



WORLD BANK GROUP

MODEST GROWTH AHEAD

39 RUSSIA ECONOMIC REPORT
MAY 2018





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This report is produced twice a year by World Bank economists in the Macroeconomics, Trade and Investment (MTI) Global Practice. The team that prepared this edition was led by Apurva Sanghi (Lead Economist for the Russian Federation, asanghi@worldbank.org) and consisted of Olga Emelyanova (Economist, GMTE2), Mikhail Matytsin (Research Analyst, GPV03), Irina Rostovtseva (Research Analyst, GMTE2), Katerina Levitanskaya (Senior Financial Sector Specialist, GFCE1), Eva Gutierrez (Lead Financial Sector Specialist, GFCEE), Yoki Okawa (Economist, DECPG), John Baffes (Senior Economist, DECPG), Peter Stephen Oliver Nagle (Economist, DECPG), Xinghao Gong (Research Analyst, DECPG). Oleg Petrov (Senior Program Officer, GTD09) and the team consisted of Asya Rudkovskaya (Consultant, GTD09) and Yaroslav Eferin (Consultant, GTD09) authored the focus note on Russia's digital economy based on a paper titled "The EAEU 2025 digital agenda: prospects and recommendations". Peer reviewers included Yaroslav Baklzhansky (Advisor, Macroeconomic Policy Department, Eurasian Economic Commission) and Julio Revilla (Lead Economist, GMTE2). The report was edited by Christopher Pala (Consultant) and the graphic designer was Robert Waiharo (Consultant). The team would like to thank Andras Horvai (Country Director for Russia) and Maria De los Angeles Cuqui Gonzalez Miranda (Practice Manager, MTI Global Practice) for their advice and support. The team also would like to express their gratitude to the Department for Research and Forecasting of the Central Bank, Department for Macroeconomic Forecasting of the Ministry of Economic Development and Department for the budget policy and strategic planning of the Ministry of Finance for the collaboration. This report went to press on May 24, 2018.

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ACRONYMS AND ABBREVIATIONS

AMCs	Asset Management Companies
APR	Annual Percentage Rate
Bbl	Oil Barrel
B2B	Business-To-Business
B2C	Business-To-Consumer
B2E	Business-To-Employee
BRICS	Brazil, Russia, India, China, and South Africa (emerging economies)
BSCF	Banking Sector Consolidation Fund
CBR	Central Bank of the Russian Federation
CDS	Credit - Default Swap
CIT	Corporate Income Tax
CPI	Consumer Price Index
DECA	Digital Economy Country Assessment
EAEU	Eurasian Economic Union
EMDEs	Emerging Markets and Developing Economies
ERP	Enterprise Resource Planning
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ICO	Initial Coin Offering
ICT	Information and Communication Technology
IEA	International Energy Agency
INSEAD	European Institute of Business Administration
IT	Information Technology
LFP	Labor Force Participation
M2	Money Supply
NAMA	National Asset Management Agency
NPL	Non-Performing Loan
OFZ	Federal Loan Bonds
OPEC	Organization of the Petroleum Exporting Countries
PISA	Program for International Student Assessment
PMI	Purchasing Managers' Index
PSB	Promsvyazbank
R&D	Research and Development
REER	Real Effective Exchange Rate
Rosstat	Russian Federal State Statistics Service
RTSI	Russian Trading System Index
SA	Seasonally Adjusted
SAREB	The Company for the Management of Assets proceeding from Restructuring of the Banking System
SMEs	Small and Medium-Sized Enterprises
TOT	Terms of Trade
WEF	World Economic Forum
WTI	West Texas Intermediate
y-o-y	Year-on-year

EXECUTIVE SUMMARY

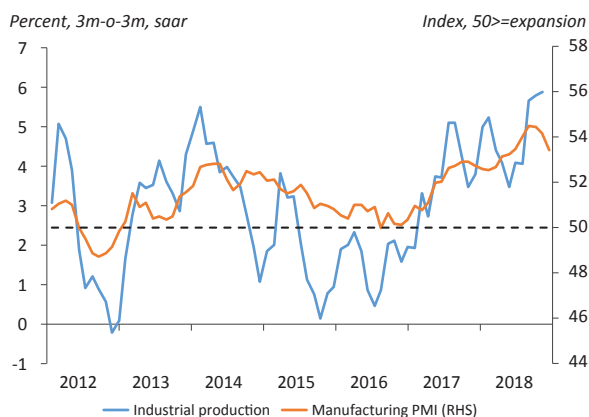
Global growth continued its 2017 momentum in early 2018. Global growth reached a stronger-than-expected 3 percent in 2017 — a notable recovery from a post-crisis low of 2.4 percent in 2016. It is currently expected to peak at 3.1 percent in 2018. Recoveries in investment, manufacturing, and trade continue as commodity-exporting developing economies benefit from firming commodity prices (Figure 1a). The improvement reflects a broad-based recovery in advanced economies, robust growth in commodity-importing Emerging Markets and Developing Economies (EMDEs), and an ongoing rebound in commodity exporters. Growth in China – and important trading partner for Russia – is expected to continue its gradual slowdown in 2018 following a stronger-than-expected 6.9 percent in 2017.

Global trade maintained its strength while the risk of escalating trade restrictions increased. The recovery of trade continued in early 2018, supported by strong demand, especially in the manufacturing sector. On the policy front, the risk of escalating trade tensions increased, following tit-for-tat trade tariff announcements by the United States and

China. The impact of these measures will depend on their ultimate scope, but a rise in trade-policy uncertainty could weigh on confidence, financial-market sentiment, and eventually on economic activity. In financial markets, prospects of a faster withdrawal of monetary policy accommodation in advanced economies have led to rising global borrowing costs.

Oil prices, which firmed up in 2017, are projected to average USD 65/bbl in 2018 and 2019, and USD 66/bbl in 2020, but may increase further, especially in the short term. This stems from the recently announced renewal of U.S. sanctions on Iran that have put upward pressure on oil prices (prior sanctions resulted in a reduction of around 1mb/d of Iranian exports). An escalation of trade tensions could also hit oil demand, particularly for fuel oil. The longer-term outlook for oil prices depends heavily on the balance between rising U.S. production and the persistence and depth of OPEC production cuts. The target for OPEC's cuts was for oil inventories to return to their five-year average. While this target has now been achieved, both Saudi Arabia and Russia are discussing other measures to ensure the success of their production cuts. Saudi Arabia would also like to shift the existing OPEC/non-OPEC agreement cooperation to a longer-term arrangement, possibly over 10 or 20 years. At its June meeting, OPEC is scheduled to assess market developments and to consider extending or amending output limits in conjunction with non-OPEC producers. An extension of the cuts proposed by some members would further tighten oil markets. However, higher prices would also benefit the U.S. shale industry and may result in faster output growth despite increasingly binding capacity constraints in the short-term. The evolution of geopolitical tensions will also play an important role in determining oil prices.

Figure 1a: Global Growth continued its momentum in early 2018



Note: Seasonally adjusted quarterly growth, annualized. PMI stands for Purchasing Manager's Index.
Source: Global Monthly, World Bank.

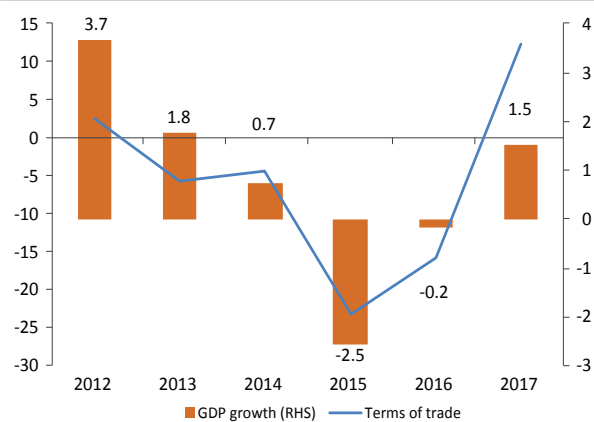
Supported by deepening macro-economic stability and gradual monetary loosening, Russia's economy continued its recovery in 2017.

Growth momentum towards the end of 2017 slowed down, but picked up in the first quarter of 2018. Growth in 2017 was mainly driven by non-tradable sectors. The contribution of tradable sectors to GDP growth was limited and amounted to just 0.2 pp in 2017 (compared to 0.3 pp in 2016). Manufacturing, which stabilized in 2016, registered growth but at a marginal rate of 0.1 percent, y/y. Moreover, the growth momentum was uneven. It stalled in the third quarter and turned negative in the fourth quarter of 2017 due to lower investment demand, before picking up again in the first quarter of 2018 (Figures 2a and 3a). While real wages and pensions increased on the back of low inflation, growth in real disposable incomes remained negative in 2017, driven by a decline in income from other sources, including some not directly registered by statistics. The poverty rate in 2017 remained at the levels close to 2016, and the extreme poverty rate remained marginal, below one percent. Unemployment declined further in the beginning of 2018 to 5 percent.

In 2017, robust external demand supported export growth. Exports grew by 5.1 percent, y/y, in real terms in 2017 (compared to 3.3 percent, y/y, in

Figure 2a: Russia's economy continued its recovery in 2017

(GDP growth, percent, y/y, TOT, percent, y/y)



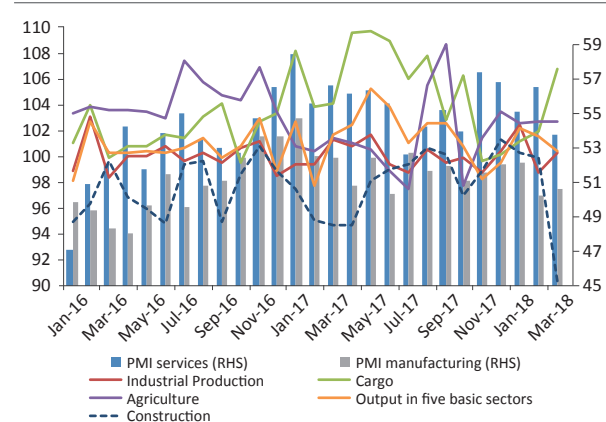
Source: Rosstat, Haver Analytics.

2016). Export growth in goods was mainly fueled by growing exports of non-oil goods. Export growth in services also demonstrated robust growth (+14.4 percent, y/y, in value¹), driven by an increase in exports of transport services, business trips, construction, ICT and other business services. Yet, as discussed in Box 1 of the main report, at almost 59 percent, the share of oil and gas exports in total exports of good remains high (Figure 4a).

Russia's balance of payments remained stable.

A favorable external environment supported the current account in 2017 and the beginning of 2018 (January – March). An increase in the trade surplus due to higher energy prices was the key factor behind the strengthening of the current account. In 2017, this was mirrored by higher net capital outflows, mainly from the banking sector, which continued its external-debt repayments. In the first quarter of 2018, net capital outflows slightly decreased, compared to the same period last year and were largely the result of an increase in the net foreign assets of the non-banking sector. International reserves gained USD 15.4 billion in 2017 and 14.8 billion in January – March 2018 largely because of currency purchases by the Ministry of Finance in the fiscal rule framework. In 2017, the government further scaled up its international borrowing by issuing Eurobonds and selling OFZ bonds (coupon-

Figure 3a: Growth momentum picked up in the first quarter of 2018

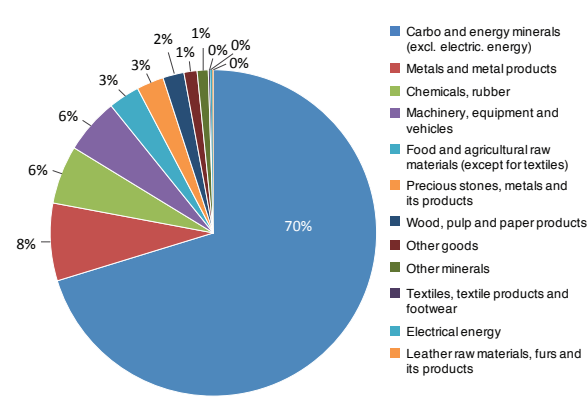


Source: Rosstat.

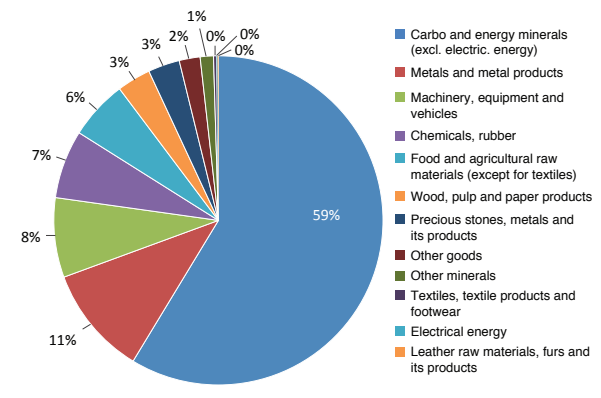
¹ Data for export volume are not available.

Figure 4a: The share of oil and gas exports in total export of goods by value remains high – at 58.7 percent

Structure of exports in 2013



Structure of exports in 2017



Source: Federal Customs Service of Russia.

bearing federal loan bonds) to non-residents in the secondary market (the share of non-residents in OFZ bond ownership reached 33 percent by the end of 2017, compared to 26.9 in the end of 2016). Total external debt of all sectors as share of GDP reached 32.9 percent in 2017 compared to 39.7 percent in 2016. In nominal terms, adjusted for exchange rate movements, Russia’s external liabilities remained almost unchanged in 2017. An increase in government borrowing was compensated by continuing debt repayments by the banking sector.

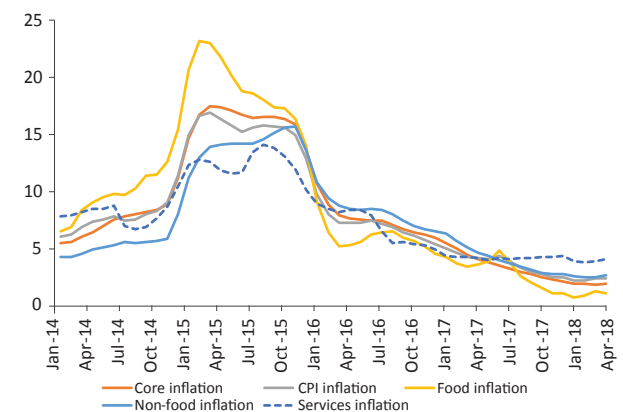
Monetary policy remained consistent with the inflation-targeting regime, and is moving from moderately tight to neutral. Moderately tight monetary and fiscal policies, in combination with a favorable external environment and some one-off factors, let the Central Bank of Russia (CBR) to reach a record-low level of CPI inflation in 2017. CBR continued its gradual approach to monetary easing, moving from a moderately tight policy to a neutral one. Annual inflation now stands at a record-low level, even below the CBR’s target of 4 percent, while inflation expectations, though trending downward, remain elevated (Figure 5a). However, pro-inflationary factors are on the rise, as discussed later in the outlook section.

The banking sector’s fundamentals are largely stable but the share of state-controlled banking assets grew because of the continuing CBR clean-

up. In December 2017, on the heels of the earlier bailout of Otkritie and B&N, the CBR announced the bailout of Promsvyazbank, the third large private bank and the second systemically important institution to be rescued via the Banking Sector Consolidation Fund (BSCF). Because of the banking-sector clean-up, the share of state-controlled banks in the combined assets of the Russian banking system increased to nearly 70 percent. In April 2018, the CBR announced that it will create a “bad bank” to transfer distressed assets in the amount of RUB 1.1 trillion from these three large private banks. Trust Bank, a failed bank acquired by Otkritie, will act as an asset management company (Box 3 in the main report provides an overview of issues to consider when setting up bad banks based on international

Figure 5a: Inflation is at a record-low level below the CBR’s target

(CPI index and its components, percent, y-o-y)

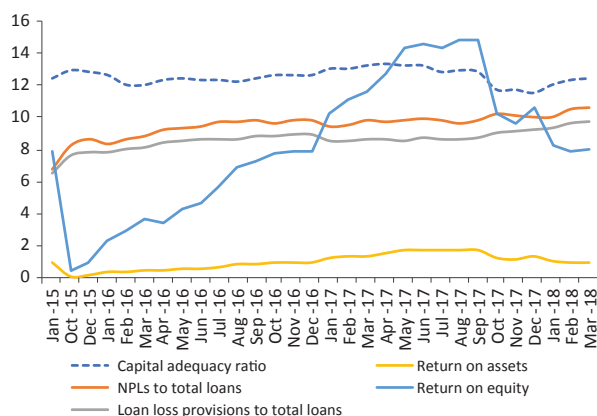


Source: CBR and Haver Analytics.

experiences). More detailed operational features and financial projections on the “bad bank” have yet to be disclosed. As discussed in the previous RER, these funds were provided by the CBR, as opposed to budget sources, which may result in monetization of resolution costs and undermines fiscal transparency (Box 3, RER #38). Despite these developments, retail credit continued to grow at double digits and overall financial sector indicators remained broadly stable (Figure 6a). Credit growth to the corporate sector in rubles also accelerated: it grew by 4.4 percent, y/y, in the last six months, compared to 1.9 percent during the same period a year ago.

Figure 6a: Overall financial sector indicators remained broadly stable

(Key credit and performance indicators, percent)



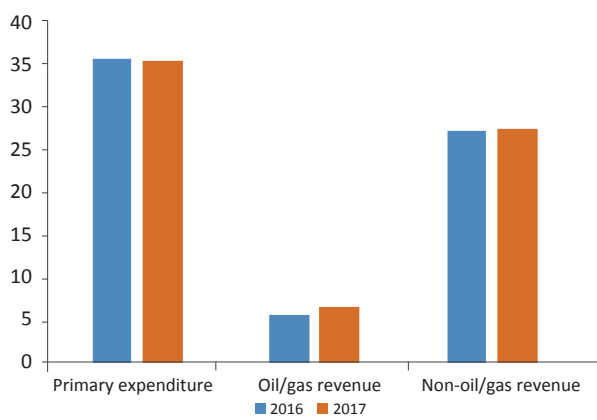
Source: CBR.

In 2017, both the general and federal government fiscal stance improved, helped by higher revenues and lower expenditures, as the authorities adhered to a path of fiscal consolidation (Figures 7a and 8a). The general government’s fiscal stance improved in 2017. The overall general government deficit improved to a deficit of 1.5 percent of GDP (compared to 3.6 percent of GDP in 2016). The federal budget deficit narrowed to 1.4 percent of GDP from 3.4 percent of GDP in 2016. This reduction was a result of growing oil and gas revenues, mostly because of increases in energy prices, as well as declining expenditures. On the revenue side, federal budget revenues increased to 16.4 percent of GDP from 15.6 percent of GDP in 2016, with oil/gas revenues higher by 0.9 percent of GDP. On the expenditure side, compared to 2016, primary expenditures decreased by 1.3 percent of GDP, largely due to lower spending on defense, and lower spending compared to the one envisaged in the federal budget law (0.6 percent of GDP). In 2017, civil servant salaries and the savings pillar of the pension system were frozen, as in 2015-2016 (2014-2016 for the savings pillar).

In 2017, the regions’ budget gained from the continuing recovery and positive terms of trade. The consolidated regional budget registered a primary surplus of 0.1 percent of GDP in 2017, compared to 0.2 percent of GDP in 2016 (Figure

Figure 7a: The General Budget Primary Balance improved in 2017

(% of GDP)



Source: Haver Analytics.

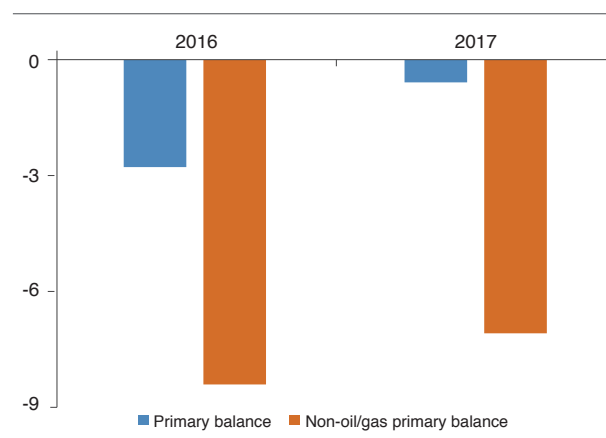
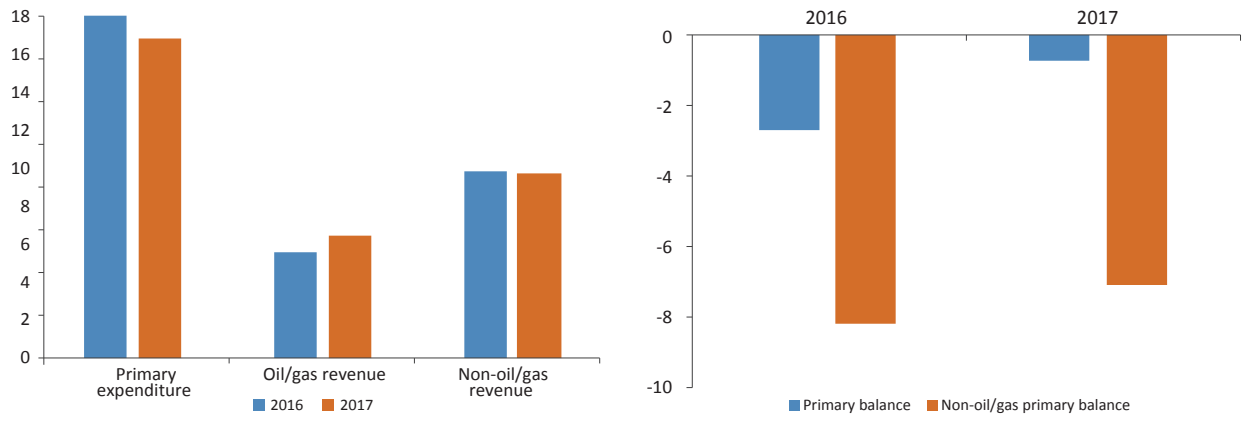


Figure 8a: The Federal Budget Stance improved in 2017
(% of GDP)

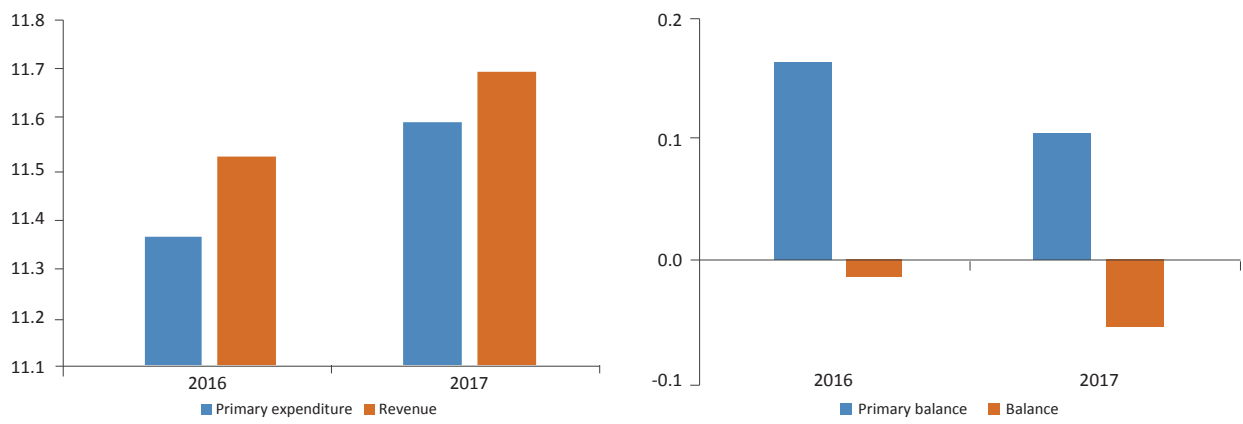


Source: Haver Analytics.

