# MONITORING OF RUSSIA’S ECONOMIC OUTLOOK:

## TRENDS AND CHALLENGES OF SOCIO-ECONOMIC DEVELOPMENT

No. 21(144) December 2021

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**Monitoring** has been written by experts of Gaidar Institute for Economic Policy (Gaidar Institute), Russian Presidential Academy of National Economy and Public Administration (RANEPA).



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# 1. THE KEY RATE OF THE BANK OF RUSSIA HAS HIT MAXIMUM VALUE SINCE 2017

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*The key rate of the Central Bank of the Russian Federation has been raised by 1 p.p. to 8.5% per annum. It has reached its maximum value since 2017. This is due to the acceleration of inflation on the back of the expansion of demand in the face of continuing problems with goods and services supply. By the end of November 2021, inflation in annual terms came to 8.4% and approached record values over the past 5 years. Given the inertia of inflation, it will remain above the target of 4% for a long time and will return to it no earlier than the end of 2022 – the beginning of 2023.*

On December 17, following a meeting of the Board of Directors of the Bank of Russia, it was decided to raise the key rate by 1 p.p. to 8.5% per annum, which is the maximum value since 2017. This is the seventh increase in the key rate over the current year, as a result of which the key rate has increased 2-fold. The decision taken is due to the persistence of high inflation against the backdrop of high expansion of demand with limited opportunities to ramp up output.

By the end of November 2021, inflation in Russia reached 8.4% (4.9% in 2020), exceeding the target of the Central Bank of the Russian Federation by 4.4 p.p. and approaching record values over the past 5 years. In November, consumer prices went up by 0.96% (0.71% in November 2020), which is slightly less than in October 2021, when the highest price growth rates over the past 6 years were recorded (1.1%).

This is the second time this year that the Bank of Russia has resorted to such a significant increase in the key rate owing to a prolonged deviation of inflation from the target value and forecast trajectory, as well as a spike in inflation expectations. Taking into account the continuing high inflation risks, the cycle of monetary policy tightening, in our opinion, will not be limited to 2021. Apparently, the key rate will remain at a high level next year. Thus, according to the basic forecast of the Central Bank of the Russian Federation, in 2022 the rate will average 7.3—8.3%, and in 2023 – 5.5–6.5%. This means that it will return to the neutral range no earlier than mid-2023.

The stable nature of inflationary processes is evidenced by the dynamics of core inflation (excluding prices associated with seasonal and administrative factors). Thus, in the period from January through November 2021, it continuously increased from 4.6% (in January 2021 against January 2020) to 8.7% (in November 2021 against November 2020) (*Fig. 1*).

Consumer prices continue to rise for most groups of goods and services. In November 2021, the growth rate of food prices against the previous month amounted to 1.27% (1.34% in November 2020). Food inflation in November 2021 came to 10.8% compared to November 2020 (5.8% in November 2020 against

November 2019). The leaders of price appreciation against a backdrop of a relatively low vegetable harvest, as well as increased costs were fruit and vegetable products (19.4% against November 2020), eggs (26.5% against November 2020), meat and poultry (18.5% against November 2020).

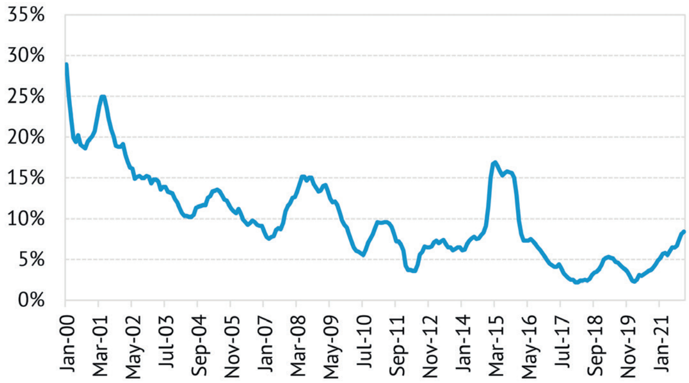


*Fig. 1. CPI over the previous 12 months, %*

*Source:* Rosstat.

The increase in prices for non-food products in November against October 2021 was 0.7% (0.6% in November 2020). Non-food inflation in November 2021 against November 2020 hit 8.3% (4.5% in November 2020 against November 2019). As demand for non-food products strongly expanded with limited supply, as well as supply problems, construction materials went up in price the fastest (24.6% in November 2021 against November 2020), TV and radio products (11.5% in November 2021 against November 2019). November 2020), motor gasoline (8.1% in November 2021 against November 2020), as well as cars of both imported (14.8% in November 2021 against November 2020) and domestic production (15.2% in November 2021 against November 2020).

Paid services to the population rose by 0.8% in November (0.05% in November 2020). Inflation in this sector in November 2021 against November 2020 was 5.2% (2.5% in November 2020 against November 2019). At the same time, prices for foreign tourism services (12.3%), passenger transport (7.5%) and insurance services (7.6%).

In the first two weeks of December, the consumer price index (CPI) went up by 0.1%, and in annual terms, inflation fell to 8.1%, which may indicate that the peak of inflation is approaching in the context of tightening monetary policy of the regulator, contributing to a gradual slowdown in price dynamics.

