provided data.

- The Consumer Confidence Index points to improving consumer sentiment of households.

The decline in retail turnover sped up in December to 5.9% YoY (-4.1% YoY in November). Annualised food sales contracted more than non-food sales, 6.5% and 5.3% respectively (Figure 23). These dynamics are unusual for a period of recession and challenge the accuracy of retail statistics (for details, refer to Section 3 'In focus. Consumption: evidence for decline or growth?').

According to Rosstat, retail trade turnover slowed down its decline over the year from 10.0% in 2015 to 5.2% in 2016. Nevertheless, Rosstat will update its 2016 estimates of retail trade turnover after it analyses companies' annual and quarterly reporting forms.

Figure 23. Retail trade turnover, % YoY
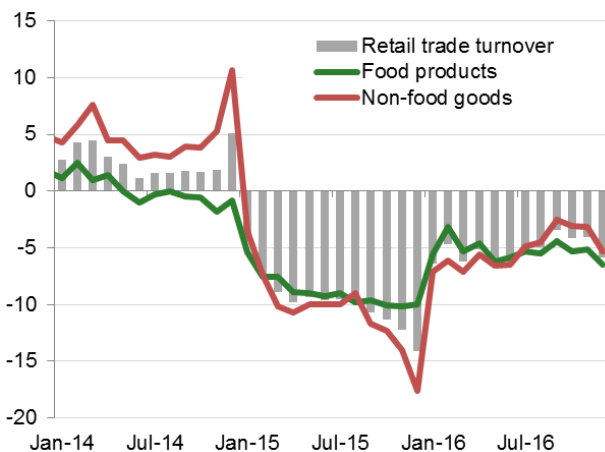
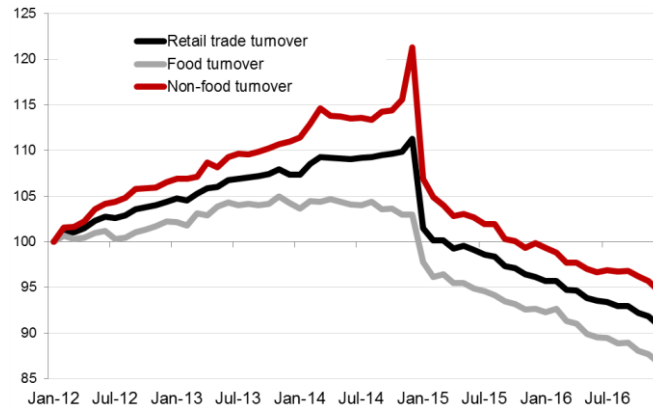Sources: Rosstat, R&F Department calculations.

Figure 24. December growth in retail trade by year, % MoM (seasonally adjusted)
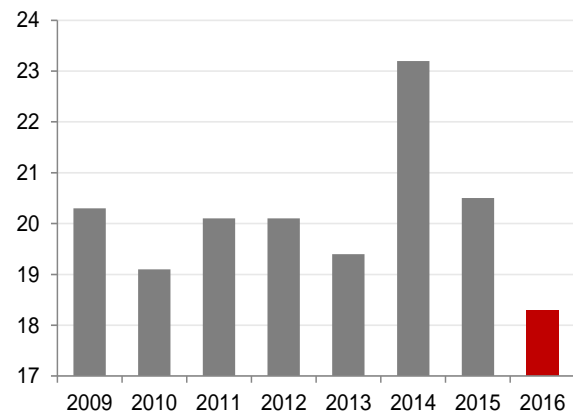
Sources: Rosstat, R&F Department calculations.

Growth in retail sales in the period from November till December 2016 was the lowest in the past eight years (Figure 24). The R&F Department estimates that seasonally adjusted December decline in retail trade turnover stood at 1.1% MoM and was the most considerable in 2016 (Figure 25).

**Figure 25. Retail trade turnover and its components
(%, January 2012 = 100%, seasonally adjusted)**

Sources: Rosstat, R&F Department calculations.

Given the structural changes in the economy, including consumer behaviour, seasonality of retail sales might shift over the year. In particular, the traditional December shopping spree may now be lower than it used to be. However, seasonal adjustment methods may factor in seasonality fluctuations only three years afterwards, therefore, the turnover in December 2016 may be currently underestimated.

Romir Research Holding's data on Russians' daily spending also point to an unusually low December increase in consumer demand traditionally connected with end-of-the-year shopping[13]. In December 2016, they showed the lowest December readings in the past five years. Having said that, as compared with 2015 readings, the difference was negligible and stood at 1 pp (Figure 26).

**Figure 26. Real daily household expenditure
(%, January 2012 = 100%)**
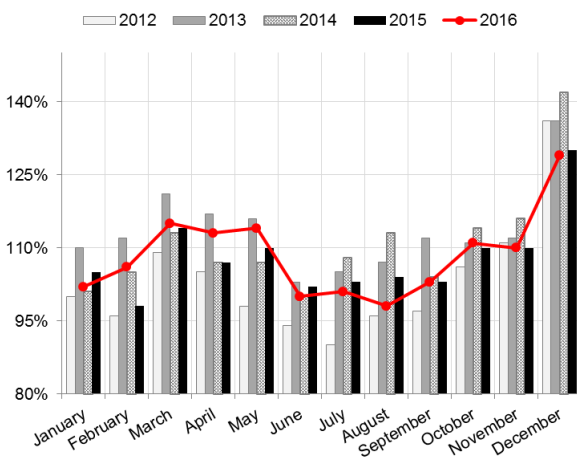
Source: Romir Scan Panel.

**Figure 27. Paid services rendered to households
(% YoY) and services PMI**
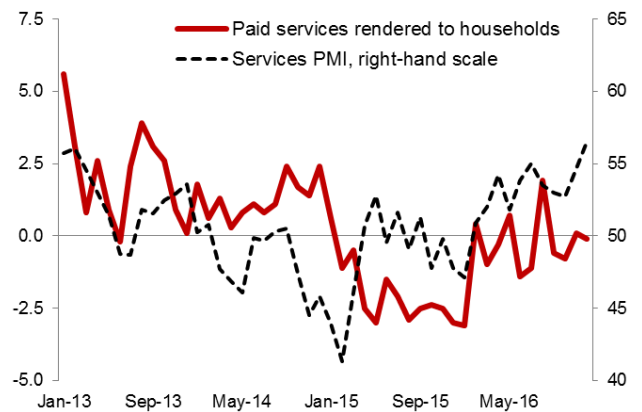
*Sources: Rosstat, Bloomberg Finance L.P.,
R&F Department calculations.*

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[13] Romir Research Holding: 'Economical New Year', 12 January 2017.

Nevertheless, households' demand for paid services was quite sustainable in 2016. Preliminary data suggest that the volume of paid services hardly changed in December as compared with the previous year (-0.1% YoY) and resulted in a negligible year-on-year decline of -0.3% in 2016. Growing demand for services in December (4.2% MoM, seasonally adjusted) came along with considerable growth in services PMI, which hit its December 2012 high (Figure 27). Respondents believed that higher demand was the key driver for growth in December.

The analysis of real volumes of main services in the period from January till November signals a sustainable demand for certain categories of services, whereas demand for medical and utility services, communication and education held at the previous years' level; in November 2016[14], transport, personal, tourism and cultural services showed growth against the previous year (Figure 28). It may signal a gradual recovery in consumer demand.

Figure 28. Paid services rendered to households by main service (%, cumulative growth in November against January, seasonally unadjusted)[15]
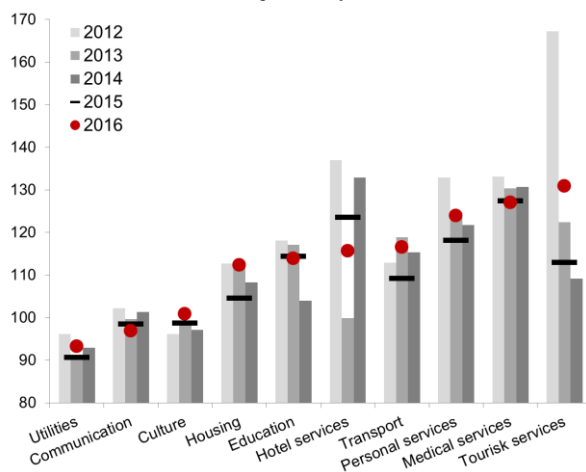
Sources: Rosstat, R&F Department calculations.

Figure 29. Consumer Confidence Index and its components

Sources: Rosstat, R&F Department calculations.

Rosstat's survey of consumer sentiment also suggests that conditions are positive for consumer demand to increase (Figure 29). Households' consumer sentiment continued to improve in the fourth quarter. The survey suggests that Russians' personal financial standing improved over the past year. The incentives to save dropped as the incentives to make large purchases stabilised.

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[14] December 2016 data for individual paid services to households are yet to be released.
[15] Based on real sales of respective services.

1.2.7. Labour market returns to the flourishing period of 2012-2013

- Unemployment fell 0.5 pp to 5.3 pp in 2016, back to the 2012-2013 rate.

- Employment reached high levels, and the demographic trends suggest that it will soon hit the ceiling.

- Higher labour force participation of seniors (over 60 y.o.) might slow down the shrinkage of economically active population, but reduce the productivity of labour.

- Improving economic activity in the second half of 2016 have propped up growth of real wages.

The situation in the labour market keeps improving. Unemployment fell to 5.3% in December 2016[16] (Figure 30). Thereby, the rate dropped 0.5 pp last year to reach the level of late 2014 – early 2015. The December decline in joblessness resulted from the shrinkage in the number of unemployed and simultaneous growth in the number of employed and economically active population. As a result, employment[17] reached 66% in December (seasonally adjusted) – the highest level in contemporary Russian history. The economic activity of households in January 2017 was also at its highest level of 69.9% (Figure 31).

Figure 30. Unemployment rate, %
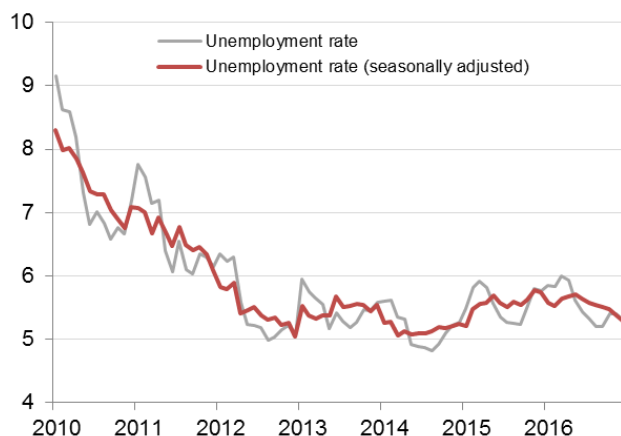
Figure 31. Employment and labour force participation rate (seasonally adjusted)

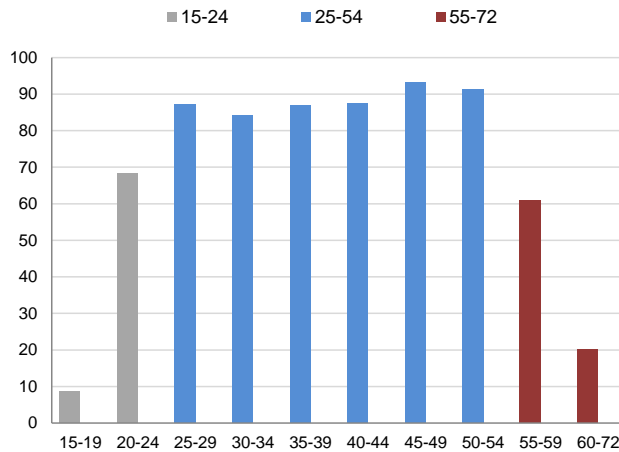*Sources: Rosstat, R&F Department calculations.*
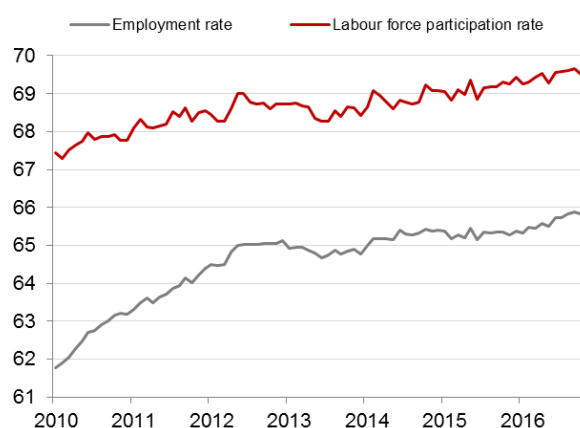
Sources: Rosstat, R&F Department calculations.

The Russian labour market will face limited growth in labour supply in the years to come due to the changing structure and size of economically active population.[18] It results from demographic factors, in particular a decline in population aged 25-54 with the highest labour force participation rate of roughly 85-90% (Figure 32).

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[16] Both seasonally adjusted and unadjusted.
[17] The employed to working-age population ratio.
[18] The ILO calculates this indicator for the persons aged 15-72.
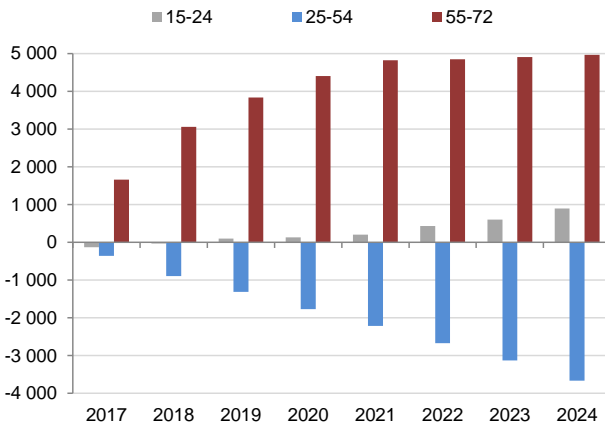
Figure 32. Economic activity by age group, %

Sources: Rosstat, R&F Department calculations.