9a). The economic recovery increased the revenues of the regional budgets, with a slight increase in primary expenditures (reasons for these increases are discussed in the main report). Regional debt also decreased to 2.5 percent of GDP from 2.7 percent in 2016. However, aggregate debt dynamics concealed substantial variations in debt levels among regions. By the end of 2017, there were 7 regions, out of more than 80, with a share of debt exceeding the region’s own revenues (the same number as at the end of 2016). In 2018, the Ministry of Finance is not expected to provide new budgetary loans. To support regions with high debt burden, starting 2018, the Ministry initiated a long-term program for state debt restructuring. Extra-budgetary funds were balanced, after posting a deficit of 0.2 percent of GDP in 2016.

Russia’s growth prospects for 2018 – 2020 remain modest, with growth forecasted to be between 1.5 and 1.8 percent in the 2018 – 2020 period. However, in the short-term, these forecasts may change due to changing oil prices. Relatively high oil prices, continued momentum in the global economic growth and macro stabilization would support growth. Yet, the growth forecast for Russia for 2018 has been slightly decreased (to 1.5 percent a year) due to carry-over effect from a weak second half of 2017 and lower than expected growth in the first quarter of 2018, aggravated by some uncertainty arising from the latest sanctions (Box 2 in the main report discusses the new US sanctions against Russia that were imposed on April 6, 2018). Growth projections for 2019 and 2020 stand at 1.8 percent a year (Figure 10a). Although the fiscal rule

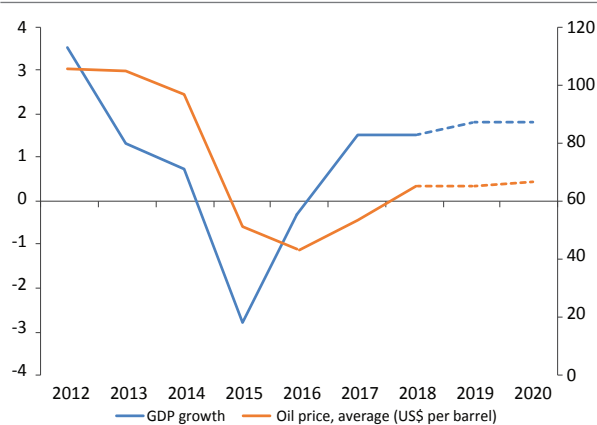
Figure 9a: Regional budget revenues gained from the economic recovery and positive terms of trade
(% of GDP)



Source: Haver Analytics.

has reduced sensitivity to oil prices, these forecasts are subject to changing oil prices. For instance, a simulated rise of 15 percent in oil prices (i.e. if oil prices rose to USD 75 /bbl in 2018 and 2019), that would increase growth to 1.7 percent for 2018 and 2.0 percent in 2019 (Figure 32, main report).

Figure 10a: The growth forecast for Russia for 2018 has been slightly decreased
(real GDP growth, percent)



Source: Rosstat, World Bank.

Consumer demand is expected to be the main engine of GDP growth in 2018-2020. In the forecast period of 2018-2020, growth in gross fixed capital formation is expected to slow down compared to 2017, when most large public infrastructure projects were undertaken.

The poverty rate is expected to decrease slightly due to low inflation and recoveries in private income and consumption, but remains above the pre-crisis level. Driven by a rebound in disposable income and consumption, the poverty headcount is expected to have declined marginally in 2017 to 13.2 percent in the baseline scenario, after reaching 13.3 percent in 2016 (Figure 34, main report). The poverty rate is projected to decline in the baseline scenario in 2018, 2019 and 2020 to 12.5, 11.9 and 11.4 percent, respectively, as income and consumption grow further. Among the factors that could fuel real income growth are a deceleration in inflation and a general recovery of the economy.

The outlook is subject to both favorable and unfavorable risks. Favorable risk factors come primarily from higher than expected oil prices. Unfavorable risk factors include marked escalation of trade tensions and restrictions among major economies, which could derail the recovery in global trade and negatively impact confidence and investment worldwide. Other external unfavorable risk factors include a further expansion of sanctions. A sudden tightening of global financing conditions could be triggered by a reassessment of inflation risks or by shifting expectations about monetary or fiscal policies across major advanced economies. Surges in volatility in financial markets can affect expectations for the exchange rate and inflation. Domestic pro-inflationary risks stem mainly from the closing output gap, elevated inflation expectations, a tight labor market, and high food-inflation volatility. The steep growth in nominal wages, if not followed by growing productivity, could also be a pro-inflationary risk in the medium-term. And although the performance of the banking sector is expected to remain stable, the bailout of three large private banks points to the continuing fragility in the sector, while the quality of capital and assets linked to related-party lending will likely remain a concern.

While the government has set in place macro fundamentals for growth, certain micro fundamentals still need to be addressed. By switching to a flexible exchange rate regime, introducing the fiscal rule, and continued inflation targeting, the government has set important macro fundamentals for growth. Meanwhile, achievement of the goals that were recently set by the President's May 2018 decree (keeping economic growth above the global level, the creation of highly productive export oriented sub-sectors in agriculture and manufacturing) may face challenges because of large state footprint and other structural problems. Improving micro fundamentals for growth becomes necessary to increase productivity and put Russia on a higher growth path. As analyzed in detail in previous reports², this entails limiting the role of

² World Bank 2016: "Systematic Country Diagnostic for the Russian Federation: Pathways to Inclusive Growth." World Bank 2017: "Russia Economic Report #37. From recession to recovery."

the state in the economy, improving institutional and regulatory frameworks, and promoting fair competition, among others. Achieving higher growth rates and improving social assistance targeting would also allow the government to reduce poverty rates – another important goal set in the President’s decree.

Part 3 of the main report discusses how Russia can accelerate its transformation to a digital economy. A strategic focus on digital transformation has enabled Russia to build a national digital

infrastructure to support universal broadband and mobile communications. However, for Russia to gain significant socio-economic benefits from digital transformation, it will need to implement policies that will accelerate the digital transformation of the economy’s traditional enterprise sector, promote R&D, innovation and entrepreneurship and enable effective execution not only at the national level, but also at the regional level, as well as that of the Eurasian Economic Union level. Part 3 of the report analyzes and discusses these issues.

PART I

RECENT ECONOMIC DEVELOPMENTS



1.1 Global growth: solid momentum

Global growth remains robust in early 2018. Global trade remained strong, but the risk of escalating trade restrictions increased.

Global growth continued its 2017 momentum in early 2018. Global activity remains robust. The World Bank's January 2018 forecast is for global growth to edge up to 3.1 percent in 2018, highest after 2011, while some high frequency data suggests momentum has eased recently. Recoveries in investment, manufacturing, and trade continue as commodity-exporting developing economies benefit from firming commodity prices (Figure 1). The improvement reflects a broad-based recovery in advanced economies, robust growth in commodity-importing EMDEs, and an ongoing rebound in commodity exporters. Growth in China is expected to continue its gradual slowdown in 2018 following a stronger-than-expected 6.9 percent in 2017.

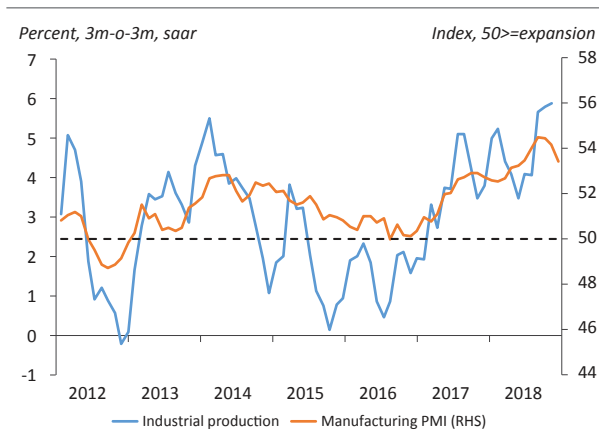
Global trade maintained its strength while the risk of escalating trade restrictions increased. The recovery of trade continued in the start of 2018, supported by strong demand, especially in the manufacturing sector. On the policy front, the risk of escalating trade protectionism increased, following tit-for-tat trade tariff announcements by the United States and China. The impact of these measures will depend on their ultimate scope,

but a rise in trade-policy uncertainty could weigh on confidence, financial-market sentiment, and eventually on activity. In the financial market, prospects of a faster withdrawal of monetary policy accommodation in advanced economies have led to rising global borrowing costs and depreciation of currency for emerging and developing economy since the start of 2018.

Following a weak first half of 2017, oil prices rose sharply in the latter half of the year. Strong oil consumption growth, geopolitical tensions, and greater-than-expected compliance by the 22 OPEC and non-OPEC producers to their agreed production cuts helped tip the market into deficit and reduced inventories (Figure 3A). Oil inventories are now just 30 million barrels above their five-year average, which was the original goal of OPEC's production cuts.

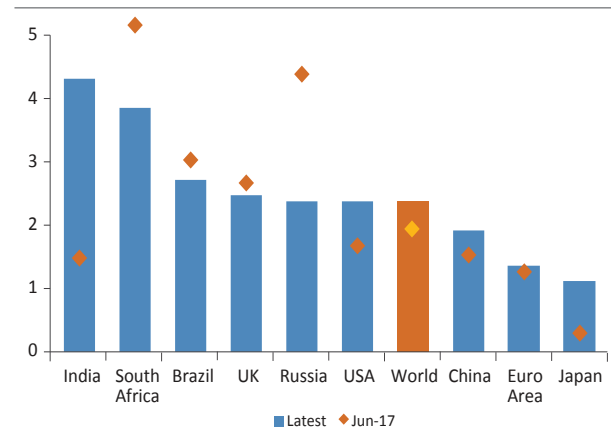
Oil prices continued to rise in the first quarter of 2018 on strong consumption growth, with the main international marker, Brent, briefly topping USD 70/bbl in January. Prices rose further in May, with Brent reaching USD 79/bbl, its highest level

Figure 1: Global industrial production growth and manufacturing PMI



Note: Seasonally adjusted quarterly growth, annualized. PMI stands for Purchasing Manager's Index.
Source: Haver Analytics, World Bank.

Figure 2: Inflation in selected economies (percent, year-on-year)



Source: Global Monthly, World Bank.

since November 2014. Rising geopolitical tensions threatened oil exports on several fronts, such as the reinstatement of U.S. sanctions against Iran, military escalation in Syria, and tensions between Saudi Arabia and Iran. OPEC’s supply cuts have also continued to be deeper than expected, worsened by unplanned production losses in Venezuela, where supply has fallen by more than half a million barrels per day compared to last year.

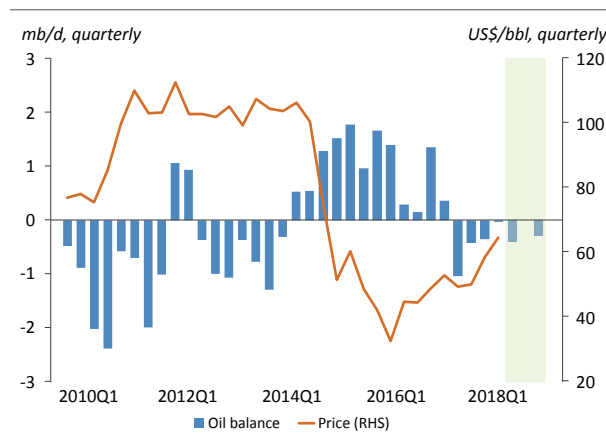
The impact of the substantial production cuts by these countries has been countered by continued increases in U.S. production (Figure 3B). The number of rigs in the United States has increased by nearly 500 from its low in 2016 to 844 in mid-May 2018 (Figure 3C). The United States has overtaken

Saudi Arabia to become the world’s second-largest crude oil producer after Russia (Figure 3D).

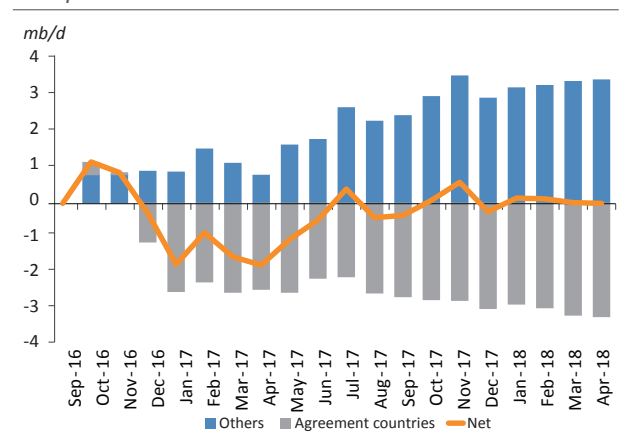
Crude oil prices are projected to average USD 65/bbl in 2018 and 2019, and USD 66/bbl in 2020. The longer-term outlook for oil prices depends heavily on the balance between rising U.S. production and the persistence and depth of OPEC production cuts. The target for OPEC’s cuts was for oil inventories to return to their five-year average. While this target has now been achieved, both Saudi Arabia and Russia are discussing other measures to ensure the success of their production cuts. Saudi Arabia would also like to shift the existing OPEC/non-OPEC agreement cooperation with Russia and other non-OPEC producers to a longer-term arrangement,

Figure 3: Following a weak first half of 2017, oil prices rose sharply in the latter half of the year. Oil prices continued to rise in the first quarter of 2018 on strong consumption growth

A. World oil balance and oil price



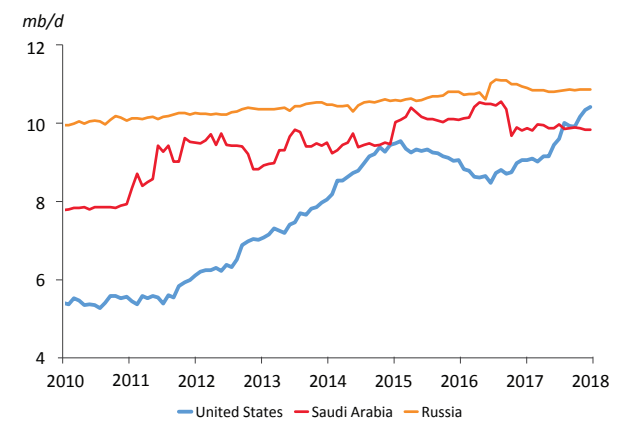
B. Cumulative change in oil production since September 2016



C. U.S. oil rig count and oil prices, weekly



D. Crude oil production



Note: A. Shaded area (2018Q2-2018Q4) represents IEA projections. OPEC crude oil production for 2018 is assumed at 32.0 mb/d. Sources: Energy Information Administration, International Energy Agency, World Bank.

possibly over 10 or 20 years. At its June meeting, OPEC is scheduled to assess market developments and to consider extending or amending output limits in conjunction with non-OPEC producers.

An extension of the cuts proposed by some members would further tighten oil markets. However, higher prices would also benefit the U.S. shale industry and may result in faster output

growth despite increasingly binding capacity constraints in the short-term. The evolution of geopolitical tensions will also play an important role in determining oil prices. The recently announced renewal of sanctions on Iran is likely to have an adverse impact – prior sanctions resulted in a reduction of around 1mb/d of Iranian exports. An escalation of trade tensions could also hit oil demand, particularly for fuel oil.

1.2 Russia: modest 2017 growth led by non-tradable sectors

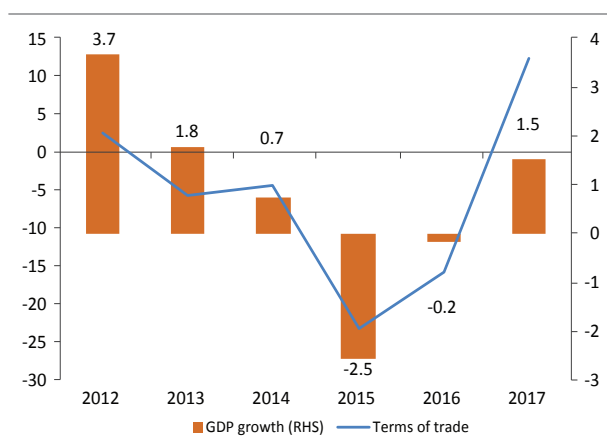
In 2017, the Russian economy continued recovering from a “soft” recession that started in the third quarter of 2014 and continued for nine quarters. As for growth composition in 2017, it was mainly driven by non-tradable sectors. As for growth dynamics, momentum was uneven, stalling in the third quarter and turning negative in the fourth quarter of 2017. Growth momentum picked up in the first quarter of 2018. The pattern of growth will have implications for the growth outlook in the medium term (see Outlook section).

Russia’s economy continued its recovery in 2017, supported by a strengthening global economy, deepening macro-economic stability, firming energy prices, and gradual monetary loosening. The GDP expanded by 1.5 percent in 2017. Prompt and adequate stabilization policies contributed to economic growth, along with firming energy commodity prices, gradual monetary loosening and a recovering global economy (Figure 4). The recovery in non-tradable sectors supported growth,

whereas the contribution of tradable sectors was modest, limited by the OPEC+ agreement affecting oil production, along with subdued growth in manufacturing. Growth dynamics lost steam in the last two quarters of 2017 largely on the back of lower investment demand; and growth momentum was lower than expected in the first quarter of 2018.

Growth in non-tradable sectors was the main engine of recovery in 2017. Recovery in retail and wholesale trade, transportation and real estate contributed the most to growth. Retail and wholesale trade were supported by growth in household consumption, which increased on the back of increasing real wages, macro stabilization, a stronger ruble and reviving consumer credit. Wholesale trade also benefitted from high growth in gas extraction. The contribution of non-tradable sectors to GDP growth totaled 1.4 percentage points (pp) in 2017 (Figure 5).

Figure 4: Russia’s economy has emerged from recession to recovery
(GDP growth, percent, y/y, TOT, percent, y/y)



Source: Rosstat, Haver Analytics.

Figure 5: Recovery in non-tradable sectors was the main engine of growth in 2017
(contribution to growth, p.p.)

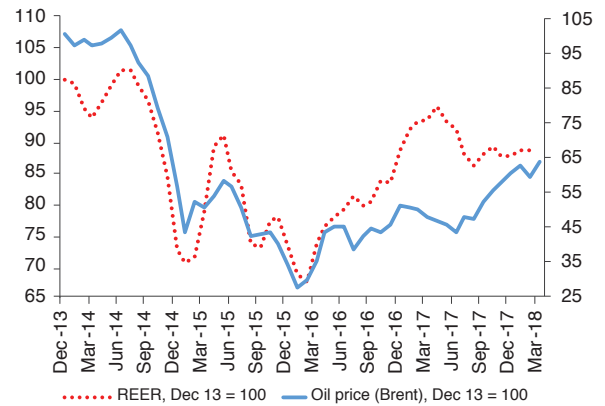


Source: Rosstat.

The contribution of tradable sectors to GDP growth was limited and amounted to just 0.2 pp in 2017 compared to 0.3 pp in 2016.

- In 2017, strong growth in natural gas production (+7.8 percent, y/y) supported mineral resource extraction, which increased by 1.4 percent, y/y, despite slightly decreasing oil production as Russia joined the OPEC+ agreement. Due to gradually increasing compliance to OPEC+ agreement and high base of oil production in the fourth quarter of 2016, the contribution of mineral resource extraction to growth was uneven. It decreased in the third quarter of 2017 and turned negative in the fourth (Figure 11).
- Manufacturing, which stabilized in 2016, registered growth but at a marginal rate of 0.1 percent, y/y. Despite the appreciation of the Real Effective Exchange Rate (REER) by 16 percent in 2017, manufacturing and other tradable sectors (mineral resource extraction and agriculture) benefitted from persisting modest comparative advantage due to the REER depreciation in 2014-2016. In 2017, the REER index was about 10 percent below that of December 2013 (Figure 6). Growth in manufacturing was broad-based

Figure 6: In 2017, tradable sectors benefitted from modest comparative advantage from REER depreciation in 2014 - 2016
(REER index)

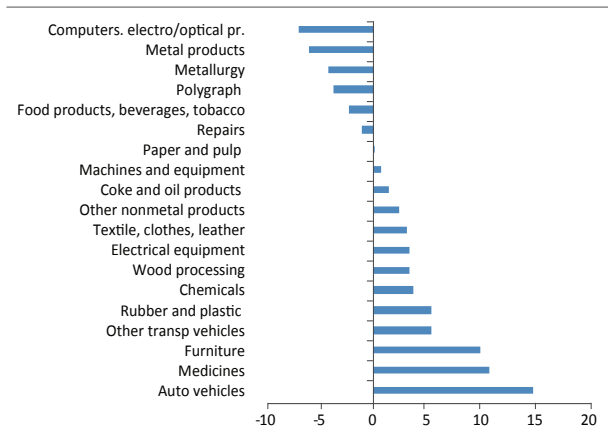


Source: Rosstat, Haver Analytics.

(Figure 7). Industries such as auto vehicles, other transport vehicles, chemicals, and coke and oil products contributed the most. Expanding global demand also supported manufacturing, as the export of goods volume increased for all categories of goods, except for mineral goods, leather and furs. However, the contraction of metallurgical production in 2017 (mainly in the fourth quarter) dragged down manufacturing the most (Figure 8). While the volume of exports of metals and metal goods was growing in 2016-2017, domestic demand (from construction, for instance) remained subdued and REER appreciation in 2017 led to increased competition from imports. A drop in the production of computers, electronic and optic devices also contributed negatively to manufacturing growth. Lower government spending on national defense also could have negatively impacted growth in both above-mentioned industries in 2017.

- **Domestic demand bounced back by 3.6 percent, y/y, in 2017, and became the main engine of growth.** Yet, the growth momentum in domestic demand was uneven: it stalled in the third quarter and turned negative in the fourth quarter of 2017.

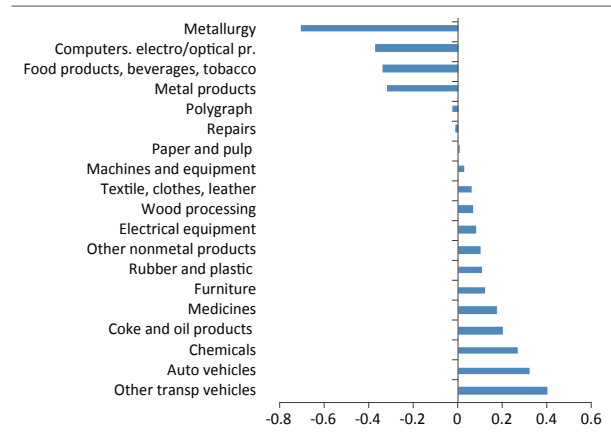
Figure 7: In 2017, growth in manufacturing was broad-based
(percent, y/y)



Source: Rosstat.

- Both household and investment demand expanded and contributed almost equally to GDP growth. Yet, investment demand slowed down in the second half of 2017, largely due to lower restocking in the third quarter and destocking in the fourth. Lower investment demand was the main reason for weak growth momentum in the second half of 2017 (Figure 10). Due to the high volatility of changes in inventory, the destocking in the fourth quarter of 2017 could be rather considered as a one-off factor.
- Private consumption, supported by a stronger ruble, growing real wages and pensions and by reviving credits to households, contributed 1.8 pp to growth in 2017.

Figure 8: The production of auto vehicles, other transport vehicles, chemicals, and coke and oil products contributed to growth the most
(contribution to growth of the manufacturing sector, p.p.)

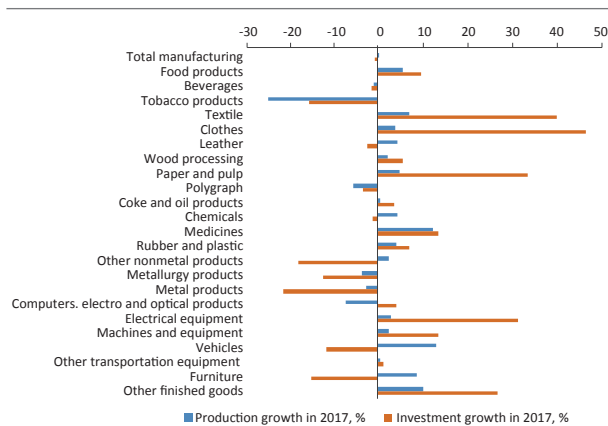


Source: Rosstat.

