INVESTMENT BEHAVIOR OF ENTERPRISES IN 2017–2018

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Abstract: Investment activity of enterprises, in terms of equipment procurement and total volumes of capital investments, turned out to be rather high in 2017 (and in the first half of 2018). In the ranking of the investments' limiting factors, "lack of financial resources" and "high prices for equipment and construction" remained to be paramount constraints. Enterprises suppose that bank loans and own funds are the main sources of finance for capital investments. At the same time, most of the companies are not trying to get a bank loan to finance capital investments.

Keywords: Russia; industry; industrial enterprises; capital expenditures; investments; investment plans; sources of financing; bank loans; marginal interest rate; investment motives.

1. Indicators of the Investment Behavior on the Whole

According to REB surveys, the investment activity of industrial enterprises in 2017 was relatively high. THE SHARE OF ENTERPRISES NOT PURCHASING ANY EQUIPMENT two or more months in a row, decreased by 5 percentage points compared to 2016, i.e. from 45% to 40%. In the first 6 months of 2018, it went further down, to 34%. By historical standards, this level is very close to the record values of 2007–2008 (30–33%).

If we shift our attention from equipment to the TOTAL VOLUME OF CAPITAL INVESTMENTS (by 12-month intervals), the situation seems to be also quite optimistic. The average share of enterprises that did not make capital investments during the previous 6 months and did not expect to make any in the following 6 months (relative to the timing of

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the survey) amounted to 26% in 2017 and to 14% in the first quarter of 2018 (for comparison: in 2007–2008 it was 15–18%.)

An indirect measure of investment activity used in REB studies is the DEGREE OF FULFILLMENT OF INVESTMENT PLANS. In 2017, it was 76%. This is a pretty good result by historical standards, almost repeating the record of 2006 (77%). However in the first half of 2018, this indicator dropped to 71%.

2. Limiting Factors for Capital Investments

"Shortage of financial resources" is still holding the first place among the FACTORS CONSTRAINING THE CAPITAL INVESTMENTS of enterprises. Although the share of respondents highlighting this restriction was steadily decreasing since 2009, 58% of enterprises still felt its negative impact in 2017. This is the lowest (annual) value of the indicator for the whole period of our observations (since 1992). Moreover, the tendency towards its further decline continued (to 56%) in the first half of 2018.

The second place is usually occupied by "high prices for equipment and construction". Their rating in 2017 (53%) was rather low by historical standards and declined further in the first half of 2018 (to 36%). This is an absolute record for all years of observations, which is undoubtedly achieved due to a sharp slowdown of inflation in the Russian economy.

"High bank interest rate" is on the third place in terms of frequency of references. In 2017, it was noted as the main constraint for capital investments by 31% of respondents. This level is exactly the same as in 2007 and is the lowest one in the last decade. In the first half of 2018, it decreased even more (to 28%).

"Uncertainty of general situation" is still a noticeable constraint for capital investments. The rating of this factor remained at the level of 13–14% in the early 2000s, but recently it became almost equal to the rating of "high bank interest rate". "Low rate of return on investment projects" is

the fifth most important factor, which was noted by 18% of respondents in 2017, and by 16% in the first half of 2018.

Table 1
Limiting Factors for Capital Investments
(Share of respondents who pointed out each factor as the important one, %) [1)]

Year	1. Shortage of financial resources	2. High prices for equipment and construction	3. High bank interest rate	4. High indebtedness	5. General uncertainty	6. Excess of production capacities	7. Low rate of return on investment projects
1997	73	50	22	40	21	20	7
1998	81	46	24	38	24	16	4
1999	82	54	24	27	18	16	5
2000	81	58	24	23	15	13	5
2001	81	58	25	22	13	12	7
2002	84	55	28	22	13	13	5
2003	80	53	26	17	14	11	8
2004	78	52	30	17	13	11	14
2005	78	51	31	13	17	12	12
2006	76	56	36	12	15	10	13
2007	74	63	31	8	11	10	18
2008	73	59	34	9	18	10	14
2009	80	51	35	9	34	10	12
2010	77	55	34	14	24	10	12
2011	75	54	32	11	22	8	14
2012	70	52	35	9	23	11	13
2013	69	48	36	8	24	12	16
2014	67	48	35	6	27	10	16
2015	59	51	42	9	31	9	12
2016	60	53	33	9	29	14	20
2017	58	53	31	7	25	12	18
2018 (1–2 quarters)	56	36	28	10	27	12	16

[1)] Respondents were offered to choose no more than three factors.

Two factors with traditionally low ratings (during the last 15–20 years) complete this list; they are “excess of production capacities” (12% both in 2017 and in the first half of 2018) and “high indebtedness” (7% and 10%, respectively).