Rosstat predicts that this age group will shrink along with the main labour force (Figure 34 and Figure 33). In addition, the group aged 55-72 will grow exponentially being the key factor for the decline in economic activity.

Our calculations suggest that, given the ongoing demographic trends and persistence of labour force participation in all age groups at the current level (Figure 32), economically active population will shrink by roughly 2 million people (about 2.5% of the current level) by 2020-2021. For the economically active population, i.e. labour supply, to hold at the current level, higher labour force participation will be required. It has already increased in the group of 25-54 year olds and exhausted its potential for further growth. Labour force expansion through the participation of youth is also restricted, because most 15-24 year olds are engaged in their education. That said, the development of work-and-study practice may offer a certain buffer to the labour market.

The group of 55-72 year olds may offer the most. Importantly, this group will add up with 60-72 year olds (rather than 55-59 year olds) despite the low labour force participation (20%). Our calculations suggest that should the economic activity of this group be raised to 30%, labour force participation may be held at the current level until 2020-2021. However, it may result in lower productivity of labour affecting GDP growth rate, whereas the problem of labour force shortage may be left unsolved.

Figure 33. Cumulative changes by age group against 2016, thousand people

Sources: Rosstat, R&F Department calculations.

Figure 34. Cumulative growth in labour force by age group against 2016*, thousand people
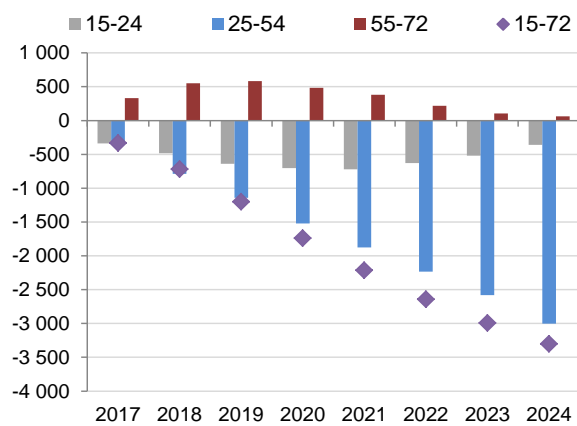

* The calculation is based on the dynamics of population size in age groups (Figure 33) and stable economic activity inside them (Figure 32). Unadjusted for population growth through migration.
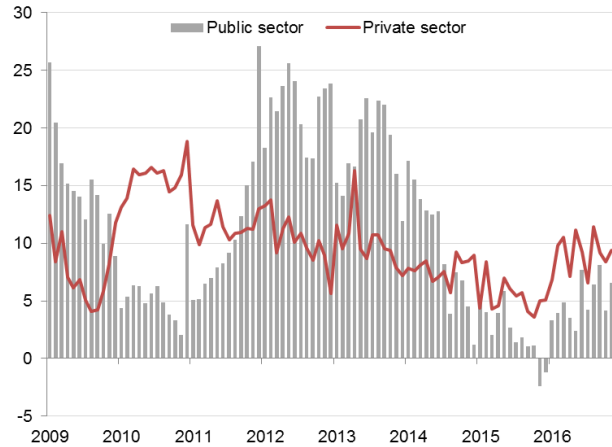
Sources: Rosstat, R&F Department calculations.

Growth in both nominal and real wages is also propping up the improvement of economic environment that boosts employment. As inflation slowed down to 5.4% in December, real wages accelerated growth to 2.4% YoY in December against 2.1% in November, whereas nominal wages grew slightly slower (Figure 35). Further slowdown in inflation in 2017 will underpin growth of real wages.

The released November data on wages in different types of economic activity suggest that the previously established trends are still in place (Figure 36). Wage growth in the private sector wobbles between 8% and 10%, while wages in the public sector keep growing by roughly 5%. The low base effect stood behind a slight acceleration in growth of public sector wages to 6% YoY. Wage indexation provided for by the May decrees will considerably speed up wage growth in the public sector (most likely in the second half of 2017).

It may bring about inflation risks, especially if the acceleration translates into the private sector amid low unemployment. However, previous accelerated wage growth in the public sector (in 2011-2013) failed to spur remuneration of labour in the private sector.

Figure 35. Nominal and real wages, % YoY
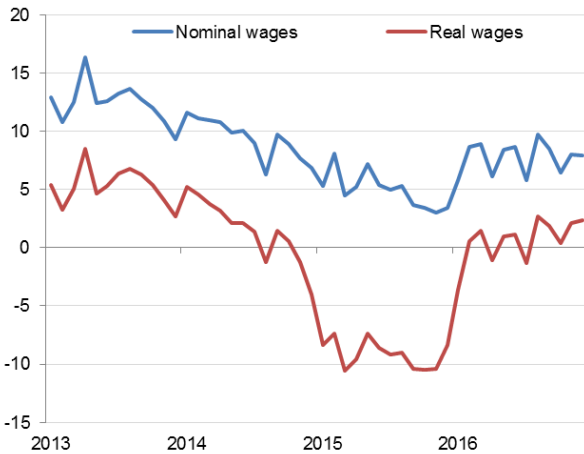
Sources: Bank of Russia, R&F Department calculations.

Figure 36. Public and private sector wages, % YoY

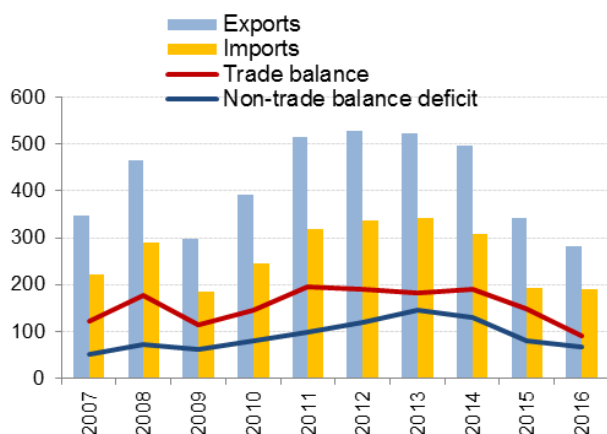*Sources: Bank of Russia, R&F Department calculations.*

1.2.8. 2016 balance of payments: capital outflow declines as imports recover

- Current account surplus declines as imports recover.

- Import growth may accelerate if current oil prices hold.

- The banking sector's lower external debt repayments reduced net capital outflow.

- The Finance Ministry-conducted currency purchases may have a modest effect on the balance of payments.

The key balance of payments trends in 2016 Q4 and 2016 include lowering net capital outflow and shrinking current account surplus. Net capital outflow fell to $15.4 billion in 2016 against $57.5 billion in 2015. It is largely explained by a natural decline in external debt repayments by the banking sector (given the restriction to raise new debt abroad) and external debt refinancing by the corporate sector.

Current account surplus shrank more than threefold in 2016 to $22.2 billion against $69 billion in 2015. It came about as the balance of trade surplus declined (to $87.8 billion against $148 billion in 2015), whereas the shrinking deficit on non-trade balance (to $(-65.5) billion against $(-79.5) billion in 2015) prevented a further drop in current account. At the same time, the investment income balance held near the 2015 level ($(-32.5) billion in 2016).

Figure 37. Individual balance of payments components, billion US dollars

Sources: Bank of Russia, R&F Department calculations.
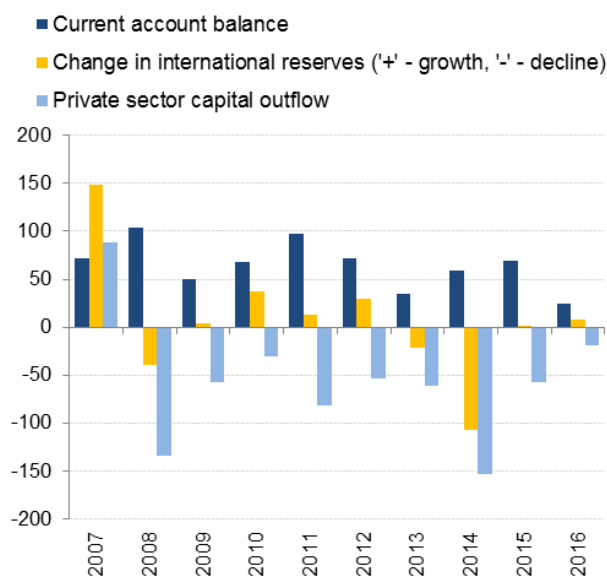
Figure 38. Exports and imports (% YoY)
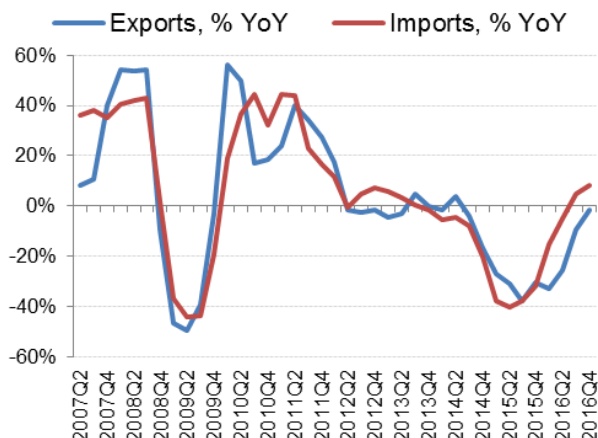
Sources: Bank of Russia, R&F Department calculations.

The fourth quarter of 2016 stood out due to improvements in both oil-and-gas (increase of $5.8 billion QoQ to $43.8 billion) and non-oil-and-gas exports (increase of $3.1 billion QoQ to $36.2 billion). Physical exports were also on the rise. Growing exports built up current account surplus in the fourth quarter to $7.8 billion against $0.4 billion in 2016 Q3 and set off the recovery in imports.

Meanwhile, growth in imports sped up to 8.6% YoY in the fourth quarter against 5.6% YoY in 2016 Q3. As a result, imports hardly changed in 2016 as compared with 2015 (-0.8% YoY) amounting to $191.4 billion. However, quite dramatic improvement in investment imports hardly translates into fixed capital investment dynamics.
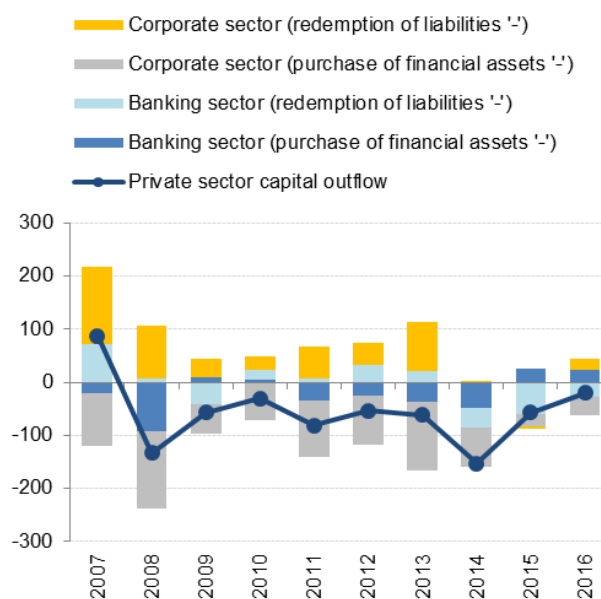
The 2016 Q4 data show that net capital outflow accelerated to $6.4 billion against $1.4 billion a quarter earlier, with the banking sector being the key source of capital outflow. Thereby, net capital outflow from the banking sector stood at $8.1 billion in 2016 Q4. Capital outflow is mainly driven by external debt redemption: preliminary estimates suggest that banks' liabilities to non-residents dropped by $7.5 billion in the fourth quarter (after having contracted by $7.7 billion in 2016 Q3). Foreign exchange assets of the banking sector demonstrated unusual dynamics in 2016 Q4 – foreign exchange assets stopped contracting, though it was the key source of compensation for large external debt redemptions throughout the year. It gave way to a slight increase in banks' foreign exchange assets by $0.6 billion. This increase is temporary in nature and includes FX fund raising by banks under BoR repos in the amount of $1.5 billion.

Figure 39. Key balance of payments components, billion US dollars

- Current account balance
- Change in international reserves ('+' - growth, '-' - decline)
- Private sector capital outflow

Sources: Bank of Russia, R&F Department calculations.

Figure 40. Components of net capital inflow/outflow, billion US dollars

- Corporate sector (redemption of liabilities '-')
- Corporate sector (purchase of financial assets '-')
- Banking sector (redemption of liabilities '-')
- Banking sector (purchase of financial assets '-')
- Private sector capital outflow

Sources: Bank of Russia, R&F Department calculations.

Non-financial sector registered small capital inflow of $3.2 billion in 2016 Q4, with net liabilities to non-residents reaching $18.5 billion, of which $15.2 billion are direct investments under Rosneft deal. However, this positive effect was almost entirely offset by a strong increase in foreign exchange assets of non-financial sector ($15.3 billion), with growth in other assets accounting for $11.7 billion. It implied a transfer of receivables and collateral to Rosneftegaz (22 December 2016), whereas the Glencore-QIA consortium entered into possession of the share in Rosneft only on 3 January 2017. Thereby, unless the Rosneft deal is factored in, non-financial sector might register a small net capital outflow in the fourth quarter.

