**IRSTI 06.73.55**

**JEL G210**

**DIGITALIZATION OF BANK LENDING AS A METHOD OF FINANCING INVESTMENTS**

***Kassenova Gulmira***

*CES, Acting Associate Professor,*

*Republic of Kazakhstan,*

*Al-Farabi Kazakh National University,*

*Gkassenova.1971@gmail.com*

***Sadvakassova Kamilla,***

*Master of Economic Sciences,*

*Republic of Kazakhstan,*

*Doctoral student of Al-Farabi Kazakh National University, kamilla.sadvakassova@gmail.com,*

 *tel. 87017774142*

***Sabidullina Ademi,***

*Master of Economic Sciences,*

*Republic of Kazakhstan,*

*Doctoral student of Al-Farabi Kazakh National University,* *sabidullina96@inbox.ru**,*

 *tel. 87771851884*

**Introduction**

Finding sources of investment financing has always been one of the most important problems in investment activity. In modern conditions for our country, this problem remains, perhaps, the most acute and urgent. Sources of investment financing are funds that can be used as investment resources. The forms of financing are understood as external manifestations of the essence the financing method.

The investment financing method is a mechanism for attracting investment resources in order to finance the investment process.

With all the variety of financing sources, the main methods of financing investment activities include the following:

* self-financing;
* issue financing;
* credit financing;
* leasing;
* mixed financing;
* project financing.

The relationship between methods and forms of financing is shown in Figure 1.

Figure 1 - The relationship between methods and forms of investment financing

Note: compiled by the author

Let consider in more detail the essence of credit investment financing and focus on the analysis of bank lending financing. Bank lending is the totality of the relationship between bank as a lender and its borrower regarding:

* provision by the borrower a certain amount of money for the intended use;
* their timely return;
* receiving payment from the borrower for the use of the funds placed at his disposal.

In 2020, Kazakhstan's economic activity declined significantly due to the Covid-19 pandemic and restrictive measures related to the coronavirus. The transition to off-line, the decline in business activity, also led a decrease in the price of oil, which in turn affected the tenge exchange rate. Such unforeseen circumstances led to a slowdown in the development of the banking sector, mainly due to a decrease in demand for bank loans.

In a crisis situation, the population tried to consume and risk less than in normal times. Nevertheless, starting from the third quarter, credit activity in the credit market of Kazakhstan began to gradually recover. The monthly issuance of new loans in annual terms entered a positive growth zone, due to the restoration of loans to the population for consumer purposes against the background of the easing restrictive measures.

The summer months were quite difficult for the banking sector. The credit market went into negative territory for two consecutive months: by 0.5% in June, by 0.9% in July, and in August it went into positive territory — by 2.2% for the month and then showed stable growth. In November 2020, there was an improvement in the economic situation in the country.

The volume of loans issued by banks amounted to 1 702 259 million tenge at the end of December 2020. The volume of loans to legal entities decreased by 29 691 million tenge, to individuals-increased by 78 446 million tenge.

The volume of loans in the national currency amounted to 1 581 737 million tenge. In their structure, loans to legal entities increased by 37 611 million tenge, to individuals increased by 87 857 million tenge. The volume of loans in foreign currency shows a decrease in growth since 2017. In their structure, loans to legal entities increased by 0.4%, and to individuals - by 0.1%. The share of loans in tenge at the end of December 2020 was 92% (in December 2019 – 88%, in December 2018 - 85%).

In December 2020, the weighted average interest rate on loans issued in the national currency to non-bank legal entities was 10.6% (in December 2019 - 10.8%), and to individuals - 14.9% (16.6%). Loans issued by banks at the end of the period (December) and interest rates are shown in Table 1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **12. 2017** | **12. 2018** | **12. 2019** | **12. 2020** |
| Loans issued | mln. KZT | % | mln. KZT | % | mln. KZT | % | mln. KZT | % |
| ***Total*** | *1 217 344* | *23,5* | *1 465 611* | *12,3* | *1 653 504* | *12,9* | *1 702 259* | *12,3* |
| to non-bank legal entities | 884 122 | 11,4 | 1 058 273 | 10,4 | 1 059 375 | 10,8 | 1 029 684 | 10,6 |
| to individuals | 333 221 | 19 | 407 338 | 17,2 | 594 129 | 16,6 | 672 575 | 14,9 |
| **In national currency:** | 996 352 | 15,2 | 1 247 983 | 13,5 | 1 456 267 | 14 | 1 581 737 | 12,9 |
| to non-bank legal entities | 667 263 | 13,2 | 843 678 | 11,7 | 872 410 | 12,1 | 910 021 | 11,4 |
| to individuals | 329 089 | 19,2 | 404 306 | 17,2 | 583 858 | 16,8 | 671 715 | 14,9 |
| **in foreign currency:** | 220 991 | 5,9 | 217 627 | 5,3 | 197 237 | 4,5 | 120 522 | 4,8 |
| to non-bank legal entities | 216 859 | 5,9 | 214 595 | 5,2 | 186 966 | 4,4 | 119 663 | 4,7 |
| to individuals | 4 132 | 7,3 | 3 032 | 9,5 | 10 271 | 6 | 860 | 18,3 |

