MONITORING OF RUSSIA'S ECONOMIC OUTLOOK:

TRENDS AND CHALLENGES OF SOCIO-ECONOMIC DEVELOPMENT

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TRENDS AND CHALLENGES OF SOCIO-ECONOMIC DEVELOPMENT

Although having of late been predominantly favorable for Russia, the effects of external factors on this country's national economy have simultaneously shown that its vulnerability to spillover of uncontrollable external risks remains undiminished. The decision of the US Federal Reserve System (FRS) to leave its target range unchanged until the year 2021 and the de facto acquittal of President Trump by Special Counsel Robert Mueller have attracted foreign investors to Russia's domestic finance market, allowed the RF Ministry of Finance to successfully float the new issues of Russian Eurobonds, and strengthened the ruble at least for the time being. By then, the price of oil had already been replaced as the main driving force of the ruble exchange rate by expectations of new anti-Russia sanctions.

This relatively calm external environment and a lower-than-expected rate of inflation (caused, among other things, by the slackness of demand) has made it possible for the Bank of Russia to admit the possibility that the key rate by the end of 2019 might be somewhat reduced, and to downwardly revise its own end-of-year annual inflation forecast for 2019. However, for example, price stability in the Russian domestic fuel market has been achieved in recent years by increasingly sophisticated regulations, as well as by the promises of new lavish compensations to producers to be paid from the state budget. If the latter trend becomes stronger, the resulting low prices would inevitably be accompanied by a continual rise in taxes (or charges). As a matter of fact, the same development will take place if the State resorts to subsidizing the cost of the ever increasing range of bank loans, reflected in interest rates.

Our experts, on the basis of their analysis of the sources of the corporate sector's debt financing, believe that the most important source thereof is bank lending. In 2018, Russian banks' overall new loans issued to their corporate customers totaled RUB 45 trillion. The bulk of that amount (RUB 38.2 trillion, which represents an 18% rise on the previous year) was assigned to big businesses. Medium sized and small enterprises received RUB 6.8 trillion in new bank loans (an 11% rise on 2017), a rather impressive record, but it is still below the record high hit in 2013 (RUB 8.1 trillion); their share of the bank loan market also has not recovered its 2013 level as yet (15% in 2018 vs. 22% five years ago). At the same time, the issuance of loans to small and medium sized businesses remains much riskier than lending to big businesses: by the end of last year, the share of overdue loans issued to big lenders amounted to 5.6% vs. 12.4% in the SME segment.

As far as the loan bond market is concerned, the growth in bond issuance by borrowers (with the exception of credit organizations) was much slower than in the past few years. And although the volume of the issued bonds hit its historic high of the entire period since the establishment of this market (Rb 9.43 trillion), its growth over the course of 2018 amounted to just slightly more than 2%. At the same time, the share of bond loans denominated in foreign currencies in the total volume of corporate bonds was less than 6%.

When analyzing data on Russia's external trade in 2018, our experts draw attention to the fact that Russia's exports of fuel and energy products displayed accelerated growth (by 35.6%), while the exports of other goods increased by a mere 11.7%. At the same time, according to the May 2018 Presidential Executive Order, non-raw non-energy exports should grow from $ 149.8bn in 2018 to $ 250bn in 2024, or by 67% over the course of six years. In principle, such growth rates would correspond to the growth rate of exports achieved in 2018 and 2019 (9% per annum). However, the experts point out that the rise in non-raw non-energy exports by 11.7% was attained first of all due to an 8.1% rise in exports prices, that is, due to the high-volatility factor. Nevertheless, it should be noted that the volume of these exports grew by a mere 3.6%, which is far below the set benchmark of 9% per annum.

Our experts' analysis of the efficiency of infrastructure investments is also related to the implementation of the Presidential Executive Order, this time in the part concerning the Comprehensive Plan for upgrading and expanding core infrastructure for the period until 2024. The analysis is focused in the main on investments in transport infrastructure. According to our authors, the efficiency of such investments should be assessed not only from the point of view of their direct effects on the transportation sector (increases in shipment speeds, in the carrying capacity of rail- and motor roads, and in the scale of passenger and cargo flows), but also from the point of view of multiplicative effects in the economy, which are mainly limited to the time of a project's implementation (temporary increases in orders to the building construction industry and in the demand for labor). An even greater effect is associated with the social importance of such projects, that is, with the consequential changes in the economic geography of a country or a region, and with the resulting increase in transport availability and the corresponding growth in the economic potential of that country or region.

The Gaidar Institute's experts emphasize that Russia still lacks count data models for analyzing the transportation system effects. However, several such models capable of calculating the effect of modernization of the road network down to the district level are already in use in the USA. An efficient count data model has been created in the Netherlands. As a rule, such effects are long-term and significant when regions with sufficiently dense populations are taken into account. All these factors should be taken into consideration when assessing the efficiency of the measures envisaged in such a comprehensive plan. It should be remembered that part of this plan is devoted to the development of transport-transit and port infrastructure. However, according to our experts, the economic effect of such investments could be achieved only if Russia gets involved more intensely in international trade.

The review of the situation in developing economies by the end of 2018 also offers our experts' conclusion that the calm in developing markets that began at the end of last year and the beginning of the current year is just temporary. Almost throughout the whole of 2018 these economies experienced a capital outflow caused by the toughening of the FRS's policy and by the US-China trade conflict. The two hardest-hit countries were Turkey and Argentina that had already been burdened with some severe internal problems accumulated over a long time. The aggravation of the economic situation in these countries resulted in a massive devaluation of their national currencies and a significant rise in the inflation rate.

Trends and Challenges of Socio-Economic Development

In late 2018 and early 2019, tensions in the emerging markets decreased, and some national currencies even strengthened, in large part, under the influence of changes in the policy of the US monetary authority. However, major macroeconomic indicators are pointing to the presence of risk aggregation, while deepest concerns are raised by the rapid growth in household debt. Since 2016, the volume of household debt had increased by more than 30%, to $ 12 trillion by the end of Q3 2018. The hugest contribution to this process belongs to China: its household debt has increased by 45% to $ 6.8 trillion, or 50.9% of GDP. The debt burdens shouldered by many developing economies and the ongoing decline in China's pace of growth belong to the category of factors clearly capable of complicating the development situation in these countries.

1. BANK LENDING MARKET: GROWTH DUE TO LARGE BUSINESS

M.Khromov, E.Khudko

In 2018, banking credit pays the key role in the provision of the corporate sector's borrowed resources. From 2014 through 2017, increment of the total bond market debt exceeded Rb 1 trillion, which was comparable with the bank debt growth of the corporate borrowers. Bank lending notably increased in 2018. Large business increased its presence both in the bank lending market and in the bank market.

The Russian banks extended in 2018 new loans to the corporate borrowers totaling Rb 45.0 trillion, up 17% against the previous year (*Fig. 1*). Lending to large business posted a more dynamic upturn. This category of borrowers received in 2018 new loans to the tune of Rb 38.2 trillion, up 18% against the previous year. Small and medium-size enterprises (SME) received in 2018 new loans totaling Rb 6.8 trillion, up 11% against 2017. Meanwhile, lending volumes extended to large business have already notably surpassed the pre-crisis maximum of 2014, when this segment received bank loans to the tune of Rb 30.9 trillion. At the same time, peak volumes of loan disbursements to SME have not been reached yet (2013 – Rb 8.1 trillion). The share of SME borrowers in the bank lending market decreased from 22% posted in 2013 to 15% at the year-end 2018. Growing loan disbursements have fueled growth of the total corporate debt with the banks. In 2018, it went up by Rb 2.3 trillion, or by 7.8%. This is comparable with the increment of the bank debt over three previous years in the nominal terms (RB 2.6 trillion).

Entire growth of past-due loans concentrates in the large business segment. Outstanding SME debt have been falling for four years in a row starting from 2014. In 2018, (for the first time since 2013) past-due SME loans moved up by 1%.

Bank lending market has been exhibiting a clear trend of large business predominance. This is mainly attributed to the credit portfolio in the corresponding segments of the market. Loan disbursements to SME remains much riskier than lending to large business. For example, outstanding large business debt at 2018 year-end constituted 5.6% in the overall volume of bank loans extended to large business. In SME segment outstanding loans remained at 2018 year-end at the level of 12.4%.