The Finance Ministry's currency purchases under the transition to the permanent budget rule will make the ruble's real effective exchange rate less dependent on oil prices. In the medium term, it will ensure more sustainable and predictable interest rates in the Russian economy (including the key rate) and reduce the need to apply monetary policy measures in response to growing or falling oil prices.

With the current level of oil prices, the Finance Ministry-conducted purchases of foreign currency under the implementation of transitional budget rule seem to have a negligible effect on the balance of payments. As the Bank of Russia sent a message about its further key rate decisions in February, market expectations of a softer monetary policy may taper somewhat flattening the OFZ yield curve. Thus, the effect of monetary policy will strengthen.

Nevertheless, a weaker ruble (in contrast to the scenario that does not provide for the Finance Ministry's currency purchases) will constrain the recovery in imports. Exports are expected to show a moderate growth amid higher oil prices and encouragement of non-oil-

and-gas exports through the exchange rate. Collectively, it will enhance current account surplus.

Thereby, the Finance Ministry-conducted purchases of foreign currency will bring about negligible changes in the current and financial account of the balance of payments.

1.3. Global economy, financial and commodity markets

1.3.1. Monetary authorities are reluctant to adjust their policies early in the year

- The Fed expectedly maintained the federal funds rate. The market's forecasts of monetary policy normalisation have not provided so far for a possible fiscal stimulus.

- The eurozone's economic indicators are showing moderately positive dynamics, but inflation has been accelerated mainly by the energy component.

- The Bank of Japan kept its monetary policy parameters unchanged. Markets expect the yen to depreciate after Donald Trump won the US presidency and to boost the economy.

- Climbing expenditures buttress Britain's GDP, that stems from the prudence triggered by the growing economic uncertainty over Brexit implications.

USA: awaiting fiscal stimulus

The US Fed's Federal Open Market Committee (FOMC) expectedly left the federal funds rate unchanged at its meeting on 31 January – 1 February. Economic performance estimates hardly changed as compared to the December readings. In addition, the press release did not mention that the US Fed's balance sheet might start to shrink as some committee members had said in late January. The meeting minutes may however demonstrate that the issue was on the agenda. The US Fed's balance sheet is currently $4.5 trillion. Morgan Stanley estimates that, if the proceeds from securities redemption are not reinvested, the balance sheet may shrink by $600 billion over the first two years.

Committee members have taken a wait-and-see attitude until the terms, volume and measures of a possible fiscal stimulus are clarified. Donald Trump may come up with his suggestions at the joint meeting of the US Congress late in February. Further discussions in both Houses may produce amendments. Until a single solution is worked out, the US Fed will be unlikely to include fiscal stimulus in its forecast of rate revision path. Let us remember that December press release predicted three rate hikes in 2017. So far, the market expects only two rate increases in 2017, with the first one to be seen in May at the earliest (the probability of a rate hike in May is 50.1%).

Macroeconomic statistics for November and December were upbeat. In January, the American private sector created 227 thousand jobs, exceeding December data (157 thousand) and analysts' expectations (175 thousand). Unemployment stands at 4.8%. Job growth is now aimed at the recovery of the pre-crisis labour force participation rate (Figure 42).

Low base effect due to the oil price dynamics accelerated inflation to 2.1% YoY in December (1.7% YoY). Core CPI grew 2.2% YoY in December. Inflationary pressure will be backed not only by high oil prices in the first months of 2017 (as compared with the previous year), but also the nascent acceleration of wage growth.

In 2016 Q4, GDP grew 1.9% saar, below the consensus and 2016 Q3 readings (3.5% saar). Slower economic growth is partially attributed to the base effect – high GDP growth in 2016 Q3 was underpinned by an untypical surge in soya bean exports amid poor crop in Latin America. In the fourth quarter, the external sector made a negative contribution to growth, – 1.7% pp. The negative contribution of the external sector was offset by domestic demand. Consumption grew 2.5% saar (3% a quarter earlier), business investments added 2.4% saar. At the year-end, the US economy added only 1.6%, the lowest growth in five years. Nevertheless, leading indicators suggest that moderate economic growth is very likely to continue in 2017 Q1. The recovery of the labour market coupled with tax cut prospects holds the University of Michigan Consumer Sentiment Index close to its 13-year high (Figure 41). PMI index also points to the likely acceleration of growth in this sector in the months to come despite a stronger dollar.

Figure 41. University of Michigan Consumer Sentiment Index, pp
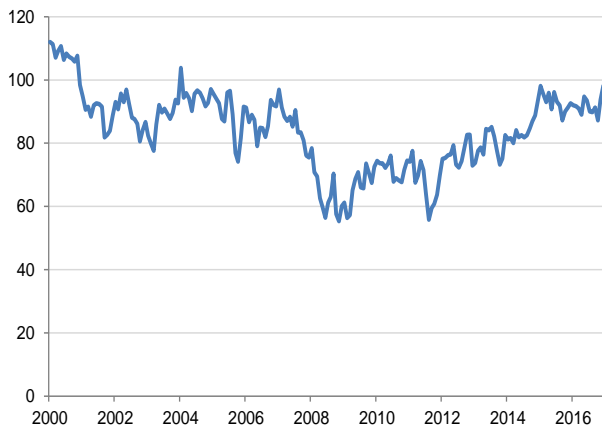
Source: University of Michigan.

Figure 42. Labour force participation rate, % (seasonally adjusted)

Source: Federal Reserve Bank of St. Louis.

Eurozone: temporarily upbeat statistics

The meeting of the ECB Governing Council on 19 January 2017 expectedly failed to bring any significant news. Rates on the bank's key operations and QE parameters remained unchanged. ECB meetings should not be expected to change the parameters of

the ongoing policy until autumn when the regulator will have to decide on the QE extension through 2018.

At the press conference in the follow-up to the meeting, Mario Draghi said the current inflation acceleration in the eurozone was temporary in nature (CPI 1.8% YoY, core CPI 0.9% YoY in January 2017). While inflation dynamics may exceed the ECB's December forecasts, they will not result in a sustainable increase in inflationary pressure in the economy. Mario Draghi summed up the conditions needed to shift to monetary policy normalisation. Inflation should accelerate sustainably in the medium term irrespective of the loose monetary policy pursued. In addition, inflation should accelerate in the whole eurozone. Indeed, the ongoing acceleration of inflation in Germany and its prospects of exceeding 2% will not make the ECB revise its monetary policy.

In 2016 Q4, the eurozone economy added 0.5% QoQ, 1.8% YoY after having grown 0.4% QoQ in 2016 Q3 (upward revision from +0.3% QoQ). Aggressive growth was typical of Germany (+0.5% QoQ), France (+0.4% QoQ) and Spain (+0.7% QoQ). Growth in 2016 stood at 1.7% YoY, exceeding the US economic growth for the first time since 2008. Leading PMI and economic sentiment indices of the European Commission point to a strong likelihood of further aggressive economic growth of 0.4% QoQ in 2017 Q1. Later dynamics are, however, less evident – accelerating inflation may impede consumption and GDP growth.

Industrial production in the eurozone showed a strong 1.5% MoM growth in November (0.1% MoM in October). Industrial growth was typical of most countries and sectors (Figure 44). Various indicators suggest that industrial production is highly likely to continue to grow. Thus, new orders have been showing growth for three months in a row, and PMI indices are close to their local highs. Good industrial data will back up GDP statistics. Having said that, industrial production makes only a fifth of the eurozone's GDP. The impact, which temporary acceleration in inflation will have on consumption, will have more important effect on economic growth in 2017.

The latest macroeconomic statistics point to positive trends in the eurozone's economy. However, not all of them are sustainable and, therefore, trends and the ECB's policy should be interpreted reasonably. Thus, inflation acceleration is likely to constrain consumer demand in 2017, keeping inflationary pressure low. After having exhausted the base effect, CPI and core CPI are most likely to hold below the ECB target triggering the extension of quantitative easing through 2018. As the US Fed's federal funds rate is set to increase threefold in 2017, the euro is very likely to weaken to equal or even to fall below the US dollar value.

Figure 43. Inflation in Germany and the eurozone
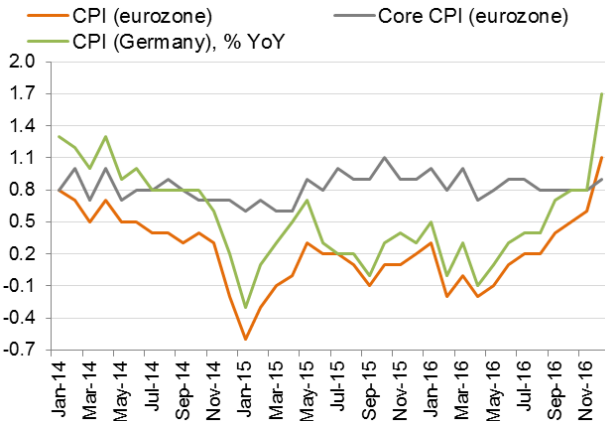
Source: Bloomberg Finance L.P.

Figure 44. Industrial production, % MoM
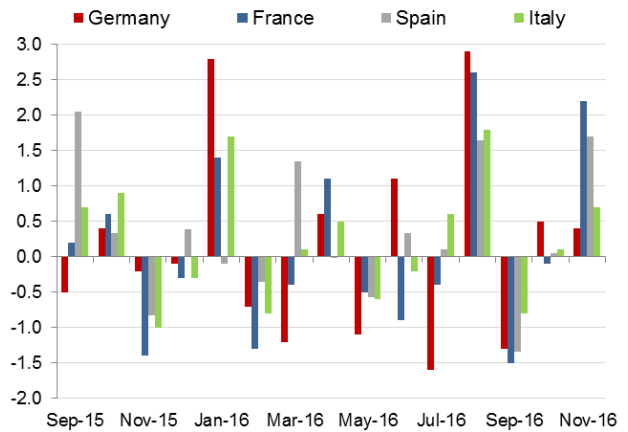
Source: Bloomberg Finance L.P.

Japan: Trump's victory as the Japanese economy's key way out of deflation trap

At its monetary policy meeting on 30-31 January 2017, the Bank of Japan maintained the key parameters of its monetary policy in line with analysts' consensus forecasts. They do not expect any changes in monetary policy until the end of 2017, either. It goes in contrast with aggressive changes in the Bank of Japan's policy in 2016, which turned out to be largely insufficient to create inflationary pressure. Now the country is trying to escape the deflation trap through the exchange rate channel considerably weakened by Donald Trump's victory.

The Bank of Japan changed some parameters of its quarterly forecast. The recent depreciation of the yen and more sanguine expectations of world economic performance improved prospects of Japanese economic growth in 2017 and 2018 by 0.2 pp to 1.5% YoY and 1.1% YoY respectively. Though inflation somewhat exceeded expectations in the later months of 2016 (still remaining in deflation area), inflation forecasts for the years to come have remained unchanged. As early as October, the Bank of Japan predicted rather high inflation dynamics which looks upbeat even as yen is weakening and oil prices are staying high (Figure 45).

The statistics of the past months suggest that the Japanese economy has entered the path towards slow recovery growth. Industrial production grew steadily in the later months of 2016[19] largely following the improvements in exports (Figure 46) as the yen was depreciating. The decline in households' spending in the year-end also slowed down considerably. In December, the Japanese economy registered unemployment of 3.1% (21-year low), and the job-to-applicant ratio rose to the 25-year high. Tensions in the labour market should be translated into faster growth in wages, inflation, consumer demand and GDP. Growth in 2016 fiscal year is forecast to stand at 1.4% YoY and hold at this level in the years to come.
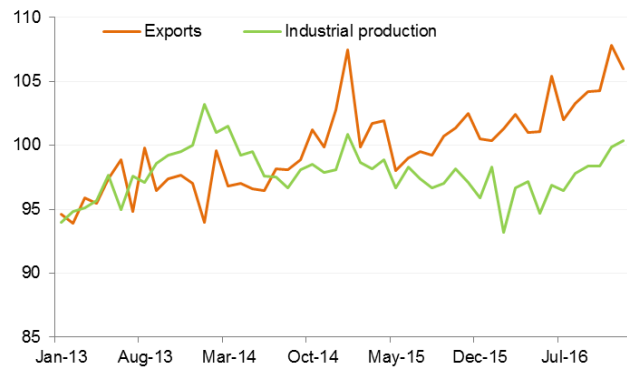
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[19] 1.5% MoM in November and 0.5% MoM in December, exceeding expectations in both cases.

Figure 45. Median forecast of BoJ Policy Board, % YoY

	Fiscal year 2016		Fiscal year 2017		Fiscal year 2018	
	Jan-17	Oct-16	Jan-17	Oct-16	Jan-17	Oct-16
GDP	1.4	1	1.5	1.3	1.1	0.9
Inflation	-0.2	-0.1	1.5	1.5	1.7	1.7

Source: Bank of Japan.

Figure 46. Exports and industrial production (seasonally adjusted)


Source: Japan Macro Advisors.