Table 1 - Loans issued by banks at the end of the period (December) and interest rates on them

Note: compiled from the Source [1]

The volume of lending to the economy shows an increase every year and in December 2020 this indicator became equal to 14 623 065 million tenge. The most creditable sectors of the economy are non-manufacturing, individual activity (9 380 911 million tenge / share in the total volume – 64.2%), industry (1 984 166 million tenge / 13.6%), as well as wholesale and retail trade (1 711 347 million tenge / 11.7%) (shown inTable 2).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Bank loans** | **2016** | **2017** | **2018** | **2019** | **2020** |
| ***Total***  | *12 859 118* | *12 705 352* | *13 091 764* | *13 863 847* | *14 623 065* |
| Industry | 1 843 102 | 1 981 577 | 2 024 483 | 1 889 894 | 1 984 166 |
| Agriculture, forestry and fisheries | 681 756 | 695 213 | 489 689 | 254 226 | 234 335 |
| Construction | 956 154 | 915 088 | 753 240 | 674 383 | 654 831 |
| Transport and warehousing | 562 201 | 572 718 | 593 275 | 500 480 | 489 461 |
| Information and communication | 147 557 | 98 73 | 71 859 | 127 998 | 168 014 |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 2 780 921 | 2 019 606 | 1 801 210 | 1 743 446 | 1 711 347 |
| Other (non-production sphere, individual activity) | 5 887 427 | 6 422 419 | 7 358 008 | 8 673 420 | 9 380 911 |

Table 2 -Bank loans by economic sector, million tenge, at the end of the period (December)

Note: compiled from the Source [1]

Analyzing the volume of loans issued in the context of economic sectors, we observe that the predominant sectors of the economy that are credited are:

1. Non-productive sphere, individual activity, which shows the peak of lending volumes over the past 5 years, 9.35 trillion tenge;

2. Wholesale and retail trade show a decline in lending volumes by 37.88% over the past 5 years;

3. An industry that demonstrates fairly stable dynamics.

Figure 2 - Bank loans by economic sector

Note: compiled by the author

The growth of lending to the country's economy is due to the implementation of state support programs, including concessional lending. Thus, in March 2020, as part of the anti-crisis measures of the President, the National Bank of the Republic of Kazakhstan launched a program of preferential lending to business entities. Mortgage lending also played a significant role. The stable situation in the country's banking sector and the reduction of interest rates on loans are also important reasons for the growth of lending.

Initially, the program of concessional lending was aimed at small and medium-sized businesses, but due to the ongoing epidemiological situation in the country, the National Bank of Kazakhstan expanded the program to mitigate the consequences of the crisis on October 27, 2020. In accordance with this, an additional 200 billion tenge was allocated for lending to large business entities and the agro-industrial complex. As a result, the total amount of funds allocated for the implementation of the program amounted to 800 billion tenge, and the duration of the program was extended until December 31, 2021.

The lowest volume of lending is observed in the industry: Information and communication, which is credited every year for an average of 121.6 billion tenge and occupies about 0.8-0.9% of the share the total volume of lending, which is undoubtedly the lowest indicator. The reason for this may be that the country has a monopoly on the information sector and the lack of competition makes it pointless to develop in this area, which shows the low volume of lending.

Figure 3 - Dynamics of lending to the air transport industry

Note: compiled by the author

As for the air transport industry, there are two periods of active growth in lending volumes:

1. In the period from 2017 to 2018, the volume of lending increased by 62.35%, in this case, the development of air transport in Kazakhstan was observed.