As noted above, the rapid recovery of consumer demand in comparison with the possibilities of ramping up output remained the key pro-inflationary factor. In particular, the growth rate of retail turnover in Q3 2021 against Q3 2020 amounted to 5.3% and turned out to be a record since Q3 2012. Stable growth in Q1–Q3 2021 was characterized by real wages of the population. According to the results of Q3 2021, its growth amounted to 2% against Q3 2020. The unemployment rate has updated the historical minimum (4.3% in October 2021, 6.3% in 2020), while the number of vacancies corresponds to historical highs (+60% in November 2021 against November 2020[1]). Labor shortage contributes to increase in wages and cost escalation.

As a result, according to the estimates of the Sberindex[2], by the end of November 2021, consumer spending of the population increased in nominal terms by 13.7% compared to November 2020.

The growth of world prices for most goods and services during the year in addition to the factors of rapid recovery of domestic demand noted above facilitated the acceleration of inflation in Russia. Despite the fact that in

1 URL: https://stats.hh.ru/
2 URL: https://sberindex.ru/

November 2021, the growth rate of world commodity prices slowed down, and prices decreased for a number of categories of raw materials,[1] inflation in the world still continues to grow for a wide range of goods.

The increase in inflation in 2021 turned out to be a global trend and was observed in both developed and developing countries. For the period from January through November 2021, inflation (measured by the consumer price index in relation to the same month of the previous year) increased in the United States from 1.4 to 6.8%, in Germany – from 1 to 5.2%, in Canada – from 1 to 4.7%. The increase in inflation is also characteristic of developing countries: in Brazil it went up from 4.6 to 10.7%, in Poland – from 2.6 to 7.8%, in Mexico – from 3.5 to 7.3% (*Fig. 2–3*).

The price growth is accompanied by a rise in inflation expectations of economic agents, which in itself becomes an important factor in maintaining high inflation. According to a survey by inFOM LLC, during 2021, inflation expectations of the population were at a steadily high level at near multi-year highs and were characterized by an upward trend. So, for the period from January through November 2021, they went up from 10.5% to 13.5%. According to the monitoring[2] conducted by the Bank of Russia, the balance of responses of enterprises regarding the expected price dynamic increased from 18.4 p.p. in January 2021 to 27.5 p.p. in June 2021, having stabilized in the second half of the year at the level of 25–26 p.p. and remaining above the highs of 2019—2020. The reason for the increase in price expectations of enterprises, according to the inFOM report, was mainly an increase in costs. It should be noted that the growth of inflation expectations and their "non-anchoring" will contribute to the preservation of higher inflation rates in 2022.

The weakening of the ruble was an additional inflationary factor in late 2021. It was caused by an increase in geopolitical risks, lower oil prices, as well as capital outflow from emerging markets due to the decision of the US Federal Reserve to accelerate the curtailment of the asset repurchase program, the expected increase in the federal funds rate, as well as increased risks of slowing the pace of global economic recovery on the back of the spread of a new strain

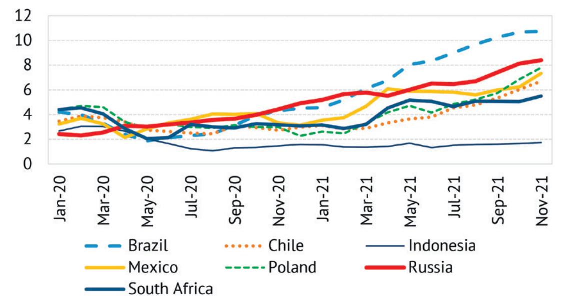


*Fig. 2. Inflation for previous 12 months in a number of developing countries, %*

*Source:* IMF.

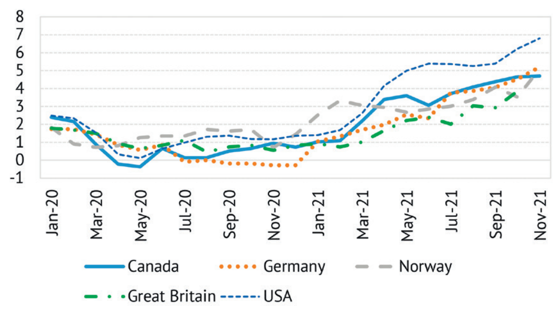


*Fig. 3. Inflation for previous 12 months in a number of development countries, %*

*Source:* IMF.

1 In November 2021 against October 2021, fertilizer prices surged by 19%, energy prices decreased by 6.3%, metal prices went down by 3.7%, the food price index went up by 1.2%, world meat prices dropped by 0.9%, vegetable oils by 0.1%, while grain prices increased by 3.2%, sugar – by 1.3%. According to the Food and Agriculture Organization of the United Nations, URL: http://www. fao.org/

2 URL: https://www.cbr.ru/analytics/dkp/inflationary_expectations/

of coronavirus. According to the results of November 2021, the exchange rate of the domestic currency decreased by 6.3% to Rb74.98 USD.

We believe that the decisions taken by the Bank of Russia to raise the key rate, as well as signals about the high probability of its further increase at the next meetings, will contribute to reducing inflation and inflation expectations. Nevertheless, given the inertia of inflation, it will remain above the target of 4% for a long time and will return to it no earlier than the end of 2022 – the beginning of 2023.