UK: fallouts from Brexit are yet to be seen

In January 2017, the UK Supreme Court ruled that the Parliament must approve the launch of the formal process of the country's exit from the EU under Article 50 of the Lisbon Treaty. Both Houses must approve the Brexit initiation bill. Despite the evident temporary impediments, Theresa May is intending to launch the process until the end of March 2017, as announced earlier. The bill is highly likely to get the approval in both houses of the Parliament – the leader of the opposition Labour Party urged to succumb to the results of the referendum, and there are not enough vigorous Brexit opponents in the Parliament to form a majority.

Before the UK Supreme Court passed its ruling, Theresa May said that post-Brexit relations with the EU would be regulated by a free trade agreement and trade will be duty-free and completely flexible. In addition, the UK intends to sign trade agreements granting most favourable nation treatment with countries outside the EU. The conditions of the agreements were promised to be negotiated sector-wise. The expected changes will stop fund transfers to the EU budget.

Britain's GDP continued to grow aggressively by 0.6% QoQ in 2016 Q3 and Q4 in defiance of the expected economic slowdown in the wake of Brexit referendum. The external sector – where a weaker pound made British goods more competitive and imports less attractive – failed to be the key contributor to GDP growth (Figure 47). The growth is buttressed by the domestic demand (Figure 48).

Figure 47. Contribution of individual sectors of the British economy to QoQ GDP growth, pp
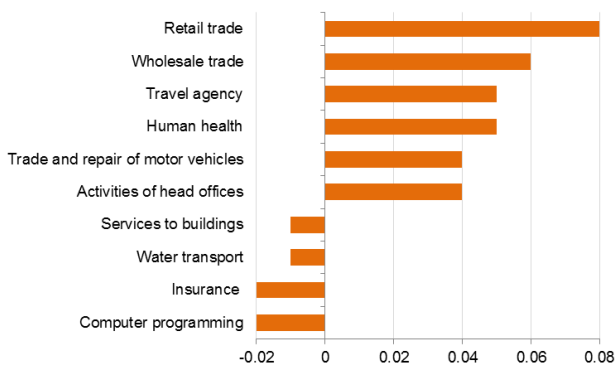
Source: Office for National statistics.

**Figure 48. GDP and contribution of components to quarterly growth**
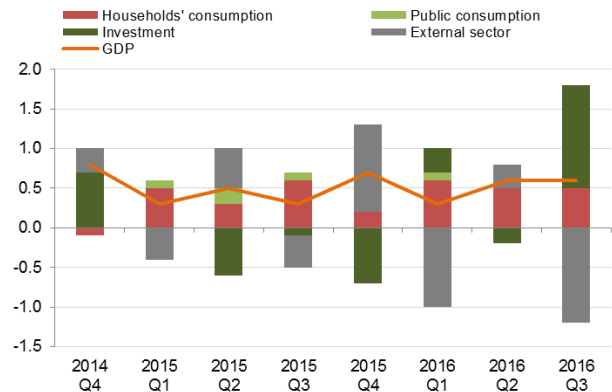
Source: Office for National statistics.

The clue lies, among other things, in the drop of savings rate (Figure 49). As uncertainty was growing, Britons decided to step up consumption through credits (Figure 50). Such behaviour can be explained, among other things, by the future price growth as the pound weakens. As inflation accelerated in December 2016 to 0.5% MoM and 1.6% YoY, retail sales shrank 0.7% MoM against the expected fall of 0.4% MoM. Non-food products showed the most considerable drop. The latest BoE Inflation Report predicts further decline in the savings rate to the lowest level since 1963 (the earliest statistics) following softer terms of lending, among other things. Along with the incorporated governmental investment programme[20] it became a reason for a considerable revision of economic growth rates in 2017 (from 1.4% to 2% YoY). In addition, the Bank of England revised its labour market estimates. The regulator believes that the natural rate of unemployment is lower than previously considered. It allows the regulator to be more tolerable to domestic consumption growth, which will first result in free labour force utilisation, and then is likely to trigger additional inflationary pressure. Therefore, the inflation forecast has hardly been changed.

Furthermore, the Bank of England left its policy rate unchanged at the meeting on 2 February and maintained the parameters of monetary stimulus.
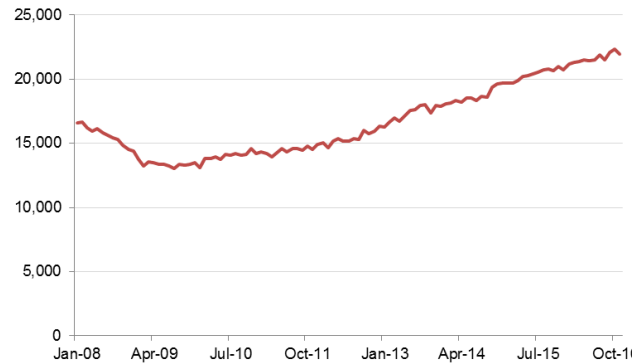
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[20] A 10-year programme for investing £23 billion in transport infrastructure, technology and housing.

Figure 49. Savings rate (four-quarter moving average), %
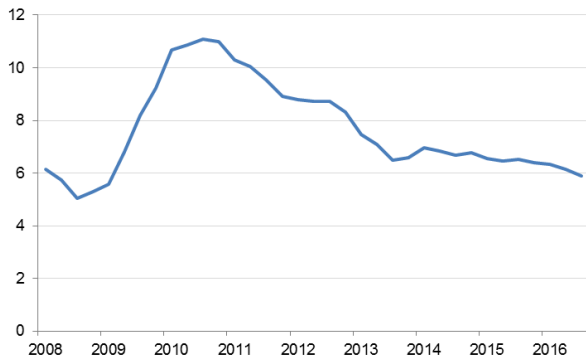
Source: Office for National statistics.

Figure 50. Consumer loans, million pounds (seasonally adjusted)

Source: Office for National statistics.

## China: Economy peaks amid tighter monetary policy

In the fourth quarter, China's GDP grew to 6.8% YoY after having added 6.7% YoY in the first three quarters of 2016 (Figure 51). Services have remained a driver for growth accelerating to 8.3% YoY. PMI indicators improved considerably in the fourth quarter and held at a high level in January 2017 (Figure 52). The official and Caixin manufacturing PMI have been at their four-year highs since November. Both domestic economic activity and export orders showed better dynamics. Capital Economics' alternative estimates of China's economic growth suggest that the gap between their estimates and the official data that had persisted since 2011 was closed in December (Figure 51).

Figure 51. China's GDP growth (official data and Capital Economics (CE) estimates) (seasonally adjusted by CE) and official targets

Sources: Bloomberg Finance L.P., Capital Economics.

Figure 52. Official and Caixin PMI in manufacturing and other sectors, points
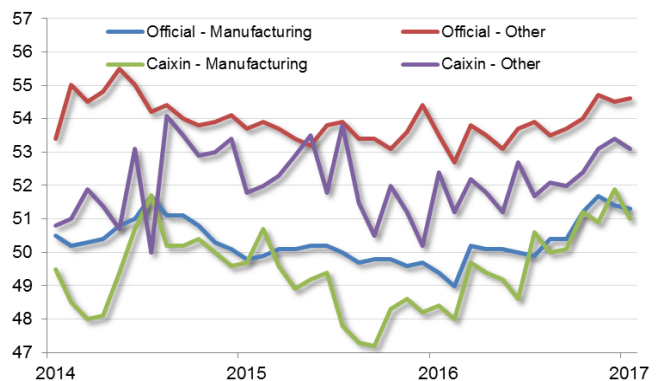
Source: Bloomberg Finance L.P.

As the economy is showing high growth rates, considerable capital outflow from China persists, as well as pressure on the renminbi exchange rate. In the second half of 2016 it was stable against the currency basket, but depreciated considerably against the US dollar (Figure 53). The government continues to tighten controls over capital outflows

with regard to both households and corporates. According to our estimates, the People's Bank of China (PBC) stepped up its FX interventions considerably (Figure 54). In 2016, the PBC's international reserves dropped 10% to almost $3 trillion, but are still high enough. The IMF standards-based Capital Economics' estimates suggest that if the government did not control capital flows, the adequate level of international reserves would have been close to the actual $2.9 trillion. However, given the current policy, this level is considerably lower at $1.8 trillion.

Figure 53. RMB/USD and RMB/currency basket exchange rate (01.01.2013 = 100)
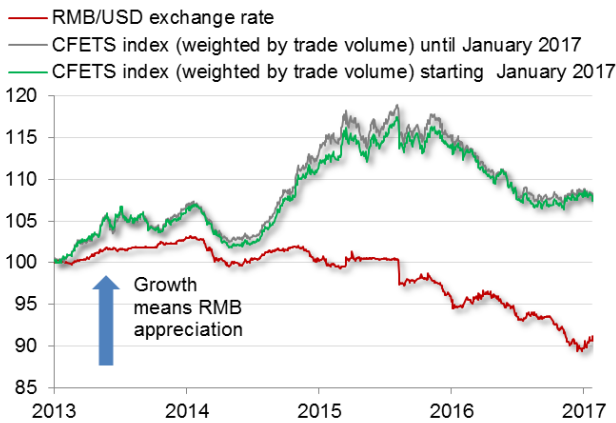
Sources: Bloomberg Finance L.P., Natixis, R&F Department calculations.

Figure 54. PBC's international reserves and FX interventions

Sources: Bloomberg Finance L.P., R&F Department calculations.

Consumer price inflation dropped to 2.1% YoY in December (in November – 2.3% YoY) due to a slower growth in food prices (Figure 55). However, the service price index and core inflation have been showing an upward trend since early 2016. In addition, the producer price index continued to grow aggressively reaching 5.5% YoY in December (in November – 3.3% YoY). Given the earlier than usual Chinese New Year in 2017 (late January), price growth may be expected to accelerate early in 2017.

Figure 55. Consumer and producer price growth in China
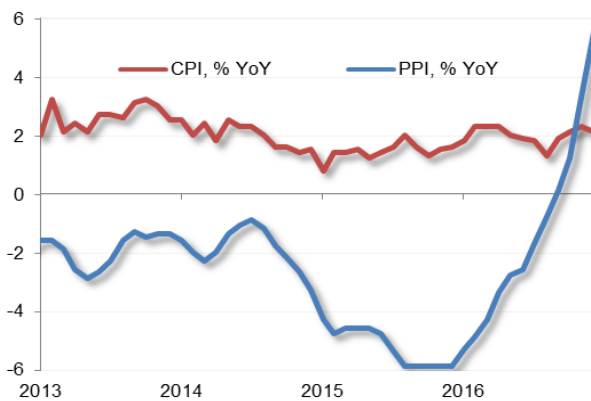
Source: Bloomberg Finance L.P.

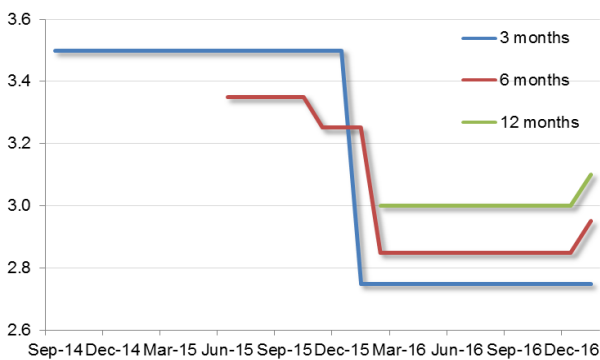**Figure 56. China's interbank rates Shibor, pp**
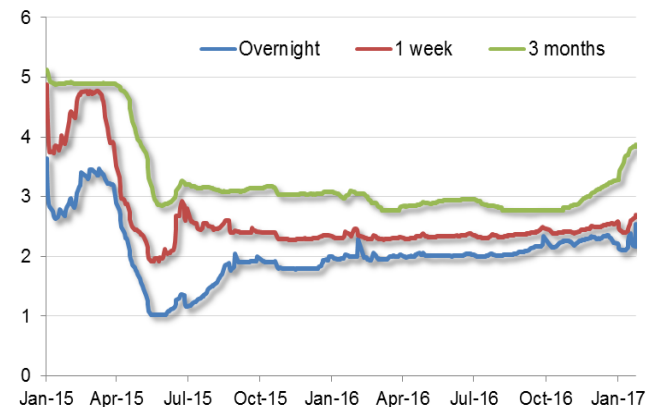
Source: CEIC.

The PBC said in December that in 2017 it would focus on the control over inflation acceleration, capital outflow and renminbi depreciation, as well as countering financial risks. The PBC gradually tightened its monetary policy in 2016 Q4 as it prioritised more expensive medium-term liquidity provision instruments over the short-term ones, thus, pushing up Shibor interbank rates (Figure 56). On 24 January 2017, it was the first time that the PBC ratcheted up rates on 6- and 12-month liquidity provision instruments by 0.1 pp to 2.95% and 3.1% respectively (Figure 57). As liquidity situation deteriorated in January, this move may well be a signal of further rate hikes by the PBC. Interbank rates point to the expected tightening of the liquidity situation (Figure 56).

High growth rates of the Chinese economy result from both monetary and fiscal stimulus in 2016 (Figure 58), which seems to be posed to render further support to the economy in 2017. However, without further stimulus, growth rates may be expected to gradually decline to the equilibrium 4.5-5.0% YoY as estimated by Capital Economics.