2. In the period from 2019 to 2020, the whole world was covered by the coronavirus pandemic, which directly affected all sectors of the economy. One of the most affected industries was air transport, namely passenger transportation, which accounts for the bulk of the airline's profits.

On the example of Air Astana JSC: Revenue for 2019 amounted to 343.9 billion tenge; Net profit – 11.4 billion tenge. Revenue as of September 30, 2020 amounted - 114.5 billion tenge; Loss – 35.9 billion tenge. According to information data, in March-April 2020, the number of passengers transported in Kazakhstan decreased by 70%. From the reduction and restriction of flights, domestic airlines lost 235 billion tenge, airports - 24.5 billion tenge, RSE "Kazaeronavigatsiya" - 28 billion tenge.

Therefore, it is not surprising to expect that the volume of lending as air transport will increase.

In the regional context, the main share of loans issued by banks is located in three large cities of Kazakhstan: Almaty, Nur-Sultan and Shymkent (Table 3).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **2016** | **2017** | **2018** | **2019** | **2020** |
| ***Total*** | *977 902* | *1 217 344* | *1 465 611* | *1 653 504* | *1 702 259* |
| Nur-Sultan | 121 017 | 108 477 | 111 755 | 111 021 | 147 314 |
| Almaty | 560 674 | 761 057 | 946 624 | 1 027 100 | 980 325 |
| Shymkent | 25 480 | 32 742 | 43 281 | 57 829 | 76 093 |
| Akmola region | 13 495 | 21 673 | 18 477 | 20 793 | 19 725 |
| Aktobe region | 24 661 | 31 717 | 37 255 | 39 433 | 43 014 |
| Almaty region | 12 699 | 13 630 | 17 233 | 25 917 | 28 387 |
| Atyrau region | 21 526 | 38 462 | 33 055 | 39 285 | 46 611 |
| East-Kazakhstan region | 26 632 | 36 032 | 46 761 | 54 101 | 54 709 |
| Zhambyl region | 9 671 | 12 960 | 17 041 | 25 181 | 26 712 |
| West-Kazakhstan region | 20 049 | 28 455 | 30 686 | 34 376 | 37 988 |
| Karaganda region | 34 568 | 41 769 | 49 174 | 72 840 | 71 218 |
| Kostanay region | 22 723 | 20 811 | 37 355 | 30 314 | 37 183 |
| Kyzylorda region | 14 249 | 14 310 | 16 616 | 23 773 | 26 084 |
| Mangistau region | 22 505 | 20 562 | 23 987 | 31 061 | 39 043 |
| Pavlodar region | 36 068 | 21 879 | 24 700 | 37 586 | 39 736 |
| North-Kazakhstan region | 11 884 | 12 808 | 11 374 | 14 520 | 16 656 |
| Turkestan region | 25 480 | 32 742 | 236 | 8 268 | 11 461 |

Table 3 - Loans issued by banks, in the regional context, million tenge, at the end of the period (December)

Note: compiled from the Source [1]

Thus, from 2016 to 2020, the most credited region is Almaty, the share in the total volume is 57.6% in 2020 (Nur-Sultan - 8.7%, Shymkent - 4.5%).

The role of mortgages as a key driver of the credit market is obvious. Therefore, while the loan portfolio grew by only 0.8% during the crisis summer, direct loans to the economy increased by 1.6%, but mortgage loans immediately added 8.8%. (shown in the Table 4).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Mortgage loans** | **2016** | **2017** | **2018** | **2019** | **2020** |
| ***Total*** | 983 349 | 1 096 547 | 1 303 335 | 1 767 152 | 2 373 221 |
| **in the national currency** | 857 740 | 1 016 316 | 1 254 541 | 1 741 608 | 2 367 122 |
| short-term | 6 491 | 6 857 | 2 482 | 1 977 | 6 965 |
| long-term\* | 851 249 | 1 009 459 | 1 252 059 | 1 739 631 | 2 360 158 |
| **in foreign currency** | 125 609 | 80 231 | 48 793 | 25 544 | 6 099 |
| short-term | 108  | 59 | 163 | 103 | 59 |
| long-term\* | 125 500 | 80 172 | 48 630 | 25 442 | 6 040 |
| \* over 1 year |

Table 4 - Mortgage lending to the population by banks, million tenge, at the end of the period (December)

Note: compiled from the Source [1]

Over the year, the picture is even more clear: the loan portfolio of Kazakh banks grew by 9.6%, lending to the economy increased by 7.3%, while mortgage loans jumped by 27.2% at once. The share of mortgages from loans to the economy reached a record 14.3%, compared to just 12% a year earlier and only 7.9% five years ago.