# 2. REGIONAL BUDGETS IN Q3 2021: PUBLIC BUDGET LOANS REPLACE COMMERCIAL LOANS

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*Based on results for Q3 2021, tax and non-tax revenues of consolidated budgets of RF constituent entities increased markedly as compared with the same period of 2019. In 2021, the pattern of regional consolidated budgets' expenditures does not differ very much from the pre-pandemic one, which is evidence of long-term changes in RF regions' budget policy. Fast growth in regions' own tax and non-tax revenues, as well as a large-scale replacement of commercial loans with public budget loans facilitated a reduction in regions' debt burden and related expenditures.*

**Revenues**

Based on results for Q3 2021, the RF regions' overall consolidated budget revenues were equal to Rb11.92 trillion, an increase of 19.6% relative to the same period of 2020. Such considerable index growth was driven by RF regions' own tax and non-tax revenues which picked up by 26% and amounted to Rb9.43 trillion. By contrast, the volume of intergovernmental transfers declined to Rb2.35 trillion, a decrease of 2.1% relative to the same period of 2020.

Such results became feasible not only owing to a low base for January through September 2020 and growing inflation: in Q1—Q3 2021 there was growth in RF regions' overall consolidated budget revenues (25.6%), tax and non-tax revenues (19.5%) and intergovernmental transfers (54.1%) as compared with the relevant period of 2019, an increase in all the above items exceeded considerably the consumer price index in that period.[1]

From among the main tax and non-tax revenues, in the period under review corporate profit tax (+46.9% relative to January through September 2020 and +25.2% relative to the same period of 2019) and the tax charged under the simplified taxation scheme (+48.9% and +42.6%, respectively) showed the highest growth rates of revenues, while the personal income tax (+14.6% and +18.8%, respectively), excises (+17.0% and +24.5%), property taxes (+9.3% and +3.2%) and non-tax revenues (+27.0% and +9.3%), a somewhat slower pickup.

So, despite the ongoing pandemic RF constituent entities' consolidated budget revenues not only recovered in real terms to the level seen in 2019, but also surpassed it considerably.

In the period under review, intergovernmental transfers saw mixed dynamics: subsidies (+22.8% relative to January through September 2020 and +143.5% relative to the same period of 2019) and other intergovernmental transfers (+21.8% and +66.8%) increased, while grants (-23.2% and +15.3%)

1 The consumer price index was equal to 107.4% and 111.3% in September 2021 on September 2020 and September 2019, respectively.

and subventions (-11.1% and +34.8%) decreased. Consequently, the pattern of intergovernmental transfers changed as well: from the Q3 2021 results the share of grants in the overall volume of intergovernmental transfers (except for subventions) was equal to 37.7%, a record-low level for the reviewed part of the year (on average 53.3%) since 2013. A pickup in the share of targeted transfers in the pattern of financial aid to regions can be hardly regarded as a positive trend because it reduces regions' flexibility in utilization of these funds and, ultimately, leads to budget expenditures' lower efficiency at regional and local levels.

Based on results for January through September 2021, most constituent entities of the Russian Federation (82) showed positive growth rates of consolidated budget revenues as compared with the relative period of 2020. Budget revenue growth champions were the Lipetsk Region (+57,8%), the Belgorod Region (+50,0%) and the Nenets Autonomous Region (+43.0%). At the same time, budget revenues decreased in the Sakhalin Region (-4.4%), the Republic of Crimea (-19%) and the Khanty-Mansi Autonomous Area – Yugra (-1.8%).

Due to the fact that pandemic-related tough restrictions introduced in Q4 2021 affected the economic activity, RF regions' consolidated budget revenues growth rates are expected to decline before the end of the year.

**Expenditures**

In January-September 2021, RF regions' consolidated budget expenditures were equal to Rb10.94 trillion, an increase of 6.5% on the relevant period of 2020, that is, below the growth rates of budget revenues and the current level of inflation.

From among large expenditures, in the period under review there was a considerable pickup in expenditures on family and childhood protection (+29.6%), housing and public utilities (+21,8%) and national economy (+11.0%), including transport (+27.5%) and the highways sector (+14.4%) as compared with the relevant period of 2020. At the same time, there was a decrease in expenditures on healthcare (-10.7%) and social services (-4.4%). Despite a rise in the RF Central Bank's key rate and growth in public debt of RF constituent and municipal entities, debt servicing costs did not grow, but even decreased by 0.1%, which can be explained by a reduction in the volume of commercial loans and advanced growth in public budget loans whose debt servicing is almost free of charge.

The pattern of regional and local budget expenditures has not recovered to the pre-crisis level yet. So, if we consider the overall deviation of the expenditure patterns for January through September 2020 and January through September 2021 from that of the relevant period of the base year (2019) as the total of absolute values of expenditure pattern deviations across budget classification subsections, this may lead to the conclusion that the expenditure pattern seen in 2021 differs even more than that of 2020 from the expenditure pattern of 2019.

So, the pandemic-induced changes in regions' budget policy have become long-term. It is premature to speak about this policy's specific lines because of multidirectional current changes, but it is noteworthy that particular attention was paid to the development of infrastructure (the highway sector (+14.4%), transport (+27.5%) and housing and public utilities (+21.8%)) because it is expected to give an impetus to regions' economic growth rates in future.

In the period under review, consolidated budget expenditures increased in 77 RF constituent entities, but only in 37 constituent entities expenditures growth surpassed the rate of inflation in that period. It is noteworthy that growth dynamics of budget expenditures across federal districts was even: the growth leader in budget expenditures has become the Far Eastern Federal District (+8,5%), while the Urals Federal District which showed the result of +3.1% on the relevant period of 2020 can be attributed to the outsiders though its result was not too far from the leader's.