Figure 57. PBC's 3- to 12-month liquidity provision rates, pp	**Figure 58. Fiscal deficit in China, % of GDP**

Source: CEIC.
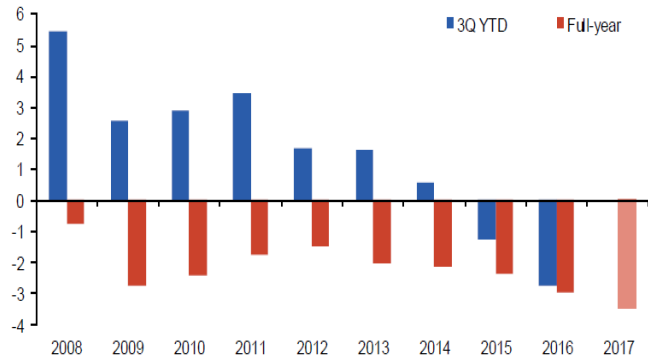
Source: Mizuho.

The government is very unlikely to put up with considerable economic slowdown. Economic growth through 2020 is targeted at 6.5-7.0% (Figure 51). Moreover, the Communist Party of China is to elect the General Secretary at the end of this year. As monetary policy is being tightened, new stimulus is assumed to require further easing of the fiscal policy. Thus, Mizuho expects fiscal deficit to expand from 3.0%, as projected in 2016, to 3.5% of GDP (Figure 58). China has quite a small public debt (41% of GDP) and high nominal GDP growth rate allows it to tolerate relatively high deficit while avoiding debt-to-GDP growth.

1.3.2. The US dollar ceased to appreciate

- The US dollar ceased to strengthen in January. The greenback depreciated against most currencies of both advanced and emerging economies.

- On the back of growing risk appetite in equity markets, all the key US stock indices hit new highs.

- The People's Bank of China's restrictions on capital outflow triggered a surge in interbank rates, thus strengthening the renminbi.

- The OFZ curve took an unconventional shape as investors are likely to rebalance their portfolios towards a shorter duration.

Global markets

The beginning of the year saw a reverse in trends – especially those related to bonds and foreign exchange – which used to dominate the markets in the later months of 2016. In the period between late December and early January, US government bond yields drifted considerably lower following the reassessment of the expected scale of fiscal expansion the new US President intends to carry out. Nevertheless, yields started to climb up in the second half of the month as positive data on the US economic performance were released. Signs of accelerating inflation in the eurozone pushed the yields up. The spread between the US and German government bond yields declined after having peaked in the period between November and December.

The US dollar depreciated against the key global currencies of advanced economies earlier this year. It partially resulted from the verbal interventions of the new US President and his administration who claimed that currencies of some US trading partners were too weak against the US dollar. Most emerging market currencies, including the ruble, have appreciated against the US dollar since the beginning of the year. Having weakened by more than 6.5% against the US dollar in January, the Turkish lira remains an outsider.

Figure 59. US dollar LIBOR rate, %
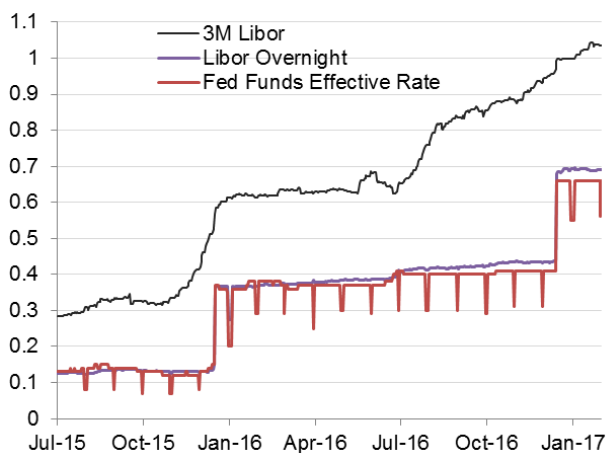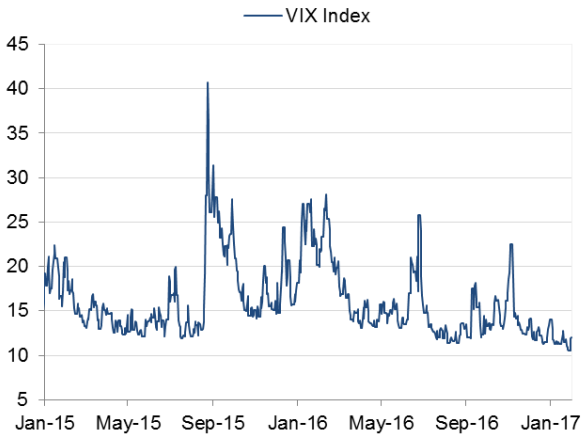

Source: Bloomberg Finance L.P.

Figure 60. 10-year bond yields of advanced economies, %
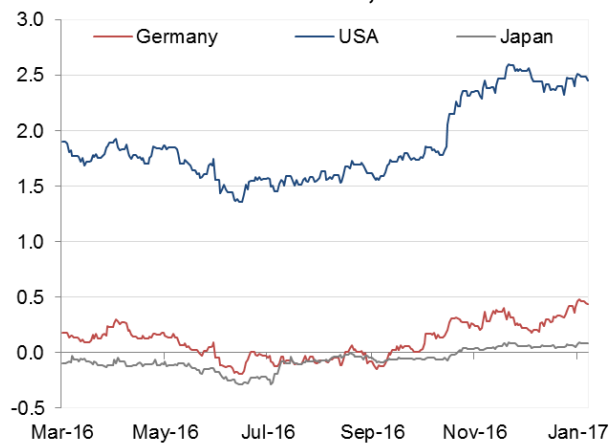
Source: Bloomberg Finance L.P.

All three leading US stock indices (Dow Jones, S&P 500 and Nasdaq) hit their new historical highs as the Q4 reports of American companies exceeded expectations and Donald Trump promised to cut the corporate profit tax rate from 35% to 15%. Volatility (VIX index) fell to the lowest values (Figure 61).

Figure 61. VIX index (S&P500)

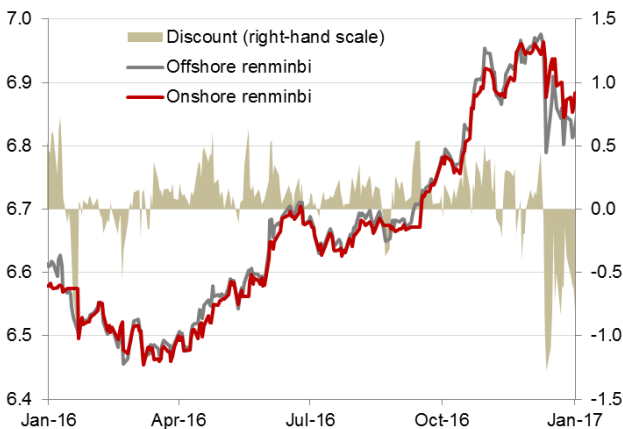Source: Bloomberg Finance L.P.

Figure 62. Stock indices in local currencies, 1 January 2016 = 100
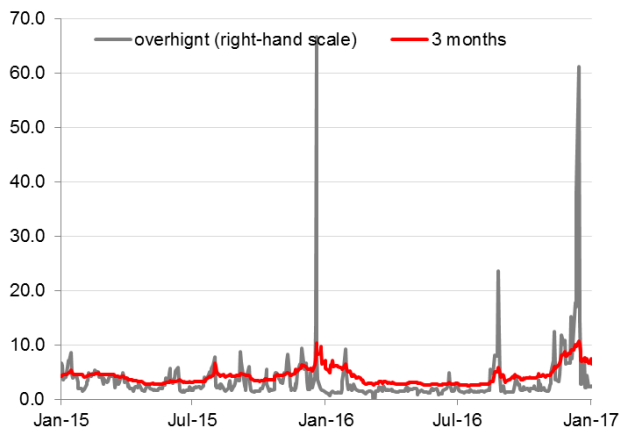

Source: Bloomberg Finance L.P.

The first week of January saw a sharp appreciation of the renminbi against the US dollar that began in the international segment. As a result, offshore renminbi was traded with a considerable premium to the onshore renminbi for the first time in a long period (Figure 63). Before that, it was usually discounted, because many market participants prefer to operate in a less regulated offshore renminbi market to short the Chinese currency. The appreciation resulted from a sharp shrinkage of renminbi liquidity as manifested by a surge in interbank rates: overnight rates jumped to 60-70% p.a. (Figure 64). Market participants believe that the People's Bank of China's operations, though not explicitly evidenced, pushed liquidity down.

Figure 63. RMB/USD exchange rate

Source: Bloomberg Finance L.P.

Figure 64. Interbank rates at the international renminbi market


Source: Bloomberg Finance L.P.

The People's Bank of China may replace ever more complicating and longer procedures designed to softly restrict money withdrawals from the country with direct control over capital outflow. Bloomberg reported that the People's Bank of China had prohibited some banks to make cross-border renminbi transfers until their value equalled payments in renminbi received from abroad. Indeed, capital outflows were mostly

denominated in renminbi rather than a foreign currency in the past several months.[21] It means that a strong slowdown in renminbi outflow triggers liquidity problems in the international segment, pushing the rates up and complicating shorting of the currency.

Russian markets

The OFZ yield curve took an unconventional shape: medium-term bond yields (duration of 3-5 years) were lower than those of short (up to 2 years) and long-term (more than 5 years) ones. As compared with the local highest yields in the end of November, yields fell 0.2% at the short end, 0.8% at the medium end, and 0.2% at the long end of the yield curve. The accelerating decline in the medium-term bond yields as compared with the long-term ones may result from the altered strategy of major players. They could reduce the average duration of their portfolio as the market grew in December, i.e. showed relatively higher demand for medium-term securities rather than long-term ones. Given that Bloomberg consensus forecast[22] predicts that the potential yield drop remains low, the investors' behaviour is understandable, as it restricts the potential drop in the value of bond portfolio in case of negative developments in the market.

Figure 65. OFZ yield curve, %
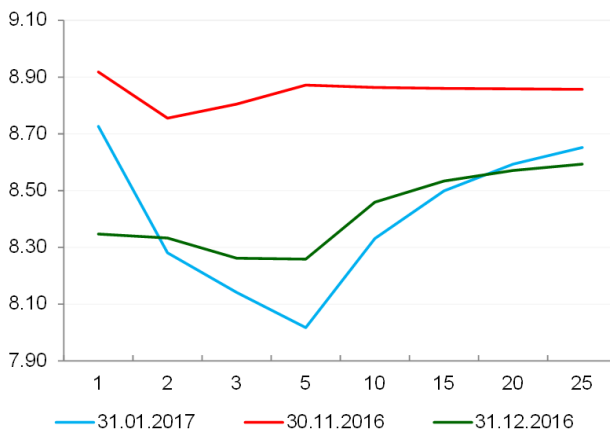
Source: Moscow Exchange.

Figure 66. Ruble bond yield, %
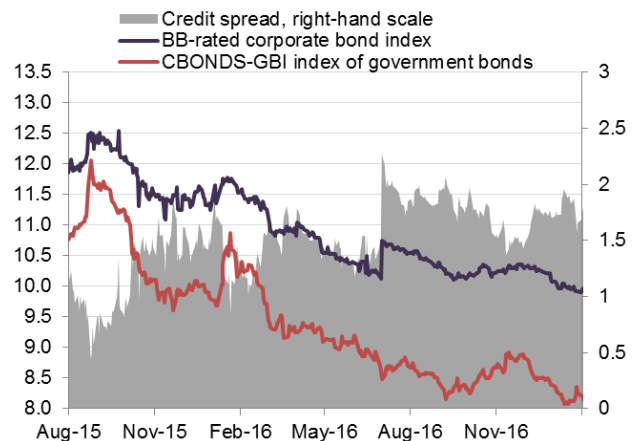
Source: Cbonds.

Russian risk premium returned to the pre-sanction level – 5-year CDS-premium fell to 180 points as early as December and has been holding at about this level. Russian risk metrics dropped so considerably largely because of the growing oil prices and the expectations that the international sanctions against Russia will be eased or lifted as the new US President entered into office. If oil prices go down or sanctions remain in place, these trends may reverse. All else being equal, it may negatively affect the exchange rate and the debt market.

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[21] The renminbi outflow amounted to $309 billion in the period between January and November 2016.
[22] The consensus forecast suggests that 5- and 10-year OFZ yields will stand at 8.0% (close to the current level) by late 2017.

Figure 67. Spread between RUONIA and BoR key rate, bp
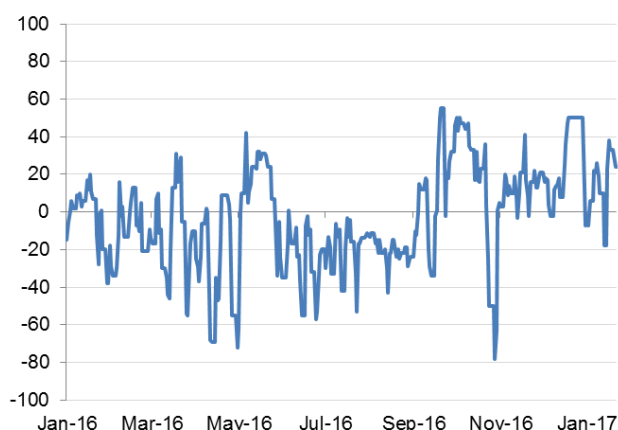
Sources: Bank of Russia, R&F Department calculations.