The volumes of the corporate loans[1] in the Russian bond market during 2018 were way below the growth rated exhibited in the previous year (*Fig. 2*). Most notable decrease of loans disbursements was observed in the non-banking sector.
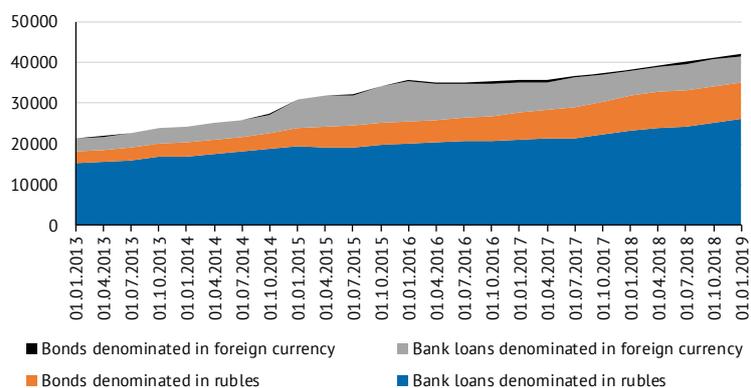

Fig. 1. Main elements of the corporate debt in the domestic market, Rb billion

Source: Bank of Russia.

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1   Less credit organizations but including other financial and insurance organizations.

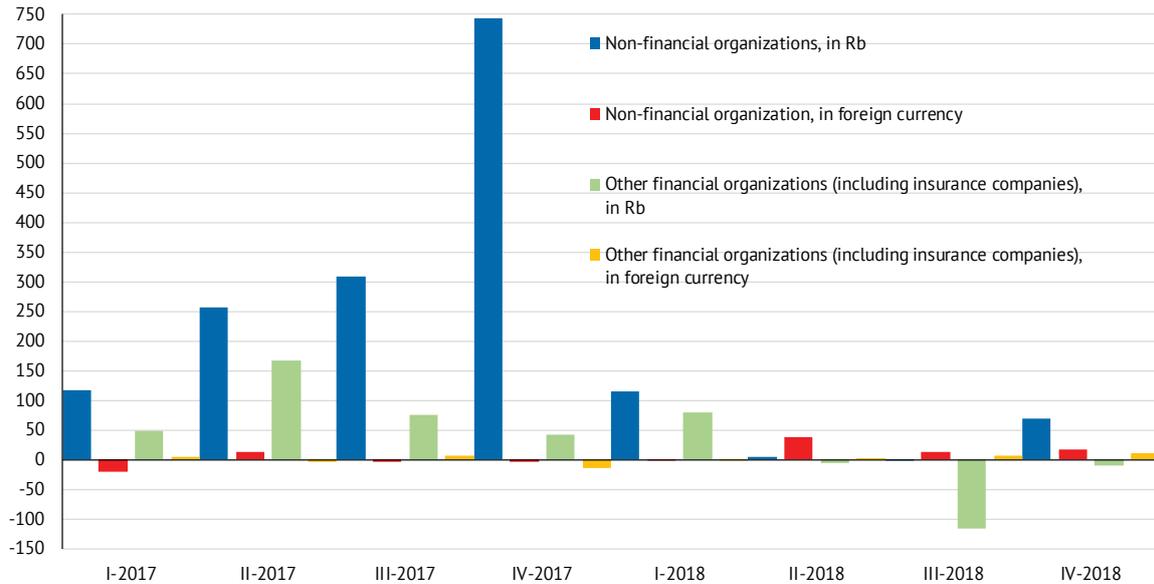# 1. Bank Lending Market: growth due to large business

Fig. 2. Growth of bonded loans issued by non-financial and other financial organizations (at Q-end, Rb billion)

Sources: Bank of Russia, own calculations.

There is no question about a significant real increase of corporate borrowings denominated in foreign currency because nominal growth of currency loans recalculated into the national currency ensured a change in the exchange rate. In particular, for the period from the end of Q1 through the end of Q4 2018 USD exchange rate (major share of internal currency loans are extended in USD) went up by more than 20%. The share of currency loans in the overall volume of corporate bonds still constitutes below 6%.

Although the total volume of the corporate debt (less credit organizations) at 2018 year-end hit an all-time high for the entire period of the bond market life in Russia reaching Rb 9.42 trillion (*Fig. 3*), annual growth amounted to a little bit over 2%. Growth was attributed entirely to the large companied in the real sector.

2018 sow the downward activity trend in the market of primary placement: total volume of issues placement over the year decreased by more than 40% (compared to 2016 and 2015 indicator was 30% less and even in comparison with 2014 it shrank by around 10%). The most significant decrease in the primary market was observed in Q2 and Q3 2018 although there was a traditional growth at the end of the year.

Largest borrowers last year we-re PJSC Sberbank and JSC DOM.RF (including affiliated individuals). Previously largest borrowers were production companies – Rosneft
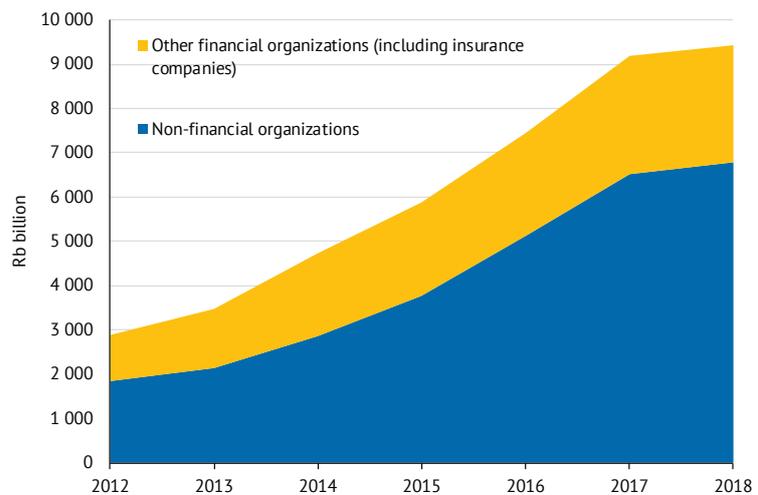

Fig. 3. Dynamics of bonded loans in nominal terms issued by non-financial and other financial organizations (your-on-year)

Sources: Bank of Russia, own calculations.

and Gazprom group of companies (*Fig. 4*[1]). Emergence of mortgage companies among the largest borrowers is largely determined by trend on the mortgage market: the volume of extended new mortgages in Russia in 2018 moved up by 50% to the all-time high of Rb 3 trillion[2]. The share of borrowers in the financial segment in the primary market at the year-end 2018 constituted 55% of internal loans.

However, it should be noted that in Q4 2018 the major part of primary placements were loans to construction companies, which resulted in the increased share of this sector in the overall structure of corporate bonds market. This happened prior to coming into effect of new rules of constructors financing.

Low rates of primary place-ments are due both to external issues (in particular, new American sanctions imposed at the beginning of Q2 2018 on Russian companies) and to internal ones including negative yield dynamics. From Q2 when the weighted average yield of corporate bonds included in IFX-Cbonds reached an all-time high for several recent years, the indicator posted an upward trend which was sustained by a gradual increase of the key rate.

Nevertheless, a large number of bond programs were registered in 2018 compared to the previous year. The largest programs for issuing long-term bonds were approved by PJSC GMK Norilsk Nickel, PJSC Sberbank, JSC ALFA-BANK, PJSC Gazprom neft, Gazprombank, PJSC Megaphone, PJSC FSK UES, PJSC TransKonteiner, etc. A number of small companies (in particular, LLC Talanfinans, LK Rodelen, etc.) approved programs for inaugural issues including commercial bonds (for example, LLC BIFRI, and LLC Zhiloy Mikrorayon).

The volume of placed currency loans on the domestic bond market in 2018 fell by half which as was stated above was due to increased currency risks.