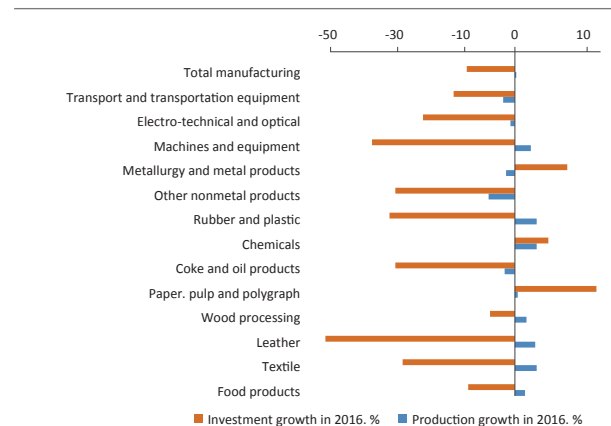
- Fixed capital investment in mineral resource extraction (oil and gas), in transportation via pipelines conducted largely by public companies, in the financial sector and in sports (related to the 2018 FIFA World Cup) were the main support of fixed capital investment growth. While fixed capital investment started the recovery in some manufacturing sub-sectors (Figure 9), fixed capital investment for the manufacturing sector as a whole continued contracting (-0.8 percent, y/y), shrinking by about 22 percent for the period 2014-2017. Contracting fixed capital investment in metallurgy and metal goods was the biggest drag on manufacturing investment dynamics.

Figure 9: Recovery of fixed capital investment began in many sectors of manufacturing in 2017

Growth in manufacturing by sector, percent; fixed capital investment growth in manufacturing by sector [large and medium enterprises], percent: 2017 (left chart) vs 2016 (right chart)

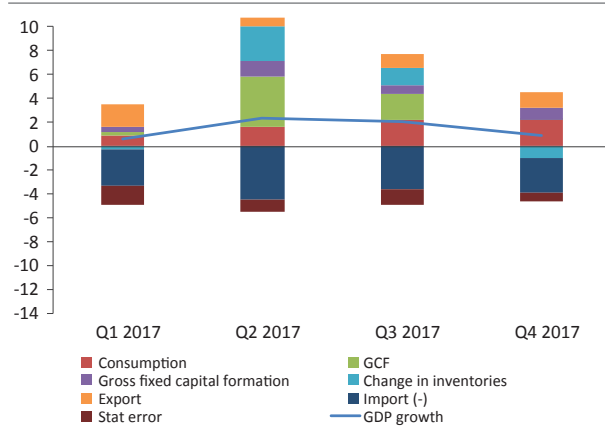


Source: Rosstat.



Source: Rosstat.

Figure 10: Lower investment demand growth led to lower growth momentum in the second half of 2017
(contribution to growth, p.p.)



Source: Rosstat.

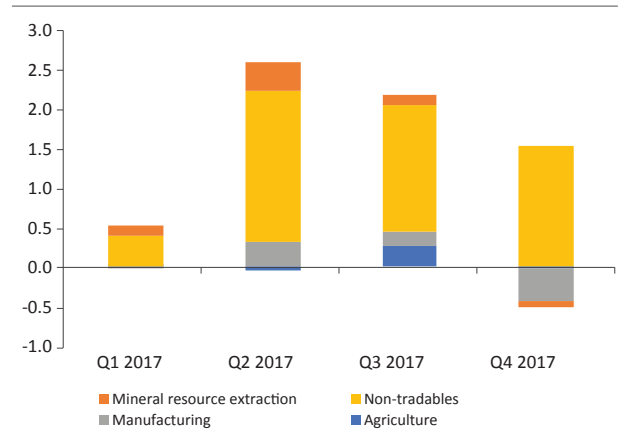
- 2017 also witnessed an increase in foreign direct investment (+ USD 12.4 billion)¹ after marginal levels of FDI inflows in 2015 and 2016. This inflow reflected a certain decrease in uncertainty in the business environment and some revival of interest by foreign investors in Russia, but it also included a good portion of capital round-tripping. In 2017, 30 percent of incoming FDI were concentrated in the oil and gas sector, compared to about 13 percent in manufacturing.

In 2017, a robust external demand supported export growth. Exports grew by 5.1 percent, y/y, in real terms in 2017 compared to 3.3 percent, y/y, in 2016. In 2017, the growth of exports of goods was mainly fueled by growing export of non-oil goods. Export of services also demonstrated robust growth (+14.4 percent, y/y, in value²), driven by an increase in export of transport services, business trips, construction, ICT and other business services. Yet Russia still has a long way ahead to significantly increase the share of non-oil/gas exports and break its dependence on hydrocarbons, which would reduce its vulnerability to external shocks and increase sustainability of growth (Box 1). The recovery in imports, which started in the second

¹ Adjusted for one-off privatization of Rosneft in 2016 and reinvestment of profits.

² Data for export volume are not available.

Figure 11: Growth dynamics lost steam in the last two quarters of 2017
(contribution to growth, p.p.)



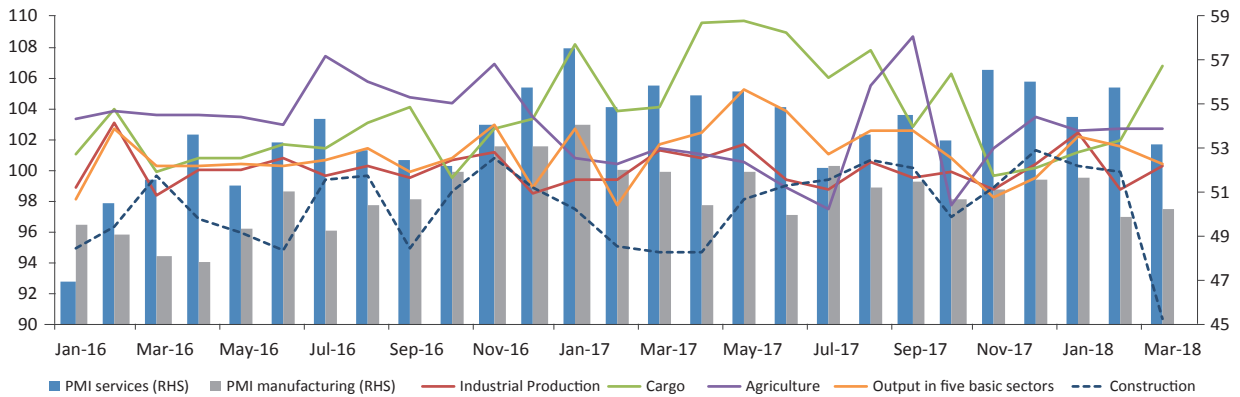
Source: Rosstat.

quarter of 2016, continued in 2017, helped by macro stabilization, a relatively stronger ruble and growing consumer and investment demand. Imports increased by 17.4 percent, y/y, in real terms in 2017, and its negative contribution to GDP growth overweighed the positive contribution of exports.

Growth momentum picked up in the first quarter of 2018 (Figure 12). In the first quarter of 2018, GDP growth totaled 1.3 percent, y/y and 3.2 percent q/q, saar. This is compared with GDP growth of 0.9 percent y/y and -1.5 percent q/q, saar, in the last quarter of 2017. According to high-frequency statistics, In January-March 2018, output in five basic sectors³ increased by 1.3 percent, y/y (Figure 12). Industrial production output increased by 1.9 percent, y/y in the first three months of 2018. Yet growth momentum of both indicators was the strongest in January and decreased in February-March. In the first three months of 2018, construction dropped by 4 percent, y/y, pointing to weak fixed-capital investment growth. Sanctions, which were introduced in the beginning of April and which could have caused certain distortions in the metals and energy sector (Box 2), had a marginal effect in April on industrial production, which expanded by 1.3 percent, y/y and 0.5 percent, q/q, sa.

³ The five basic sectors consist of agriculture, industrial production, construction, retail trade, and transportation.

Figure 12: Growth momentum picked up in the first quarter of 2018



Source: Rosstat.

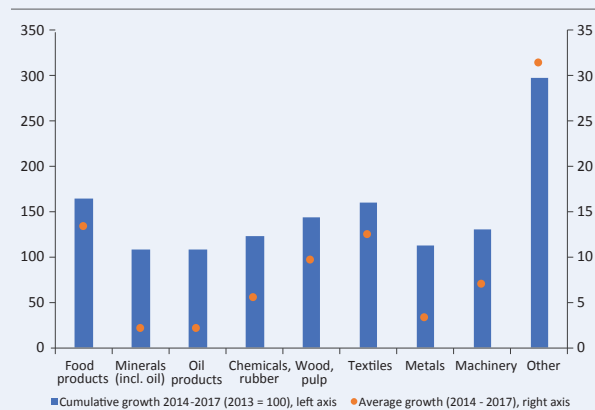
Box 1 Russia must overcome structural constraints to rebalance its exports towards non-energy items

The significant depreciation of the Real Effective Exchange Rate (REER) during 2014-2016 increased competitiveness and contributed to growth of non-energy exports (Figure B1-1).

In 2017, the export value of goods in all categories – except for energy goods, metals and wheat, other important commodities exported by Russia – increased by 17 percent, y/y. Export value of tradable services such as ICT and business services increased by 21.6 percent, y/y and 7.8 percent, y/y respectively.⁴

While this is a positive development, the share of oil and gas exports in total export of goods (by value) remains high at 58.7 percent (Figure B1-1).

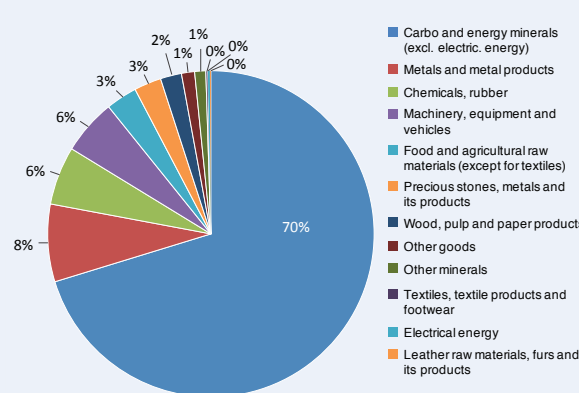
Figure B1-1: Some non-energy export items demonstrated robust growth in 2014 – 2017



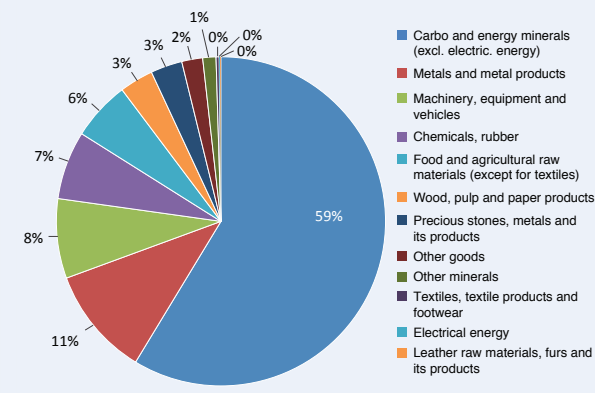
Source: Federal Customs Service of Russia.

Figure B1-1: Non-energy export demonstrated robust growth in 2014 – 2017

Structure of exports in 2013



Structure of exports in 2017

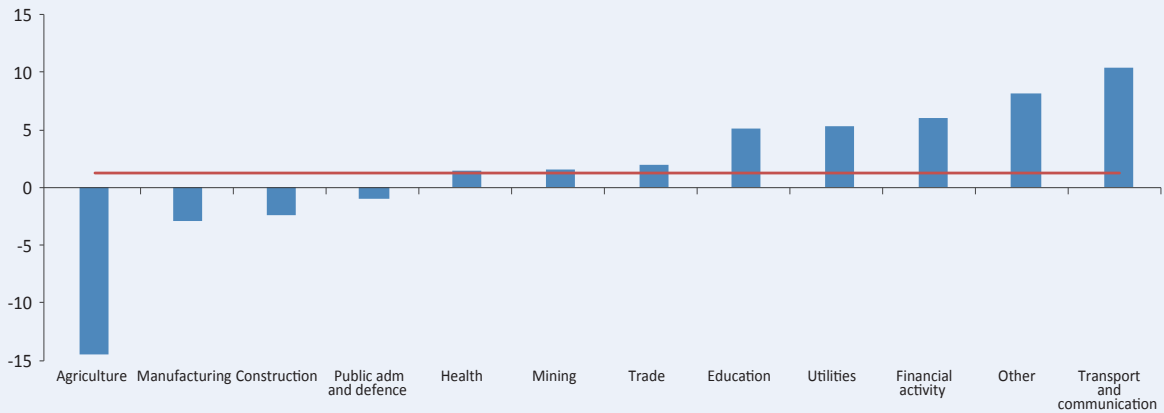


Source: Federal Customs Service of Russia.

⁴ Data for export volume are not available.

Among tradable sectors, manufacturing remains the weak spot: compared to 2013, investment in manufacturing had contracted by 22 percent⁴ by end 2017, and employment in manufacturing had decreased by 2.9 percent (Figure B1-2). Despite the marginal growth of 0.1 percent in 2017, production in manufacturing fell by 4.0 percent, compared to 2013, and its share in GDP remained flat at about 13 percent. Macroeconomic policies (switching to a flexible exchange rate, low inflation, fiscal consolidation) set the stage for non-oil/gas export growth through reducing external volatility and reducing uncertainty. Yet, accumulated structural problems aggravated by sanctions negatively affect the growth of non-energy exports. Boosting manufacturing, which is crucial for further non-oil/gas robust export growth, would require addressing accumulated structural problems such as poor connectivity and inadequate competition.

Figure B1-2: 2017: change in employment, compared to 2013 (percent)



Source: Rosstat.

Box 2 In April 2018, new round of U.S. sanctions increased volatility at the financial markets in Russia

On April 6th, the U.S. imposed new sanctions on Russia—particularly on a group of oligarchs and their 12 companies, as well as 17 senior Russian government officials and a state-owned Russian weapons trading company and its subsidiary.

All assets of the designated individuals and entities subject to U.S. jurisdiction were frozen, and U.S. citizens are generally prohibited from dealing with them. The imposition of sanctions, coupled with increased geopolitical tension, caused a massive sell-off of Russia’s financial assets. The RTS index dropped from 1253 on April 5 to 1083 on April 11 and the ruble depreciated from 57.7 Rub/USD on April 5 to 64.4 Rub/USD on April 11 despite increasing oil prices (Figure B2-1). The ministry of finance postponed its domestic debt auction on the back of the interest rate increase (it resumed the auctions on April 18) and refrained from currency purchases in the budget rule framework to stabilize the FX market (it resumed those purchases on April 17). However, by the end of April, the markets had calmed down to some extent and the ruble gained back about 30 percent of its losses with respect to the USD, and the RTS index gained back about 50 percent of its losses.

The fiscal impact of the sanctions is not yet clear and it will depend on the nature and magnitude of public support for the affected firms. However, aside from a potential fiscal burden, any public intervention could increase the state footprint, further affecting competition and productivity. The performance of the banking sector is expected to remain stable. Russia’s largest bank, state-owned Sberbank, may become vulnerable to sanctions due to lending to certain Russian companies. However, according to Sberbank management, loans to companies on the new sanctions list — which are now barred from making payments in dollars or accessing western markets — total “no more than 2.5 percent” of Sberbank’s total assets. On April 23, the CBR informed banks that they are allowed not to create additional reserves and request additional collateral

⁵ Data are available for large and medium enterprises.

for loans to companies on which the latest U.S. sanctions have been imposed and whose financial situation has worsened. They will just need to inform the central bank about decisions related to the loans to sanctioned entities. This is an expected measure of banks' support on the part of the regulator, especially given that the government is now working on the plan to support the companies that are under sanctions.

Figure B2-1: The imposition of sanctions, coupled with increased geopolitical tension, caused a massive sell-off of Russia's financial assets



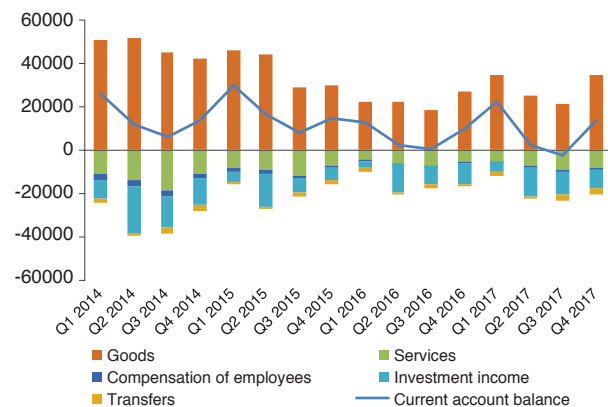
Source: CBR, Micex.

1.3 Balance of Payments: in 2017, a stronger current account and higher reserves

In 2017, positive terms of trade (higher oil/gas and metals prices) supported the current account through higher exports. An increase in energy export revenues stemming from the price effect more than compensated for the significant growth in imports that accompanied a stronger ruble and a recovering domestic demand. While short-term capital flew into the government sector on the back of continued interest in the financial assets of emerging and developing economies (EMDEs), net capital outflows from the non-government sector increased. The CBR increased its reserves, mainly conducting interventions introduced by the Ministry of Finance in the context of the fiscal rule.

In 2017, the current account surplus increased on the back of a stronger trade balance. The current account surplus increased to USD 35.2 billion in 2017 from USD 24.4 billion in 2016 (Figure 13). Due to positive terms of trade and a robust export demand, the surplus in goods trade increased by USD 24.7 billion despite a recovery in imports, mainly supported by REER appreciation (+15,9 y/y) and recovering economy. Deficits increased in the service, investment income and secondary income accounts. The non-oil deficit of the current account remained high at USD 157.7 billion, or 9.9 percent of GDP, only slightly below the level of 10.0 percent of GDP in 2016 (USD 129.6 billion).

Figure 13: The current account surplus increased on the back of a stronger trade balance (bln US\$)



Source: CBR.

In 2017, short-term capital flow into the government sector, driven by a resilient risk appetite for EMDE financial assets and supported by the still-accommodative monetary policy in advanced economies. Net capital outflows⁴ from the non-government sector increased. In 2017, the government sector registered a net capital inflow of USD 12 billion that was mainly due to OFZ (federal loan bonds) purchases by non-residents. Net capital outflows⁵ from the non-government sector increased as net capital outflows from the banking sector rose. Banks continued deleveraging, but their net foreign assets decreased less strongly than they did last year, which could be associated with the Rosneft privatization deal closing in the first quarter of 2017. Meanwhile in the non-banking sector, net capital outflow turned zero in 2017, compared to USD 19.6 billion in 2016. While the acquisition of net foreign assets dropped considerably in 2017, an increase in net foreign liabilities of the non-banking sector was just slightly less than in 2016. An increase in net foreign liabilities in 2017 largely stemmed from incoming FDI, part of which was non-repatriated profit.

The CBR increased its reserves, mainly conducting interventions introduced by the ministry of finance in the context of the fiscal rule framework. The CBR added about USD 15.4 billion to its reserves, which amounted to USD 433 billion at end-December 2017 (27.4 percent of GDP). The import cover stayed at a comfortable level, although slightly lower than as of end 2016 (15.9 months of goods and services in the end of 2017, compared to 17 months of goods and services at the end of 2016). The central bank refrained from intervening on its own, in line with its flexible exchange-rate regime.

⁴ Adjusted for currency swaps and correspondent accounts of resident banks in the central bank, and repayments of foreign-currency loans by large banks to the central bank.

⁵ Adjusted for currency swaps and correspondent accounts of resident banks in the central bank, and repayments of foreign-currency loans by large banks to the central bank.

Russia's external liabilities increased only slightly in 2017. An increase in government borrowing was compensated by continuing debt repayments by the banking sector. Russia's outstanding external debt rose to USD 518.9 billion at end-2017, from USD 511.7 at end-2016, but it remained almost unchanged after adjusting for the exchange rate movement. Meanwhile, with the ruble appreciating in nominal terms during 2017, the debt burden decreased substantially as a share of GDP from 39.7 percent of GDP in 2016 to 32.9 percent of GDP in 2017, closer to the level of 31.8 percent of GDP in 2013. The government further scaled up its international borrowing by issuing Eurobonds and selling OFZ to non-residents (the share of non-residents in OFZ ownership reached 33 percent by the end of 2017, compared to 26.9 in the end of 2016). Banks continued deleveraging as their access to international market remained restricted. Adjusted for exchange rate movement, non-banking sector debt remained flat, ceasing the downward trend caused by lower oil prices and sanctions (Table 1). During the first nine months of 2017, the bulk of the decrease of non-banking sector debt was due to the public sector, while the private sector attracted debt, mainly ruble-denominated debt from direct investors.

A stronger trade balance supported the current account in the first quarter of 2018 while net capital outflow from the private sector decreased.

In the first three months of 2018, the current account increased to USD 28.8 billion from USD 22.3 billion in the same period last year. An increase in the trade surplus, due to higher exports (+20.2 percent, y/y, in value) supported by higher energy prices, was the key factor behind the strengthening of the current account. Despite REER depreciation in the first quarter of 2018 largely on the back of stronger euro, value of imports increased by 18.5 percent, y/y. Net capital inflow to the government sector decreased compared to the same period last year, as the Central Bank continued gradual easing and the monetary stance in the advanced economy gradually tightened. In addition, country

Table 1: External debt of the Russian Federation
(US\$ billions)

	1-Jan-16	1-Apr-16	1-Jul-16	1-Oct-16	1-Jan-17	1-Apr-17	1-Jul-17	1-Oct-17	1-Jan-18
Total	518.5	520.1	523.0	518.3	511.7	521.5	527.0	529.6	518.9
Government (w/t CBR)	30.5	32.1	35.9	40.4	39.1	45.8	46.5	54.3	55.8
Corporate	476.3	477.3	476.4	467.2	460.5	461.7	463.6	454.1	448.6
Banks	131.7	129.8	127.7	123.6	119.4	120.2	113.3	108.0	103.4
<i>Short-term</i>	25.3	25.6	28.7	28.4	26.7	32.5	32.0	27.6	30.6
Non-banking sector	344.5	347.5	348.7	343.6	341.1	341.5	350.3	346.1	345.2
<i>Short-term</i>	13.2	12.5	14.3	12.5	13.5	12.8	16.4	14.3	14.2

Source: CBR.

risk slightly rose in the end of March on higher geopolitical tensions. Net private capital outflows in the January-March 2018 period reached USD 13.4 billion compared to USD 16.4 billion from January-March 2017, as net capital outflow in the banking sector dropped significantly compared to the first quarter of 2017 when it rose due to Rosneft privatization deal. Marginal capital inflow

of January-March 2017 in the non-banking sector, is compared now to net capital outflow of USD 12.5 billion in the first quarter of 2018. The international reserves gained USD 14.8 billion in the January-March 2018 period compared to an increase of USD 4.4 billion in the January-March 2017 period on the back of foreign currency purchases by the ministry of finance in the fiscal rule framework.