Figure 68. Banks' net liquid position to BoR, billion rubles

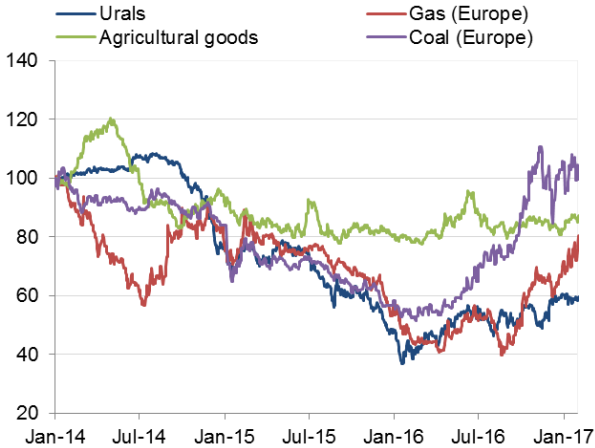Sources: Bank of Russia, R&F Department calculations.

1.3.3. Commodity markets: risks that oil glut will persist remain elevated

- January oil production data suggest that OPEC and non-OPEC countries highly comply with their obligations to cut production and WTI long and net positions are all-time high.

- Nevertheless, international organisations are not unanimous in their estimates of oil market balancing prospects.

- Risks of an increase in oil supply are posed by Libya and Nigeria, as well as shale producers. The latter increasingly signal a step up in activity, though most companies are yet unwilling to ramp up production.

- Quota termination poses risks of a new, fiercer standoff for the market share between countries and elevated pressure on oil prices.

Prices for most goods and metals grew in January, but it is explained by the weakening of the US dollar (Figure 69 and Figure 70). The Bloomberg Commodity Index went up modestly.

After having grown 13% in December and more than 50% over 2016, oil prices lost 2% following the concerns that the measures to restrict production agreed upon by the oil exporting countries will be inefficient to balance the market and bring inventories to the five-year average levels, which qualify for the 'normal market'.

**Figure 69. Commodity prices
(January 2014 = 100)**

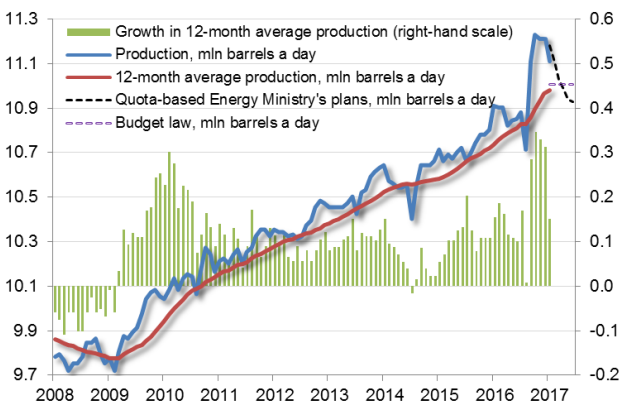Sources: Bloomberg Finance L.P., R&F Department calculations.

**Figure 70. Metal prices
(January 2014 = 100)**
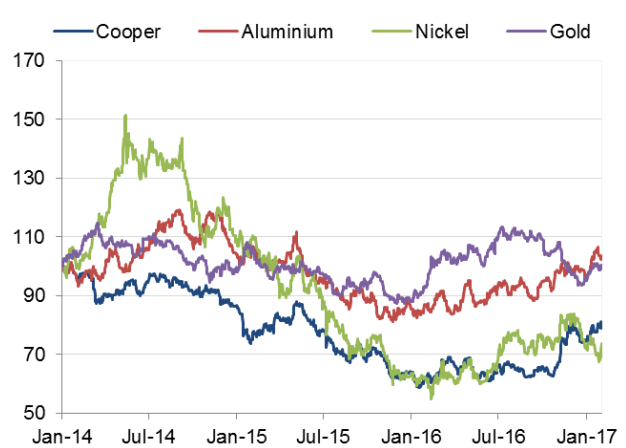
Sources: Bloomberg Finance L.P., R&F Department calculations.

In December, OPEC member-states and most countries outside the cartel agreed to cut oil production by the total of 1.55 million barrels a day relative to October 2016 production. January data suggest that the countries strongly comply with their obligations. Intending to gradually reduce production during the first six months of the year, Russia goes ahead of schedule presented by Alexander Novak, Russia's energy minister. The country cut its production by 0.1 million barrels a day in January (Figure 71). Bloomberg estimates that 11 OPEC countries (excluding Libya and Nigeria) cut production by 1.05 million barrels a day or 83% of their obligations in January; the violation from quotas lies almost entirely with Iraq. The compliance with quotas considerably exceeds both the comparable figures of the similar agreements of 2009 (60%) and investors' expectations.

Figure 71. Oil production in Russia

Sources: Bloomberg Finance L.P., Vedomosti, R&F Department calculations.
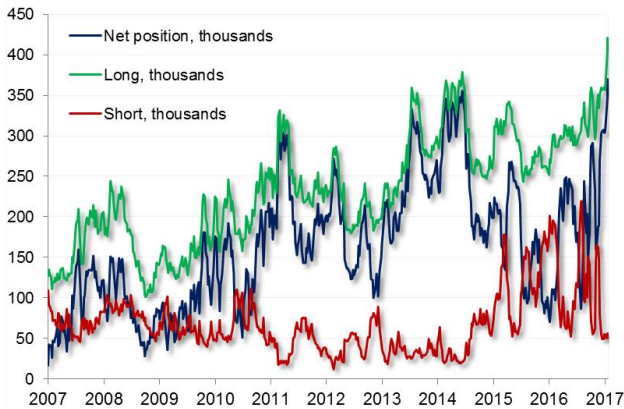
Figure 72. Oil production in OPEC countries
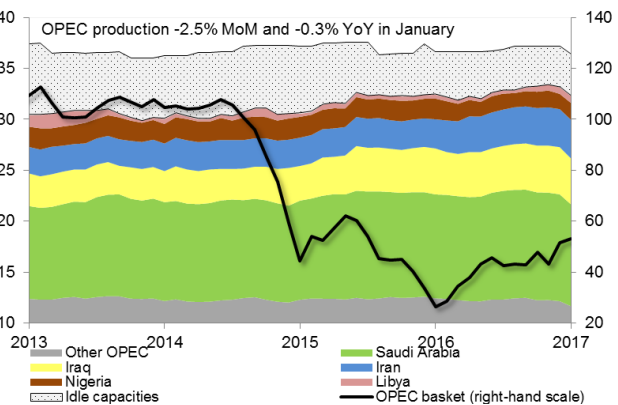
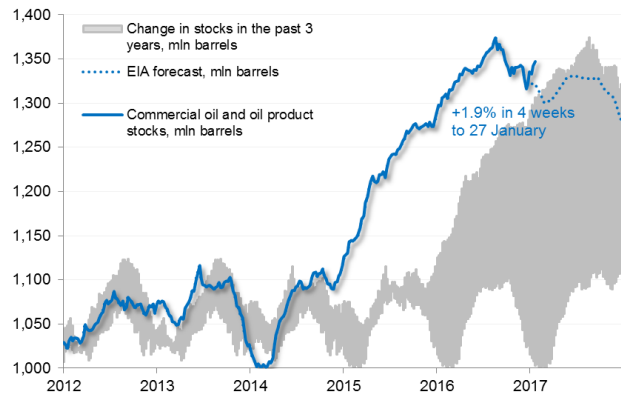Source: Bloomberg Finance L.P. estimates.

It supports bullish sentiment in the market – WTI long and net positions are at their historical highs (Figure 73). However, negative news may reverse these dynamics and drag oil prices down.

Figure 73. WTI futures and options


Source: Bloomberg Finance L.P.

Figure 74. Total US commercial oil and oil product stocks

Sources: Bloomberg Finance L.P., R&F Department calculations.

Leading international organisations – the International Energy Agency (IEA), OPEC, and the US Energy Information Administration (EIA) – are not unanimous in their opinion about the situation in the oil market in late 2016 and their estimates of its balancing prospects. Estimates of oil glut in the market in 2016 Q4 vary greatly between 0.7 million barrels a day (IEA) and 2.0 million barrels a day (EIA). Consequently, the IEA predicts that the market may face a daily shortage of 0.7 million barrels in the first half of 2017 (Figure 75); the EIA, however, forecasts that, although the surplus will be reduced, the market will persistently face oil glut at least until 2018 (Figure 76). Significantly, the OPEC estimates are closer to those of the EIA, but investors rely on the IEA projections.
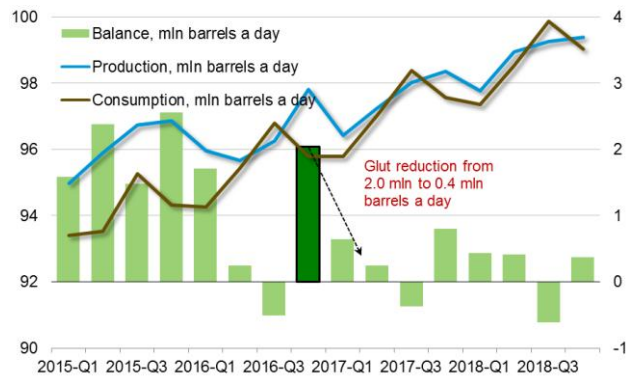
Figure 75. IEA estimates of key indicators of liquid fuel market*
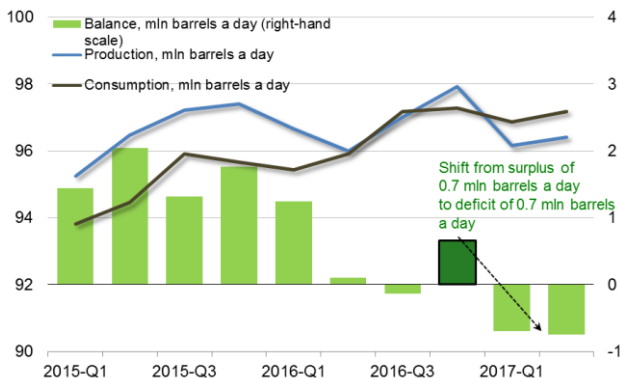
* The calculations imply that the countries fully comply with the set quotas.
Source: IEA.

Figure 76. EIA estimates of key indicators of liquid fuel market*

* The calculations imply that the countries strongly adhere to the set qoutas.
Source: EIA.

The current high-frequency data on the US oil and oil product stocks suggest that oil glut still persists in the market: January changes in inventories correspond to the elevated dynamics of the past two years and are long way from the normal seasonality and EIA expectations (Figure 74). Having said that, it can be largely explained with a lag in oil

supplies: currently the US receive the oil produced in late 2016, before the quotas became effective.

'Dark horses' – Libya, Nigeria and shale oil producers – may reduce the efficiency of measures designed to restrict oil production. According to the Wall Street Journal, the Libyan government intends to step up daily production by 0.25 million barrels in the first quarter and double it to 1.2 million barrels a day by the end of 2017, as the opposition forces gradually unblock the oil fields. Bloomberg estimates that Nigeria produced 0.6 million barrels a day less oil in December than it did in January 2016 (Figure 72), and given that the government has reportedly restored the practice of paying militants for guarding the pipelines, it may well restore production. Libya and Nigeria are unlikely to be able to translate their capabilities into actions in the next quarters, but may definitely exert pressure on oil prices. Bloomberg estimates that Libya and Nigeria increased daily production by the total of 0.2 million barrels in January 2017.

Uncertainty over the promptness and scale of US oil producers' response to growth in oil prices may also undermine oil market balancing. The EIA's regular and often considerable revisions of the shale industry's performance (towards higher sustainability) signal that the agency does not have a very clear idea about its capabilities either.

We estimate that the period between an oil price shock and peak oil at a shale well takes roughly six months. The first stage, which includes prior operations (in particular obtaining a drilling permit and the drilling), lasts for about three months (Figure 77). The second stage – putting the field on line – averages another two month (Figure 77). Ultimately, peak oil falls on the second month after the well has been put online (Figure 78). Meanwhile, we can see that shale producers have tended to respond more swiftly over the past six months.

The analysis of the leading indicators of shale oil production in the US prompts that oil production will step up considerably by the end of the first quarter in response to the tentative production cut deal of late September, and come in full swing at the end of the second quarter in response to the final agreement of early December.

Figure 77. Lags in response of active shale producers to oil price movements

Figure 78. Monthly oil production by individual companies in the Permian Basin (barrels a day)
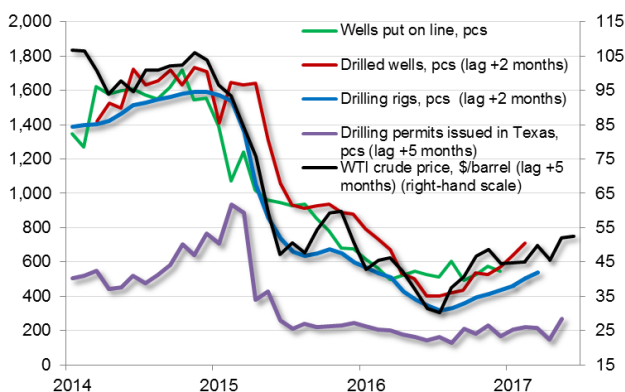
Sources: Bloomberg Finance L.P., Railroad Commission of Texas, R&F Department calculations.
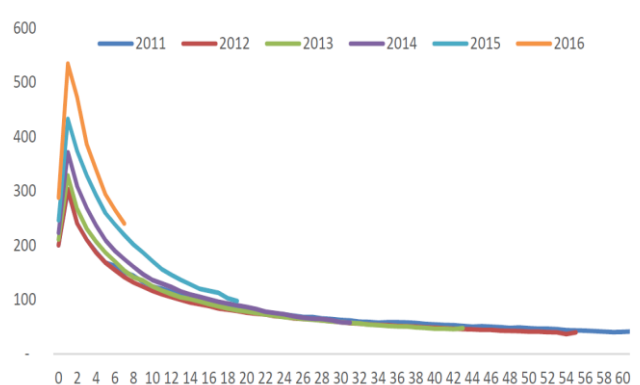
*Source: Oxford Institute for Energy Studies.*

Oil production in the US may be expected to go up in the months to come. Climbing oil prices may well trigger the use of drilled but uncompleted wells (DUCs), which were EIA-estimated to total 5.4 thousand units as of the end of 2016. Should the DUCs be put in operation, the potential oil production output might peak to over 0.5 million barrels a day (Figure 79). In reality, the effect of such scale is unfeasible due to the limited number of rig hands and the assumption that most wells are profitable only if oil prices are considerably higher.