Year 2018 saw increased number and diversity of structural bonds created by the financial sector issuers for investors. New legislation providing definition for structural bonds, regulating their creation and circulation spurred their creation. PJSC Sberbank was the leader in creating structural bonds in 2018. A number of other large credit organizations have also created structural bonds. In the majority of cases structural bonds were created to the amount significantly lower than the planned volume. That was due to unfavorable market situation as a whole and specific features of the financial instrument – main clients of structural bonds are individuals.
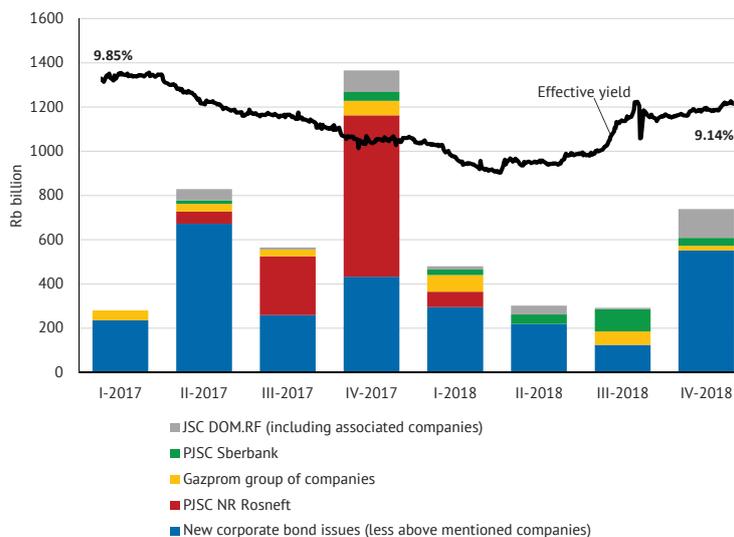
Fig. 4. Dynamics of effective bond yield included in the IFX-Cbonds index, and the volume of placement of new ruble-denominated bond issues by financial and non-financial institutions

Sources: Cbonds information agency, own calculations.

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1 Statistics does not include short-term stock obligations issued by VTB, Vnesheconombank and Sberbank of Russia with maturity from 1 to 154 days.
2 International News Agency 'Russia Today" https://realty.ria.ru/20190128/1550036483.html

2. THE RUSSIAN FOREIGN TRADE IN 2018: GROWTH IN NON-OIL AND GAS EXPORTS

A.Knobel, A.Firanchuk

In 2018, the exports of fuel and energy commodities increased by nearly 36%t as compared to the previous year, while growth in non-oil and gas exports amounted to over 11%. However, it was mainly facilitated by improvement of the pricing situation on the market. Within a year, imports rose by 5% primarily owing to considerable growth in H1 2018. The depreciation of the real exchange rate of the rouble in H2 2018 had a negative effect on the volume of imports.

The dynamics of exports and imports. In 2018 *the value of exports* increased considerably to $450.0bn (an increase of 125.8% on the level of 2017), including growth of 35.6% in exports of fuel and energy commodities ($286.7bn). The exports of other commodities saw growth of 11.7% up to $163.2bn (*Fig. 1*).
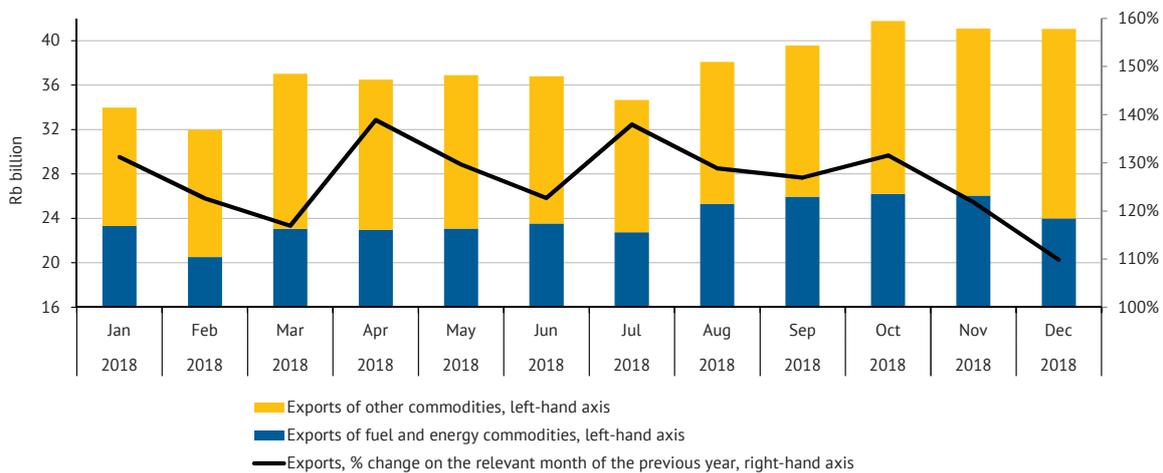

Fig. 1. The dynamics of Russian exports in 2018

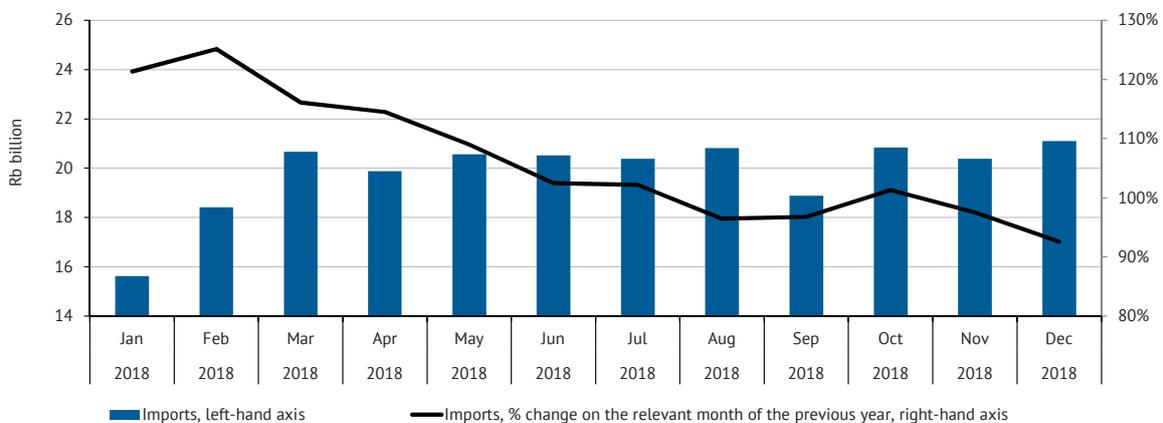*Source*: own calculations based on the data of the Federal Customs Service.

Fig. 2. The dynamics of the Russian imports in 2018

Source: own calculations based on the data of the Federal Customs Service.
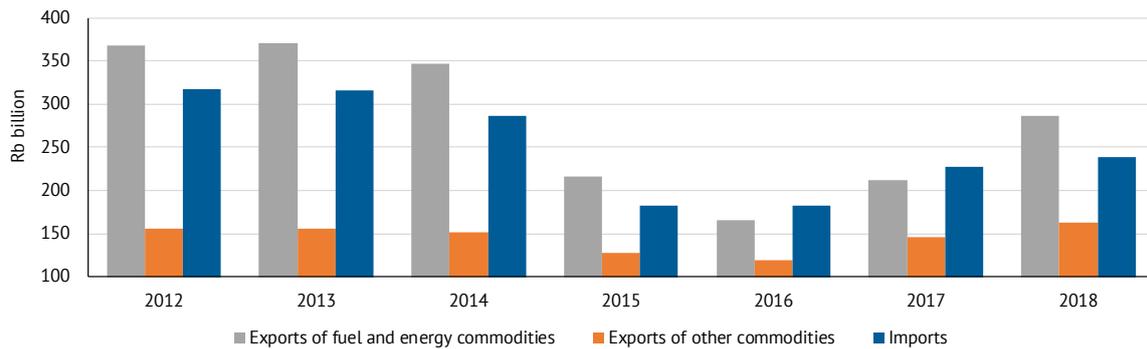
Fig. 3. The dynamics of Russian exports and imports in 2012–2018, billion USD

Source: own calculations based on the data of the Federal Customs Serive.

In 2018, *the value of imports* surpassed the level of the previous year by 4.7% and amounted to $238.1bn (*Fig. 2*). Note that in H2 2018 the imports were somewhat lower than in the same period of 2017.