Table 2
Limiting Factors for Capital Investments by Industry, 2017 (Share of respondents who pointed out each factor as the important one, %) [1)]

Industry	1. Shortage of financial resources	2. High prices for equipment and construction	3. High bank interest rate	4. High indebtedness	5. General uncertainty	6. Excess of production capacities	7. Low rate of return on investment projects
Iron and steel and non-ferrous metals	61	68	34	5	5	18	8
Machinery and metalworking	54	52	22	7	22	14	14
Chemicals and petrochemicals	45	19	29	0	0	0	16
Logging, woodworking, pulp-and-paper	50	64	54	0	77	0	21
Building materials	68	46	44	6	33	10	8
Light industry	56	50	20	4	46	16	47
Food industry	66	72	53	15	23	0	5
Spread between highest and lowest ratings (percentage points)							
2017	23	53	34	15	77	18	42
2015	33	39	50	14	41	13	31
2013	50	31	27	15	31	21	25
2012	53	31	22	14	28	20	12
2011	35	34	18	16	24	14	16
2010	21	43	33	24	28	21	13
2009	14	24	31	14	29	27	26
2008	35	11	18	9	16	18	24

[1)] Respondents were offered to choose no more than three factors.

The differentiation of ratings by individual industries remained in 2017 very high. First of all, this refers to the “uncertainty of general situation” (factor 5). Indeed, if everything was generally clear for the chemical industry’s enterprises, the situation seemed completely different in the light industry (textiles, clothing and footwear) and especially in the branches of the timber industry complex (the ratings of this factor were 46 and 77%, respectively). Never before had different industries considered the economic situation of their enterprises so dissimilar. To a great extent, it is also true for the price factor (factor 2, the dispersion of ratings is 53 percentage points) and for the low rate of return on investment projects (factor 7, 42 percentage points).

3. Sources of Funds for Capital Investment

Speaking about the MOST PLAUSIBLE SOURCES OF FUNDS FOR CAPITAL INVESTMENTS in the next 2–3 years, 47% of respondents indicated a loan from commercial banks. This is only slightly inferior to the record of 2013 (48%).

The second position in the ranking of 2017 was taken by self-financing (44%). The rating of this source has been constantly high in the last 15 years, although sometimes (due to the deterioration of enterprises’ financial position during the crises) it dropped below the 40% line (see table 3).

Well, the third place has long been firmly held by a group of respondents convinced of having no funds for capital investments and not expecting any in the next 2 or 3 years. In 2017, this group equaled to 17% of the sample. On the one hand, the number of such pessimists seems to be quite large. But on the other hand, it has decreased by almost 3 times, compared to, for example, 1996. And even if we assume that some pessimists “reside” under the heading “difficult to answer”, their total number in 2017 (17% + 6% = 23%) was one of the lowest for the entire observation period.

Table 3

Sources of Investment Funds in the Next Two or Three Years

(Share of respondents who pointed out each source as the most plausible one, average data of two surveys, %)*)

Year	1. The enterprise will save up all by itself	2. Loans from commercial banks	3. Funds from the domestic partner	4. Funds from the foreign partner	5. Funds from selling shares/bonds	6. Funds from the state	7. Other sources	8. The enterprise will get no funds	9. Difficult to answer
1996**)	18	13	7	7	5	9	2	49	19
1997	22	15	9	8	5	7	10	41	19
1998	27	10	8	7	4	8	5	44	18
1999	42	18	8	4	3	8	2	37	12
2000	41	24	12	4	5	8	4	30	10
2001	44	26	10	4	3	6	4	28	10
2002	42	30	9	2	4	3	5	32	9
2003	43	37	9	2	3	4	3	27	8
2004	42	31	9	3	4	4	3	23	12
2005	48	41	10	2	3	4	3	22	8
2006	43	46	9	2	2	4	4	20	5
2007	42	47	10	3	2	4	3	20	7
2008	39	39	6	3	1	5	7	24	9
2009	33	36	6	2	1	8	5	30	12
2010	38	40	5	1	1	8	4	28	5
2011	37	42	4	2	2	11	2	27	3
2012	43	43	4	2	2	11	2	22	10
2013	42	48	4	1	3	11	1	22	5
2014	34	39	5	2	2	14	12	24	3
2015	44	39	9	1	2	13	8	22	1
2016	45	38	7	1	2	4	8	17	4
2017	44	47	5	1	2	7	5	17	6

*) *Respondents were offered to choose no more than two versions of answer.*

**) *Second half-year.*

A very small part is assigned to the state. Only 7% of enterprises' directors see it as the main source of funding. This is two times lower than in 2014 (the record year for this indicator). As for other potential sources of investment funds, all of them have become insignificant in the last 10 years.