Figure 79. Oil production effect of putting DUCs in operation in the US (thousand barrels a day)
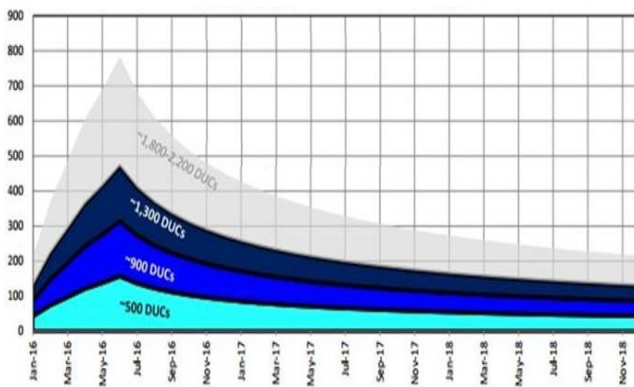
Source: Oil and Gas.

Figure 80. Drilling rigs (pcs) and efficiency of shale oil production in the US (barrels per rig)
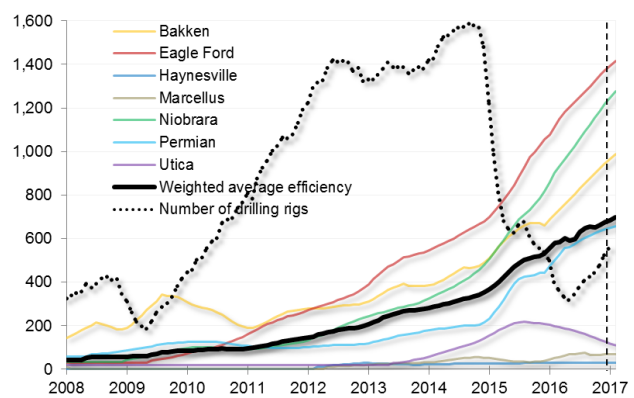

Sources: EIA, Bloomberg Finance L.P., R&F Department calculations.

The ongoing growth in production efficiency is important for enhancing sustainability of shale producers (Figure 80). However, Rystad Energy estimates that in the case of Whiting, an oil company, a decline in production costs results from both structural and cyclical factors (Figure 81). Important structural factors may include an ever increasing shift from the vertical drilling towards the horizontal one that is more time- and money-consuming, but considerably more productive (Figure 82).

Cyclical factors include the relocation of production to better fields and cheaper services of production crews. The surge in production efficiency in early 2015 coincided with a drop in operational rigs (Figure 80). Cyclical factors will be setoff as oil prices go up. Thus, the Financial Times reports that service companies have already announced an increase in prices for their services following the oil price hike.

Figure 81. Breakdown of the change in Whiting's Bakken wellhead breakeven price, US dollars per barrel
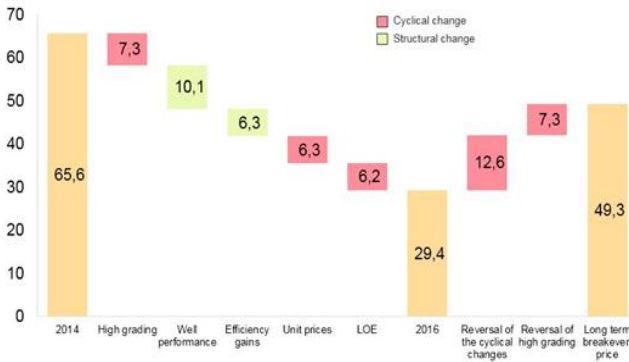
Source: Rystad Energy.

Figure 82. Vertical and horizontal wells and their productivity, the case of the Permian Basin
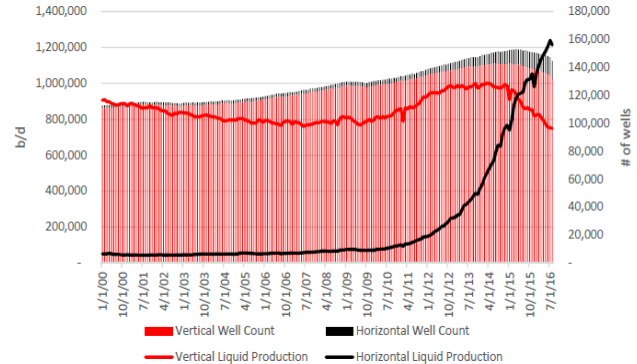
Source: Oxford Institute for Energy Studies.

Despite the climbing oil prices and improving financial position of shale oil producers, not all of them are set to ramp up their operations. The Dallas Fed reports[23] that all indicators signal an increase in shale companies' business activity: their hiring rates outpaced lay-offs and the compensation started to increase for the first time in a long period. Having switched to positive dynamics in the previous quarter, capital costs grew faster. However, only one in three companies is set to step up oil field development and production in response to higher oil prices. The explanation behind it is primarily that more than half of the polled companies are unconvinced that oil exporters will comply with the quotas and current oil prices are sustainable. Thereby, even despite the active hedging, evidenced by the backwardation[24] of WTI futures curve in the medium segment (Figure 83), the effect of shale oil production will be limited at least temporarily.

The EIA expects shale oil production to pass the bottom in January and show a daily growth of 0.2 million barrels throughout 2017 (Figure 83). Gunvor and Goldman Sachs estimated production growth at 0.5-0.6 million barrels a day, which we consider more realistic.

The termination of quotas bears the risks of an even stronger strife for a global market share between oil exporting countries. The BP Energy Outlook through to 2035 outlines that cumulative global oil demand through to 2050 amounts to less than half of today's technically recoverable oil resources. Given slower growth in demand for oil (from 1.3% on average in 1995–2015 to 0.7% in the next two decades), BP expects companies to revise their policies towards accelerated production. According to the Wall Street Journal, oil exporters are going to repair and upgrade their infrastructures at an accelerated pace during the period of restricted production. It poses an additional risk of considerable growth in oil production after the quotas are lifted.

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[23] The report describes the economic activity of oil and gas companies of the Eleventh District – Texas and neighbouring territories, where the key US shale regions are located.
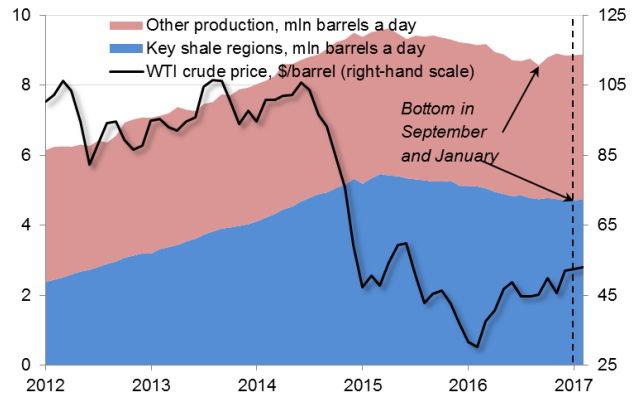[24] The price of a futures contract is trading below the spot price.

Figure 83. WTI futures curve, US dollars
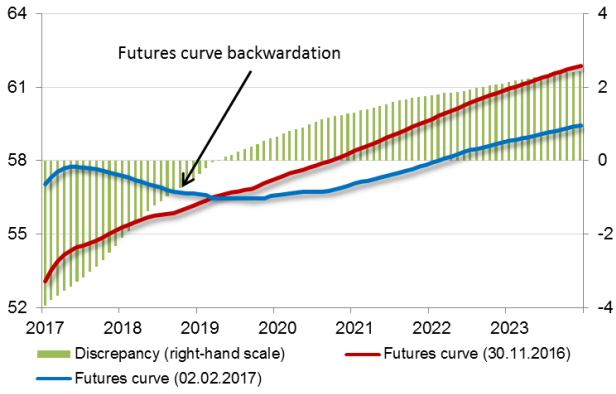
Source: Bloomberg Finance L.P.

Figure 84. Shale and conventional oil production in the US and WTI crude price

Sources: EIA, R&F Department calculations.

2. Outlook: leading indicators
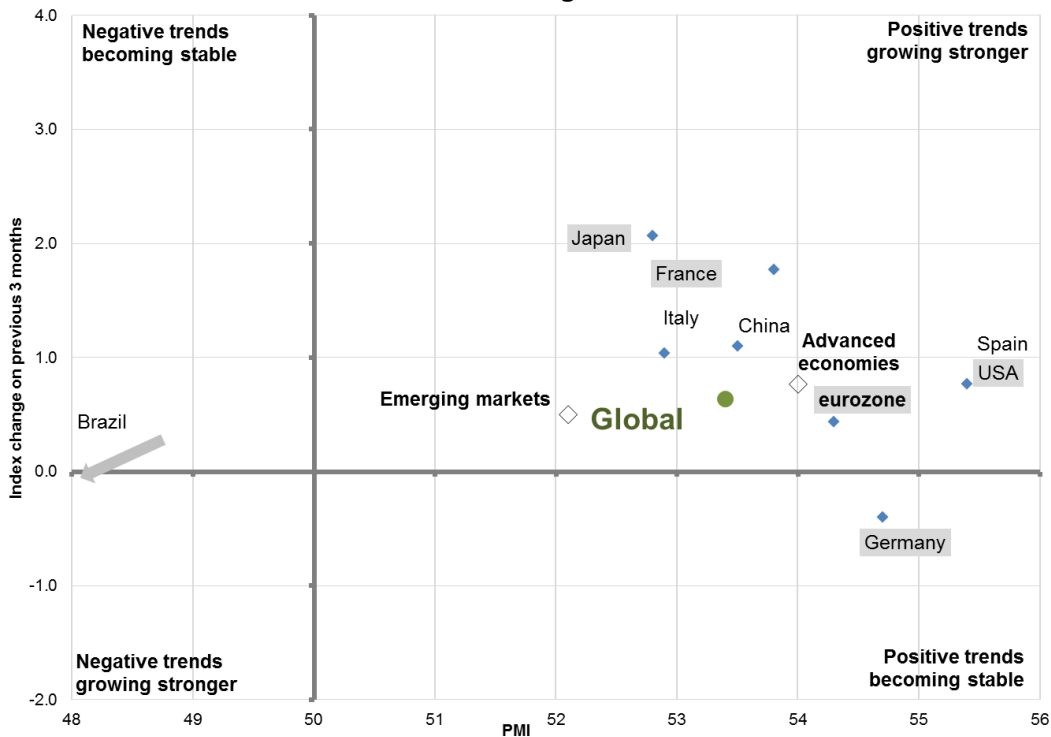
2.1. Global leading indicators

2.1.1. Preliminary PMI in the US and the eurozone signal growth acceleration

Preliminary composite PMI data (Figure 85, highlighted in grey) suggest that the public sector in the US and the eurozone continued to grow sustainably in early 2017.

The composite PMI in the US was up from 54.1 pp to 55.1 pp, reflecting the improvement in market conditions in both manufacturing (growth from 54.3 pp to 55.1 pp), and services (growth from 53.7 pp to 55.1 pp). Jobs continue to grow sustainably signalling an upbeat sentiment of companies propped up by good internal order statistics (28-month high).

The PMI in the eurozone hardly changed in January against the December highs: 54.3 pp and 54.4 pp respectively. That said, PMI statistics suggests a set of promising trends in business activity of the eurozone. They include the highest in nine years monthly growth in employment propped up by good statistics of new orders and growing business sentiment, as well as increasing inflationary pressure in the purchase prices of manufacturing and service companies.

Figure 85. Composite PMI in January and change against the October-December average

* *Highlighted in grey are preliminary January data.*

*Sources: IHS Markit, Bloomberg Finance L.P.*

2.2. What do Russian leading indicators suggest?

2.2.1. Improving GDP nowcast implies sustainable growth

- Index GDP estimate for the fourth quarter is revised upwards to 0.35% QoQ (seasonally adjusted) from 0.2% in December (Figure 86).[25]

- Estimates for the next two quarters suggest that positive GDP dynamics will be sustained and enhanced. Estimates stand at 0.4% QoQ for 2017 Q1 and at 0.5-0.6% QoQ for 2017 Q2, seasonally adjusted.

- Upward revision of the forecasts for the first six months of 2017 is largely propped up by leading business indicators (primarily, PMI indices). Their positive year-end dynamics were reflected in Rosstat's short-term statistics.

- Estimates of GDP growth in 2017 Q1 and Q2 assume that Urals crude price will stand at roughly $48 a barrel.

- Incomparability of Rosstat data on industrial production in November-December 2016 and earlier periods bring uncertainty to our current GDP estimates.

	January 2017	December 2016
	% QoQ SA	% QoQ SA
2016 Q4	**0.35**	0.2
2017 Q1	**0.4**	0.2-0.3
2017 Q2	**0.5-0.6**	0.5

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[25] The estimates may be updated as new statistics are released or revised retrospectively.