At the same time, the main engine of the mortgage is Zhilstroysberbank. The portfolio of housing and communal services accounts for 58.7% of the total volume of mortgage loans in Kazakhstan, compared to 55.9% a year earlier and only 32.2% five years ago.

Mortgage lending to the population by banks shows an increase since 2016 and amounted to 2 373 221 million tenge at the end of December 2020, an increase of 25.5% compared to the end of December 2019. The volume of mortgage lending in the national currency amounted to 2 367 122 million tenge at the end of December 2020. In their structure, short-term mortgage lending accounts for 0.3%, long-term - 99.7%. The volume of mortgage lending in foreign currency is decreasing every year. Since 2016, it has decreased by 20 times. The share of loans in tenge at the end of December 2020 was 99.7% (in December 2016 - 87.2%).

The key factors for improving the economic situation are investments in non-mining sectors, lending, as well as implemented measures to support the economy.

**Results and discussions**

Thus, analyzing bank lending to the economy, we can conclude that credit activity in Kazakhstan has begun to recover. Despite low volumes compared to the previous year, monthly new loans came in positive growth zone, including through the rehabilitation of loans to individuals consumer loans amid the easing of restrictive measures.

The issuance of new loans for the quarter exceeded the volume of repaid loans. As a result, the balance of debt on bank loans (loan portfolio) by the end of the third quarter 2020 increased in annual terms by 7.1% to 14.3 trillion tenge. The annual growth of the loan portfolio, after a rapid slowdown from 14.7% in March 2020 to 6.7% in July, has been gradually accelerating since August.

November is the fourth month in a row when credit volumes in the sector are growing. Of the 26 Kazakh banks, 12 second-tier banks were in the black by October; of the top ten, exactly half showed monthly growth.

ForteBank is confidently leading among the largest banks in the country: immediately plus 6.1% for the month, up to 810.6 billion tenge. In the annual dynamics, the bank is also in a significant plus: by 14.3%. At the moment, the bank has the best offer among the top second-tier banks for consumer loans and their refinancing in the sector — the minimum rate, maximum amount and term.

|  |
| --- |
| Ranking by monthly growth. The loan portfolio. Top-10 second-tier banks of the Republic of Kazakhstan. November (in billion tenge) |
|  | Growth to total | Total | Share of the Republic of Kazakhstan |
| 2020/10 | 2019/11 | 2020/10 | 2019/11 | 2020/11 | 2020/10 | 2019/11 | 2020/11 | 2020/10 | 2019/11 |
| Total | 101.3% | 110.8% | 204.8 | 1527,1 | 15619,4 | 15414,6 | 14092,3 | 100% | 100% | 100% |
| 1. ForteBank
 | 106.1% | 114.3% | 46,3 | 101,6 | 810,6 | 764,4 | 709,0 | 5.2% | 5.0% | 5.0% |
| 1. Otbasy Bank
 | 104.8% | 129.8% | 60,3 | 301,5 | 1313,8 | 1253,5 | 1012,3 | 8.4% | 8.1% | 7.2% |
| 1. Sberbank
 | 104.5% | 119.8% | 74,8 | 286,0 | 1727,7 | 1652,9 | 1441,7 | 11.1% | 10.7% | 10.2% |
| 1. Kaspi Bank
 | 102.5% | 107.3% | 36,1 | 99,4 | 1463,8 | 1427,7 | 1364,4 | 9.4% | 9.3% | 9.7% |
| 1. Halyk Bank
 | 102.0% | 114.9% | 90,9 | 611,1 | 4711,3 | 4620,4 | 4100,2 | 30.2% | 30.0% | 29.1% |
| 1. Bank RBK
 | 99.7% | 132.3% | -1,4 | 127,7 | 523,6 | 525,0 | 395,8 | 3.4% | 3.4% | 2.8% |
| 1. Jysan Bank
 | 99.0% | 138.1% | -8,0 | 222,6 | 806,0 | 814,0 | 583,4 | 5.2% | 5.3% | 4.1% |
| 1. Eurasian Bank
 | 98.9% | 86.9% | -6,5 | -91,1 | 605,7 | 612,2 | 696,7 | 3.9% | 4.0% | 4.9% |
| 1. Bank CenterCredit
 | 98.4% | 106.6% | -19,2 | 72,2 | 1165,4 | 1184,7 | 1093,3 | 7.5% | 7.7% | 7.8% |
| 1. ATFBank
 | 95.3% | 86.7% | -40,6 | -127,1 | 828,2 | 868,8 | 955,3 | 5.3% | 5.6% | 6.8% |
| Others | 98.4% | 95.6% | -27,8 | -76,9 | 1663,2 | 1691,0 | 1740,1 | 10.6% | 11.0% | 12.3% |