**Equilibrium of regional budgets and the public debt**

By the end of Q3 2021, RF constituent entities' public debt increased by 17.3% relative to the same period of 2020 and was equal to Rb2.56 trillion. Despite high growth rates of the debt, regions' debt burden[1] decreased somewhat from 23.8% in September 2020 to 23.4% in September 2021 on the back of higher growth rates of their own tax and non-tax revenues (+27.8% without local budget revenues counted in) (*Fig. 1*).

As seen from *Fig. 1*, based on results for the past two years the debt burden of high-income regions increased somewhat, remaining generally at a safe level, that of middle-income regions did not virtually change at all, while that of low-income regions decreased on average.[2] So, in the past two years small growth in regions' average debt burden was driven largely by high-income regions, while lower-income and middle-income regions saw a decrease in it. From October 1,

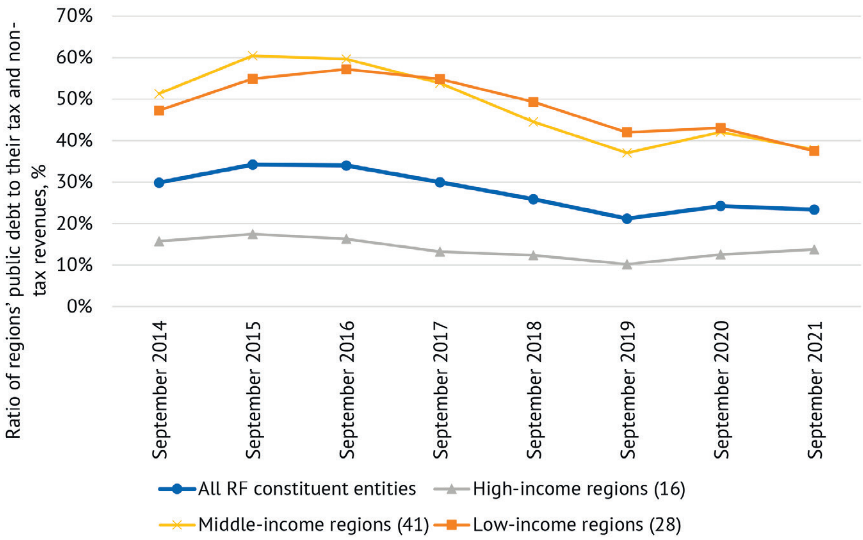


*Fig. 1. The ratio of public debt of RF constituent entities with different levels of fiscal capacity to tax and non-tax budget revenues (RF constituent entities' debt burden), %*

*Source:* own calculations based on the data of the RF Ministry of Finance and the Federal Treasury.

1 A constituent entity's debt burden is determined as a ratio of the public debt volume to the constituent entity's volume of tax and non-tax budget revenues during 12 months prior to the date of review.

2 The level of fiscal capacity of RF constituent entities is determined in accordance with the guidelines approved by Resolution No.670 of November 22, 2004 of the Government of the Russian Federation "On Distribution of Subsidies on Equalization of Fiscal Capacity of RF Constituent Entities." High-income regions include 16 RF constituent entities whose level of calculated fiscal capacity surpassed 1.0 in 2021; middle income regions include 41 RF constituent entities with the level of calculated fiscal capacity before the distribution of equalization subsidies varying from 0.6 to 1.0 in 2021 and low-income regions include 28 RF constituent entities with the level of calculated fiscal capacity below 0.6 in 2021.

2020 till October 1, 2021, public debt increased in 47 constituent entities of the Russian Federation, while debt burden, in 19 constituent entities.

A high level of debt burden exceeding 100% of the volume of regions' tax and non-tax budget revenues was seen in the Republic Mordovia (174.7%), the Tomsk Region (116.0%), the Republic of Khakasia (102.2%) and the Republic of Udmurtia (101.6%).

In the past 12 months, RF constituent entities' public debt pattern underwent substantial changes: the share of loans from credit institutions more than halved (from 18.8% to 8.8%), reaching the minimum level during the entire period since 2005. Also, the share of government guarantees fell to 1.5%, while the weight of public budget loans and government securities increased to 55.4% and 34%, respectively. Such considerable changes materialized owing to the RF Ministry of Finance's targeted measures aimed at replacing regions' commercial loans with public budget loans in H2 2021 and, consequently, slowed down regions' budget expenditures on debt servicing.

Thus, with debt burden in lower-income regions reduced and commercial loans, which debt servicing is expensive, replaced with public budget loans, the situation with regional debts is put under control.

# 3. CORPORATE LENDING IN JANUARY THROUGH OCTOBER 2021

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*The economic recovery and the expected rise in interest rates are stimulating demand for corporate loans. The quality of the aggregate portfolio of corporate loans is improving: the average level of past-due debt is gradually decreasing; the level of profitability is moving up. At the same time, the increased banks' propensity to risk amid ongoing macroeconomic turbulence requires increased attention of the regulator to the quality of the banks' corporate portfolio and the adequacy of bank risk management.*

The total credit indebtedness of corporate borrowers[1] to Russian banks as of November 1, 2021 hit Rb 50.5 trillion. The increase in the corporate loan portfolio for the ten months of 2021 amounted to Rb 5.7 trillion, or 12.7%, which corresponds to a rise in total bank assets (11.3%). A year earlier, the corporate loan portfolio of Russian banks for the same period went up by Rb 6.1 trillion, or 15.7%. However, there is no reason to talk about a slowdown in the growth rate of the loan portfolio, since the high figures of last year were due to currency revaluation and government incentives for preferential lending.