Table 2: Balance of payments, 2013–2017
(US\$ billions)

	2013	2014	2015	2016	2017	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
Current account balance	33.4	57.5	68.8	25.5	35.2	22.3	2.2	-3.0	13.7	28.8
<i>Trade balance</i>	122.3	133.7	111.5	66.4	115.0	34.5	25.2	20.8	34.5	42.3
Non-oil current account balance	-315.6	-266.9	-134.5	-128.5	-154.5	-27.1	-43.7	-47.1	-36.6	-31.2
Capital and financial account	-46.6	-89.0	-69.4	-11.1	-16.3	-11.7	1.5	10.3	-16.4	-8.2
Errors and omissions	-8.9	8.0	2.9	-4.6	3.8	0.7	3.9	-0.8	0.0	-1.3
Change in reserves (- = increase)	22.1	107.5	-1.7	8.2	-22.6	-11.3	-7.5	-6.5	2.7	-19.3
Memo: average oil price (Brent, US\$/barrel)	108.4	97.5	54.4	45.9	54.4	54.1	50.2	51.7	61.5	67.0

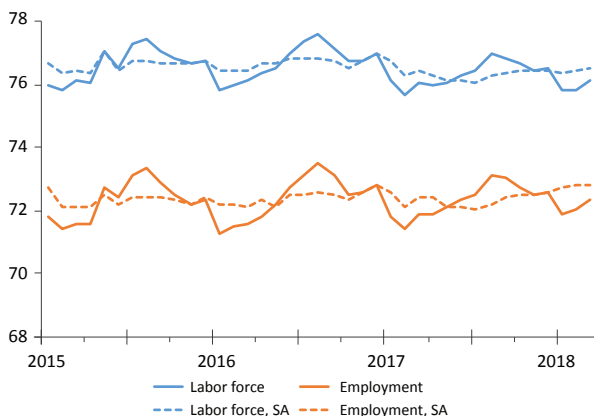
Source: CBR.

1.4 Labor Market and Poverty Trends: unemployment is stable, wages are recovering but a high share of the population remains vulnerable

Unemployment declined further in the beginning of 2018 to a current 5 percent, while real wages and pensions increased on the back of low inflation. In 2017, wage growth was highest in the tradable sectors and above the rate of inflation in the non-tradable and public sectors. However, growth in real disposable incomes remained negative in 2017, driven by a decline in income from other sources, including some not directly registered by statistics. The poverty rate under the national definition remains at the levels close to 2016. The extreme poverty rate remained marginal, below one percent.

The labor force participation and employment rates remained at high levels at the beginning of 2018, while unemployment was close to minimum. The absolute numbers of economically active people increased by 100,000 to 76.1 million, and those of employed people grew by 400,000 people to 72.3 million in March 2018, compared to the levels of a year earlier (Figure 14). This led to a marginal growth of the labor force participation and of employment rates of about 0.2-0.4 percentage points. These rates are above 62 and 59 percent respectively.⁶ High employment rates, in combination with the continued decline in the working-age population, led to a further reduction of the unemployment rate. It decreased to 5.1 percent in the first three months of 2018, compared to 5.5 percent a year earlier (Figure 15). The structure of unemployment remained the same, with the gaps between male/female and rural/urban unemployment remaining stable and most of the unemployment still being long-term: 30 percent of the unemployed had been looking for a job for over a year. Unemployment by regions remained unequal and followed the declining national trend.

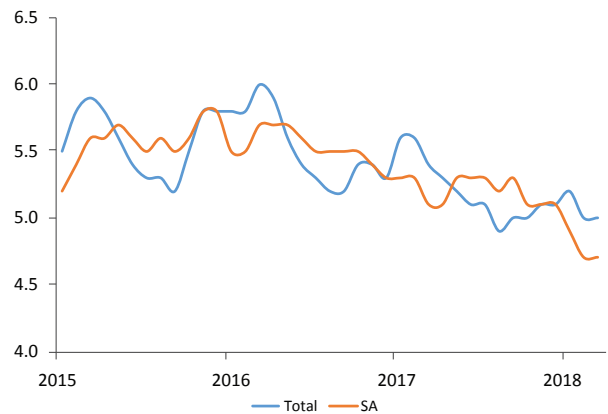
Figure 14: Labor force participation and employment remain at high levels... (in mln people)



Source: Rosstat and Haver Analytics.

⁶ The numbers are not comparable to the ones reported in the previous issues due to changes in the methodology by Rosstat. The old rates were for age 15-72, while the new ones are for 15+ and that is why lower.

Figure 15: ... while unemployment rate is at historical minimums (percent)



Source: Rosstat and Haver Analytics.

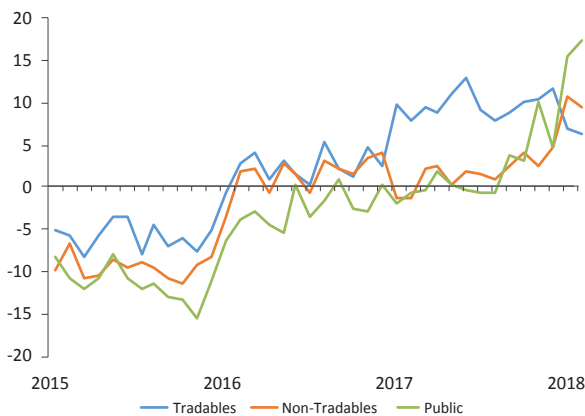
Other labor-market indicators have not been overly affected. The vacancy rate⁷ increased slightly to 2.7 percent in the fourth quarter of 2017, compared to 2.4 percent a year ago, reflecting a gradual recovery in the real sector. The number of part-time employees decreased further in 2017 and remained far below the levels of the 2009 crisis period. The average number of hours worked increased marginally for both genders.

With inflation low, wages continued to grow in real terms. Real wages accelerated in the second half of 2017 (Figure 16). The average growth in July-December was 4.5 percent, compared to the same period of 2016. In the first three months of 2018, growth sped up to 9.3 percent, while in 2017, the fastest wage growth was in the tradable sector, especially in agriculture (18.2 percent) and manufacturing (11.6 percent). In the beginning of 2018, the fastest wage growth rates were recorded in the health and education sectors as well as in financial services.

Real disposable-income dynamics remain volatile. Real disposable incomes continued declining in 2017. The growth rate of pensions and wages did not compensate for the contraction of other components of household incomes, including incomes from business as well as informal

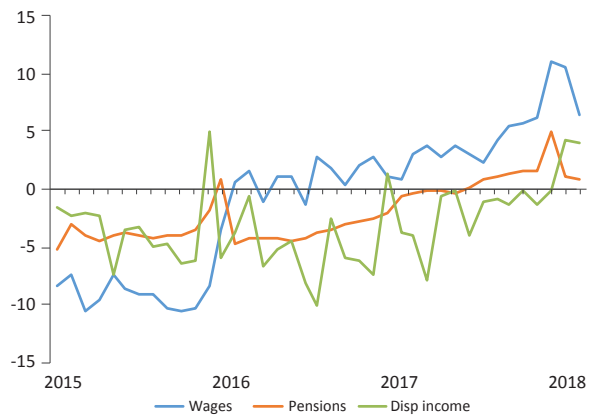
⁷ Ratio of vacancies to the total numbers of jobs.

Figure 16: Real wages are growing across all the sectors
(percent, year on year)



Source: Rosstat and World Bank staff estimates.

Figure 17: Real incomes dynamics showed some positive signs in beginning of 2018
(percent, year on year)



Note: Pension and disposable income dynamics adjusted for January 2017's one-time payment.

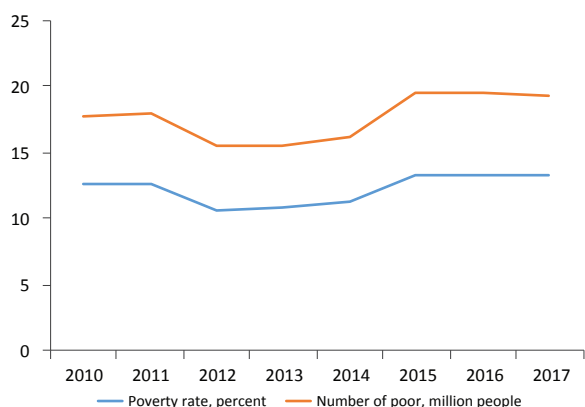
Source: Rosstat and World Bank staff estimates.

activities, which continued to decline in 2017. However, in early 2018, real disposable income dynamics showed some positive signs. Adjusting for the one-time pension payment made in January 2017, disposable incomes in January 2018 were at the same level as in January 2017 and they grew at 4.2 percent y/y in March 2018 (Figure 17). Average pensions also increased by 2.2 percent in January-March 2018.

The official poverty rate in 2017 was slightly lower than in 2016. Despite the continued contraction of real disposable income, the official poverty rate, measured as the share of the population with incomes below the subsistence minimum as

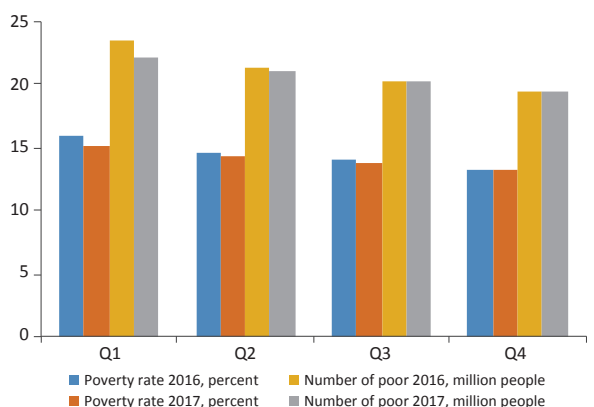
reported by Rosstat, decreased marginally in 2017 compared to a year ago (Figure 19). The poverty rate fell despite the contraction of real disposable income because of the decrease in the poverty boundary in real terms in 2017. The subsistence minimum of 10,008 Rub on average in 2017, used as the poverty line in Russia, is calculated separately from the CPI. It increased in nominal terms by 2.6 percent, which is below the inflation rate of 3.7 percent in the same period. Thus, those households whose nominal incomes increased by more than 2.6 percent, escaped from official poverty, but their real incomes might have contracted if they grew less than CPI.

Figure 18: Poverty in 2016 was higher than in 2010



Source: Rosstat.

Figure 19: Quarterly dynamics of poverty in 2017 is close to 2016 (cumulative)



Source: Rosstat.

1.5 Monetary Policy: the CBR continued monetary policy easing, moving from a moderately tight policy to a neutral one

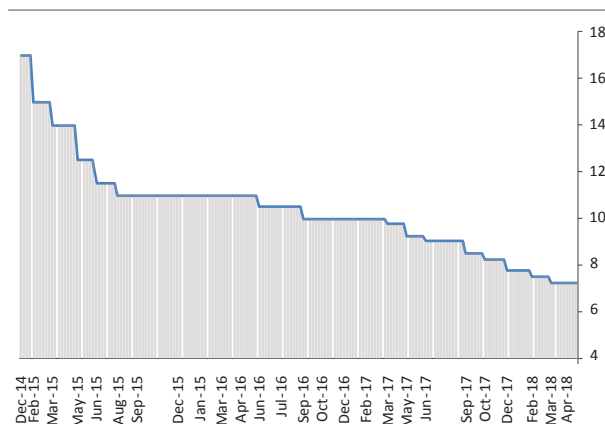
Monetary policy remained consistent with the inflation-targeting regime. Moderately tight monetary and fiscal policies, in combination with a favorable external environment and some one-off factors, let consumer inflation reach a record-low level in 2017. The nominal ruble exchange rate appreciated in 2017 and early 2018 against the US dollar.

The Central Bank of Russia (CBR) has continued its gradual approach to monetary easing, moving from a moderately tight policy to a neutral one. In 2017, the CBR cut the key rate by 225 basis points (Figure 20). Between January and March 2018, it lowered the key rate twice by 25 basis points, thus bringing it down to 7.25 percent in annual terms. After an increase in geopolitical tensions in April 2018, the CBR affirmed its intention to complete the transition to a neutral monetary policy⁸ in 2018. Yet, the Central Bank noted that the estimated neutral interest rate has shifted closer to its upper bound within the range of 6 to 7 percent, due to the increased country risk premium and an upward revision of interest rates in advanced economies.

Annual inflation stands at a record-low level, even below the CBR’s target of 4 percent, while inflation expectations continue their downward trend. In 2017, consumer inflation reached 3.7 percent (year-on-year, 12-month average), down

from 7.1 percent in 2016, due to the combination of a strengthening ruble, a bumper harvest, weak consumer demand and relatively tight monetary and fiscal policies (Figure 21). Lower inflation in services contributed the most to a decrease in inflation in 2017. Core inflation dropped from 7.5 percent in 2016 (year-on-year, 12-month average) to 3.5 percent in 2017. In January-February 2018, the 12-month Consumer Price Index stayed at the record-low level of 2.2 percent y/y. However, in March and April, it slightly increased to 2.4 percent, y/y, still far below the target. An increase in food inflation mostly contributed to the CPI growth. In April, food inflation edged up to 1.1 percent, y/y, from 0.7 percent, y/y, in January 2018, due to the dynamics of fruit-and-vegetable pricing. Core inflation decreased to 1.9 percent, y/y, in January-April 2018, from 2.1 percent, y/y, at the end of 2017, indicating low inflation pressures. Inflation expectations continued to decline,⁹ though they remained elevated compared to the inflation target (Figure 23).

Figure 20: The CBR continued monetary policy (percent)

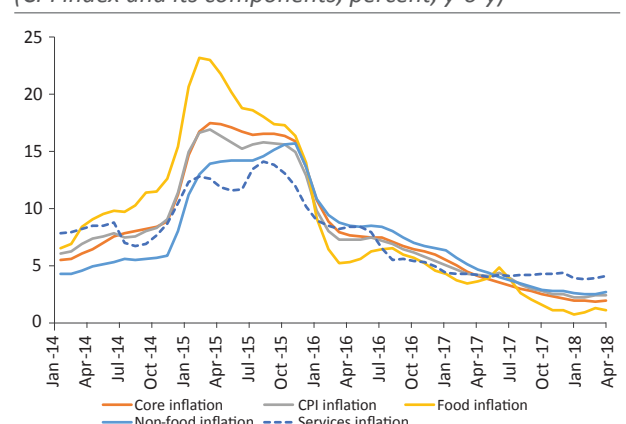


Source: CBR.

⁸ A neutral key rate would not either decelerate or accelerate inflation, relative to the target level of 4 percent.

Figure 21: Inflation is at a record-low level below the CBR’s target

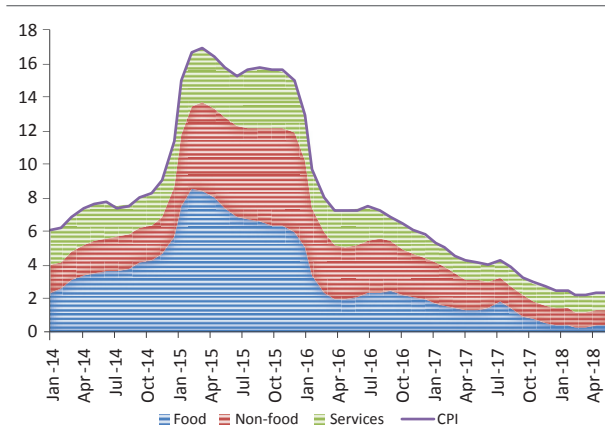
(CPI index and its components, percent, y-o-y)



Source: CBR and Haver Analytics.

⁹ Data on inflation expectations do not include the period after a new round of sanctions.

Figure 22: Food products strongly influence the headline inflation
(contribution to inflation by component, percent)

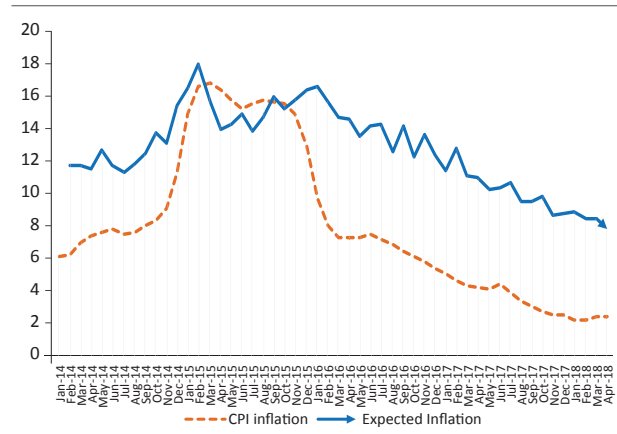


Source: Rosstat, World Bank staff calculations.

The monetization of the economy continued its upward trend. The monetary conditions were gradually eased further, primarily due to the transfer of less-tight monetary policy to market interest rates. The ratio of the money supply (M2) to GDP increased to 42.8 percent at the end of 2017 from 41.5 percent in 2016 (Figure 24).

Relatively favorable external conditions, together with a moderately tight monetary policy in Russia amidst accommodative monetary policies in advanced economies, supported the strengthening of the ruble exchange rate in 2017. With help from these factors, the nominal ruble exchange rate strengthened by about 15 percent with respect to the US dollar in 2017. Meanwhile, currency interventions conducted by the Central Bank on behalf of the Ministry of Finance (about USD14 billion in 2017) and episodes of increased geopolitical tension, exerted downward pressure

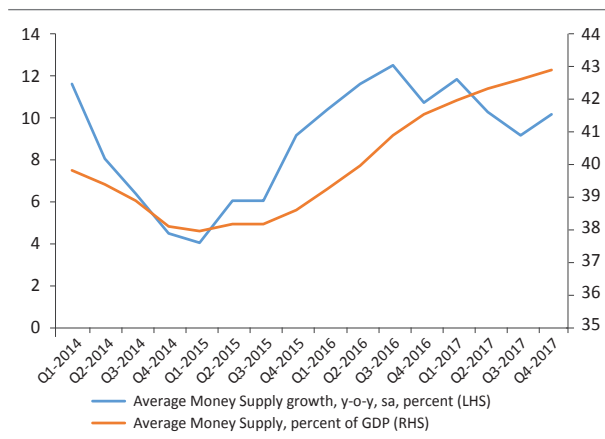
Figure 23: Inflation expectations continued to decline, though remained elevated compared to the inflation target
(percent)



Source: CBR.

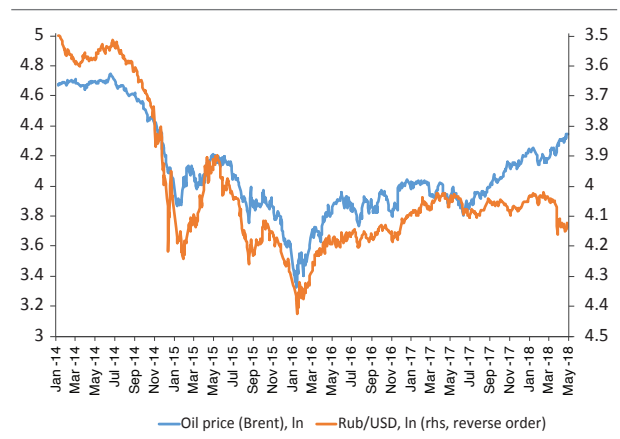
on the ruble in 2017. Relatively favorable external conditions supported the ruble in the first quarter of 2018 as well. Meanwhile, currency interventions conducted by the Central Bank on behalf of the Ministry of Finance (about USD 14.8 billion in the first quarter of 2018), combined with prospects of a faster withdrawal of monetary policy accommodation in advanced economies and episodes of increased geopolitical tension, exerted downward pressure on the ruble. The nominal ruble exchange rate strengthened by about 2.7 percent with respect to the US dollar in the first quarter of 2018, q/q. Compared to the previous years, the ruble's exchange rate correlation with oil prices weakened (Figure 25). New sanctions imposed by the U.S. on April 6th led to a sell-off of Russian financial assets and a depreciation of the ruble. In April, the ruble lost 6.5 percent against the U.S. dollar compared to March.

Figure 24: The monetization of the economy increased (percent)



Source: CBR and World Bank staff calculations.

Figure 25: Compared to the previous years, the ruble's exchange rate correlation with oil prices weakened (changes in oil prices and the nominal exchange rate, logarithmic scale)



Source: CBR, World Banks staff calculations.

1.6 The Financial Sector: the banking sector's fundamentals are largely stable; the share of state-controlled banking assets grew as a result of the continuing CBR clean-up

The Central Bank of Russia (CBR) continued the banking sector clean-up. On December 15, 2017, it announced a bailout of Promsvyazbank, the third large private bank and the second systemically important institution to be rescued via the Banking Sector Consolidation Fund (BSCF). As a result of the banking-sector clean-up, the share of state-controlled banks in the combined assets of the Russian banking system increased to nearly 70 percent. On April 2, 2018, the CBR announced that it will create a “bad bank” to transfer distressed assets in the amount of RUB 1.1 trillion from the three large private banks that were bailed out in 2017 via the BSCF. Trust Bank, a failed bank acquired by Otkrytie, will act as an asset management company. More detailed operational features and financial projections on the “bad bank” have yet to be disclosed. Retail credit continued to grow at double digits and overall financial sector indicators remained broadly stable. In the absence of severe external shocks, the performance of the banking sector is expected to remain stable.

The CBR continued the banking sector clean-up by removing insolvent banks and recapitalizing systemically important ones, thus further increasing the public sector's share of the banking system. Since November 2017, 30 banks had their licenses revoked for failing to comply with regulations. On December 15, 2017, the CBR announced a bailout of Promsvyazbank (PSB). It was the third large private bank and the second systemically important institution to be rescued by the CBR via its Banking Sector Consolidation Fund

(BSCF).¹⁰ BSCF was put in place in the second half of 2017 as a new resolution mechanism that allows the CBR to inject capital into insolvent banks. The central bank has already injected RUB 626 billion (approximately USD 10 billion) into the capital of Otkrytie, B&N and Promsvyazbank. Following this recapitalization, Otkrytie and B&N will be merged

¹⁰ In total, three major privately held Russian banks (nearly 6% market share by assets) went under the control of the CBR last year: Otkrytie, Binbank (B&N Bank) and Promsvyazbank. They all had earlier taken on other problematic banks for restructuring.

in 2018, while their toxic loans will be transferred into a separate “bad bank,” yet to be established. As a result of the banking-sector cleanup, the share of state-controlled banks in the combined assets of the Russian banking system increased to 69 percent,¹¹ most of them under central bank ownership. This may affect the levelness of the playing-field and create conflicts of interest between CBR’s regulatory and ownership functions.

To provide liquidity support and recapitalize the three large private banks — Otkritie, B&N and Promsvyazbank, the CBR has already spent RUB

1.45 trillion and it will spend RUB 1.1 trillion to hold and manage their problem assets in a “bad bank”. The funds were provided by CBR, as opposed to budget sources, which may result in monetization of resolution costs and undermines fiscal transparency (Box 3, RER #38).

In January 2018, the government announced that Promsvyazbank would become a special state-controlled bank for servicing Russia’s defense sector. Loans from other large Russian lenders currently servicing the sector will be transferred to PSB. It is expected that Promsvyazbank would

Box 3 Public asset management companies: Review of international experience¹³

Asset Management Companies (AMCs), known as “bad banks,” were set up as independent financial institutions to hold and manage problematic assets of banks. A bad bank is a corporate structure created to hold and manage problem assets of a financial institution or a group of institutions. Bad banks can be set up in a variety of ways, ranging from an internal unit within the bank that holds the problem assets to a separate financial institution.¹⁴ When set up as independent financial institutions, bad banks are typically known as AMCs.

AMCs may be created to manage the assets of failed institutions that are under liquidation or to acquire the problem assets of operating financial institutions. In the former case, assets are transferred for management by the AMC and there is no purchase involved. In the latter, the sale of the assets to the AMC involves recognizing losses in the value of the transferred assets. While the bank receives cash or interest-bearing securities in exchange for the problem assets, the price at which assets are sold is below the asset book value. The segregation of the problem assets facilitates the valuation of the remaining part of the bank by potential investors, so the bank can raise capital or funding to strengthen its financial position and resume lending, or be privatized, if it was nationalized to maintain viability. Hence, AMCs set to purchase problem assets from operating institutions are used as tools to restore financial health to the system.