The exchange rate of the rouble. The sustainable positive correlation between the RUR/USD exchange rate and imports prevailed in 2018 (*Fig. 4*)[1]. The rate of correlation between the index of the value of imports (as percentage to the relevant month of 2013) and the index of the RUR/USD real exchange rate (as percentage to the relevant month of 2013) was equal to 0.85 in 2014–2018.

In 2018, the index of the RUR/USD real exchange rate depreciated from 105.7% in January (on January 2017) to 89% in December (on December 2017), while the index of imports, from 121.4% to 92.6%.

Fig. 4. The dynamics of imports, non-oil and gas exports and the real exchange rate of the rouble in 2014–2018 , % change on the relevant month of 2013

Source: own calculations based on the data of the Federal Customs Service and the Central Bank of Russia.

Also, the non-oil and gas exports saw positive correlation (0.40) with the index of the real exchange rate of the rouble in 2014–2018. It can be explained by a substantial share of other primary products in the Russian non-oil and gas exports on which global prices demonstrated dynamics similar to those of oil. In addition, such a correlation is consistent with the fact that export prices depend to a greater extent on the exchange rate of the rouble rather than the volume of export supplies.

Export prices. As seen from *Table 1*, in 2018 all large groups of export commodities (identified by the Federal Customs Service) saw appreciation of export prices (except for ferro-alloys and some items from the "machines, equipment and transportation vehicles" group). Also, most export positions demonstrated growth in the volume of exports.
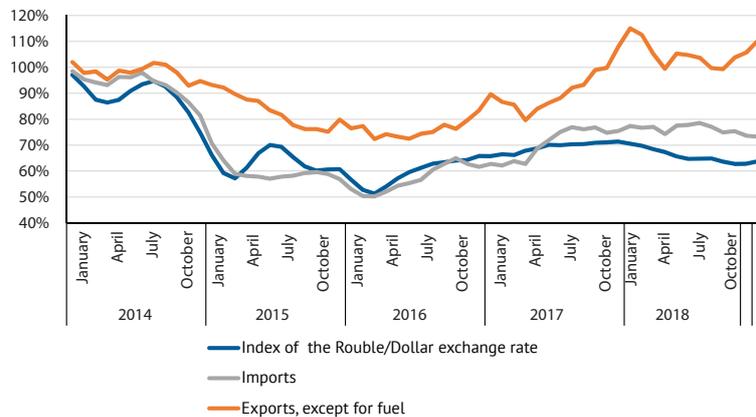
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1   For more detailed comparison of the dynamics of imports and the nominal exchange rate of the rouble, see: A. Knobel., A. Firanchuk The Russian Foreign Trade in 2017 // Russia's Economic Development. 2018. No. 3. P. 6–13.

2. The Russian Foreign Trade in 2018: Growth in Non-Oil and Gas Exports

Growth in exports of *fuel and energy commodities* (35.2%) is justified by appreciation of export prices of oil, petrochemicals and piped gas (23–34%) with a moderate increase in the volume of exports of relevant products (1–5%). Note that export supplies of liquefied natural gas grew by 50% and its share in the overall exports amounted to 1.2%.

Continuous growth in grain exports (33% in physical terms) facilitated to increase the value of exports (46%). The value of exports of *"Food Products and Agricultural Primary Products"* increased by 20.2%.

The exports of *chemical products* grew by 14.2%. Appreciation of export prices of mineral fertilizers (10–19%) and ammonia (18%) was substantial, while the dynamics of the volumes of exports of mineral fertilizers were oppositely directed (the exports of nitrogen and mixed fertilizers were growing, while those of potash fertilizers falling).

Growth in export prices of *wood and paper products* (from 4% to 36%) coupled with mainly positive dynamics of volumes (from -2% to +9%) resulted into growth of 18.4% in the value of exports of this commodity industry.

The value of exports of *metals* grew by 19.9%. Export prices of ferrous metals increased (2–26%) in respect of all the main items, except for ferro-alloys (a decrease of 5%). The tonnage of the exports of ferrous metals and copper increased (9% and 11%, respectively), while that of aluminum decreased (-5%).

Growth in the value of exports of energy commodities, ferrous metals, nickel, mineral fertilizers and timber was mainly driven by the improvement by the pricing environment[1], while that in the value of exports of grain, liquefied natural gas, ammonia and copper, by the increase in the volume of export supplies.

The value of exports of high-tech commodity industries was quite stable. The exports of *machines, equipment and transportation vehicles* amounted to $29.0bn (growth of 2.7%). The exports of the *"Other Commodity"* group decreased to $7.1bn (-2.8%). Note there is considerable growth in exports of cars (45%) and a decrease in exports of trucks (14%) with prices remaining stable.

An objective was set in the May 2018 Decree to increase non-oil and gas exports up to $250bn by 2024. In 2018, it amounted to $149.8bn. In six years, the exports of this category of goods are expected to grow by 67%, which is equal to the average annual growth rate of 9 % in 2018–2019.

Based on the results of 2018, growth was equal to 11.7% (*Table 2*). The dynamics can be called recovery growth: in 2014–2016 non-oil and gas exports decreased by 1.7%, 17.4% and 9.0%, respectively, having fallen to 74% of the level of 2013. After that, there was considerable growth of 26.5% and 11.7% in 2017 and 2018, respectively. As a result, the exports of these commodities were 6% higher last year as compared to 2013.

In reviewing mid-term growth in non-oil and gas exports and development of the economy, the dynamics of exports in volume terms is more informative because pricing effects are more volatile. A 11.7% growth in last year's exports was primarily justified by growth of 8.1% of the export price index[2].

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1 The dominant effect of the pricing environment on the value of exports as compared to changes in the volume of supplies was observed in the previous year, too – see: A. KnobelA. Firanchuk. The Foreign Trade in 2016 // Russia's Economic Development. 2017. No.3. P. 8–17.

2 The calculation of the index was based on the price per unit of produce across four important positions included in the specific group of commodities with standard filters applied. After application of the procedure for clearing the data, the final basket included 90% of the reviewed trade and this factor makes it feasible to consider the price index in terms of the Fischer form as the index of prices of the entire non-oil and gas exports (without the classified commodity group taken into account).

Table 1

Changes in prices and volumes of supplies of the main export commodities in 2018

FEACN code	Position name	Price		Price change, %	Volume change, %	Value change, %	Share in exports in 2018, %
		2017	2018				
Food products							
1001	Grain and meslin, USD per ton	175	192	9	33	46	1.9
Fuel							
2701	Fossil coal, USD per ton	75	85	14	10	26	3.8
2709	Crude oil, USD per ton	369	496	34	3	38	28.5
2710	Petrochemicals, USD per ton	392	521	33	1	34	17.3
2711110000	Liquefied natural gas, USD/cubic meter	130	144	11	50	67	1.2
2711210000	Natural gas, USD/thousand cubic meters	181	223	23	5	29	10.9
Chemical products							
3102	Mineral and nitrogen fertilizers, USD per ton	182	200	10	8	19	0.62
3104	Mineral potash fertilizers, USD per ton	193	230	19	-20	-4	0.45
3105	Mixed mineral fertilizers, USD per ton	262	301	15	8	24	0.75
2814100000	Liquid ammonia, USD per ton	228	269	18	33	57	0.25
4002	Synthetic rubber, USD per ton	1 709	1 697	-1	-1	-1	0.38
Timber and timber articles							
4403	Unprocessed timber, USD per cubic meter	75	78	4	-2	1	0.33
4407	Processed timber, USD per ton	221	234	6	7	13	1.00
4412	Glued plywood, USD per cubic meter	446	505	13	9	23	0.30
4702–4704	Wood pulp, USD per ton	522	709	36	1	37	0.33
4801	Newsprint paper, USD per ton	416	562	35	3	40	0.14
Metals and fabricated metal articles							
72	Ferrous metals, USD per ton	442	503	14	9	24	5.2
72 (кроме 7201–7204)	Ferrous metals (except for cast iron, ferro-alloyes, waste and scrap), USD per ton	482	503	4	61	69	5.2
7201	Cast iron, USD per ton	338	373	10	20	32	0.48
7202	Ferro-alloys, USD per ton	1761	1680	-5	9	4	0.30
7207	Semi-products made of carbon steel, USD per ton	419	498	19	11	32	1.76
7208–7212	Carbon steel flat rolled products, USD per ton	528	603	14	-3	10	1.11
7403	Refined copper, USD per ton	6181	6329	2	11	13	0.91
7502	Unprocessed nickel, USD per ton	10145	12828	26	-1	25	0.38
7601	Unprocessed aluminum, USD per ton	1703	1750	3	-5	-2	1.18
Machines, equipment and transportation vehicles							
840130	Unexposed heat-generating units (fuel elements), USD per ton	444	385	-13	12	-3	0.22
8411123009	Other gas-driven turbines with power of over 44 kN, but maximum 132 kN, thousand USD per unit	4114	4016	-2	12	10	0.31
8450111100	Household washing machines, USD per unit	169	166	-2	-8	-9	0.04
85287240	LCD TV-sets, USD per unit	335	334	0	6	5	0.03
860692	Open railway cars, USD per unit	24.00	29.76	24	-11	10	0.03
8703231940	Cars with effective engine cylinder capacity of over 1500 cm3, but maximum 1800 cm3, thousand USD per unit	8.91	8.92	0	45	45	0.11
8704229108	Other trucks with full weight of 5–20 tons, thousand USD per unit	33.57	32.65	-3	-14	-16	0.02