The ruble portfolio of corporate loans has grown by 17.7% since the beginning of 2021 and amounts to Rb 39 trillion, or 77.3% of the total volume of corporate debt, which exceeds last year's growth rate of 11.7%. The share of ruble loans in the total loan portfolio remains almost unchanged – 73.6%. The foreign exchange portfolio has decreased by 1.4% this year, while in 2020 a significant increase of 28.2% was recorded due to the ruble depreciation.

The increase in lending volumes, as well as the rise in interest rates and the introduction of various banking commissions have a positive effect on the growth of bank income from lending to legal entities. After a drop in their level in 2019–2020 caused by a reduction in rates, there was a pronounced trend change in 2021 (*Fig. 1*). Also, the growth of bank revenues is due to subsidizing loans provided under preferential government programs.

The level of overdue debt is decreasing both in absolute and relative terms. According to the reports of November 1, 2021, the volume of overdue corporate loans amounted to Rb 2.6 trillion, having decreased by Rb 310.7 billion, or 10.7%, since the beginning of the year. At the same time, the ratio of overdue debt to the total portfolio of corporate loans has also decreased from 6.5 to 5.2%.

Thus, most Russian banks as a whole adequately assessed the creditworthiness of their clients, and also managed to use various mechanisms for dealing with problem debts (assignment to collectors, sale of collateral, use of insurance

1 Loans to non-financial and financial organizations, as well as individual entrepreneurs are included.

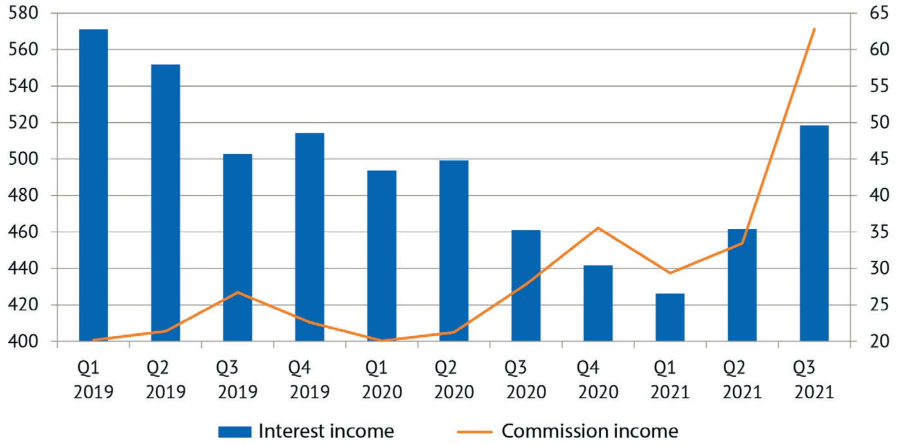


*Fig. 1. Interest and commission income of the banking sector from corporate lending in 2019–2021, Rb bn*

*Sources:* Report on performance results (form No. 102) for the period from April 1, 2019 through October 1, 2021 / Bank of Russia; own calculations.

instruments). The formed reserves for possible loan losses cover problem loans by 76% (as of the end of the third quarter) and do not pose a significant risk.

The sectoral structure of corporate loans has not undergone significant changes compared to the previous year. The leaders in the volume of loans attracted are enterprises engaged in financial and insurance activities (Rb 34.0 trillion, or 48.9% of the total amount of disbursements for the first ten months of this year), wholesale trade enterprises (Rb 12.8 trillion, or 18.4%) and manufacturing enterprises (Rb 9.4 trillion, or 13.5%).

The most significant increase in the volume of loans attracted was recorded among enterprises engaged in professional and scientific and technical activities (an increase of 67.8% over the ten months of this year relative to the volumes of the corresponding period in 2020), extractive industries (by 54.9%), enterprises engaged in real estate transactions (by 47.8%).

Despite the continuation of preferential lending programs and other measures to support enterprises in vulnerable industries in 2021, many areas of activity still experienced serious difficulties in attracting bank loans and were forced to reduce borrowing volumes. As of November 1, 2021, 34 OKVED-2 classes (42% of all activities) had a decrease in bank loan debt relative to the level as of November 1, 2020. The most significant drop in volumes was recorded in the sectors of health care and social services (a decrease of 30.1%), information and communications (a decrease of 22.5%), as well as in other types of activities (a total decrease of 50.7%).