AMCs have been set up in most major recent financial crisis episodes with public support. Examples of AMCs set to manage assets from institutions under liquidation include Resolution Trust Corporation in the US during the saving and loan crisis of the late 1980s; Securum in Sweden in the early 1990s; the Indonesian Bank Restructuring Agency during the Asian financial crisis of the late 1990s or Turkey’s Savings Deposit Insurance Fund. Examples of AMCs set up as purchasing asset entities include the Korea Asset Management Corporation and Malaysia’s Danaharta. Several purchasing assets AMCs were also set up in Europe in the aftermath of the global financial crisis, including the Company for the Management of Assets proceeding from Restructuring of the Banking System (SAREB) in Spain, the National Asset Management Agency (NAMA) in Ireland or BACMA in Slovenia. AMC initial capital primarily came from governments because the banking sector was very weak. In Ireland and Spain, efforts were made to enhance the private sector’s “skin in the game.” In Ireland, NAMA issued 5% of the purchase price of its assets in the form of subordinated debt payable only if performance target were met. The banks were required by the supervisor to write this debt off. In Spain, SAREB’s capital is owned at 55 percent by international and local banks and insurance companies.

¹² This Box is based on Cerruti, Caroline and Ruth Neyens (2016), *Public Asset Management Companies: A Toolkit*. World Bank Studies. Washington, DC: World Bank.

¹³ Gabriel Brenna; Thomas Poppensieker & Sebastian Schneider (December 2009), “Understanding the Bad Bank,” McKinsey & Company.

¹¹ World Bank staff calculations.

AMCs present advantages as tools to rescue financial institutions. AMCs provide a mechanism to improve the valuation of operating financial institutions when there is no market for distressed assets. The sale of problem assets provides banks with much-needed income, improves transparency and confidence and allows banks to focus on resuming lending. AMCs can also help maximize recovery value. For example, by representing several of the lenders of a troubled corporation, the AMC is in a better position to negotiate an out-of-court corporate debt workout. Coordinated asset disposal may prevent fire sales that occur when many banks try to simultaneously dispose of their assets, pushing market prices downward. Also, by concentrating assets, AMCs have bargaining power in price negotiations with asset buyers.

However, setting up AMCs to purchase assets poses substantial risks and their overall performance record is mixed. The prospect that the state will take over non-performing loans may encourage banks to take undue risks (i.e. moral-hazard behavior). Also, it may induce corporations to default (“strategic defaulters”) so they can repurchase their obligations at a deeply discounted price. AMCs are costly to establish and operate, as they require substantial public equity and funding guarantees to raise funds to purchase the assets. Asset purchases at inflated prices may end up building contingent liabilities for the government. Public AMCs may also be subject to political interference and be slow to dispose of assets in order to ensure their continuity. Furthermore, few AMCs have managed to repay their liabilities and at least part of their initial equity.

A review of experiences with AMCs indicates that certain preconditions should be in place to ensure their success. The preconditions include (i) a strong consensus and political will with respect to the approach, and willingness to recognize losses; (ii) a comprehensive and coordinated reform program to strengthen financial-sector regulation and supervision, risk management and workout practices within the banks; (iii) corporate restructuring and legal and regulatory reforms to remove impediments to restructuring; (iv) a solid diagnostic of the critical mass of impaired assets; (v) a strong tradition of institutional independence and public accountability and (vi) a robust legal framework for bank resolution, debt recovery, and creditors’ rights.

Experience shows that a strong commercial focus is a key success factor. AMCs should have a focused and narrow mandate and be given the necessary powers to accomplish their task. AMCs’ legal mandate should provide a lifespan that avoids “fire sales” but prevents warehousing of problem assets and protects the AMC against political interference. The AMC should be managed by private-sector professionals with expertise on asset resolution. The transfer price should be based on market value established through a transparent, market-based, due-diligence process conducted with the assistance of an independent third-party experienced in valuation. Strong levels of governance, with frequent reporting including annual financial statements, should help to gather public support and to exert oversight over the AMC.¹⁶ Adequate funding should be provided up front to cover operating expenses until the proceeds of asset sales are received.

receive up to RUB 1 trillion in defense sector’s loans to be transferred mainly from Sberbank and VTB, along with the corresponding amount of capital against those loans. PSB is being re-capitalized by the CBR in the amount of RUB 243 billion (approximately USD 4 billion), out of which RUB 113 billion has been already provided. Then it will be transferred to government ownership later in 2018.

The CBR has also announced the creation of a “bad bank” to manage the distressed assets of the failed banks as part of its bank resolution efforts. On April 2, 2018, the central bank announced that it will create a “bad bank” to transfer distressed assets in the amount of RUB 1.1 trillion (USD 17 billion or

about 1.3 percent of the total assets of the Russian banking sector) from the three large private banks that were bailed out in 2017 via the BSCF. The CBR estimates that 40–60 percent of the bad loans could be recovered. Trust Bank, a failed bank initially acquired by Otkrytie for restructuring and recently transferred to BSCF, will hold and manage those distressed assets, acting as an asset management company after surrendering its banking license. The funding to the company will be provided by the CBR in the amount of RUB 1.1 trillion as a loan at the preferential rate of 0.5 per cent. More detailed operational features and financial projections on the “bad bank” have yet to be disclosed, including its capital position and the price at which distressed

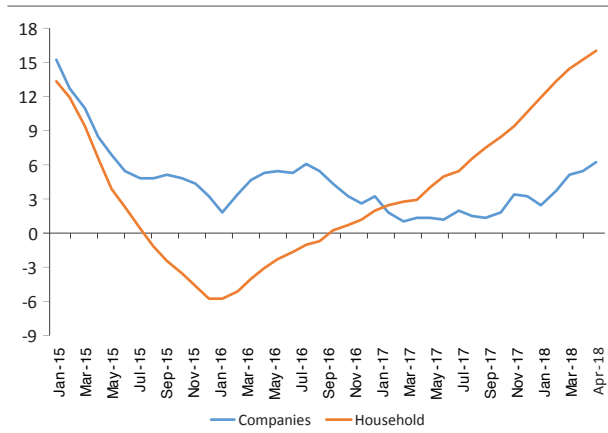
assets are to be transferred. Box 3 provides an overview of issues to consider when setting up bad banks based on international experiences.

Despite these developments, retail credit continued to grow at double digits and overall financial sector indicators remained broadly stable. In the last 6 months, credit to households in rubles grew at 13.6 percent, y/y, compared to 2.5 percent during the same period a year ago (Figure 26). To address the risks linked to accelerated consumer lending growth in recent months, the CBR tightened risk-weighting requirements for consumer loans with an annual percentage rate (APR) of 15-25 percent, which account for the bulk of unsecured consumer loans. The new requirements apply to consumer loans issued after May 1, 2018. This regulatory measure follows the recent tightening of risk-weighting requirements for mortgage loans with low down payments (below 20 percent), which came into effect on January 1, 2018. Credit to the corporate sector in rubles grew by 4.4 percent, y/y, in the last six months, compared to 1.9 percent during the same period a year ago (Figure 26). As of March 1, 2018, the sector's average capital ratio was

broadly stable at 12.5 percent, while non-performing loans slightly increased to 10.6 percent, compared to 10.2 six months before (Figure 27). Profitability, affected by the ongoing financial recovery process for the three rescued banks since the second half of 2017, continued its declining trend from 2016 and return on assets and the return on equity stood at 0.9 percent and 8 percent, respectively.

To support financial-sector development, the CBR approved two important strategic documents on financial technology and financial inclusion. Both documents promote the use of technology to decrease transaction costs for financial institutions and their customers and to improve access to financial services for consumers and SMEs. On February 7, 2018, the central bank published the framework “Main Directions for Financial Technology Development in 2018-2020,” along with a detailed implementation roadmap. This document is fully aligned with the government program on the digital economy¹⁵ and provides the foundation for the CBR to establish a regulatory framework for digital technologies and set up the related financial infrastructure. Most proposed

Figure 26: Credit growth in rubles accelerated
(Y-o-y, percent)

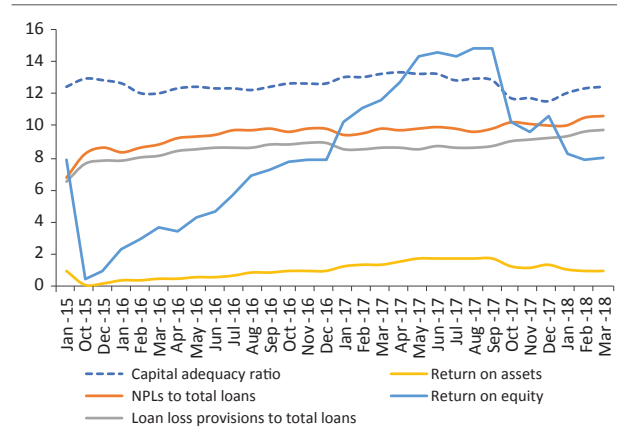


Source: CBR, World Bank staff calculations.

¹⁴ The European Commission's recently published AMC blueprint provides a comprehensive discussion of reporting requirements to meet both EU and national standards as well as practical guidance for setting up public AMCs. EU Commission Staff Working Document AMC Blueprint, Com 2018 133 final, March 2018.

Figure 27: Overall financial sector indicators remained broadly stable

(Key credit and performance indicators, percent)



Source: CBR.

¹⁵ Digital Economy of the Russian Federation.

initiatives are likely to be implemented in 2018-2019. The adopted framework, infrastructure and regulations should encourage competition, reduce risks and costs, increase the availability – and improve the quality – of financial products and services. The CBR outlined a number of high-priority innovative technologies that it encouraged the sector to develop. These include big data and smart data, mobile technologies, artificial intelligence, machine learning, biometry, blockchain and open-application programming interface. On March 26, 2018, the CBR's board of directors approved a Financial Inclusion Strategy for 2018-2020 aimed at improving financial inclusion for people living in remote areas, socially vulnerable groups and SMEs. The strategy also emphasizes the use of technology in improving the quality and speed of access to financial services for businesses and consumers.

The new U.S. sanctions against Russia imposed on April 6, 2018 may have a muted effect on the banking sector. Russia's largest bank, state-owned Sberbank, may become vulnerable to sanctions against the Russian companies to which it lends. However, according to Sberbank management, loans to companies on the new sanctions list — companies now barred from making payments in dollars or accessing Western markets — total “no

more than 2.5 percent” of Sberbank's total assets. Furthermore, the current state of the Russian banking system, with its ample liquidity and fairly strong capital base, makes it less vulnerable to the consequences of the latest US sanctions.

In the absence of severe external shocks, the performance of the banking sector is expected to remain stable. However, the quality of capital and assets, and related-party lending will likely remain a concern for some time. As the economy accelerates, NPLs, which are still high in comparison to other BRICs and large emerging countries, are expected to decline. Further banking-sector consolidation will continue due to the ongoing CBR clean-up and to restructuring and transitioning towards a tiered banking system. While the immediate impact from the most recent US sanctions has been muted so far, and CBR granted a regulatory forbearance to the banks whose clients have fallen under the sanctions, their longer-term effects remains to be seen. The banking system has sufficient liquid foreign currency assets to repay its maturing external debt and ruble liquidity is at an all-time high. High international reserves, a positive net external creditor position, a current account surplus, low public-sector debt and moderate financing needs continue to provide important buffers.

1.7 Government Budget: the fiscal stance has improved, aided by higher oil prices, a recovering economy, improved tax administration and lower expenditures

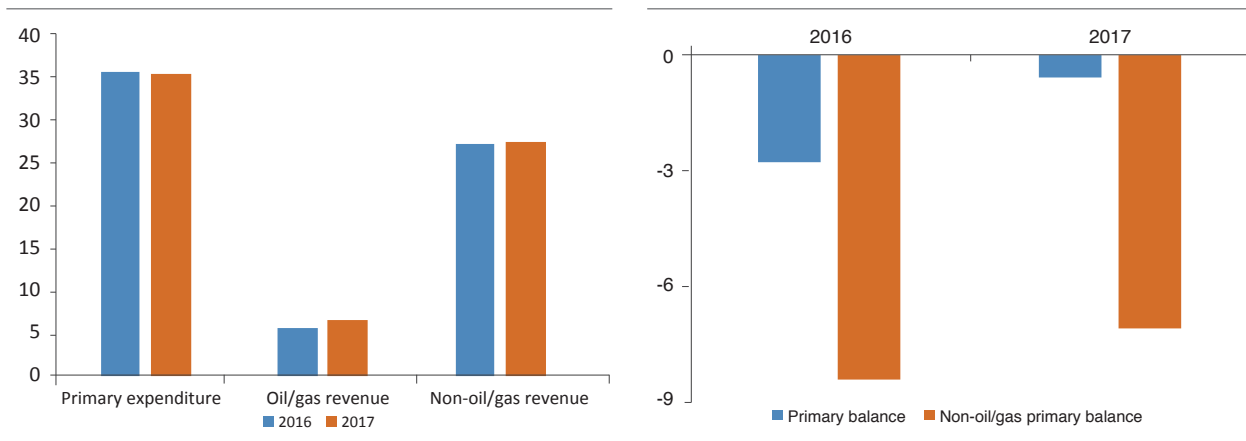
In 2017, both the federal and general government fiscal stance improved, helped by higher revenues and lower expenditures, as the Russian Government adhered to a path of fiscal consolidation. The government changed the formula for currency interventions, increasing the volume of interventions for a one-dollar change in the price of a barrel. This suggests that a higher share of windfall oil/gas revenues will be absorbed by the National Welfare Fund, which potentially decreases the exchange rate volatility caused by oil price fluctuations.

The general government's¹⁶ fiscal stance improved in 2017 (Figure 29). In 2017, the general government registered a primary deficit

of 0.6 percent of GDP, compared to a primary deficit of 2.8 percent in 2016. The overall general government deficit of 3.6 percent of GDP in 2016 improved to a deficit of 1.5 percent of GDP in 2017. The fiscal stance improvement happened mostly at the federal level.

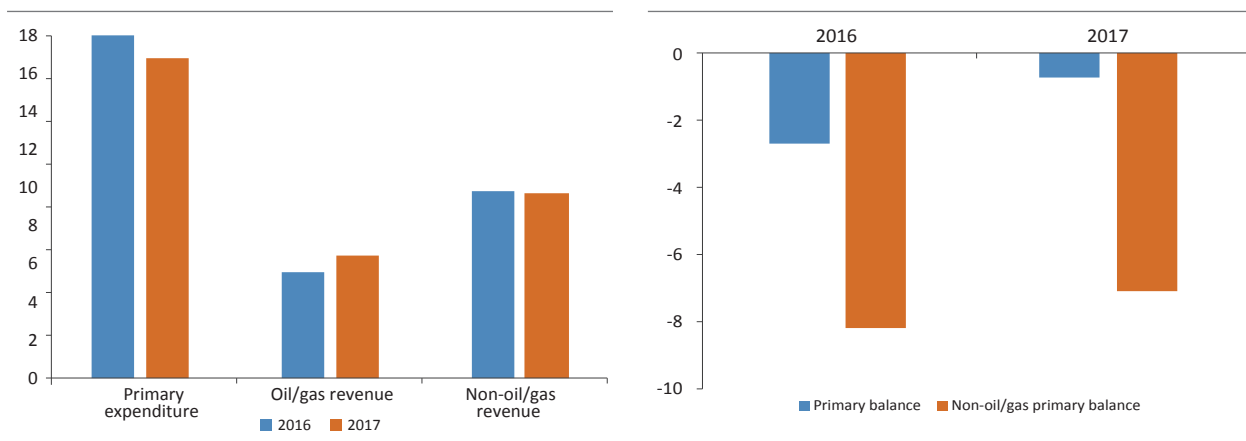
¹⁶ The general government budget includes the federal budget, the subnational budgets and extra-budgetary funds, i.e. pension, mandatory medical insurance and social security funds.

Figure 28: The GG budget primary balance improved in 2017
(% of GDP)



Source: Haver Analytics.

Figure 29: The federal budget stance improved in 2017
(% of GDP)



Source: Haver Analytics.

In 2017, buoyed by higher revenues and lower expenditures, the federal budget registered a primary deficit of 0.7 percent of GDP¹⁷ compared to a primary deficit of 2.7 percent of GDP in the same period last year (Figure 28). Federal budget revenue increased to 16.4 percent of GDP from 15.6 percent of GDP in 2016, with oil/gas revenues higher by 0.9 percent of GDP (Table 3). Despite the appreciation of the ruble in nominal terms, oil and gas revenues grew, mostly because of increases in energy prices. Non-oil/gas revenues decreased by 0.1 percent of GDP, compared to 2016.¹⁸ Compared

¹⁷ On a cash basis.

¹⁸ Accounting for the Rosneft privatization deal in 2016 and a higher share of CIT receipts transferred to the federal budget, non-oil/gas revenues increased by about 0.5 percent of GDP, also because of improved tax administration and higher excise and VAT receipts from a recovering domestic demand.

to 2016, primary expenditures decreased by 1.3 percent of GDP, partly due to lower spending compared to the one envisaged in the federal budget law (0.6 percent of GDP). In addition, in 2017, civil servant salaries and the savings pillar of the pension system were frozen, as in 2015-2016 (2014-2016 for the savings pillar), and spending on defense decreased by 1.3 percent of GDP. In 2017, the non-oil/gas primary deficit narrowed to 7.2 percent of GDP (compared to 8.3 percent in 2016 and 8.9 percent in 2013). Overall, the federal budget deficit narrowed to 1.4 percent of GDP from 3.4 percent of GDP in 2016.

Ruble-denominated debt issuance and Reserve Fund spending were the main sources of deficit financing in 2017. In addition, the government used 0.7 percent of GDP from the National Welfare Fund

and issued euro bonds.¹⁹ In 2017, the federal debt stock dropped to 12.6 percent of GDP from 12.9 percent of GDP in 2016 on the back of a decrease in external debt, partly due to a price effect and a decrease in ruble-denominated state guarantees.

Table 3: Federal budget revenue increased in 2017

(percent of GDP)

	2016	2017
Revenues	15.6	16.4
Oil and gas revenues	5.6	6.5
Non-oil/gas revenues	10.0	9.9
Expenditures	19.1	17.8
Primary expenditures	18.3	17.1
Interest payments	0.7	0.8
Balance	-3.4	-1.4
Primary balance	-2.7	-0.7
Non-oil/gas primary balance	-8.3	-7.2

Source: Federal Treasury of the RF.

Starting February 1, 2018, the government closed the Reserve Fund, which was exhausted by the end of December 2017. Currency purchased by the CBR on behalf of the ministry of finance in 2017 (about

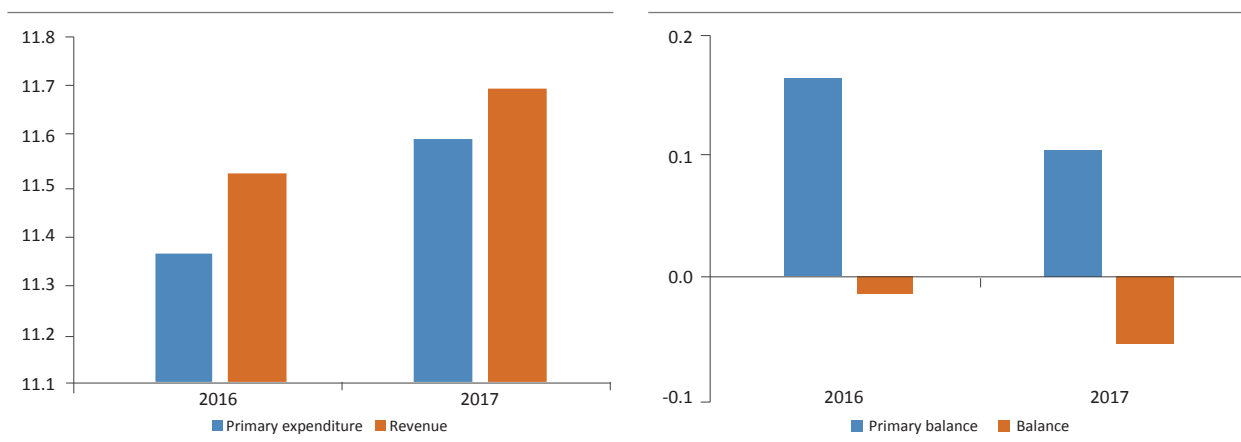
USD 14 billion) is to be transferred to the National Welfare Fund by October 1, 2018. As of January 1, 2018, the National Wealth Fund stood at USD 65.15 billion (3.9 percent of GDP). Starting on January 1, 2018, the government changed the formula for currency interventions. The new formula uses the actual exchange rate to determine oil/gas revenues in excess of the benchmark price, as opposed to forecasted exchange rate in the previous version. It also increases the volume of interventions for a one-dollar change in the price of a barrel. This suggests a that higher share of windfall oil/gas revenues will be absorbed by in the National Welfare Fund, and it potentially decreases exchange rate volatility caused by the oil price fluctuations.

In 2017, the regional budgets gained from the economic recovery and positive terms of trade.

The consolidated regional budget registered a primary surplus of 0.1 percent of GDP in 2017, compared to 0.2 percent of GDP in 2016 (Figure 30). The economic recovery increased the revenues of the regional budgets, yet primary expenditures increased only slightly more. Expenditures expanded for the national economy (+0.2 percent

Figure 30: Regional budget revenues gained from the economic recovery and positive terms of trade

(% of GDP)



Source: Haver Analytics.

¹⁹ In June 2017, the government issued USD 1.0 billion in 10-year Eurobonds with an effective rate of 4.25 percent and USD 2.0 billion in 30-year Eurobonds with an effective rate of 5.25 percent. In addition, the Finance Ministry issued permission to swap up to \$4 billion of debt maturing in 2018 and 2030 into new notes. It conducted a swap of USD 1.4 billion issuing notes maturing in 2027 and USD 2.5 billion notes maturing in 2047 with interest rate of 4 percent and 5.2 percent respectively.

of GDP, partly related to the renovation program in Moscow), housing and communal services (+0.1 percent of GDP) and culture (+0.1 percent of GDP). Overall regional budgets balance worsened to a 0.1 percent deficit from a balanced stance in 2016. The number of regions that registered budget surpluses increased to 39 in 2017 from 27 in 2016. The Ministry of Finance continued to ease the regional debt burden, providing budgetary loans with low interest rates to regions. The share of budget credits increased to 43.6 percent of total debt of regions, from 42 percent by the end of 2016. In 2017, the regional debt decreased to 2.5 percent of GDP from 2.7 percent in 2016 or by 1.6 percent in value. Yet the aggregate debt dynamics concealed substantial variations in debt levels among regions. By the end of 2017, there were 7 regions, out of more than 80, with a share of debt exceeding the region's own revenues (the same number as at the end of 2016).²⁰ In 2018, the Ministry of Finance is not expected to provide new budgetary loans. Starting 2018, the Ministry initiated a long-term program for statedebt restructuring.

Extra-budgetary funds were balanced, after posting a deficit of 0.2 percent of GDP in 2016.

In early 2018, higher oil prices continued to help the budget. In the first four months of 2018, aided by higher oil revenues and lower expenditures, the federal budget primary surplus strengthened to 1.5 percent of GDP from a primary deficit of 1 percent of GDP in the same period last year. Higher oil prices prompted an increase in federal budget oil revenues to 8.3 percent of GDP in January-April 2018, compared to 7.2 percent in the same period last year. Federal budget primary expenditures decreased to 16.9 percent of GDP in January-April 2018 from 18.5 percent of GDP in the same period last year, mainly due to lower spending on social policy due to a one-off pension payment in January 2017. The overall federal budget stance improved to a surplus of 0.6 percent of GDP in January-April 2018 compared to 1.9 percent of GDP deficit in the same period last year. The general government budget surplus improved to 2.2 percent of GDP in January-February 2018 from 0.2 percent of GDP in the same period last year.