Figure 86. Real-time estimates of GDP growth for 2016Q4, %QoQ SA
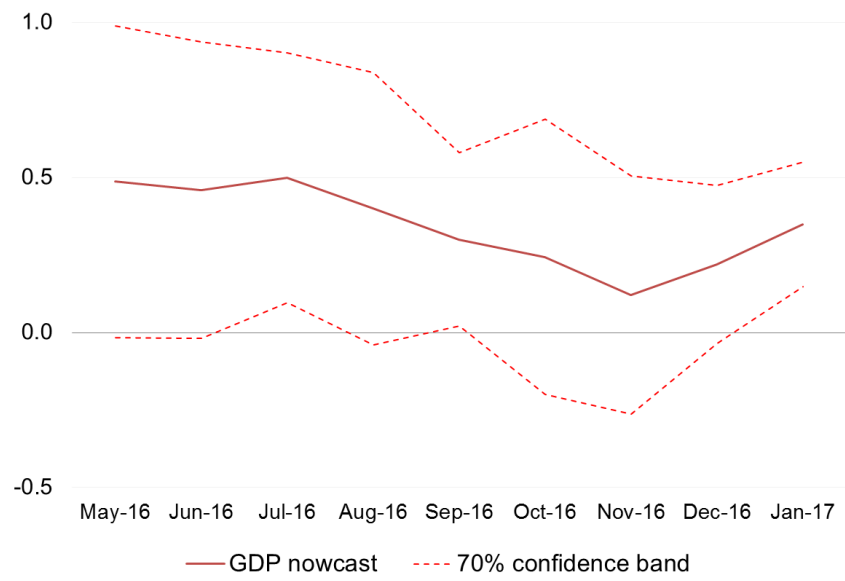
Sources: Rosstat, R&F Department calculations.

3. In focus
Consumption: evidence for decline or growth?

- Rosstat may underestimate real consumption of households due to the specifics of the methodology for calculating retail sales turnover, including deflators and CPI.

- Sales of individual goods and some alternative indicators suggest more favourable dynamics of retail turnover.

- It signals possible underestimation of final consumption in GDP statistics.

Annualised real retail trade turnover – a key indicator of households' consumption – has been going down for the past two years. In 2016, the decline in retail trade turnover slowed down considerably only in September and accelerated its downward movement afterwards (Figure 87). The statistics of GDP utilisation in 2016 suggests that consumption of households made the largest negative contribution to Russian economic performance. Can consumer demand be going down indeed as other GDP components recover? We believe that Rosstat's estimates of retail turnover may underestimate consumption due to the specifics of the methodology for calculating the indicator.

Complications in the estimates of retail turnover are easily exemplified by the drop in annualised sales that was faster in the food rather than non-food segment in the second half of 2016. Such comparative dynamics are illogical, because as income falls and uncertainty goes up, consumers tend to cut the consumption of non-food goods (including durables) rather than essentials, i.e. food (Figure 87).

The total retail trade turnover does not measure up against the sales in individual product categories. We used the data on sales of individual goods from Rosstat's quarterly report on the social and economic situation in Russia to calculate a composite index[26] for estimating retail dynamics. The discrepancy between this indicator and the retail trade turnover index[27] is especially high in 2016 (Figure 88) and may be indicative of overestimation of decline in overall retail trade turnover. Nevertheless, last year's quarterly statistics are based on real-time data, i.e. statistical reports Rosstat receives on a monthly and quarterly basis, and are not final figures. The data will be updated against annual reports and conjugate exponents, such as industrial production indices, real disposable income, etc.

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[26] The index is weighted average of key categories of food products and non-food goods, which jointly account for more than 70% of the total retail trade turnover. The commodity composition is borrowed from the pre-target year.

[27] We used both updated and unrevised data, which Rosstat publishes simultaneously with commodity data.

Figure 87. Retail trade turnover, % YoY
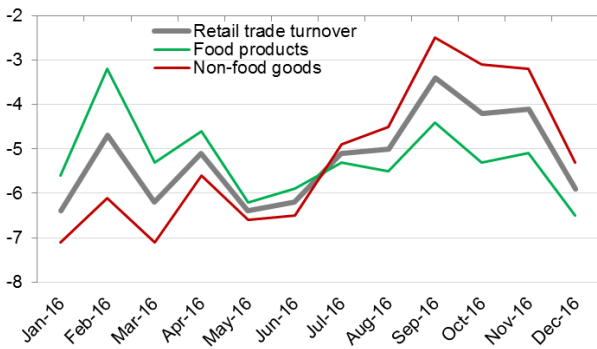
Sources: Rosstat, R&F Department calculations.

Figure 88. Retail trade turnover, % year-to-corresponding period of previous year
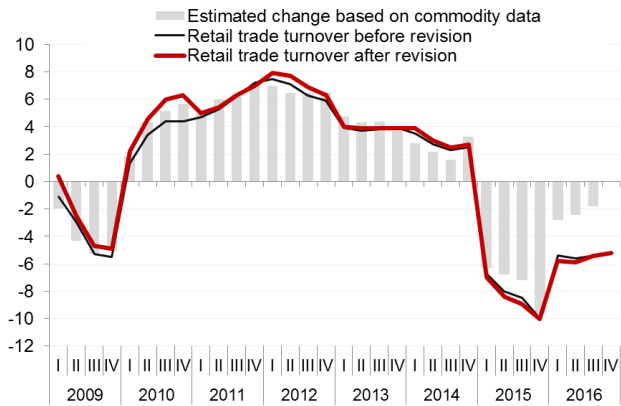
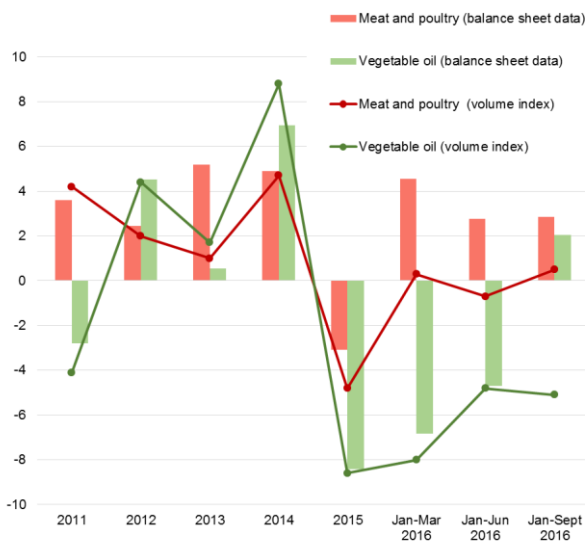*Sources: Rosstat, R&F Department calculations.*

Rosstat supplements its estimates with information about sales of some food products calculated by the balancing method, which takes into account exports and imports, inventory changes, production and intermediate consumption. Everything is measured in physical volumes (rather than through calculating changes in physical volumes through nominal volumes using a deflator[28]). These estimates supplement the indicators used to update the annualised retail trade turnover for individual commodities. Meat product and vegetable oil statistics shows that in the previous years these indicators matched up with Rosstat's revised annual estimates for the said goods (Figure 89).

To make a comparison, we calculated food turnover estimated by the balancing method and by adjusting nominal turnover using a deflator[29] (Figure 90). The discrepancy in year-on-year dynamics for the period between January and September stood at more than 2% to the benefit of the balancing method. It cannot be attributed to the 2015 base effect – a drop in retail turnover, estimated by the balancing methods, was also lower during this period than that estimated by the other method.

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[28] This method is used to calculate the overall retail trade turnover and the abovementioned sales of individual goods.

[29] Included in the calculation are meat and poultry, vegetable and animal oils and fats, cheese, flour and cereals. These goods make up about 25% of food retail turnover.

Figure 89. Retail trade turnover and sales of meat product and vegetable oil, as % of corresponding period of previous year

Figure 90. Retail trade turnover and staple food sales, % YoY

Sources: Rosstat, R&F Department calculations.
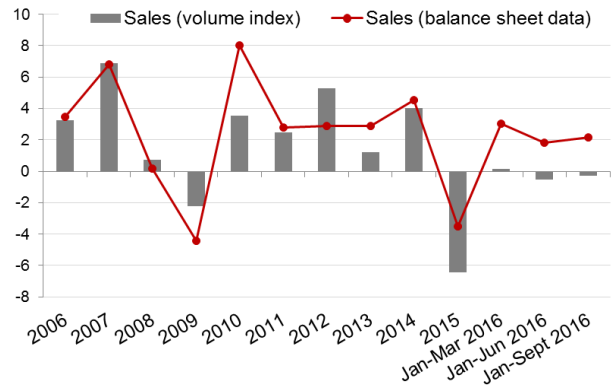
Sources: Rosstat, R&F Department calculations.

The overestimation of decline in retail trade turnover may result from the use of an overstated deflator to calculate the changes in physical volume of retail trade turnover. The deflator is an aggregate price index based on the commodity composition of retail trade turnover and consumer price index of goods. For example, Rosstat's methodology does not include discounts valid for less than a week in CPI calculation. Most large retailers grant discounts valid during short promo offerings (e.g. weekend discounts) and often change the range of products offered at a lower price. In addition, almost all major retail chains offer a cumulative discount, which is also excluded from price statistics. Rosstat also leaves out other discounts and promo offerings for customers.[30]

Having said that, the number of customers who do more than half of their shopping on promotion has been up to 19%, and FMCG purchases on promotion stand at 35%.[31] The 2016 Q1 research by Nielsen Promo Pressure[32] suggests that 46% of sales were promotional, 9 pp higher than in 2015 Q1. The year 2015 saw an increase in both the discount rate and commodity items on promotion. This trend seems to have held in 2016. Though most discount sales are registered in non-food segment, promotional offering of food products keeps expanding. None of the categories under research has shown a drop in sales under either price or non-price promotions.

Attempts have recently been made to make alternative estimates of price growth. They are designed to indicate actual changes in final prices for customers and take into

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[30] For details, refer to Clause 4.4 of Rosstat Order No. 734, dated 30 December 2014, 'On Approving the Official Statistical Methodology for Statistical Oversight of Consumer Prices for Goods and Services and Calculating Consumer Price Indices'.

[31] As of September 2016: http://romir.ru/studies/828_1475010000/

[32] Nielsen 'Promotions in Russia: the more the better?', 6 June 2016: http://www.nielsen.com/ru/ru/insights/news/2016/q1-promo-pressure-Russia.html.

account the factors excluded from the CPI due to the calculation methodology. The Pyaterochka Index serves as example of such indicators. It is published on the website of X5 Retail Group and reflects the ratio between the cost of average-price food products in Pyaterochka stores and the Rosstat-calculated cost of a narrow set of food items.[33] Thus, the average-price food products purchasable in Pyaterochka stores in December 2016 cost 5% less than the same food items at Rosstat-calculated average price, whereas in December 2015 the difference was 0.5%.[34]

Another deflator-related challenge is that it does not factor in possible changes in consumer preferences or the range of products during the year. Specialists from regional state statistical agencies select certain product brands and models (at least five in general) in each location to register prices proportionally to their sales as assessed through surveys among sellers. This list is updated at most once a year (subject to exceptions[35]). Consumers may switch to cheaper brands over the year (e.g., when buying household appliances), therefore physical volume of sales may go up even if the monetary value of sales holds. The dynamics calculated using a deflator is more likely to be more modest.

The Rosstat-published information about sustainably negative annual growth in retail trade turnover contradicts the dynamics of alternative indicators. For example, Romir Research Holding's data on Russians' daily spending[36] suggest that real consumer expenditures in December 2016 were slightly below the 2015 readings (discrepancy of 1 pp), whereas in November 2016 real expenses matched the November 2015 data (Figure 91).

**Figure 91. Real daily expenses of households,
%, January 2012 = 100%**
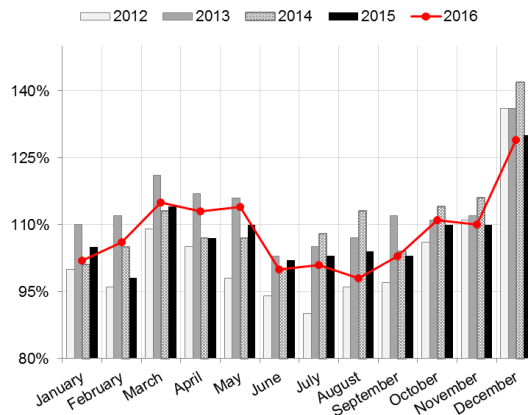
Source: Romir Scan Panel.

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[33] The Pyaterochka index in December 2016:
https://www.x5.ru/ru/Pages/Media/Index_Pyaterochka.aspx.
[34] Along with the above reasons, these dynamics may result from the retailer's pricing policy. That said, gross profit margin of X5 Retail Group does not point to a considerable increase in price investments.
[35] For details, refer to Clause 4.5 of Rosstat Order No. 734, dated 30 December 2014, 'On Approving the Official Statistical Methodology for Statistical Oversight of Consumer Prices for Goods and Services and Calculating Consumer Price Indices'.
[36] Romir Research Holding: 'Economical New Year', 12 January 2017:
http://romir.ru/studies/745_1452632400.

Given that Rosstat estimates final consumption of households through GDP statistics and factors in retail sales statistics, possible underestimation of retail sales inflicted by the specifics of calculation methodology may result in underestimation of final consumption and, consequently, GDP (see Section 1.2.1 '2016 GDP: Recession's depth and length might be overestimated').

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