The consequences of the pandemic affected the concentration of corporate lending: despite the growth of the portfolio, the total number of corporate borrowers decreased by 29.6% compared to a year ago (as of November 1, 2020) (*Fig. 2*). In just ten months of this year, 714.6 enterprises received loans, which is 28.3% less than in ten months of 2020. This is due to the fact that the main users of the support programs were borrowers who had no significant credit debt during the year before the pandemic outbreak. Currently, the decrease in the number of borrowers is largely due to the improvement of the economic situation and the reduction of preferential lending programs. As the economy

## 3. Corporate lending in January through October 2021

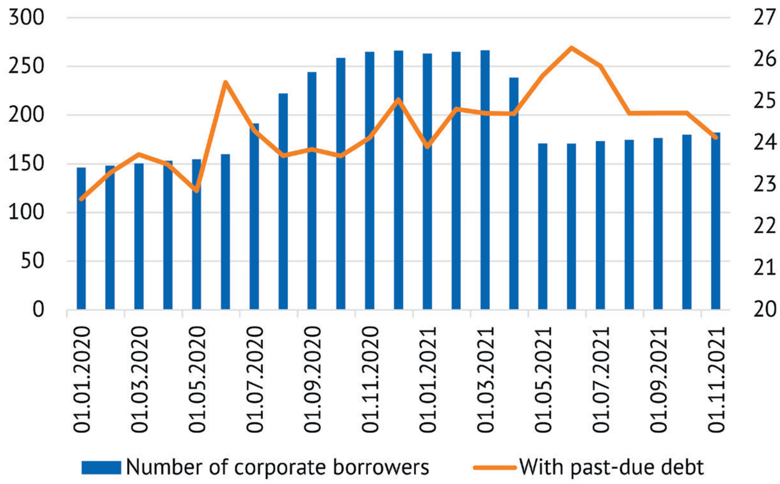


*Fig. 2. The number of corporate residents with debt before banks (including post-due debt) in 2020–2021, thousand*

*Source:* @Information on the number of borrowers and extended loans@ (Internet version) / Bank of Russia. URL: http://www.cbr.ru/statistics/bank_sector/sors/

recovers and the activity of small and medium-sized businesses stabilizes, the number of corporate borrowers will increase again.

Support for small and medium-sized enterprises (SMEs) remains one of the priorities of the state in the field of economics. Currently, loans to SMEs account for Rb 6.6 trillion, or 12.2% of the total portfolio. In this regard, the government has developed new measures to support assistance to small and medium-sized businesses

At the end of October, the government announced the launch of the second stage of the preferential lending program "FOT 3.0", as well as the mechanism of grant support for business.[1] The difference between the second stage of the "FOT 3.0" program and the first is that the list of loan recipients has been significantly expanded, as well as the loan terms (up to 18 months) and loan repayment (from 6 to 12 months) have been increased. The new program is valid from November 1 to December 30, 2021.

The loan is issued at the rate of one minimum wage (minimum wage amounts to Rb 12,792.) for each employee, for a period of 12 months, the loan rate is 3% per annum. Under the terms of the program, in the first six months, the borrower has the right not to make any payments on the loan – neither interest nor principal debt, then within 12 months to repay the loan in equal shares, taking into account interest. At the same time, 75% of the loan is secured by the guarantee of VEB.RF.

Representatives of 17 most affected industries will be able to receive support (there were 11 of them in the first phase of the "FOT 3.0" program). At the business request, such areas of activity as additional education for children and adults, day care services for children, household services, dry cleaning services, dentists, hairdressers and beauty salons have been added to the list.

During the crisis, the Government of the Russian Federation and the Central Bank managed to minimize banking risks and stimulate corporate lending. However, the still high concentration of corporate liabilities is a potential source

1 URL: http://government.ru/news/43700/

of systemic risk for the domestic banking sector. Accordingly, in the medium term, measures will be required to stimulate the diversification of the banks' corporate loan portfolio. The success of their implementation will largely depend on the development of small and medium-sized businesses, as well as on the implementation of the strategy for the development of competition and antimonopoly regulation.

# 4. FINANCING HIGHER EDUCATION ESTABLISHMENTS' R&D: ISSUES OF EFFICIENCY

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*In recent years, higher education establishments (HEE) have been set the goal to facilitate jointly with scientific institutions a technological breakthrough and prepare a modern human resource base for the economy and social services. The government allocates substantial budget funds to support R&D carried out by HEE. However, the share of R&D funding in Russia is still insignificant and amounts on average to the mere 12% of HEE's overall revenues.*[1]

In 2020, the overall R&D volume carried out by higher education establishments was equal nearly to Rb94.5 bn, a 25% increase relative to 2014 (Rb75.6 bn). This indicator's growth was particularly evident with federal universities: the R&D volume in money terms increased by 47%. In case of the Moscow State University (MSU) and the St. Petersburg University (StPU), this indicator picked up by 34%. National research universities (NRU) showed similar growth (34%). In the same period, the R&D volume of flagship HEE[2] increased by the mere 1%, while other reviewed HEE saw a 15% growth on average[3] (*Fig. 1*).

In 2014–2020, from territorial aspect HEE of the Central Federal District saw the highest pickup in the R&D volume (30%).[4] In the same period, this indicator in the North-Western Federal District exceeded 46%, while in the Far Eastern Federal District and the North Caucasian Federal district it declined.

National research universities saw the largest share of R&D revenues (on average 25%) in their overall revenues. This is not surprising because from the very beginning NRU cohort included universities with a huge research capacity, which were later granted extra funding from the federal budget to carry out R&D envisaged by their development programs.

MSU and StPU are ranked second (17.5—20%) and federal universities, ranked third (10.2—13.7%).