²⁰ In 2018, federal authorities took over the budget spending in two regions (Kostromskaya oblast and Republic of Khakassia). Due to the large volume of accumulated debt, budget spending decisions in these regions will be controlled by the federal treasury.



PART II

THE OUTLOOK FOR THREE YEARS SHOWS MODEST GROWTH



The global economic upturn is expected to peak in 2018 and gradually decelerate to 2020. Oil prices are anticipated to average USD 65/bbl in 2018 and 2019, based on robust demand and continued production restraints by OPEC and non-OPEC producers, notwithstanding increases in U.S. shale oil production. Russia's growth prospects for 2018 – 2020 remain modest, with growth forecasted to be between 1.5 and 1.8 percent in the 2018 – 2020 period. However, in the short-term, these forecasts may change due to changing oil prices.

Global growth is expected to peak in 2018. With global growth exceeding potential growth for the second consecutive year, 2018 is expected to be the first year since the financial crisis that the global economy will be operating at or near full capacity. Supply-side constraints will become more binding, suggesting that global inflation should pick up gradually while growth slows. After reaching a five-year peak of 3.1 percent in 2018 based on current projections, it is projected to moderate in 2019-20, edging down to 2.9 percent by the end of the forecast period as monetary policy stimulus is pared down, and the effect of the U.S. fiscal expansion wanes. A projected deceleration of capital spending in these economies, combined with that in China, will contribute to a more moderate global trade growth in 2019 and 2020.

Oil prices are anticipated to average USD 65/bbl in 2018 and 2019 based on robust demand and continued production restraint by OPEC and non-OPEC producers, notwithstanding increases

in U.S. shale oil production. Higher oil prices are expected to eventually feed into higher natural gas prices while coal prices will continue to decline as energy demand shifts towards less polluting sources. Upside risks to the forecasts include potential supply losses arising from geopolitical events, a deterioration of the situation in Venezuela, deeper cuts by OPEC and non-OPEC countries or an extension of the agreement to a longer-term horizon. Conversely, a weakening of the agreement, or further efficiency gains among U.S. shale producers, could depress prices.

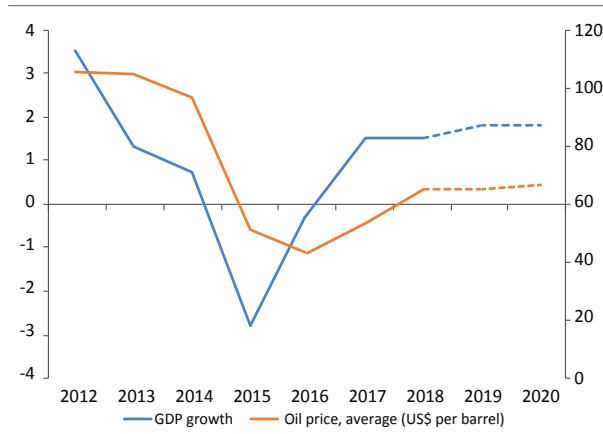
Relatively high oil prices, continued momentum in the global economic growth and macro stabilization would support growth in the medium term, but its rate will be only modest. (Figure 31). In 2018, a decrease in mineral resource extraction, mostly because of OPEC+ cuts, would stop weighing down on growth starting the second quarter, while such one-off negative factors that influenced economic performance in late 2017 as

Table 4: Global growth is broadly stable
(GDP Growth Projections, percent)

	2016	2017	2018f	2019f	2020f
World	2.4	3.0	3.1	3.0	2.9
Advanced economies	1.6	2.3	2.2	1.9	1.7
<i>United States</i>	1.6	2.3	2.5	2.2	2
<i>Euro Area</i>	1.8	2.4	2.1	1.7	1.5
Emerging and developing economies	3.5	4.3	4.5	4.7	4.7
<i>China</i>	6.7	6.9	6.5	6.3	6.2
<i>Russia</i>	-0.2	1.5	1.5	1.8	1.8
Crude oil (Brent, WTI and Dubai average, US\$/bbl)	42.8	53	65	65	66

Source: WDI, World Bank staff projections.

Figure 31: The growth forecast for Russia for 2018 has been slightly decreased
(Real GDP growth, percent)



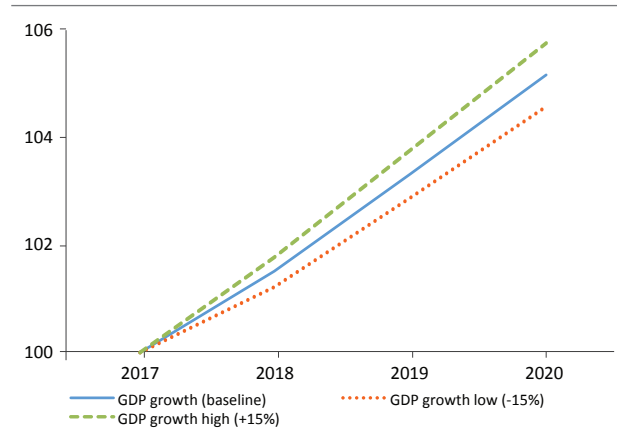
Source: Rosstat, World Bank.

negative contributions from change in inventories and one-off manufacturing low performance would dissipate. Yet, the growth forecast for Russia for 2018 has been slightly decreased due to carry-over effect from a weak second half of 2017 and lower than expected growth in the first quarter of 2018, aggravated by some uncertainty arising from the latest sanctions. Growth projections for 2019 and 2020 stand at 1.8 percent a year.

The fiscal rule suggests reduced sensitivity of Russia’s GDP growth to oil price volatility. A simulated decrease of 15 percent in oil prices would reduce growth in Russia to 1.3 percent in 2018 and 1.6 percent in 2019 and 2020. A simulated rise of 15 percent in oil prices would increase growth to 1.7 percent for 2018 and 2.0 percent in 2019 and 2020 (Figure 32).

Consumer demand is expected to be the main engine of GDP growth in 2018-2020. With relatively low inflation and continued economic recovery, real wages are expected to be on a growth trajectory. A resumption of the indexation of public employee salaries, frozen in 2015-2017, will also support real incomes and consumption. In 2018, consumption is likely to benefit further from the soccer World Cup hosted by 11 Russian cities. Credit growth will be another factor supporting consumption growth.

Figure 32: Higher oil prices would not substantially speed up the growth
(GDP growth, percent)



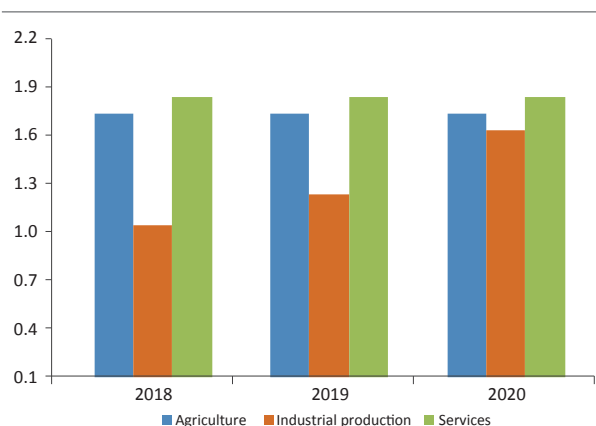
Source: World Bank staff calculations.

In 2018-2020, growth in gross fixed capital formation is expected to slow down slightly compared to 2017. Some large public infrastructure projects were finished, and the latest round of sanctions increased uncertainty somewhat. In addition, the latest sanctions announced on April 6 could dampen FDI inflow and reduce Russia’s access to technology.

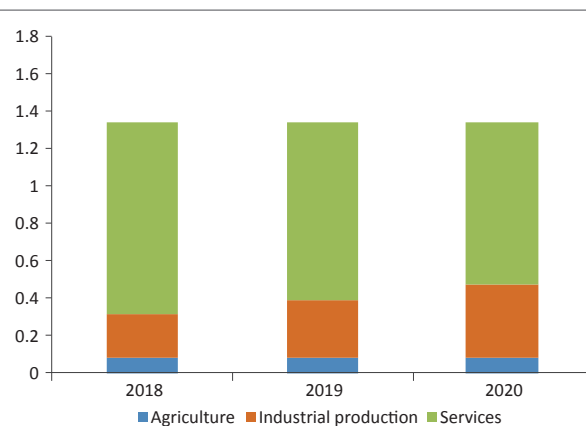
As in 2017, non-tradable sectors will drive growth in 2018 -2020. Non-tradable sectors will gain from growing domestic demand and growing incomes (Figure 33). The performance of the banking sector is expected to remain stable. However, the bailout of three large private banks points to the continuing fragility in the sector, while the quality of capital and assets linked to related-party lending will likely remain a concern. Further banking-sector consolidation will continue, due to the ongoing CBR clean-up and restructuring and the transition towards a tiered banking system. While the immediate impact from the most recent US sanctions has been muted, and the CBR granted a regulatory forbearance to the banks whose clients have fallen under the sanctions, their longer-term effects remain to be seen. Due to an anticipated flat oil production in 2018, industrial production growth is expected to pick up in 2019 and 2020 as oil production increases.

Figure 33: Non-tradable sectors are expected to drive growth in the medium-term

Projected Growth by Sector, percent



Contribution to GDP, pp



Source: WB staff calculations.

The current account surplus is set to increase in 2018, compared to 2017. An increase in the current account surplus is expected as strengthening oil prices support exports and growth of imports slows down in 2018-2020 (Table 5).

The poverty rate is expected to decrease slightly due to low inflation and recoveries in private

income and consumption, but still remain above the pre-crisis level. Driven by a rebound in disposable income and consumption, the poverty headcount is expected to decline marginally in 2017 to 13.2 percent in the baseline scenario, after reaching 13.3 percent in 2016 (Figure 34). The poverty rate is projected to decline in the baseline scenario in 2018, 2019 and 2020 to 12.5, 11.9 and 11.4

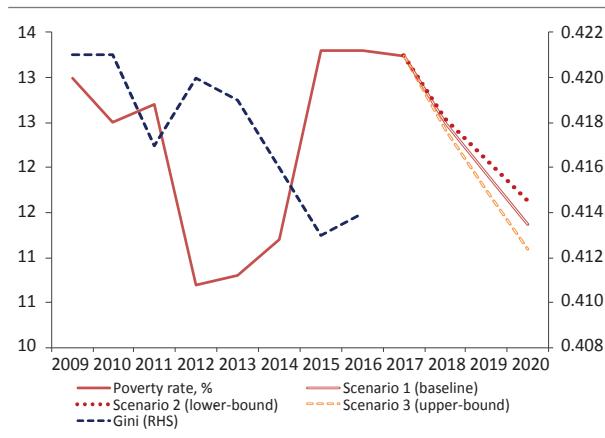
Table 5: Projected growth rates are modest
(major macroeconomic indicators)

	2016	2017	2018	2019	2020
Oil price (US\$ per barrel, WB average)	42.8	53	65	65	66
GDP growth, percent	-0.2	1.5	1.5	1.8	1.8
Consumption growth, percent	-1.9	2.6	2.6	2.2	2.1
Gross capital formation growth, percent	-1.9	7.4	2.0	2.0	3.1
Gross fixed capital formation growth, percent	0.8	4.3	3.0	3.0	3.2
General government balance, percent of GDP	-3.6	-1.5	0.2	0.7	0.7
Current account (US\$ billions)	24.4	35.2	81.9	74.5	75.5
Current account, percent of GDP	1.9	2.2	5.0	4.4	4.3
Exports (GNFS), bln US\$	332.4	410.8	487.2	511.5	547.6
Imports (GNFS), bln US\$	266.2	326.9	353.1	379.7	408.1
Trade balance (GNFS), bln US\$	66.2	83.9	134.1	131.8	139.5
Trade balance (GNFS), percent of GDP	5.1	5.3	8.2	7.8	7.9
Capital and financial account (US\$ billions)	-26.0	-19.8	-32.1	-25.1	-25.1
Capital and financial account, percent of GDP	-2.0	-1.3	-2.0	-1.5	-1.4
CPI inflation (average)	7.1	3.7	3.1	4	4

Source: WB staff calculations.

percent, respectively, as income and consumption grow further. Among the factors that could fuel real income growth are a deceleration in inflation and a general recovery of the economy. Figure 33 also shows the sensitivity of poverty projections to the minus/plus 15-percent change in oil prices (scenarios 2 and 3) compared to the baseline.

Figure 34: The poverty headcount is likely to decline in 2017 and beyond
(in percent)



Source: Rosstat, WB staff calculations.

The outlook is subject to both favorable and unfavorable risks. Favorable risk factors come primarily from higher than expected oil prices. Unfavorable risk factors include marked escalation of trade tensions and restrictions among major economies, which could derail the recovery in global trade and negatively impact confidence and investment worldwide. Other external unfavorable risk factors include a further expansion of sanctions. A sudden tightening of global financing conditions could be triggered by a reassessment of inflation risks or by shifting expectations about monetary or fiscal policies across major advanced economies. Surges in volatility in financial markets can affect expectations for the exchange rate and inflation. Domestic pro-inflationary risks stem mainly from the closing output gap, elevated inflation

expectations, a tight labor market, and high food-inflation volatility. The steep growth in nominal wages, if not followed by growing productivity, could also be a pro-inflationary risk in the medium-term. And although the performance of the banking sector is expected to remain stable, the bailout of three large private banks points to the continuing fragility in the sector, while the quality of capital and assets linked to related-party lending will likely remain a concern.

While the government has set in place macro fundamentals for growth, certain micro fundamentals still need to be addressed. By switching to a flexible exchange rate regime, introducing the fiscal rule, and continued inflation targeting, the government has set important macro fundamentals for growth. Meanwhile, achievement of the goals that were recently set by the President’s May 2018 decree (keeping economic growth above the global level, the creation of highly productive export oriented sub-sectors in agriculture and manufacturing) may face challenges because of large state footprint and other structural problems. Improving micro fundamentals for growth becomes necessary to increase productivity and put Russia on a higher growth path. As analyzed in detail in previous reports²¹, this entails limiting the role of the state in the economy, improving institutional and regulatory frameworks, and promoting fair competition, among others. Achieving higher growth rates and improving social assistance targeting would also allow the government to reduce poverty rates – another important goal set in the President’s decree.

²¹ World Bank 2016: “Systematic Country Diagnostic for the Russian Federation: Pathways to Inclusive Growth.” World Bank 2017: “Russia Economic Report #37. From recession to recovery.”

PART III

RUSSIA'S DIGITAL ECONOMY: ACCELERATING DIGITAL TRANSFORMATION FOR ECONOMIC PROSPERITY



A strategic focus on digital transformation has enabled Russia to build a national digital infrastructure to support universal broadband and mobile communications. However, for Russia to gain significant socio-economic benefits from digital transformation, it needs to implement policies that will accelerate the digital transformation of the economy's traditional enterprise sector, promote R&D, innovation and entrepreneurship and enable effective execution not only at the national level, but also at the regional level, as well as that of the Eurasian Economic Union.

Digitization affects all aspects of economic and social development as the digital revolution spans the entire globe, with half of the world's population already connected to the Internet.

Today, digital transformation is becoming one of the key factors of global economic growth, redefining not just business models but entire industries and economic sectors, and changing the way people work, live, learn and play. Success in digital transformation brings significant additional GDP growth, creates new jobs and services, improves productivity and boosts local, regional and global competitiveness. Winners in today's race for digital transformation will reap the largest economic and social dividends and become the global leaders of tomorrow.

Russia has made significant strides in its digital transformation process

Today, **72.6 percent of Russian households enjoy broadband internet access, with active mobile broadband penetration at 74.9 percent.**²² Internet access is affordable and high-speed. Russia has the highest number of fibre connections in Europe. Over 60 percent of the population now owns smartphones – more than in most other transitioning economies. The number of users of online government and municipal services has doubled in just one year to reach 40 million.²³ In the overall ranking of citizens' electronic participation conducted by the United Nations Department of Economic and Social Affairs in 2016, Russia shared 14th place with four other countries.²⁴

²² ITU June 2017

²³ The same source.

²⁴ United Nations E-Government Survey, 2016 <<https://publicadministration.un.org/egovkb/en-us/reports/un-e-government-survey-2016>>

Digital public service delivery is on the right track, with citizens reporting high levels of user satisfaction, though commercial customers are less pleased. According to a 2016 Rosstat survey, **66.1 percent of citizens are fully satisfied with the quality of public and municipal digital services,** with another 32.4 percent partly satisfied.²⁵

A 2015 Rosstat survey of businesses determined that 23.8 percent were fully satisfied with the quality of digital public and municipal services, whereas for large enterprises employing more than 250 people, the figure was 30.7 percent.²⁶

A new national education platform called 'Open Education' (www.openedu.ru) has been established to deliver open online courses.

In B2B transactions, Russia is on par with the ASEAN region. E-commerce is growing fast as **Russia pulls ahead of the EU, the ASEAN region,** its Eurasian Economic Union neighbours and others like Korea, Brazil, Mexico, South Africa in B2C sales (Figure 35).²⁷

ICT Exports are growing steadily

Over the last six years, ICT exports have more than doubled, **reaching over USD 8.5 billion in 2017**²⁸ (Figure 36), while several Russian ICT companies

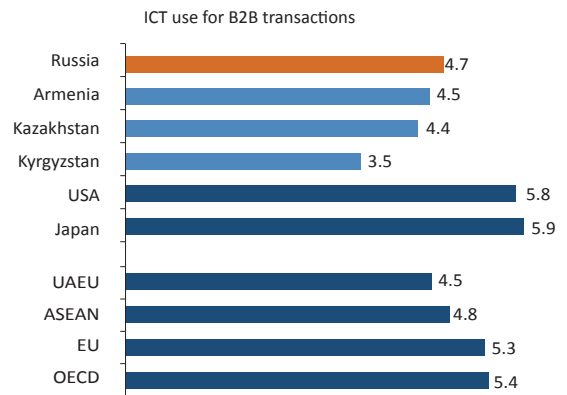
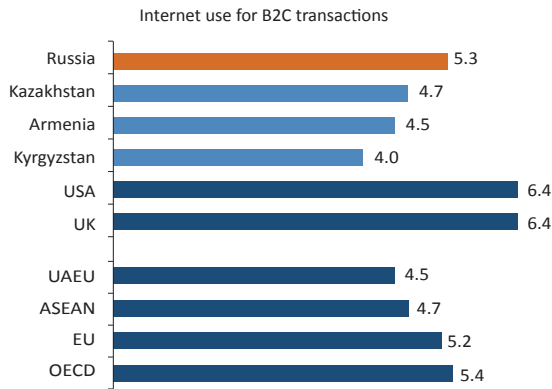
²⁵ Results of federal statistical monitoring of the use of information technologies for the public in 2016, Rosstat <http://www.gks.ru/free_doc/new_site/business/it/fed_nabl-croc/index.html>

²⁶ Rosstat. Official statistics <http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/science_and_innovations/it_technology/>

²⁷ <http://reports.weforum.org/travel-and-tourism-competitiveness-report-2017/ranking/#series=EOSQ365>

²⁸ Export of Russian Software Development Industry, 14th Annual Survey 2017, RUSSOFT Association, http://www.russoft.ru/files/RUSSOFT_Survey_14.0_rus.pdf

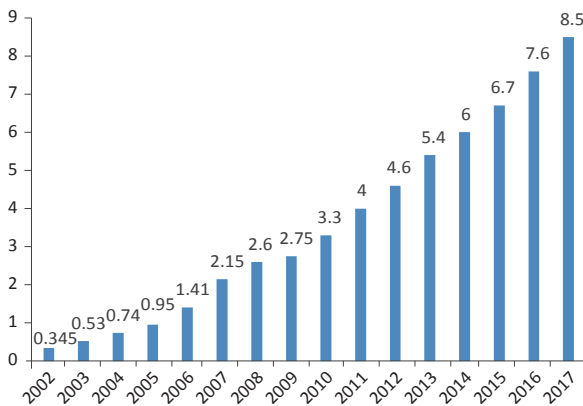
Figure 35: ICT use for B2B and B2C transactions
(WEF scores 1-7, where 7 is the highest)



Source: WEF Travel and Tourism Competitiveness Report 2017.

have emerged as global players. They include both well-established ones, such as Yandex and Kaspersky Lab, as well as relative newcomers in ICT services, business process automation and security.

Figure 36: Russia's ICT exports growth
(2003-2017, billion USD)



Source: Russoft 2017.

The use of emerging technologies is quickly gaining ground

The gains in usage are especially rapid in data analytics, cloud computing, the Internet of Things, 3D printing, robotics, artificial intelligence and blockchain.

Data analytics is used in the financial sector, in telecommunications, trade, e-commerce and mobile advertising. It is a rapidly growing field:

data analysts are in demand, universities and private sector companies are offering courses on the subject and the two local internet giants – Yandex and Mail.ru – have launched companies in this space.

Cryptocurrencies are receiving a lot of attention as well. The government has recently made a decision to complete cryptocurrencies regulation legislation by July 2018, to consider the launch of a national cryptocurrency (CryptoRuble) and to pilot the establishment of the first crypto-advisory and crypto-detective agencies in the city of Vladivostok. For now, however, cryptocurrencies are mostly used in the grey areas of the economy, even though lately many young companies in Russia have been actively discussing ICOs (Initial Coin Offerings).²⁹ Yet ICO growth is currently constrained by still-unresolved technology and legal issues.

3D printing is being introduced in manufacturing, medicine and construction with local companies appearing in this space, notably RusAt. Mobile operators (MTS, Megafon) are driving the adoption of Internet of Things technologies (eg. the Platon toll system for trucks), **while blockchain is gaining**

²⁹ Investments through bitcoins: what is the ICO and should it be used? <<http://www.forbes.ru/finansy-i-investicii/339863-investicii-cherez-bitkoiny-chto-takoe-ico-i-stoit-li-im-vospolzovatsya>>

ground across multiple sectors, for example, in fintech (Sberbank, Central Bank, QIWI), real estate (Rosreestr property registration), and patents (Rospatent intellectual property registration).

Artificial intelligence is used in image processing (NTechLab, VisionLabs, Alice by Yandex), computer vision and speech recognition. Robotics are gaining ground in education, unmanned aviation (Rosneft, Gazprom), unmanned agricultural machinery and especially in the defense industry. Unmanned vehicles are under development by Yandex and Kamaz. Yet, despite the buzz around these technologies, their commercial utilization in Russia is still in its infancy. For instance, the number of industrial robots in Russia is less than 1 percent of the world total. The adoption of the TechNet Roadmap by the President's Council in 2017 aims to accelerate the implementation and commercialization of new technologies through launching the so-called Factories of the Future based on digital and smart manufacturing.

Digital transformation is a priority at the highest level of government

As digitization remains a top priority at the highest level of government, Russia is driving digital transformation across the Eurasian space, leading digital initiatives at the international, national, regional and local levels. The Russia Digital Economy Program adopted in July 2017, the EAEU Digital Agenda passed in 2017, and a variety of digital initiatives at the regional/oblast level are all elements in this vision.

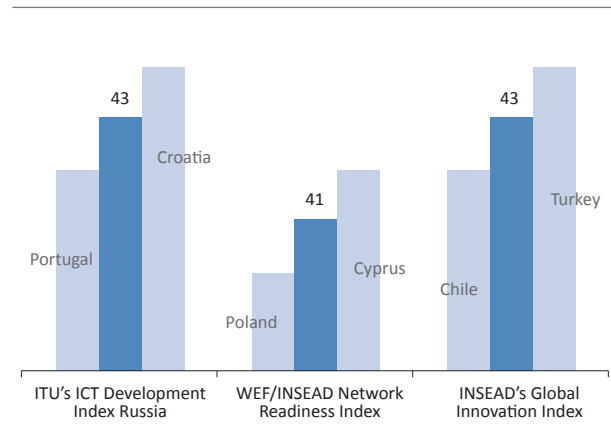
In recent years, the Russian government has prioritized digital transformation as a key national objective and it aspires to become one of the world's champions in this field.