Source: own calculations based on the data of the Federal Customs Service.

So, the index of the volume of non-oil and gas exports turned out to be at the level of 3.6%, a 2.5 fold shortfall of the required target (9%). Growth in the volume of non-oil and gas exports surpassed the required target in the "food products" commodity industry (growth of 15%) and the "textile" commodity industry (15%) and was close to the target level in the following commodity industries "timber" (7%), "other commodities (without armament)" (8%) and

2. The Russian Foreign Trade in 2018: Growth in Non-Oil and Gas Exports

Table 2

Changes in prices and volumes of non-oil and gas export supplies
by the commodity industry in 2018

FEACN CODEe	Position name	Volume of supplies, billion USD		Value change, %	Price change, %	Volume change, %
		2017	2018			
01–04, 0504, 06–11, 1201–1210, 1212, 1214, 1302, 1501–1521, 16–17, 1801, 1803–1806, 19–22, 2301, 2304–2306, 2309, 24	Food products and agricultural primary products (except for textile)	20,3	24,4	20	4	15
2523	Mineral products	0,1	0,1	-3	2	-5
28–37, 3801–3803, 3805–3824, 3826, 3901–3914, 3916–3926, 4002, 4005–4017	Chemical products, natural rubber	22,3	25,7	15	10	4
4104–4114, 411510, 42, 4302–4304	Rawhide, furs and fur articles	0.2	0.2	-7	-3	-4
4402, 4404–4421, 4502–4504, 46, 4701–4706, 48–49	Timber and pulp and paper products	10.0	12.1	20	13	7
5004–5007, 5105–5113, 5201, 5203–5212, 53–54, 5501–5504, 5506–5516, 56–62, 6301–6309, 64-67	Textile, textile goods and footwear	1.1	1.2	11	-3	15
710122, 710229*, 710239, 710391, 710399, 7104–7111, 7113–7118	Precious stones and metals and articles made thereof	6.8	5.6	-17	8	-23
7201–7203, 7205–7229, 73, 7401–7403, 7405–7419, 7501, 7502, 7504–7508, 7601, 7603–7616, 7801, 7804, 7806, 7901, 7903–7907, 8001, 8003, 8007, 81-83	Metals and fabricated metal articles	35.9	42.4	18	13	5
84-90	Machines, equipment and transportation vehicles	19.7	20.5	4	-2	6
68–69, 7002–7020, 91-97	Other goods	2.5	2.6	7	-1	8
	Other	14.8	14.5	-2		
	Total	133.8	149.4	11.7	8.1	3.6

*The data on commodity group 710229 "industrial diamonds" are unavailable.

"machines and equipment" (6%). The former two industries are characterized by more high-tech exports.

However, the two largest commodity industries (in terms of the volumes of non-oil and gas exports), which accounted for a half of non-oil and gas exports saw growth which was nearly 50% below the target: exports of "metals and fabricated metal articles" and "chemical products" increased by 5% and 4%, respectively.

The geographical pattern of the trade turnover. In 2018, for the first time in the past five years the share of the EU in Russia's trade turnover increased (growth of 0.62 p.p.). Note that growth in imports from the EU (2.7%) was lower than with other countries, while growth in exports, more substantial (28.3% against 25.8%) (*Table 3*). The share of the APEC's countries kept growing (0.57 p.p.) owing to the trade turnover with China (imports increased by 8.7%, while exports, by 44%).

The share of CIS states fell by 0.73 p.p., while that of the EEU, by 0.65 p.p. The share of Ukraine in Russia's trade turnover stabilized at the level of 2.2%. Growth in the value of exports to Ukraine was equal to 19.9%, which is higher than growth in Russia's exports to any member-state of the EEU (it varied from 3.7% for Kazakhstan to 17.2% for Belarus). In 2018, Russia's share in the overall imports of the EU[1] (based on the data of the Eurostat without trade inside the EU

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1 Hereinafter the data of the Eurostat (specified in euro) are used: http://ec.europa.eu/eurostat/web/international-trade/data/database

taken into account) amounted to 8.5% (growth of 0.7 p.p. as compared to 2017), while in the EU's exports it was equal to 4.4% (a decrease of 0.2 p.p.); Russia's share in the EU's trade turnover amounted to 6.4% (an increase of 0.2 p.p.)[1].

Table 3

The geographic pattern of Russia's trade turnover in 2013–2018 by the main trade partner-countries

Region/country	Share in Russia's trade turnover, %						Change 2018 on 2017, p.p.
	2013	2014	2015	2016	2017	2018	
EU	49.6	48.1	44.8	42.8	42.1	42.7	+0.62
Ukraine	4.7	3.5	2.8	2.2	2.2	2.2	-0.02
Turkey	3.9	4.0	4.4	3.4	3.8	3.7	-0.06
Norway	0.3	0.3	0.3	0.3	0.2	0.2	-0.01
Switzerland	1.4	0.9	0.9	1.1	1.0	1.1	+0.04
APEC including:	24.8	26.9	28.1	29.9	30.4	31.0	+0.57
China	10.5	11.3	12.1	14.1	14.9	15.7	+0.88
US	3.3	3.7	4.0	4.3	4.0	3.6	-0.33
Japan	3.9	3.9	4.1	3.4	3.1	3.1	-0.02
Republic of Korea	3.0	3.5	3.4	3.2	3.3	3.6	+0.32
Vietnam	0.5	0.5	0.7	0.8	0.9	0.9	-0.01
CIS	13.4	12.3	12.5	12.3	12.5	11.7	-0.73
of which EEU including:	7.4	7.2	7.9	8.5	8.8	8.1	-0.65
Armenia	0.2	0.2	0.2	0.3	0.3	0.3	-0.02
Belarus	4.1	4.1	4.5	5.1	5.2	4.9	-0.30
Kazakhstan	2.8	2.7	2.9	2.8	3.0	2.6	-0.34
Kirgizia	0.3	0.2	0.3	0.3	0.3	0.3	+0.00

Source: own calculations based on the data of the Federal Customs Service.

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1 For more details on the factors of dynamics of Russia's share in the EU's exports and import, see: A. Knobel, A. Firanchuk. The Russian Exports in the EU in 2017 // Russia's Economic Development. 2018. No.5. P. 12–17.

3. MODERNIZATION OF THE BACKBONE INFRASTRUCTURE HOW TO EVALUATE ECONOMIC EFFECTS

T.Mikhailova

The projects of modernization of transport infrastructure which were included in the relevant national project can modify the geography of economic activities inside the country and promote economic growth. However, such effects are rarely taken into account in investment program planning. According to the analysis of this issue, the implementation of transport projects in densely populated regions produces a substantial effect of "public good" which is to be taken into account in decision-making regarding the infrastructure development.

Discussing the plans of investments in public infrastructure projects, including the transport infrastructure, experts and public authorities proceed from the cost-benefit analysis. There are plenty of potential projects. The objective is to select those projects where benefits overweigh costs and range them in terms of social utility.