As regards HEE in the field of medicine, agriculture, sports, creative arts and transport[5], which were not included in the cohort of high-profile higher education establishments, their share of R&D revenues is markedly lower. At the same time, this indicator's upward trend can be traced with agricultural HEE (from 5.3% in 2014 to 6.3% in 2021) and HEE of culture (from 5% to 5.3%, respectively). In all other higher education establishments of the specified

1 The analysis of R&D funding was based on the data of 549 Russian public and private HEE.
2 HEE established in regions by means of a merger of existing higher education establishments.
3 HEE authorized by the RF President's Decree to establish singlehandedly educational standards were not included in the analysis.
4 Here and elsewhere, we mean HEE in federal districts from the number of 549 HEE reviewed.
5 These HEE are subordinate to the RF Ministry of Healthcare, the RF Ministry of Agriculture, the RF Ministry of Sport, the RF Ministry of Culture and the RF Ministry of Transport.

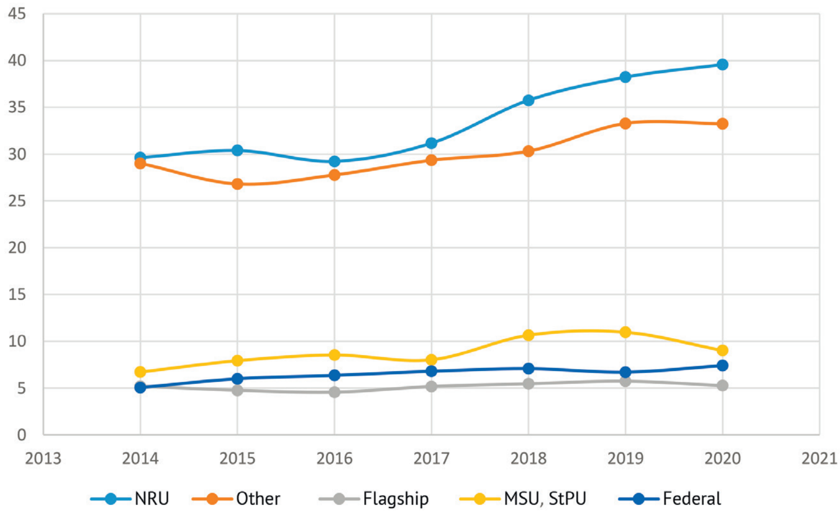


*Fig. 1. The R&D volume across HEE cohorts in 2014–2020, billion rubles*

*Source:* own calculations based on the data of the Monitoring of Efficiency of HEE's Activity. URL: https://monitoring.miccedu.ru/?m=vpo

cohorts, the share of R&D revenues either declines or, as in case of medical HEE, remains unchanged even though these revenues may increase in absolute terms.

All this suggests that most HEE which are not included in the cohort of high-profile HEE turn gradually into solely academic institutions where the R&D component is insignificant. It is noteworthy that a portion of HEE subordinate to the RF Ministry of Agriculture stands out: the share of their R&D revenues in overall revenues increased by 27% in 2014–2020. It seems that the role which the agriculture has been playing in the Russian economy in recent years has given an impetus to the development of R&D in the abovementioned HEE (*Fig. 2*).

The indicator of an average R&D volume per one employee of the academic staff at high-profile HEE with higher R&D volumes (federal universities, MSU and StPU) is much lower than at other HEE. Notably, in case of MSU, StPU and federal universities, quite the opposite trend is observed: in 2014–2020 this indicator showed considerable growth of 192% in MSU and StPU, but declined by 19% in federal universities.

A pickup in the R&D volume was accompanied in most cases by growth in the share of R&D funded from non-government sources. So, in 2014–2020 the share of non-government financing in the overall R&D volume at 549 HEE reviewed increased from 59.2% to 62.7%. The only exception was MSU and StPU where the share of non-government funds in R&D revenues decreased during that period. MSU and StPU saw the lowest share of non-government funds in their R&D revenues: 11.6% and 9.2%, respectively.

From among different HEE, HEE of art and culture with a relatively low share of non-government funding in R&D volumes (23–25%) and HEE of transport with this share amounting to 82–92% stand out.

Despite the declared importance of intellectual products (IP) and the need to commercialize them, they have failed to become so far an important driver of development of R&D at HEE; revenues from IP commercialization are not HEE'

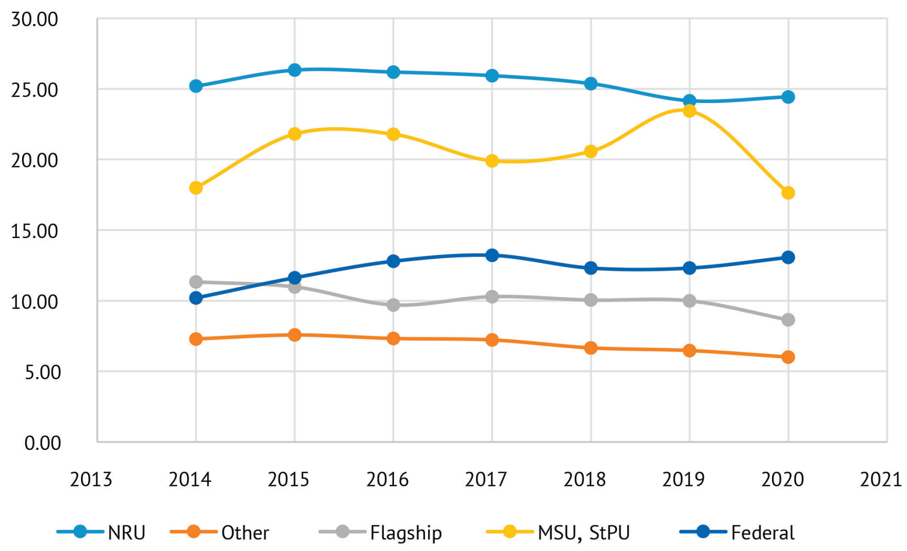


*Fig. 2. The share of R&D revenues in HEE's overall revenues in 2014–2020, %*

*Source:* own calculations based on the data of the Monitoring of Efficiency of HEE's Activity. URL: https://monitoring.miccedu.ru/?m=vpo

substantial sources of revenues and are unlikely to become as such in short-term. Each specific case of successful IP commercialization is a unique one.