Yet challenges in joining global digital leaders remain.

More work needs to be done for Russia to become a global leader of digital transformation.

In the 2016 ITU's ICT Development Index, Russia scored 43rd,³⁰ and in the World Economic Forum Networked Readiness Index 2016, it scored 41st³¹ while in INSEAD's³² Global Innovation Index, it scored 43rd³³ (Figure 37).

Figure 37: Russia's ranking



Source: ITU 2016, WEF 2016, Global Innovation Index 2016.

In the World Bank's Reaping Digital Dividends in Europe and Central Asia Report,³⁴ countries are divided into three groups, depending on their level of development of digital technologies: emerging, transitioning, and transforming (Figure 38).

Today Russia is in the "transitioning" group of countries due to inadequate progress in what the World Bank defines as the analogue foundations of the digital economy, such as effective leadership and management institutions, a solid regulatory base and relevant digital skills.

³⁰ Measuring the Information Society Report 2016. – Geneva: International Telecommunication Union <<https://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2016.aspx>>

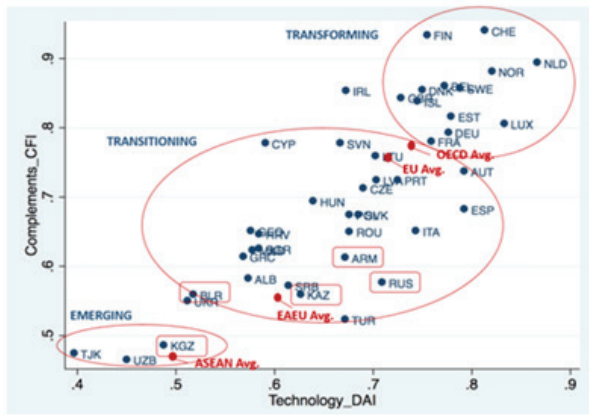
³¹ The Global Information Technology Report 2016. – Geneva: World Economic Forum and INSEAD <<https://www.weforum.org/reports/the-global-information-technology-report-2016>>

³² L'Institut européen d'administration des affaires or European Institute of Business Administration.

³³ The Global Innovation Index 2016: Innovation Feeding the World <<https://www.globalinnovationindex.org/>>

³⁴ Reaping Digital Dividends in Europe and Central Asia Report, 2017 <<http://www.worldbank.org/en/region/eca/publication/digital-dividends-in-eca>>

Figure 38: Analogue (“Complements”) and Digital (“Technology”) factors interplay in determining the leaders in digital transformation



Source: World Bank staff calculations.

Factors affecting the pace of Russian Digital Transformation

There are several factors at play here. **Business usage of ICT tools by Russian companies still lags behind** that of global leaders Singapore, Finland, Denmark and the US (Figure 39).

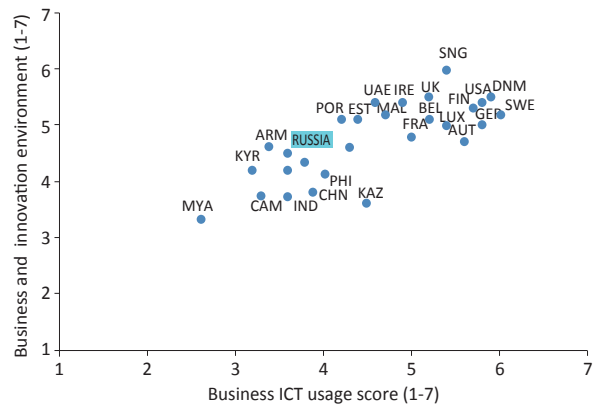
Despite the solid technical education foundation remaining from Soviet times, **broad high-level digital skills are still lacking**, and aligning the education system with industry needs calls for improvement.

Weak linkages between academia, centers of scientific research and key economic players have historically been a hindrance in the implementation and commercialization of new technologies in Russia. Specific initiatives are required to address this issue with the emergence of new technologies today.

The lack of alignment between the government, the private sector and the scientific community in turn negatively affects the innovation and entrepreneurial environment.

Research and development is the backbone of country competitiveness. Investments in R&D are required to develop new products and services

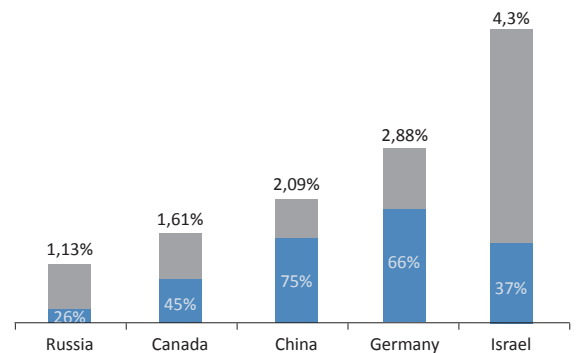
Figure 39: Impact of business usage of ICT tools on the innovation and entrepreneurial environment (World Economic Forum 2016)



Source: WEF Networked Readiness Index 2016.

to drive economic growth. Russia’s share of national R&D expenditure is **1.13 percent of GDP**, which corresponds to the 34th place in the Global Innovation Index for 2017.³⁵ By comparison, Canada spends 1.61 percent, China 2.09 percent, Germany 2.88 percent, and the global leader, Israel, spends 4.3 percent³⁶ (Figure 40). The share that Russian businesses contributed to the total national R&D expenditure is low, standing at 26.5 percent in 2015. This indicates a lack of commitment to innovation in the commercial sector. By comparison, in Canada, this index

Figure 40: Share of R&D spending in nations’ GDP



Source: Global Innovation Index 2017.

³⁵ Global Innovation Index, 2017 <<https://www.globalinnovationindex.org/gii-2017-report#>>

³⁶ The same source.

is at 45 percent, in Germany 65 percent and in China almost 75 percent.³⁷ Internal Russian enterprise spending on information and telecommunications systems R&D was worth 77.9 billion rubles in 2016, just 8.3 percent of the total internal R&D spending.³⁸

Enterprise demand for technology innovation is a key driver of digital transformation. The aggregate level of innovation activity of Russian enterprises (the share of enterprises engaged in innovation activity in the reporting year) was 9.3 percent in 2015, with technological innovation carried out by only 8.3 percent of the organizations. This is considerably less than in both developed and most developing countries: in Switzerland, 75.3 percent of companies were innovative (52.7 percent were implementing technological innovation), in Brazil 73.1 percent, and in Germany 67 percent (52.6 percent were implementing technological innovation). In terms of this indicator, **Russia lags behind all EU countries** with the exception of Romania, which stands at 6.3 percent.³⁹

According to the Global Entrepreneurship Monitor Index of Innovation,⁴⁰ which is calculated as the proportion of first-time entrepreneurs who are entering the market with new products and services, Russia holds the second-to-last place among 64 countries participating in the survey with 5.4 percent, far behind the leaders in this space.

Overall, enterprise digital transformation in Russia lags behind that of the public sector

In terms of broadband usage, only 24.2 percent of Russian businesses use broadband (with download speeds of 30 Mbps and higher), with large enterprise broadband usage at 40 percent,⁴¹ in spite of the general availability of broadband access. According to Rosstat, the share of R&D expenditure of the business sector in the field of ICT is 9.98 percent⁴² as compared to 54/59 percent globally.⁴³

According to the World Economic Forum Global Competitiveness Index 2016-2017,⁴⁴ the availability of venture capital in Russia is also very low as Russia scores below 89th place in the global ranking. Despite general support from the state, the creation of start-ups and innovative enterprises in Russia based in educational or research institutions is weak. Half of university start-ups do not generate revenue, and existing revenue is generated by universities priming the work.⁴⁵ The volume of investment in university-funded start-ups in Russia in 2015 totalled just USD 9.8 million, out of the USD 22 billion invested globally.⁴⁶

To better understand the intricacies of the gap between Russia's stated goals and aspirations and its international scores, the World Bank has conducted a Digital Economy Country Assessment (DECA) for the Russian Federation by doing the first global pilot of this holistic benchmarking tool being developed under the Digital Development Partnership initiative.⁴⁷

³⁷ The same source.

³⁸ Science and Technology Indicators: 2018: Data Book / N. Gorodnikova, L. Gokhberg, K. Ditkovskiy et al., National Research University Higher School of Economics. - Moscow: HSE, 2018. https://www.hse.ru/data/2018/02/12/1162058327/Science_and_Technology_Indicators_2018.pdf

³⁹ The Global Competitiveness Report 2016-2017, The World Economic Forum, 2017 <<https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1>>

⁴⁰ Global Entrepreneurship Monitor. Global Report 2016/17, 2017 <<http://www.gemconsortium.org/report/49812>>

⁴¹ Rosstat, Data of the Main Interregional Center for 2015.

⁴² Rosstat, Data of the Main Interregional Center for 2015.

⁴³ PWC: Companies will redistribute most of the costs of R & D in favor of software and services development. <<https://www.pwc.ru/en/press-releases/2016/global-innovation-1000.html>>

⁴⁴ The Global Competitiveness Report 2016-2017 <<http://reports.weforum.org/global-competitiveness-index>>

⁴⁵ Monitoring the effectiveness of innovation Russian universities in 2016. - M.: Russian Venture Company, 2017 <https://www.rvc.ru/upload/iblock/596/universities_monitor.pdf>

⁴⁶ The same source.

⁴⁷ <http://www.worldbank.org/en/programs/digital-development-partnership>

Russia Digital Economy Country Assessment

In 2017, the World Bank conducted a DECA in Russia. The approach to DECA was based on the digital development vision initially presented in the World Bank's World Development Report 2016: Digital Dividends.⁴⁸ The report examined the socio-economic effects of digital transformation – the digital dividends – and the conditions for achieving them. The assessment focused on evaluating the key conditions for the development of a digital economy: its non-digital foundations; the use of digital technologies to transform key sectors of the economy and the society at large; and the impact of digital technologies on socio-economic development (economic growth, jobs, quality of services). The assessment yielded several important findings.

Non-Digital Foundations:

Public Policy and Strategic planning. While the Russian Federation has developed a clear vision and strategy for its digital transformation and has set ambitious goals, more work needs to be done in devising detailed action plans and creating roadmaps for the implementation of this strategy.

More effort needs to be invested into optimizing the governance of this process (e.g. creating strategic foresight units to improve agility) and into the development of monitoring and evaluation tools to assess the effectiveness of the implementation of the strategy.

Leadership and Institutions. While there is a very high level of leadership commitment to and responsibility for the implementation of digital transformation in Russia, the engagement of the traditional enterprise and commercial sector is not as strong. Incentives may be required to stimulate a more active adoption of digital tools and strategies by the business sector and the public at large.

Legislation and Regulation. Hard work on the legal framework in the last decade has led to the development of updated regulations on digital payment systems, digital infrastructure and cybersecurity policy. Moreover, according to the 2016 World Bank Global Indicator of Regulatory Governance, Russia was graded 4 out of 6 in transparency and general public inclusion in the legislative process.⁴⁹ In 2018, Russia's top standard-setting agency, Rosstandart, ordered the expansion of responsibilities of the technical committee for standardization in "cyber-physical systems" to cover the Internet of Things, Smart Cities, Big Data, Smart Manufacturing and Artificial Intelligence.⁵⁰ More work needs to be done in the area of protecting the rights of online users and regulation of digital transactions.

Another area for development is creating the mechanisms to stimulate the use of digital goods and services. Existing gaps in the regulations create barriers for the implementation of digital technologies in the enterprise sector, which in turn slows down its digital transformation.

In terms of **human capital**, in 2016 Russia scored a fairly high 28th place out of 130 countries on the World Economic Forum Index of Human Capital 2016.⁵¹ High scores in international rankings in human capital development have been a reflection of Russia's strength in this area since Soviet times. PISA rankings in reading, science and math skills remain high to this day. However, most current educational programs have not been updated in line with digital economy requirements and training in digital competencies remains insufficient, so there is a lack of skilled digital-economy graduates. Most educational programs have not been updated and do not provide for the development of core competencies in digital transformation.

⁴⁸ World Development Report 2016: Digital Dividends <<http://www.worldbank.org/en/publication/wdr2016>>

⁴⁹ Global Indicator of regulatory Governance <<http://rulemaking.worldbank.org/>>

⁵⁰ Rosstandart Order of 27 March 2017 #642 <<http://docs.cntd.ru/document/456055018>>

⁵¹ WEF Human Capital Report 2016 <<http://reports.weforum.org/human-capital-report-2016/economies/#economy=RUS>>

Boosting innovation and R&D is a key objective that requires focused efforts to enable digital economy growth. While Russia has a reasonably well-developed innovation infrastructure, the innovation mentality and the institutional commitment to innovation are lacking. This is evident from a low overall share of R&D spending, low levels of enterprise R&D spending, low share of R&D in ICT spending, weak links between businesses and universities, insufficient research in the digital economy field, and low availability of venture capital resulting in few start-ups. A joint effort by the government, business leaders and the scientific community is required to overcome the barriers to effective R&D, entrepreneurship and innovation.

This situation is exacerbated by the continuing challenges in Russia's overall **business environment**. While the country scored 35th in the World Bank's 2018 Ease of Doing Business Rating,⁵² up 17 spots since 2016, some key challenges need to be addressed. For example, a relatively high **total taxation rate impedes** business innovation. In the World Economic Forum Global Competitiveness Report 2017-2018, Russia ranked 101st at 47.4 percent total tax rate, which is a combination of profit tax (percent of profits), labor tax and contribution (percent of profits), and other taxes (percent of profits), **compared** to 44 percent in the U.S., 30.9 percent in the UK and 21 percent in Canada. Access to new technologies remains limited, **the protection of intellectual property rights** is insufficient, the perception of corruption remains high and judiciary independence is seen as low.

Digital Foundations:

In the past years, Russia has focused on developing broadband access and has built a fairly **strong and advanced digital infrastructure** marked by a competitive telecommunications market, high rates of mobile penetration, affordable broadband and a

high level of cybersecurity. This infrastructure has enabled the growth of strong domestic and localized digital platforms and should now be used to launch 4.5 and 5G mobile networks to create a more **efficiently distributed network of data centers**, to develop local companies in the data analytics space, and to introduce new/emerging technologies such as the Internet of Things, artificial intelligence, robotics, and blockchain. The interest in the new/emerging digital technologies in Russia is very high, with Russian products starting to appear in the artificial intelligence and robotics space. More broadly, however, this interest has yet to translate into specific strategies, new products and services, commercialization models and national projects that could bring Russia into a leadership positions in this field.

In the development of **digital government**, the Russian Federation has achieved some successes in recent years, most notably an increase in the number of state and municipal services providers using the e-government infrastructure and an increase in the number of registered users of the Unified Public Services Portal.⁵³

The impact of Digital Government implementation has been felt by citizens and corporate users alike and the former have reported particularly high levels of user satisfaction. Russia has also done well in setting the stage for open government. Disparities still exist in the use of digital technologies at the federal, regional and municipal levels of government, with only 10 percent of local self-government organizations in line with national digitization requirements. To move to the next stage of maturity of digital development, a significant transformation of the current e-government architecture will be required, including the re-engineering of administrative processes and the emphasis on the use of national databases, the

⁵² Doing Business 2017: Equal Opportunity for All <<http://www.doingbusiness.org/reports/global-reports/doing-business-2017>>

⁵³ On a single portal of public services 50 million people have been registered. Russian Ministry of Communications, June 22, 2017 <<http://minsvyaz.ru/ru/events/37067>>



sharing of digital services by local governments, and the provision of interactive digital government platform services to citizens and businesses.

In **cybersecurity**, Russia is among the global leaders, ranking 10th in the 2017 ITU Global Cybersecurity Index.⁵⁴ Still, two-thirds of Russian companies believe that in the last three years, the number of cybercrimes has risen by 75 percent⁵⁵ which suggests that cybersecurity should become a focus for the private sector as well. Also, further work is required to educate the public about cybersecurity threats as more Russians become active online.

E-health implementation is still in its early stages. While the digital infrastructure required for e-health transformation is largely in place, and legislation has been adopted to enable the use of electronic medical records nationally as well as for providing telemedicine services, the use of digital and innovative technologies in healthcare remains low and requires further effort. There are also significant regional disparities in e-health adoption. While large cities are making progress, most of the country is still far behind.

In **e-education**, the digital infrastructure is also in place, available to educational institutions of all levels. There is a strong focus on training teachers and administrative staff in digital education skills and on creating new education materials and curricula. Digital education platforms are emerging, with more opportunities for course selection and personalization. Distance learning and digital exams and certifications are gaining popularity. The private sector is an active provider of a variety of digital education services, though the budget allocated to digital services in public educational institutions is low. Still more needs to be done in increasing the quantity, quality and variety of online education content in line with

the growing demands of the digital economy. The continuing lack of highly qualified teachers and trainers has yet to be addressed.

A lot has been done to develop a **digital culture** in terms of the use of digital technologies to transform arts and culture-related organizations like libraries, museums, archives and theaters. Here again, the digital infrastructure is in place, complete with the necessary regulations and program documents. The digital transformation is taking place in a number of cultural institutions, with new databases and formats of interaction defined. Still, digital platforms in this field are underdeveloped, partly due to unresolved conflicts between copyright owners and ICT firms.

The digital transformation of the private sector is progressing slowly. Apart from some automation initiatives, including the implementation of ERP systems in some large enterprises, there are few examples of digital-transformation successes in the private sector. **The government-led digital transformation has focused on top-down public-sector digitization**, while the private sector, for the most part, has suffered from a lack of relevant knowledge and management experience among enterprise managers and employees, as well as a lack of competitive pressures caused by a high degree of market consolidation in key sectors and high barriers to entry for new players. Private-sector innovation is stagnating due to limited corporate R&D budgets and taxation regulations that do not provide incentives to invest in R&D. Links with the academic community locally and internationally are weak, and little has been done to set industry standards for data analysis and integration.

These trends are observed across large emerging economies, notably the so-called BRICs. According to the World Bank's Digital Adoption Index, public sector transformation in Brazil, China, India and South Africa is significantly ahead of digital technologies adoption by the private sector.

⁵⁴ Global Cybersecurity Index 2017 <https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2017-PDF-E.pdf>

⁵⁵ Russia Digital Economy Program, July 2017.

Despite the challenges the private sector is facing, there are nevertheless enterprise leaders pioneering digital technologies in a number of sectors and competing with foreign players in their fields. Overall, according to the McKinsey digitization-level assessment,⁵⁶ ICT, education and finance are ahead. But in key industrial sectors such as mining, manufacturing, transport and agriculture, Russia is behind global leaders.

The **e-commerce** market is growing, despite the relatively low purchasing power of the population, underdeveloped logistics channels throughout the country and competition from cross-border players.

The national focus on digital transformation in Russia and the roll-out of digital services has caused a rapid rise in the numbers of online users and the participation of the population in the digital economy. This is particularly visible in large cities, less so in rural areas. It is worth noting that there are no gender disparities *vis-a-vis* the utilization of digital services, and in the rural areas, women outnumber men in most areas of Internet use.⁵⁷ More and more households enjoy broadband connectivity, including on mobile devices. **Expert assessments point to a growing confidence of the Russian population in digital government, digital participation, the sharing economy and the use of payment cards.**

In terms of the **social and economic impacts of the transformation** to the digital economy, Russia is gradually beginning to experience certain benefits and gains. According to a composite sub-index for impact assessment created from the World Economic Forum Network Readiness Index

2016,⁵⁸ Russia ranks 41st on reaping social and economic benefits from digital transformation. The lowest rankings for Russia are on the impact of ICT on the creation of new business models, goods and services (97th place), on the impact of ICT on the accessibility of basic services like healthcare, education, etc. (88th), on the impact of ICT on new forms of organization such as remote working, telecommuting, etc. (75th), and on the impact of ICT on government effectiveness, i.e. the quality of government services and government transparency (61st).⁵⁹ It rates higher in the impact of new forms of financial services related to digital technology (FinTech) developed in Russia, mainly due to two widely used products in the country: online payments and transfers of funds⁶⁰ (Figure 41).

In 2011-2012, both McKinsey and BCG estimated the contribution of the internet to Russia's economic growth to be between 1 and 2 percent.^{61,62} The Economist proposed the existence of a "threshold effect," whereby the use of ICT starts to positively influence economic growth after reaching a certain level of penetration of technologies into the economy and/or after a certain period of time.⁶³ In 2015, McKinsey estimated that the share of the digital economy in Russia's GDP rose to 3.9 percent (compared to 8.2 percent in the EU, 10 percent in China and 10.9

⁵⁶ Digital Russia: New Reality, McKinsey Report 2017. <<http://www.mckinsey.com/~media/McKinsey/Locations/Europepercent20andpercent20Middlepercent20East/Russia/Ourpercent20Insights/Digitalpercent20Russia/Digital-Russia-report.ashx>>

⁵⁷ Results of federal statistical observation of the use of information technologies by the population for 2016, Rosstat <http://www.gks.ru/free_doc/new_site/business/it/fed_nabl-croc/index.html>

⁵⁸ The Global Information Technology Report 2016. Geneva: World Economic Forum and INSEAD <<https://www.weforum.org/reports/the-global-information-technology-report-2016>>

⁵⁹ The same source.

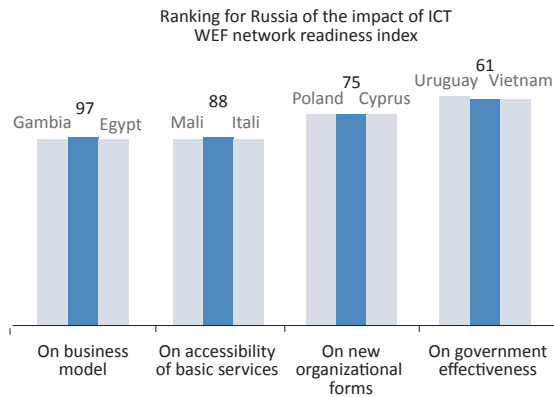
⁶⁰ Fintech Adoption Index Russia: Key Trends. – Ernst & Young Valuation and Advisory Services LLC., 2016 <<http://www.ey.com/Publication/vwLUAssets/EY-fintech-index-russia-rus/percent24FILE/EY-fintech-index-russia-rus.pdf>>

⁶¹ Internet matters: The Net's sweeping impact on growth, jobs, and prosperity. McKinsey Global Institute, 2011 <<http://www.mckinsey.com/industries/high-tech/our-insights/internet-matters>>

⁶² The Internet Economy in the G-20: The \$4,2 Trillion Opportunity. Boston Consulting Group, 2012 <<https://www.bcg.com/documents/file100409.pdf>>

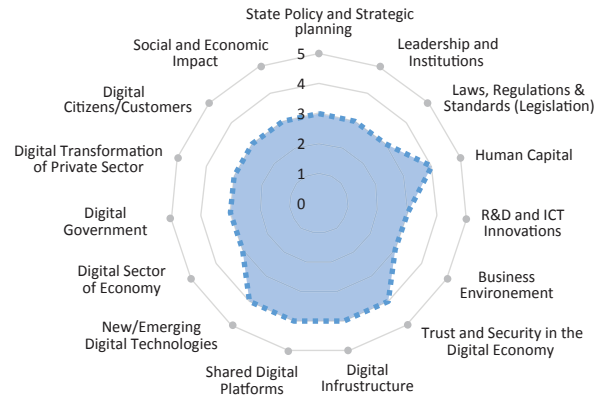
⁶³ Reaping the benefits of ICT: Europe's productivity challenge. The Economist Intelligence Unit, 2004 <http://graphics.eiu.com/files/ad_pdfs/microsoft_final.pdf>

Figure 41: Russia in the Impact of ICT ranking by World Economic Forum Network Readiness Index 2016



Source: WEF Networked Readiness Index 2016.