The task of evaluating costs from the economic point of view is rather simple: it is necessary to calculate the total cost of production factors and materials required for implementation of the project of building and renovation of a road, bridge or transport hub.

The problem arises only in the technical aspects: in implementation of the project unexpected obstacles, delays and budget overruns may happen.

The evaluation of the benefits from transport projects is a complicated economic issue. The outputs of scientific research into this issue may facilitate forecasting of economic effects from the implementation of transport projects included in the *Comprehensive Plan of Modernization and Expansion of the Backbone Infrastructure of Russia in the Period till 2024.*

How do investments in transport infrastructure affect the urban economy, regional and national as well?

1. *Direct investments in the transport sector*

The clear results of the investments are the upgrading of the transport sector as a whole. For example, modernization and building of new motor roads will reduce the load and travelling time and solve the problem with traffic jams and reduce accident risks. Faster transport connections will reduce passengers' travelling time. As a result, infrastructure consumers' direct and indirect costs will decrease.

The direct and indirect benefits are evaluated in monetary terms and multiplied by the current and future forecasted number of users. Such estimates do not often take into account the fact that people's behavior may change in future. Reduction of transportation costs spurs demand on transportation services. To estimate correctly the direct project benefits, it is necessary to take into consideration the elasticity of demand, otherwise, the positive effects may be underestimated.

Take for example the debates regarding the startup of the Sapsan project in 2009. The opponents of the project doubted that it would pay off and the trains' occupancy rate would be sufficient enough, but with time Sapsan trains have

won over not only traditional express train passengers, but also air passengers; in addition the overall passenger flow between the two capitals has largely increased. The competition between high-speed trains and air service has made transport operators keep prices at a relatively low level, so, the consumers eventually benefitted largely from that project.

2. *Multiplier effects in implementation of the project*

In implementation of any investment project, additional demand is normally created on factors of production: labor, equipment, materials and services. Building companies demonstrate demand on intermediate and investment goods, while workers' families receiving an additional income, on consumer goods. In other words, it is the multiplier of overall demand – known as the *Keynesian* multiplier – that is in action. As a result of implementation of investment projects, the country's overall GDP increases by the value exceeding the amount of investments. It is for this reason lots of economists stand for state investments to be made into development of the public infrastructure amid the economic recession: additional demand mobilizes unutilized capacities and labor resources, so the multiplier attains the maximum values.

The forecast of additional multiplicative growth in the gross product is based, in particular, on input-output tables. In Russia, such forecast calculations are prepared, for example, by experts of the Institute of National Economy Forecasting, the Russian Academy of Sciences (INEF RAS)[1]. However, it is well known from the economic theory that this effect is quite temporary, so, questions arise how considerable the multiplier can actually be in reality, whether its effect is durable and if there is any real benefit from the project and its multiplier effect for the welfare of people?

Researchers S. Leduc and D. Wilson from the San Francisco Department of the US Federal Reserve analyzed the way economic indicators changed in different US states where funds were allocated for modernization of motor roads[2]. They identified the positive effect on GRP, the rate of employment, average salary, individuals' incomes and retail trade volumes within the period of six-eight years. It was established that the effect was greater during the recession

3. *Changes in the economic geography of the country or region*

The third type of the effects – the most important one – emerges because the transport infrastructure modifies the economic geography. A critical variable for the economic prospects of a country, region and city is transport accessibility. It determines the market potential, that is, the volume of markets which are accessible to the local producer. At the international trade level, for upgrading the country's market potential it is required to develop the waterside, near-border and backbone infrastructure. At the regional economy level, it is necessary to develop the transport network inside Russia and reduce direct and indirect costs related to transportation of freight and passengers between regions. The upgrading of the transport infrastructure may redistribute economic activities inside the country and create new opportunities which did not exist

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1 See, for example: A. Zamkova and other. (2015). The Utilization of Economics of Input and Output for Substantiation of the Strategic Development of Russia's Reailway System. Moscow: INEF RAS.

2 Leduc, S., & Wilson, D. (2013). Roads to prosperity or bridges to nowhere? Theory and evidence on the impact of public infrastructure investment. NBER Macroeconomics Annual, 27(1), p. 89–142.

before. Note that it is not a temporary and short-lived effect from building, but long-term developments, potentially forever.

What is known about the extent of such effects produced by the transport infrastructure? It is difficult to make an assessment because a "pristine" experiment is infeasible. Even if economic growth is evident *after* implementation of the infrastructure project, it is not the evidence of the project being the *factor* of growth.

The cause-effect relationship can be seen in historical studies of "full-scale experiments" where for some external non-economic reasons changes in regions' transport accessibility and economic potential took place. By using the data from different countries and historical periods, researchers received very similar results: with all other conditions being equal, a region's access to the transport infrastructure and markets or the lack thereof in the long-term prospect makes the constant difference of 17–20% in the level of per capita GRP[1].

However, the abovementioned studies focused on the prominent projects of development of the infrastructure from scratch in developing countries. What is the effect of moderate changes in the existing infrastructure of a developed country? To make such estimates, economists build countable regional models of a general equilibrium. The well-known example is the model of RAEM in the Netherlands. US researchers T. Allen and K. Arkolakis built the model with the accuracy of up to small regional units – districts[2]. The model in question helped them estimate the potential growth in the overall welfare from modernization of thousands of different segments of roads between hundreds of US cities.

For example, with a road segment expanded, traffic jams and delays and transportation costs will decrease. Commercial freight carriers and individuals will change their behavior, traffic and commuting routes or even place of residence. New companies will come to the market and productive assets (workforce and capital) will be redistributed in the geographic space. All the changes are accounted for by the model.

The researchers estimated what road network segments it would be more advantageous to invest funds with building costs taken into account and what segments it would be not. It is illustrative that even in the US where the highway infrastructure is already well-developed additional investments may produce a great public benefit, while "disadvantageous" segments are just few. The outputs of the research carried out by Allen and K. Arkolakis point to the fact that the modernization of motor roads close to large cities (out of ten most advantageous segments seven were situated near New York) where demand on transportation services is the maximum one because of the high density of the population is the most advantageous[3].

This should be taken in account when decisions on infrastructure projects are made. It often happens that when the prospects of investments in transport projects are estimated, one takes into account direct advantages in the trans-

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1   Donaldson, D. (2018). Railroads of the Raj: Estimating the impact of transportation infrastructure. American Economic Review, 108(4-5), 899–934.) D. Donaldson studied railways in the continental India; Banerjee and coauthors (Banerjee, A., Duflo, E., & Qian, N. (2012). On the Road: Access to Transportation Infrastructure and Economic Growth in China. National Bureau of Economic Research.) China in 1986–2003.

2   Allen, T., & Arkolakis, C. (2019). The welfare effects of transportation infrastructure improvements. National Bureau of Economic Research.

3   It is to be specified that the area of application of the Allen-Arkolakis model is inter-regional transport links. The model does not deal with city economy and the pattern of road network inside the cities. For such purposes, there is a special class of LUTI models of urban planning and land utilization and other.

port sector from point (1) by supplementing sometimes the calculations with the effects of the multiplier of building projects from point (2). But the most important economic effects from infrastructure projects, that is, modification of the economic and geographic landscape specified in point (3) are not taken into account at all. However, such effects are long-term and the most substantial ones, particularly, if it concerns a region with a high population density.

What economic effects should be expected from implementation of the "Comprehensive Plan of Modernization and Expansion of the Backbone Infrastructure of Russia in the Period till 2024"?

There are no countable models for the analysis of the transport infrastructure in Russia, so far. The development of such a model for practical utilization in forecasting is the objective set before the economist –researchers. However, it is possible to make some conclusions based on the research carried out abroad.

In the projects of the "*Comprehensive Plan…*", one can clearly see the two main goals. One is the creation and modernization of the infrastructure for foreign trade and the freight transit through the Russian territory. It is the "Europe-Western China", "North-South" and "West-East" motor routes, maritime ports and the infrastructure of regions adjacent to seaports, long distance railways and the Northern Sea Route. It would be wrong to take into account the transit purpose of these routes alone and ignore the domestic development of territories. The main economic effect from establishment of transit corridors should be expected not so much from growth in transit carriage, but from the reduction of transportation costs between Russia's regions en route of those corridors.