Also, the analysis has revealed weak statistical correlation even at national research universities between the R&D volume per one employee of the academic staff and the number of publications – indexed in Scopus and WoS databases – per 100 employees of the academic staff (*Fig. 3*, *4*).

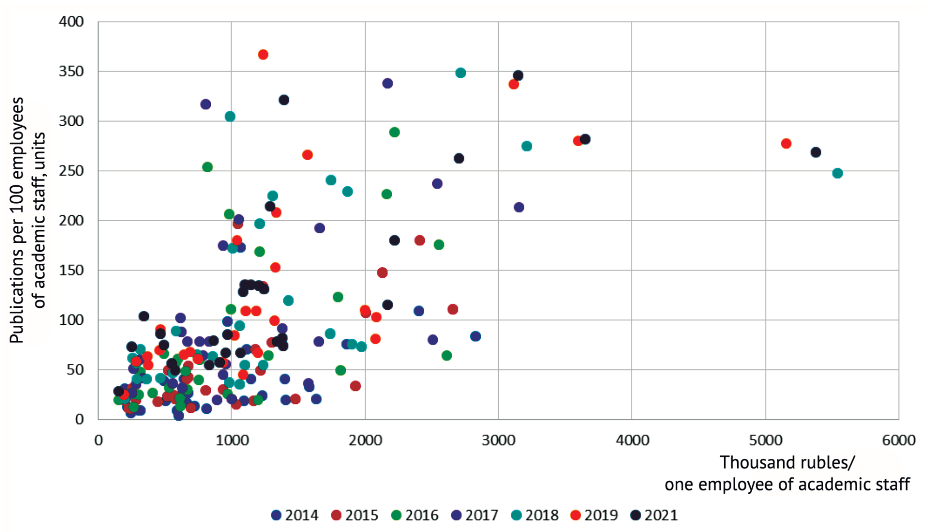


*Fig. 3. Correlation between the R&D volume per 1 employee of the academic staff and the number of publications -- indexed in the Scorpus database for five years prior to the reporting year – per 100 employees of the academic staff (NRU sample)*

*Source:* own calculations based on the data of the Monitoring of Efficiency of HEE's Activity. URL: https://monitoring.miccedu.ru/?m=vpo

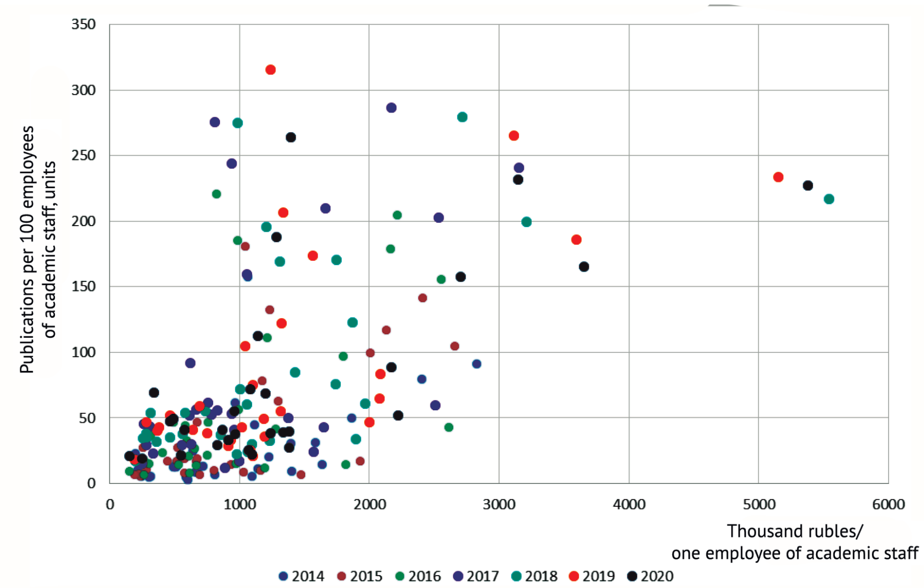


*Fig. 4. Correlation between the R&D volume per 1 employee of the academic staff and the number of publications – indexed in the WoS database for five years prior to the reporting year – per 100 employees of the academic staff (NRU sample)*

*Source:* own calculations based on the data of the Monitoring of Efficiency of HEE's Activity. URL: https://monitoring.miccedu.ru/?m=vpo

It is noteworthy that institutional forms of financial support with prevalence of government (budget) funding play still an important role in promotion of R&D at HEE. Specifically, the share of R&D funding at HEE in Russia is equal on average to around 12% of HEE's overall revenues, that is, three times less than in developed countries. In the past 15 years, an increase in the index of HEE's R&D volumes has been underpinned mainly by high-profile HEE which were actively supported by the government.