Figure 42: Russia's Digital Economy Assessment Summary



Source: World Bank staff calculations.

percent in the U.S.),⁶⁴ whereas BCG suggested 2,1 percent⁶⁵ – a significant increase over five years, yet still not on par with global leaders. Russia's business-climate shortcomings continue to negatively affect potential digital-dividend gains. As noted earlier, in its Reaping Digital Dividends Report, the World Bank emphasizes the need to strengthen non-digital foundations for digital transformation, as well as to promote broad education and inclusion to obtain social and economic dividends.

Russia Digital Economy Assessment Results Summary

The DECA analysis results (Figure 42) confirmed the World Bank's earlier assessment of **Russia as a country that is transitioning to a digital economy**, having created a solid platform for the digital leap in terms of both analogue and digital factors.

It has built on its traditional strengths such as human capital, scientific excellence, strong leadership and security, while its recent focus on digital infrastructure, strategic planning and regulation has started to pay off. However,

the digital transformation of the public sector (government, education, health, and culture) and especially the transformation of business through the application of digital technologies needs to be accelerated. R&D, innovation and entrepreneurship are underdeveloped by global standards. Adoption of digital technologies by the general public outside the large cities is quite low, all of which explains the lack of significant quantifiable social and economic effects – the digital dividends – from the digitization process.

The work ahead requires specific policies and steady dedication to accelerate the pace of private and public-sector transformation, to raise public awareness of the use of digital technologies, to foster links between the scientific community and private and public sectors, and to focus on developing a business climate conducive to innovation, R&D and entrepreneurship—all of which are key elements of a digital economy culture now in short supply in Russia. Improving the regulatory and taxation environment, boosting investment in innovation and fostering entrepreneurship should become top policy priorities.

⁶⁴ Digital Russia: A New Reality. Digital McKinsey, July 2017.

⁶⁵ Russia Online: Catch Up Impossible to Fall Behind. BCG, June 2016.

Russia Digital Economy Program 2025

In July 2017, Russia adopted the Russia Digital Economy Program with an expected **annual budget of USD 1.8 billion until 2025**⁶⁶ to address the current weaknesses preventing the country from joining global digital economy leaders.

The program is quite comprehensive, **focusing on both analogue and digital foundations** of digital transformation and addressing the legal, technical, organizational and financial aspects of this process. In preparing this program, its authors were able to draw upon international best practice in digital transformation.

They prioritized changes in the legal and regulatory framework, addressed key aspects of building digital skills, education and R&D, proposed investments in digital infrastructure and cybersecurity, emphasized strict program management requirements and proposed specific initiatives in e-government, Smart Cities and e-health. Given the high priority assigned to this program at the most senior levels of government, along with the funding allocated through the federal budget, there are reasons to believe that if properly implemented (see sidebar), this program will allow Russia to make significant progress in its digital transformation process.

Russia Digital Economy Program Implementation Success Factors

In collaborating with the Russian Government on its Digital Economy Program, World Bank experts emphasized the following points:

- **Ensure a common vision of the program's mission and its strategic goals**, expected results and definitions of success, including quick wins. Induce the office of the government CIO to drive cross-government

implementation and innovation, focusing on transparency, quality of services and leveraging shared data assets.

- **Focus on the digital transformation of the traditional economy**, not just the ICT sector. Prioritize the creation of new hybrid segments of the economy and incentivize traditional industries to accelerate the adoption of digital solutions.
- **Implement business models focusing on commercial gains** from the use of e-commerce, digital platforms, big data analytics and emerging technologies.
- **Develop effective project management tools** and new business models for the implementation of the program, focusing on coordinated execution, alignment with other development priorities and programs, the role of the private sector and PPPs.
- **Develop a concise list of result-oriented project metrics** and evaluation tools aimed at assessing the success of each implementation stage.
- **Ensure the availability of funds and sources of financing** (including approved government funding) for the entire length of the program.
- **Focus on addressing the regional challenges** in implementing the program, such as bridging the digital technology gaps, attracting private-sector investment and participation, building local skills and education and countering brain drain and emigration from poorer areas.

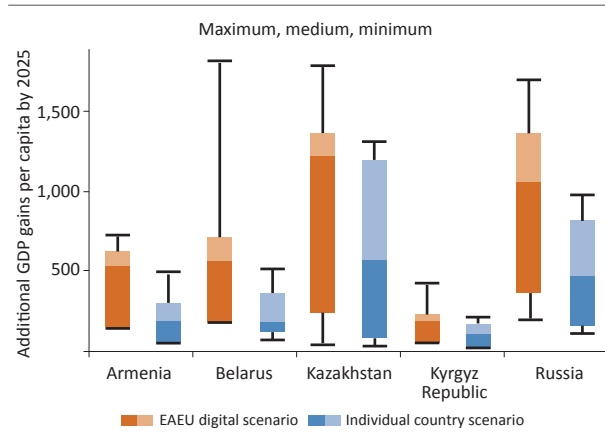
The Eurasian Economic Union Digital Agenda

The program also provides for Russia's participation in the *Digital Agenda of the Eurasian Economic Union (EAEU)*, another key digital transformation initiative announced in 2017, aimed at the **creation of a single digital space across the Eurasian Union**. According to the joint study by the Eurasian Economic Commission and the World Bank, if properly implemented, this digital integration agenda, focusing on the use of digital

⁶⁶ Program "Digital Russian economy." Approved by the Federal Government on July 28, 2017 № 1632 <<http://government.ru/docs/28653/>>

technologies to eliminate obstacles to economic cooperation across Eurasia, will yield economic benefits such as GDP growth, job creation and services transformation to all EAEU members, with Russia as the Union's largest economy standing to gain significant competitive advantages, and its population benefiting from sizable economic gains. (Figure 43).

Figure 43: Implementing the EAEU Digital Agenda. Additional Gains Per Capita by 2025



Source: World Bank staff calculations.

Reaping Digital Dividends across the EAEU: the multiplier effect

The Joint Study determined that the digital dividends gained from the implementation of digital transformation across the EAEU are likely to be multiplied compared to those that may be achieved if countries were to focus on implementing their digital strategies at the national level alone under the individual-country scenario.

For example, the joint study estimates that in terms of fixed broadband per capita penetration (Figure 44), in following the country digitization scenario, **Russia may achieve a fixed broadband penetration rate of 28.7 percent by 2025** (28.7 broadband subscribers per 100 people), which may translate into additional GDP growth between 0.1 and 0.8 percent. In following the EAEU digital transformation scenario, in the same time frame, **Russia could achieve a 35.9 percent rate of fixed**

broadband penetration and a related GDP growth of between 0.3 and 1.8 percent.⁶⁷

Similarly, for mobile penetration, the joint study estimates that Russia alone may achieve a 95 percent penetration rate by 2023, whereas following the EAEU Digital Agenda may enable it to achieve that rate as early as 2020.⁶⁸

Digital transformation of the services sector in the EAEU space should become another key area of focus for the Russian Federation, including the development of cross-border e-government and open government services, e-commerce, and e-procurement. According to the joint study, the development of e-commerce in Russia may add 0.53 percent to the GDP by 2025, whereas the growth of e-commerce between the EAEU member states may add 1.06 percent to Russian GDP alone.⁶⁹ Critically, the value of removing barriers to digital trade is estimated at almost 3 percent of Russian GDP.⁷⁰

McKinsey estimates that by 2025, the economic impact of digital transformation in Russia will reach an impressive 19-to-34 percent of GDP.⁷¹ The World Bank indicates that by 2025, digital transformation may lead to the **creation of between 7 and 13 million new digital-economy jobs** in the country (Figure 45), and potential productivity gains of over USD 38 billion.⁷²

⁶⁷ Joint study by the Eurasian Economic Commission and the World Bank "The EAEU Digital Agenda 2025: Prospects and Recommendations."

⁶⁸ Joint study by the Eurasian Economic Commission and the World Bank "The EAEU Digital Agenda 2025: Prospects and Recommendations."

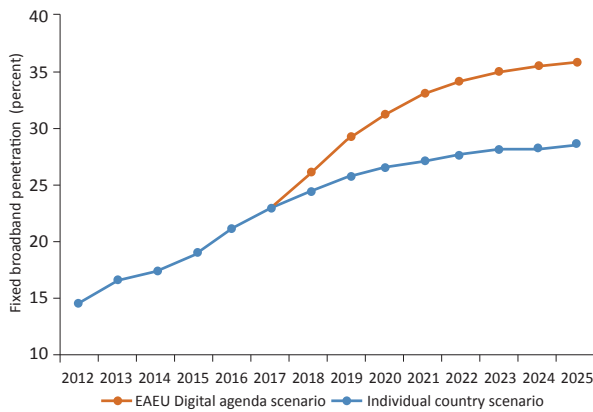
⁶⁹ Same source.

⁷⁰ Same source.

⁷¹ Digital Russia: New Reality, McKinsey Report 2017 <<http://www.mckinsey.com/~media/McKinsey/Locations/Europepercent20andpercent20Middlepercent20East/Russia/Ourpercent20Insights/Digitalpercent20Russia/Digital-Russia-report.ashx>>

⁷² Joint study by the Eurasian Economic Commission and the World Bank "The EAEU Digital Agenda 2025: Prospects and Recommendations."

Figure 44: Scenarios for the growth of fixed broadband per capita in the Russian Federation



Source: World Bank staff calculations.

These forecasts imply not only the digitization of existing business processes, but also the adoption of new business models, platforms and ecosystems, as well as the use of emerging technologies, such as data analytics, artificial intelligence, robotics, 3D printing, blockchain and the Internet of Things.

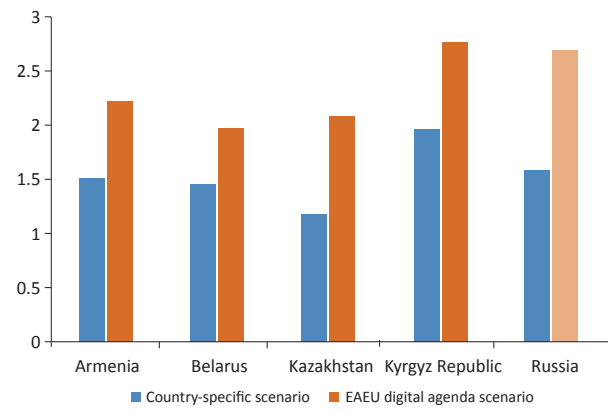
For example, in assessing the transformation to a data-driven economy, the joint study estimates that its value in Russia may reach 1.9 percent of GDP by 2025. If, however, the implementation of digital technologies and solutions is driven across the EAEU, then the **value of the data-driven economy in Russia may reach 2.36 percent of GDP – the highest in the Union** (Figure 46).⁷³

Similarly, the value of the rapidly emerging technology of cloud **computing may reach 0.40-0.46 percent of Russian GDP by 2025**. If, however, this technology is implemented across the EAEU, its value in the Russian GDP may reach 1.09 percent⁷⁴ (Figure 47).

⁷³ Joint study by the Eurasian Economic Commission and the World Bank “The EAEU Digital Agenda 2025: Prospects and Recommendations.”

⁷⁴ Joint study by the Eurasian Economic Commission and the World Bank “The EAEU Digital Agenda 2025: Prospects and Recommendations.”

Figure 45: The impact of the digital economy on employment growth (percent) when implementing country and regional Digital Agendas in 2018-2025



Source: World Bank staff calculations.

Addressing Regional Disparities in Digital Adoption

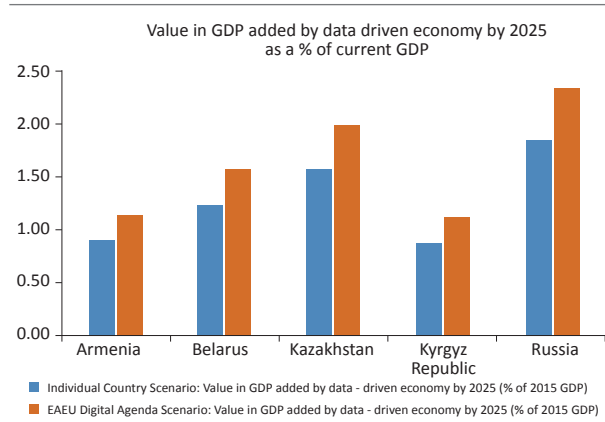
While Eurasian integration through the use of digital technologies presents compelling opportunities to benefit from the multiplier effect in obtaining digital dividends, it is critical for Russia to address the disparities in digital adoption at the regional level, which could slow the progress of its digital transformation. Differences in the economic development of the different parts of the Federation are likely to be reflected at the digital level too.

To better understand the challenges Russian regions are facing in implementing digital transformation, the World Bank has conducted a **Digital Economy Assessment (DECA) of the Ulyanovsk region of Russia** by applying the same methodology principles used in the assessment of Russia at the national level. This was the first global pilot of DECA at the subnational level.

Ulyanovsk Oblast Digital Transformation

The Ulyanovsk oblast is located in the heart of the Volga region, in the south-east of European Russia. It has a population of 1.3 million and an area of 37.2 sq km – 0.22 percent of the Russian territory. Its location at the heart of the Volga Federal region puts it advantageously at the crossroads of transport and logistics links between

Figure 46: Aggregate GDP impact by 2025 of data-driven economy



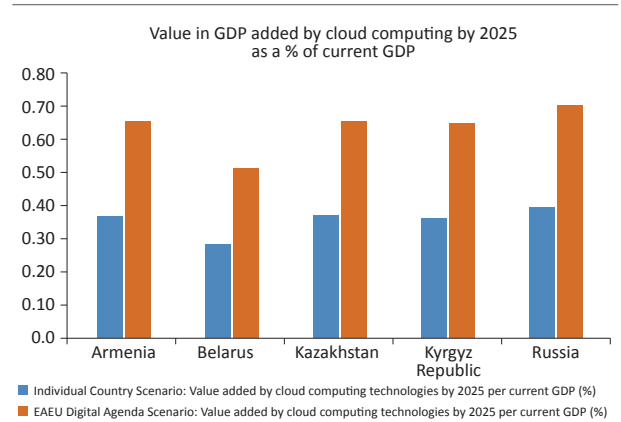
Source: World Bank staff calculations.

the Volga region and Europe, Central Asia, China and the Middle East. Industrial development historically focused on mechanical engineering, hosting Europe’s largest aircraft factory, Aviastar-SP, and the Ulyanovsk car factory, which traces its roots back to WWII with the production of the UAZ off-road vehicles. In 2018, Ulyanovsk announced a plan to open a competence center for unmanned systems set in the “Ulyanovsk-Avia” cluster. The 5th International Air Transport Forum will be held in Ulyanovsk in August 2018.⁷⁵

The region is also active in tool-making and machine-tools, as well as textiles, food processing, construction, woodworking and forestry. A nuclear innovation cluster has been created in the city of Dimitrovgrad. Innovation in Dimitrovgrad and at Ulyanovsk Avia has led to the formation of the region’s Innovation Cluster that made it to the national list of the top 11 advanced development territories of the country. Industrial development zones and special economic zones have been established to attract investment by Russian and foreign companies. More recently, the city has adopted a Smart Region development program aimed at transforming the region by using digital technologies.

⁷⁵ AeroNet agreement with Ulyanovsk Oblast < https://aeronet.aero/news/2018_04_09_ulyanovsk_agreement >

Figure 47: Cloud computing in EAEU – potential member-country gains



Source: World Bank staff calculations.

The regional government’s commitment to driving digital transformation and attracting investment has translated into a relatively well-developed digital infrastructure, a competitive telecommunications market, high mobile-penetration rates, affordable broadband access and high user awareness of cybersecurity issues. Municipal services are provided electronically, and 98.9 percent of users are completely or partially satisfied with online government services.⁷⁶ The region also has a reasonably well-developed infrastructure for innovation: it ranks 16th out of 85 and is among the most innovative regions in Russia, while the share of R&D expenditure in the GRP is quite high.⁷⁷ **The region’s government lends strong support to the development of the digital sector of the economy, specifically encouraging SMEs and offering taxation and other preferences to the ICT sector.** The region was among the first in Russia to do this. As a result, 3.3 percent of the local workforce is employed by the region’s almost 200 ICT companies (compared to 2 percent in the ICT sector in Russia overall).⁷⁸

⁷⁶ Estimates provided by the government of Ulyanovsk oblast.

⁷⁷ Rating of High School of Economics.

⁷⁸ Expert RA. Ranking of the largest groups and companies in the field of information and communication technologies following the results of 2016 <<https://raexpert.ru/rankingtable/it/2016/main>>

Nevertheless, despite the relatively well-developed infrastructure, there is a lack of innovation in traditional industry and few start-up successes. Persistently weak links within the innovation cluster may be a cause, with insufficient communication and few partnerships between businesses, the R&D scientific community, the public sector and other players. The business environment, which is reflective of Russia's general business climate challenges such as corruption, limited access to new technologies and insufficient protection of intellectual property rights, is also a constraint. In line with the general trend in Russia, emerging technology services such as cloud computing and data analytics are underdeveloped.

In terms of private-sector transformation, the situation is also reflective of that in Russia, as examples of digital transformation leadership in the private sector and of resulting changes in business models are limited to a few individual enterprises. Moreover, the share of enterprises engaged in innovations related to digital transformation is half the Russian average, despite the fact that the share of business expenditure on R&D is more than double the Russian and even global average. This should be cause for concern and a call to action for the region's leaders, who possess sufficient authority to formulate policy and implement meaningful reforms without waiting for solutions from the federal level.

As elsewhere in Russian regions, a shortage of ICT specialists and of ICT training is a key factor holding back the Ulyanovsk region's digitization. This is another issue that can be addressed locally, without waiting for a solution at the federal level.

As the case of Ulyanovsk oblast demonstrates, the impact of digital transformation may be more tangible at the regional than at the national level. Today **98.9 percent of users of online government services in the region report high levels of**

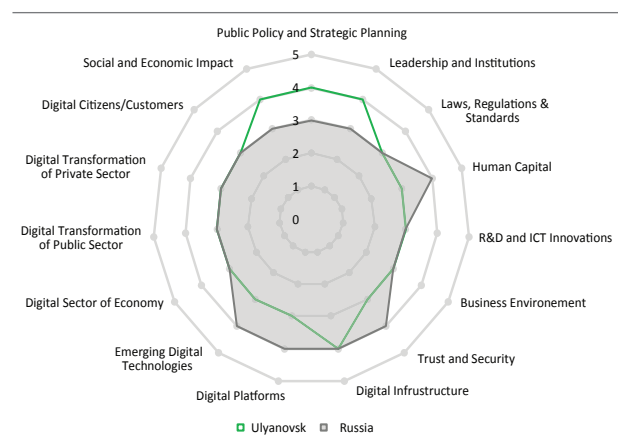
satisfaction, 100 percent of doctors have access to online medical information, 25 percent of students have used distance learning courses to improve their qualifications, and the rate of growth of the digital sector of the economy is five times higher than that of the real economy of the region. In terms of social dividends, Ulyanovsk is already ahead of the national Russian impact, according to statistics related to the provision of basic services (medical, educational, financial, etc.).⁷⁹

Results of the Digital Economy Assessment of the Ulyanovsk Oblast of Russia

The Ulyanovsk DECA results (Figure 48) are broadly in line with the World Bank's findings in the Russia DECA, and the differences, especially with respect to weaknesses, are indicative of the situation at the regional level across Russia.

Overall, both the digital and non-digital foundations required to succeed in the digital transformation process of the region are in place. In Ulyanovsk, the commitment of the region's leadership to digital transformation is perceived as even higher than at the national level, as is the strength of public policy and strategic development plans.

Figure 48: Results of Digital Economy Assessments (DECA) in Russia vs Ulyanovsk Region



Source: World Bank staff calculations.

⁷⁹ Analysis of current status of digital economy in Ulyanovsk oblast, World Bank, 2017.

More work needs to be done to overcome the challenges posed by the business environment and to address the digital literacy and skills gap of the population. It is critical to find ways to **counteract the brain drain** from the region and attract and keep qualified personnel, as well as to **build trust** in the digital economy and **encourage the public to actively engage in economic activity online**, through shared digital platforms, digital content creation and other digital mechanisms.

Specific incentives are required to accelerate the back-end digital transformation of public and private sector entities and to encourage innovation. The government, business and non-profit sectors in the region will have to work closely together to overcome these challenges and achieve further dividends inherent in digital transformation success.

Conclusions and Recommendations

The dividends of building a competitive digital economy in Russia are high, and tightly focused policies are required to accelerate the pace of this transformation.

Firstly, it is key to **maintain the high-level government focus** and strategic prioritization of the national digital transformation so as not to lose the existing momentum and concentrate on effectively reaching the 2025 goals set out in the Russia Digital Economy Program, the EAEU Digital Agenda and other relevant policy documents.

Effective project management is of the essence. Detailed roadmaps need to be developed and implemented, project portfolios prioritized to identify quick wins as well as longer-term strategic initiatives. New governance mechanisms should be introduced to accelerate the pace of transformation in line with stated goals. Budgets and financing mechanisms need to be firmly in place.

Secondly, there is a need to **accelerate the pace of the digital transformation of the traditional-industry** sector where the application of ICT and new digital technologies can yield significant dividends across all parts of the value chain, thus improving the competitiveness of key industry sectors. Engaging the private sector in digital transformation partnerships, fostering connections with the scientific and R&D community, creating favourable taxation regulation to incentivize investments into digital technologies and R&D are all mechanisms that need to be leveraged. Current industrial policy should be closely aligned with the digital economy policies and programs. It is also critical to invest into back-end digital transformation and organizational restructuring of both private and public-sector entities.

Thirdly, **boosting R&D into new technologies** and understanding their potential to transform traditional industries and create new ones should be high on the government and private sector agendas. Understanding the impact of emerging technologies on existing business models is key to gaining competitive advantage. A high level of coordination is required between industrial development objectives and digital transformation goals, so it can accelerate the creation of clusters of innovative companies and new drivers of economic growth.

Fourth, specific policies should be implemented to **encourage innovation and entrepreneurship** in the digital transformation context. Sustainable innovation requires close coordination between the government, the private sector and the academic community. Public sector investment should not only support fundamental research and drive the development of world-class R&D units in Russia, but also implement policies to encourage the commercialization of R&D outputs, while the private sector should focus on go-to-market strategies and new business-model development. An efficient regulatory system encouraging innovation should be further developed, with a special focus on intellectual property rights protection and patent regulation.

Fifth, digital transformation in Russia requires the **development of a highly trained workforce**. Policies should be put in place for training and upskilling the existing workforce, as well as retaining talent. The brain drain has to be addressed and strategies should be put in place to attract the best and the brightest back into the country.

Sixth, the government needs to focus on ways to **leverage digital technologies to alleviate disparities in the development of Russia's regions and municipalities** and to enable the less-advanced regions to take advantage and effectively localize the implementation of the national digital economy programs. Policies should focus on local digital skills development, management training, local PPPs and innovation cluster-building, local market development and funding mechanisms. Special attention should be given to the development of digital infrastructure in remote and rural areas and to educating rural populations about the benefits of digital services.

And finally, policies should be aimed at the **development of a receptive domestic market that values the processes and outputs of digital transformation**. These include specific steps aimed at improving the local business climate, focused market-development initiatives to boost local demand, public-sector technology procurement preferences and incentives for market players to procure locally. Initiatives aimed at building the public's trust in the digital economy are also important.

In summary, the ongoing Russian government focus on digital transformation as a national priority, if complemented by effective policies and a results-oriented focus on implementation, will position the country to make the leap from the group of transitioning economies to that of transforming economies and join the world's digital economy leaders while reaping all the economic and social benefits this implies.



Russia Economic Report #39, May 2018

Modest Growth Ahead

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