Table 5 - Ranking by monthly growth of the loan portfolio, November in billion tenge

Note: compiled by the author

In second place - Otbasy Bank: plus 4.8%, up to 1.31 trillion tenge. The bank specializes in mortgage loans under state programs, its own programs and the system of housing savings.

Sberbank closes the top three: plus 4.5%, to 1.73 trillion tenge.

In general, this year, despite the "coronacrisis", banks continued to support the country's economy with credit injections. The reduction in the loan portfolio was observed only during the first hard lockdown in April, as well as in June-July. However, since August, the sector has been experiencing stable growth, and the new wave of COVID-19 has not interrupted this positive trend.

It is also worth noting that, despite concerns about the decline in the solvency and creditworthiness of the population and businesses, the quality of the loan portfolio has not suffered this year — on the contrary, the indicator has improved. Therefore, loans with overdue payments over 90 days (NPL 90+) at the end of November amounted to only 1.23 trillion tenge, which is only 7.9% of the loan portfolio, compared to 8.1% in October and 8.2% a year earlier. Remind: the maximum permissible value of the NPL controller is 90+ - 10%. [4]

Preventing the suspension of lending was also an equally important task of the Agency for Regulation and Development of the Financial Market of the Republic of Kazakhstan. The main instrument of business support was the provision of preferential loans for working capital replenishment on soft terms. The program was launched by the National Bank and the agency in March, under which 600 billion tenge was allocated for lending to SMEs to replenish working capital at a rate of 8%. On behalf of the state's head, this program was expanded by another 200 billion tenge – to support large business entities. Nowadays, the amount of loans issued is 457 billion tenge.

Significant measures of support were taken by the government. The terms of the "Business Roadmap-2025" were expanded as much as possible and long-term lending under the "Economy of Simple Things" program was increased from 600 billion tenge to 1 trillion tenge, industry restrictions were eliminated and the guarantee limit was increased to 85% of the loan amount. On behalf of the state's head, interest rates up to 6% are subsidized on loans of SMEs from affected sectors of the economy for the period from March 16, 2020 to March 15, 2021.

Government programs have helped support lending to the economy. After a slight slowdown in the issuance of loans to businesses, which was observed in April – July 2020, there has been a positive trend since August. The total volume of lending to the economy by banks as of November 1 amounted to 14.4 trillion tenge, an increase of 4.2% since the beginning of the year, lending to SMEs – 4.1 trillion tenge, an increase of 4.6% since the beginning 2020.

By December, the loan portfolio of Kazakhstani banks in 2020 reached 15.62 trillion tenge — 1.3% more than a month earlier. For the year, the growth was 10.8%.

**Conclusions**

To sum up, it should be noted that the depth of the crisis caused by the Covid-19 pandemic signals an increase in the negative impact on bank balance sheets. Therefore, the regulator plans to integrate AQR and stress testing of banks into the agency's supervisory process on a regular basis using the developed templates, tools and methodology. Next year, the priority of the supervision will be to conduct stress testing on all banks in order to assess the impact of the current crisis on the banking sector.

**References:**

1. According to the section "Monetary and banking statistics", the subsection "Credit market" on the Internet resource of the National Bank of the Republic of Kazakhstan <https://nationalbank.kz/ru/loans/kredity-bankov>
2. **Author's column of the Chairman of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market Madina Abylkasymova for the business publication “Kursiv”** <https://www.finreg.kz/library/printnews/print.cfm?id=23689&docid=3329>
3. Review of the financial sector of the Republic of Kazakhstan, August 2020 <https://www.finreg.kz/library/printnews/print.cfm?id=23689&docid=3329>
4. http://ranking.kz/ru/a/infopovody/za-mesyac-ssudnyj-portfel-kazahstanskih-bankov-podros-eshyo-na-13-sredi-topovyh-bvu-rk-v-plyuse-rovno-polovina