4. Bank Loans

As in previous years, the vast majority of manufacturers did not even try to find a BANK CREDIT FOR FINANCING CAPITAL INVESTMENTS. The share of such enterprises was 76% in 2017. This is almost a reiteration of the anti-record of 2015 (77%).

As for other respondents, since 1998 we have seen that their bargaining power in negotiating their loans with banks was getting apparently stronger. While the likelihood of their success was 0.15–0.17 in 1998–1999 (i.e. only 1–2 out of 10 enterprises that sought investment loans were successful), it has surpassed 0.5 in 2002 (for the first time) and then rose to 0.72 in 2008 (see table 4). The subsequent crisis brought the indicator back to its status of the early 2000s (not exceeding 0.55). But then the upward tendency prevailed once again. In 2013, we had a record high level of this indicator (0.77), which was almost repeated in 2017 (0.75).

The "high level of the bank interest rate" was still mentioned among main DIFFICULTIES IN NEGOTIATING CREDIT AGREEMENTS. As can be seen from table 5, this very problem was the key issue for 46% of enterprises in concluding credit agreements in 2017. However the rating of this indicator declined rapidly after 2015 and reached its historical low in 2017.

The second place is consistently occupied by the "problem of collateral": in 2017, it reached a record low level with 31% of votes during the past 15 years (the maximum peak of this indicator was 57% in 2015).

The third place is taken by the “term of a loan” (22%), whose rating is gradually increasing in the last few years. Next comes the “size of a loan” (12%), followed by the “risk of loan default” (4%).

Table 4
Distribution of Enterprises by their Efforts and Success in Raising an Investment Loan over the Past Twelve Months
(The average of the two semi-annual surveys, %)

Year	Enterprises not trying to raise a bank investment loan within a year (%)	Enterprises trying to raise a bank investment loan within a year Of which:		
		Raised no loan (%)	Raised a loan (%)	Relation of successful applicants to the total number of loan applicants
	(1)	(2)	(3)	(4) = (3):[(2)+(3)]
1998	58	35	7	0.17
1999	66	28	5	0.15
2000	69	22	9	0.29
2001	63	21	16	0.43
2002	67	16	17	0.52
2003	65	17	17	0.50
2004	63	17	20	0.54
2005	61	17	22	0.56
2006	60	15	25	0.64
2007	59	14	27	0.66
2008	68	9	23	0.72
2009	67	18	15	0.45
2010	68	13	19	0.59
2011	66	9	25	0.73
2012	70	9	20	0.69
2013	68	7	24	0.77
2014	66	12	21	0.64
2015	77	7	12	0.63
2016	71	9	21	0.70
2017	76	6	18	0.75

Table 5
Main Difficulties in Concluding Credit Agreements with Banks for Financing Capital Investment
(Share of enterprises who pointed out each problem of the total number of investment loans applicants in the last 12 months, %)

Year	Main difficulties in concluding agreements				
	High bank interest rate	Risk of loan default	Term of a loan	Problem of collateral	Size of a loan
1998	66	60	37	26 *)	17
1999	75	46	36	29	18
2000	91	55	36	36	18
2001	53	24	27	34	18
2002	49	27	26	27	13
2003	48	21	25	45	16
2004	48	22	24	48	15
2005	55	21	23	42	15
2006	55	16	19	51	7
2007	50	19	20	40	10
2008	66	15	24	39	16
2009	56	18	16	43	10
2010	53	18	10	47	8
2011	51	9	14	38	12
2012	52	7	13	47	21
2013	53	12	5	46	19
2014	53	18	10	48	12
2015	80	21	20	57	14
2016	63	17	17	37	16
2017	46	4	22	31	12

*) *Second half of 1998.*

5. Efficiency of capital investments

REB's respondents estimate the potential rate of return on investment and investment risk indirectly, using a MARGINAL INTEREST RATE (MIR), which is determined in the questionnaire as the maximum bank interest rate at which the enterprise would still take a rouble loan for a period of 2 to 3 years to finance its capital investments.

On average of 4 surveys made in 2017, the marginal bank loan interest rate was 6.7%, and it reached 6.1% in the first two quarters of 2018.

For a long time after the default of 1998, the overwhelming majority of enterprises agreed to take additional bank loans for capital investments only at a negative real interest rate (see Table 6). Since 2009, this trend has begun to break, although we cannot be quite sure that the real interest rate turned into the positive one. This is also true for 2017.

When assessing the EXISTING VOLUME OF PRODUCTION CAPACITIES AGAINST THE DEMAND FOR ENTERPRISES' OUTPUT EXPECTED IN 12 MONTHS, the REB's respondents used the characteristic "excessive" (23–25%) two or three times more frequently than the characteristic "insufficient" (7–10%). In 2017–2018, the balance of these estimates was negative (minus 15–16 percentage points, see Table 7), as well as over the whole period of the last two decades.