The modernization of road sections linking Moscow and Nizhny Novgorod and Kazan may yield a considerable economic effect because they connect large cities and densely populated areas. The upgrading of the Transib will have a positive effect on the regions of the Urals, Siberia and Far East. The infrastructure of the regions adjacent to seaports, particularly, in the Azov-Black Sea Region has a dual purpose, too: it is meant both for port-servicing and for the needs of the local economy of those regions with a high population density.

With implementation of port-upgrading projects, the transport accessibility of Russian regions will become much better in terms of the global market. However, the economic effect from such investments will be achieved, provided that Russia's involvement in the international trade is much higher. Unfortunately, barriers on the way of Russian companies to participation in the global trade are limited not by transportation costs alone, but also regulations and the political climate.

The development of the Arctic Zone and the Northern Sea Route are purely transit projects with additional advantages for extracting industries created. The external effects from the infrastructure will be insignificant because the areas affected by these projects are not densely populated.

The other goal of the "*Comprehensive Plan…*" suggests primarily solution of domestic economic and social issues. The main line of operations is modernization of the infrastructure connecting economic centers inside the country: expansion of the motor road network and modernization of water routes and airports.

The role of water routes in Russia's freight turnover is currently insignificant. It can be justified by objective geographic reasons (there are no water routes in the East-West direction) and the infrastructure underdevelopment. However,

3. Modernization of the Backbone Infrastructure

water transport is one of the most inexpensive and its utilization in the European part of Russia would be reasonable.

Other projects make up only for a small share of those efforts which are required for overcoming the shortage of transport links in Russia. In a situation where funds are limited it would be expedient to concentrate efforts on development of connections between regional centers, as well as between large cities and densely populated areas and remove "bottlenecks. In the past few years, the air passenger flow inside Russia has been growing, as well as demand on air transportation. In this context, the modernization of airports is required as minimum to meet the growing demand.◢

4. DEVELOPING MARKETS: MACROECONOMIC RESULTS OF 2018

L.Gadiy, A.Kiyutsevskaya, P.Trunin, M.Sherbustanova

In 2018, the developing economies were experiencing a capital outflow due to toughening, by the USA, of its monetary policy, as well as the trade war between China and the United States. The most vulnerable ones turned out to be Argentina and Turkey, two countries that had accumulated quite a few domestic problems. In spite of the somewhat improved outlooks in early 2019, some significant risks of destabilization of the existing economic situation are still there. The strongest threats are associated with the situation in China: its domestic problems have the potential of triggering a new global economic crisis.

In 2018, the situation in the world economy as a whole and in the developing markets in particular was strongly influenced by two global factors. The first one was the continuing toughening, by the US Federal Reserve, of its monetary policy, which contributed to capital outflows from the developing markets and the US dollar's strengthening relative to the majority of world currencies. Over the course of the year 2018, the US dollar's exchange rate against those of the national currencies of the major trade partners of the United States gained 4.8%, and relative to the national currencies of the developed and developing countries it gained 3.8% and 5.8% respectively. Second, US-China trade tensions erupted into a large trade war. As a result, the year-end results of 2018 demonstrated a slowdown in the growth rate of international trade in goods to 3.3% vs. 4.7% a year earlier.

The positive trade balance of the developing countries shrank from $ 7.4 trillion (23% of their GDP) in 2017 to $ 6.3 trillion (19% of GDP) in 2018. At the same time, as estimated by the Institute of International Finance, net capital outflow from the developing countries (less China) in 2018 amounted to $ 76bn relative to capital inflows totaling $ 159bn in 2017.[1] The highest sensitivity to the increased risks was displayed by non-residents' portfolio investments, their net inflow into the markets of the developing countries (less China), according to the estimations released by the Institute of International Finance, declining 3.9 times in 2018 to $ 76 bn.

Tensions in the financial markets of the developing countries peaked in September-October 2018, when the US Federal Reserve decided, for the third time over the course of one year, to raise its benchmark interest rate to 2–2.25% per annum. However, towards the year's end, the investor outlooks for the majority of the developing countries somewhat improved. This was due to some palpable relaxation in the USA-China relations, and even the US Federal Reserve toned down its stance and began to consider the possibility of abstaining from a radical toughening of its monetary policy.

Overall, the highest risk premium growth was observed in countries burdened with substantial forex debt and piled-up domestic problems, such as Argentina and Turkey. In these two countries, the CDS spreads[2] of their 5-year

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1 Capital Flows to Emerging Markets Looking Past the Turbulence. Institute of International Finance, www.iif.com
2 A credit default swap (CDS) is a financial derivative designed to offset or 'swap' for a lender the risk that a borrower is going to default on a loan.

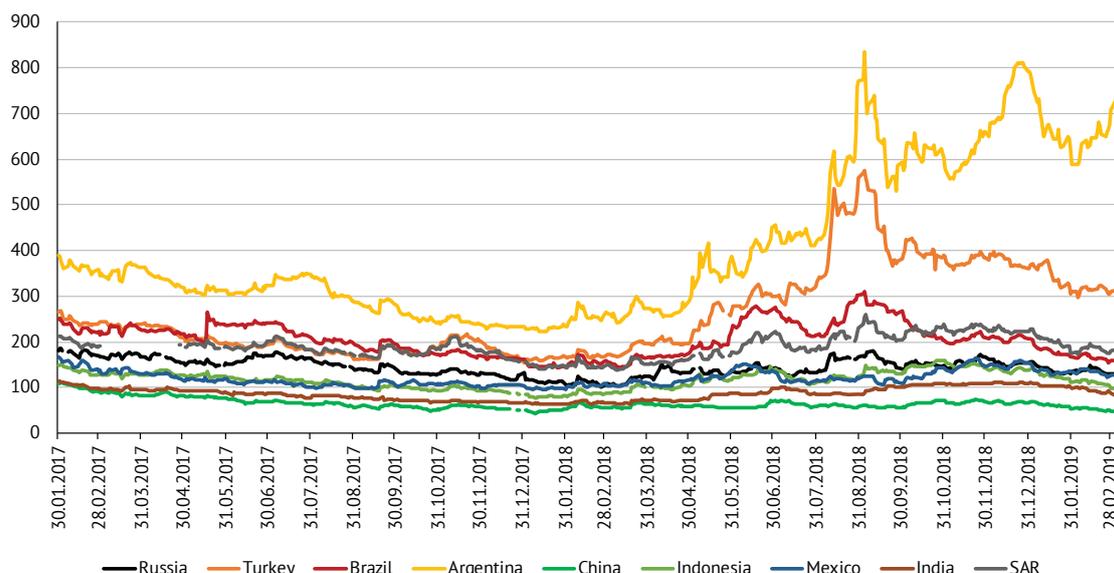# 4. Developing markets: macroeconomic results of 2018

Fig. 1. The CDS spreads of 5-year government bond contracts, bps

Sources: Bloomberg; own calculations.

government bond contracts in early September 2018 hit their record highs of 835 bps and 574 bps respectively (*Fig. 1*).

Under such conditions, over the period of January-September 2018, the national currencies of Argentina and Turkey plunged relative to the US dollar by 36.4% and 23.3% respectively. The Brazilian real lost 12.5%, the Indonesian rupiah – 5.3%, the Indian rupee – 3.2%, and the Mexican peso – 0.9%.