Table 6
Marginal Interest Rate, Anticipated Price Increase and Marginal Real Interest Rate (%)

Year	Marginal interest rate (MIR) Marginal interest rate (MIR)	Annualized rate of price increase, anticipated by the respondents		Difference between MIR and anticipated rate of price increase (marginal real interest rate)	
		For inputs and outputs	For outputs only		
	(1)	(2)	(3)	(4) = (1)–(2)	(5) = (1)–(3)
1996	15.0 *)	34.4	25.4	–19.4	–10.4
1997	8.8	8.2	5.1	+0.6	+3.7
1998	9.4	22.7	17.0	–13.3	–7.6
1999	10.6	39.8	30.0	–29.2	–19.4
2000	10.0	28.8	22.1	–18.8	–12.1
2001	9.4	18.3	13.4	–8.9	–4.0
2002	8.9	15.0	11.3	–6.1	–2.4
2003	9.0	14.5	11.3	–5.5	–2.3
2004	7.7	13.4	10.2	–5.7	–2.5
2005	7.9	11.1	9.2	–3.2	–1.3
2006	6.9	12.4	9.2	–5.5	–2.3
2007	7.3	11.8	9.2	–4.5	–1.9
2008	7.8	16.6	13.4	–8.8	–5.6
2009	8.2	6.1	3.0	+2.1	+5.2
2010	7.6	8.6	7.1	–1.0	+0.5
2011	7.3	13.4	10.2	–6.1	–2.9
2012	7.5	7.1	4.0	+0.4	+3.5
2013	7.6	9.2	7.1	–1.6	+0.5
2014	7.8	7.1	4.0	+07	+3.1
2015	8.8	16.0	12.3	–7.2	–3.5
2016	7.8	9.7	7.1	–1.9	+0.7
2017	6.7	7.6	4.0	–0.9	+2.7

*) *2nd – 4th quarters.*

Table 7
Distribution of Enterprises by Volume of Production Capacities against Expected Demand for their Output in 12 Months
(Average of four quarterly surveys, %)

Year	Volume of capacities against future demand			
	1. Excessive	2. Normal	3. Insufficient	4. Balance: (4)=(3)–(1)
1998	60	35	5	–55
1999	50	40	10	–40
2000	43	45	12	–31
2001	42	48	10	–32
2002	43	49	8	–35
2003	37	51	12	–25
2004	37	53	10	–27
2005	39	49	12	–27
2006	31	54	15	–16
2007	26	58	16	–10
2008	29	64	7	–22
2009	40	50	10	–30
2010	28	62	9	–19
2011	23	65	12	–11
2012	27	61	12	–15
2013	22	66	10	–12
2014	22	69	9	–13
2015	24	66	10	–14
2016	29	60	11	–18
2017	25	65	10	–15
2018 1st and 2nd quarters	23	70	7	–16

6. Investment motives

In the summer of 2017, the share of respondents with INNOVATIONS in the last 1.5 years amounted to 68%. And it grew to 70% in 2018. For the post-default period, this result is below average. Nevertheless, the share of innovators has been gradually increasing over the last three years.

Table 8
Distribution of Enterprises by Type of Innovative Activity (%)

Year [1]	Share of enterprises having introduced innovations in the past 1.5 years (%)			
	Total	Of which:		
		Mostly product innovations	Mostly process innovations	Equally product/process innovations
1990–1992 [2]	58	31	27	[4]
1993 [3]	62	38	24	[4]
1994	60	38	22	[4]
1995	63	46	17	[4]
1996	62	41	21	[4]
1997	52	35	16	[4]
1998	68	41	15	15
1999	76	43	33	[4]
2000	76	39	10	26
2001	76	33	14	28
2002	80	31	14	35
2003	77	31	17	29
2004	79	29	17	33
2005	79	21	20	38
2006	79	24	20	35
2007	84	27	16	43
2008	84	18	23	43
2009	77	23	25	29
2010	75	24	26	25
2011	73	21	23	29
2012	84	18	20	46
2013	72	23	14	35
2014	76	22	16	39
2015	76	16	10	49
2016	67	13	22	31
2017	68	24	15	29
2018	70	16	22	32

[1] *Surveys are conducted once a year in August.*

[2] *Ex post assessment obtained in the January 1993 survey.*

[3] *The July survey.*

[4] *This version of answer was not envisaged in the questionnaire.*

In general, the innovative component of capital investment was quite noticeable in 2017, though it was not the dominant one (unlike in the most of the past few years). For instance, our respondents named the following two MAIN CAPITAL INVESTMENT OBJECTIVES: improving the quality of products (28%), increasing the production capacity (also 28%). What is more, this is an absolute record for the second indicator during the entire observation period (since 1996). Whereas the development and introduction of new products was indicated only in 23% of cases (almost twice lower than in the “fat years”).