In Q4 2018, the rate of decline in the forex value of national currencies of the developing countries became slower, and some of them once again began to strengthen, and this trend continued in early 2019. The highest surge over January-February was demonstrated by the Mexican peso – by 4.7% relative to December 2018, and also by the Brazilian real – by 4.3%. At the same time, the Indian rupee lost another 0.2% of its value, and the Turkish lira and the Argentine peso – 0.1% each relative to December 2018 (*Fig. 2, 3*).
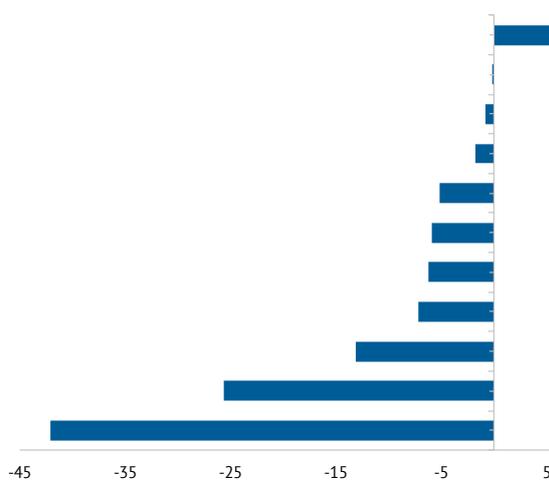

Fig. 2. The movement of national currencies of developing countries against USD in 2018, as % relative to previous period
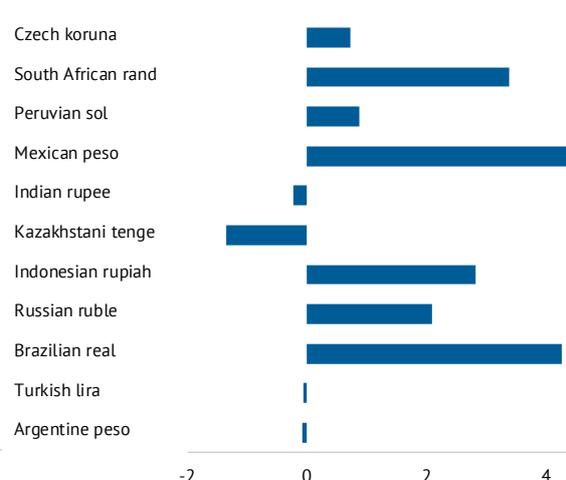
Source: Finam; own calculations.

Fig. 3. The movement of national currencies of developing countries against USD in January-February 2019, as % relative to December 2018
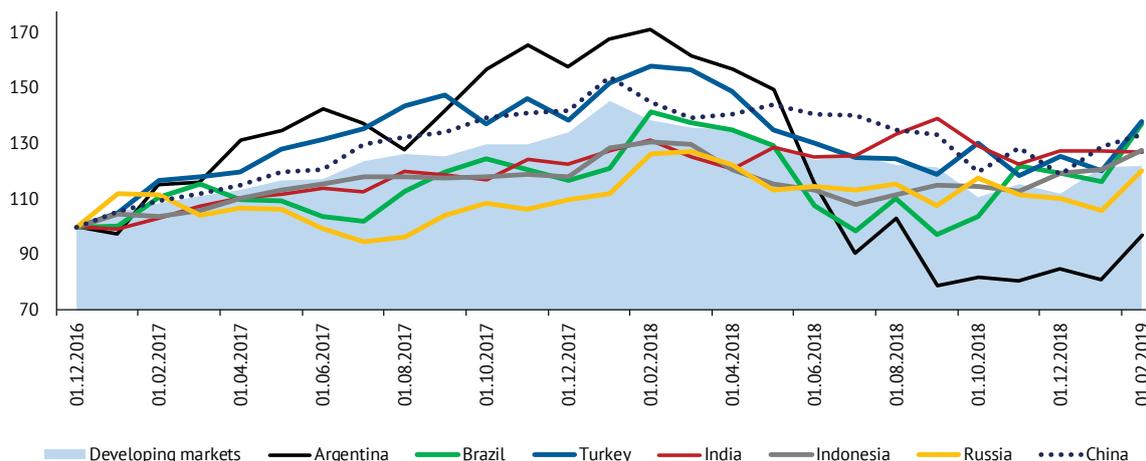
Fig. 3. The movement of the MSCI Emerging Markets Index (December 29, 2016=100%)

Source: Bloomberg; own calculations.

The relaxation of the developing markets in late 2018 – early 2019 was also confirmed by declining CDS spreads of 5-year government bond contracts. Thus, by March 1, the CDS spread of SAR dropped to 185 bps, that of Brazil – to 164 bps, that of Mexico – to 128 bps, that of India – to 84 bps, and that of China – to 49 bps. Nevertheless, all these indices were still above their values as of the year end of 2017.

The MSCI Emerging Markets Index hit its record low of that year – 955 p. in late October 2018, and thereafter it also reversed its trend. In January and February 2019, the Index gained another 8.8% (*Fig. 3*).

The drastic plunge in the value of the national currencies of the developing countries, the rapid growth in risk premiums, and the massive intensification of capital outflows resulted in a rapid increase in the rate of inflation and a significant slowdown in economic growth. This, in 2018 in Turkey, the CPI growth rate jumped to 16.3% vs. 11.1% in 2017, while GDP growth plunged to 2.6% vs. 7.4% a year earlier. Meanwhile, the preliminary data for the movement of Turkey's GDP in Q4 2018 are indicative of a deepening recession. In 2018, the rate of economic growth in the SAR also noticeably declined: GDP gained only 0.8% vs. 1.4% a year earlier. Brazil and Mexico's GDP indices in 2018 rose 1.1% and 2.0% respectively, similarly to 2017. At the same time, the CPI growth rate in Brazil increased in 2018 to 3.7% vs. 3.4% in 2017.

According to the IMF's estimations, in 2019 the growth rates in the developing economies will decline to 4.5% vs. 4.6% in 2018, while the CPI will gain 5.1% vs. 4.9% in 2018.

In our opinion, at present one may speak only of a temporary calm in the markets of the developing countries, because their major macroeconomic indices are clearly pointing to the presence of risk aggregation. The deepest concerns are raised by the rapid growth in household debt, whose volume had increased since 2016 by more than 30% to $ 12 trillion (37.5% of GDP) by the end of Q3 2018. The hugest contributor to this process was China whose household debt soared by 45%, to $ 6.8 trillion, or 50.9% of GDP. In the Czech Republic, India, Mexico, Korea, Malaysia and Chile the growth rates of household debt have all been above 20%. In the household debt structure across the developing countries, liabilities denominated in their respective national currencies have prevailed, while the bulk of their corporate and government debt is represented

4. Developing markets: macroeconomic results of 2018

Table 1

Some development indicators in the developing economies

	Key interest rate, % as of period end			GDP, growth rate, %		CPI, average annual growth rate, %		Total debt burden*, % of GDP, as of period end	
	2017	2018	02. 2019	2017	2018	2017	2018	Q3 2017	Q3 2018
Brazil	7.0	6.50	6.50	1.1	1.1	3.4	3.7	185.8	190.2
India	6.0	6.50	6.25	6.9	7.4	2.5	4.9	130.7	129.6
Indonesia	4.25	6.0	6.0	5.1	5.2	3.8	3.2	77.2	79.5
China	4.35	4.35	4.35	6.8	6.6	1.6	2.1	284.5	297.1
Mexico	7.25	8.25	8.25	2.1	2.0	6.0	4.9	93.1	95.6
Russia	7.75	7.75	7.75	1.6	2.3	3.7	2.9	92.0	90.3
Saudi Arabia	1.5	2.5	2.5	-0.9	2.2	-0.8	2.5	82.2	78.6
Turkey	8.0	24.0	24.0	7.4	2.6	11.1	16.3	141.6	152.3
SAR	6.75	6.75	6.75	1.4	0.8	5.2	4.5	151.9	151.0

* including household debt against bank loans; debt owed by financial and non-financial corporations against loans issued by international and national banks; domestic and international bonds; and general government debt.

Sources: Institute of International Finance; IMF; central banks' official websites; own calculations.

by those denominated in foreign currencies. Thus, in Turkey in late Q23 2018, their aggregate value was more than 78.6% of GDP, while the value of those denominated in foreign currencies amounted to 56.6% of GDP; the corresponding indices for the SAR were 33.3% and 85.5% of GDP, and for Malaysia – 37.3% and 115.6% of GDP respectively (*Table 1*).

The highest growth rates across the developing countries were demonstrated by the non-bank financing indices, the relative share of that source now already accounting for about 25% of total debt vs. 17% in 2008. At the same time, the central banks of the majority of developing countries, in response to the declining value of their national currencies and toughening monetary policies followed by the developed countries, in 2018 raised their key interest rates, thus making debt refinancing more difficult.

Besides, some significant risks for global economic processes are also associated with the ongoing slowdown in China's economic growth, its index in 2018 amounting to 6.6% (vs. 6.8% in 2017). In early March 2018, the government of China downwardly revised its economic growth projections for 2019, setting them at 6.0–6.5%, while previously it had been expected that they would not plunge below 6.5%.

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