The leasing development tools in the construction industry of the Russian Federation

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Abstract. The article deals with the need for leasing financing of construction organizations aimed to modernize, restore and purchase construction equipment. The importance of leasing in the construction industry of the Russian Federation is revealed. The coefficients of renewal and liquidation and the degree of depreciation of fixed assets are determined. The share of construction machinery and equipment in the structure of the leasing market is presented for the last two years. An important task is to lease objects of the construction industry as one of the most effective investment mechanism for the implementation of innovative construction technologies. The cost and structure of financial leasing agreements in the construction industry are analyzed. The trends in the development of modern leasing in the construction industry are revealed. The risks of transferring financial leasing to operating leasing are described. The article analyzes a system of aggregated leasing that takes into account interests of counterparties in leasing transactions and allows for eliminating leasing risks that are not common in the Russian Federation. The system of aggregated leasing focuses on the use of several types of leasing and combines the elements of leasing financing into a single investment tool.

Today, leasing is one of the most effective financing instruments of construction companies that helps to purchase construction machinery and equipment. Leasing is an alternative to investment forms that are traditional for the Russian Federation. Its uniqueness is due to the combination of characteristics of loan and long-term leasing agreements, the absence of bond and the reduced tax base [7].

For the Russian Federation, leasing as a form of investment is of particular importance due to the fact that insufficient investment in the renewal of fixed assets has deteriorated the technical state of machines and depreciated fixed assets [11].

A high degree of wear of fixed assets, an unfavorable age structure of equipment, a low level of investment in construction machinery and equipment result from poor financing of the Russian construction industry.

To solve the problems of investing in the renewal of fixed assets, it is advisable to determine the coefficient of liquidation, renewal and the degree of wear of fixed assets.

Meanwhile, the degree of depreciation of fixed assets is about 40-50%, which does not meet the demand conjuncture and requires replacement. The ranking of Russian regions by the degree of deterioration of machinery and equipment shows that there are regions with a wear of 60.70 and even 80% [9].
Let us present the degree of wear, the coefficients of renewal and liquidation of fixed assets in the construction industry of the Russian Federation for 2017-2018 (Figure 1).

Figure 1. The rates of depreciation, renewal and liquidation of fixed assets in the construction industry of the Russian Federation, 2017-2018 [12].

Figure 1 shows that over the past years, the degree of depreciation of fixed assets in the construction industry is 50%. This trend is a consequence of the low rates of investment in construction. In 2019, the coefficient of renewal of fixed assets calculated in comparable prices amounted to 3.2%. Compared to 2018, it decreased by 0.2%.

The rate of liquidation of fixed assets did not change in 2019.

The obsolescence of construction equipment is an impairment of fixed assets, but the equipment is physically usable. There are two forms of obsolescence [10].

The first one is reduction of the cost of fixed assets due to a decrease in the cost of their reproduction. It is based on an increase in labor productivity, technical equipment. As a result, labor intensity and manufactured equipment cost become reduced [6].

The second form is deterioration of fixed assets due to the creation of new, more advanced ones. It is based on scientific and technological progress, due to which more modern construction equipment with improved design parameters and performance is produced [4]. The profitability of new labor instruments is determined by the extent to which their use makes it possible to reduce the costs of living and materialized labor for the production of a unit of product.

In practice, there are companies that lease real estate objects, including buildings, structures, enterprises. Other companies, on the other hand, choose movable property as an object of leasing (equipment, machinery, cars, etc.). There are universal companies that lease both movable and immovable objects.

Let us consider the share of construction machinery and equipment in the structure of the leasing market (Table 1).

Table 1. Market structure by leasing objects.

| Leasing subject | Share in new business (property value) for 2019, % | Share in new business (property value) for 2018, % | Increase (+) or decrease (-) segment volume, % | Share in the leasing portfolio as of 01.01.2020, % |
|-----------------|--------------------------------------------------|--------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Trucks          | 20.3                                             | 18.7                                             | 24.3                                          | 10.7                                          |
| Category                                      | 2018    | 2019    | 2020    | 2021    |
|----------------------------------------------|---------|---------|---------|---------|
| Cars                                         | 17.7    | 15.9    | 27.5    | 7.5     |
| Railway Engineering                          | 16.8    | 25.9    | -25.7   | 35.8    |
| Vessels (sea and river)                      | 10.2    | 4.1     | 184.9   | 9.8     |
| **Construction and road construction machinery incl. construction machinery on wheels** | **8.9** | **7.5** | **35.9** | **4.5** |
| Real estate (buildings and structures)       | 5.9     | 1.6     | 322.2   | 4.9     |
| Air transport                                | 5.4     | 12.6    | -50.9   | 16.9    |
| Equipment for oil and gas production and processing | 3.2     | 1.6     | 129.0   | 2.4     |
| Loaders warehouse and warehouse equipment, packaging equipment and equipment for the production of containers | 1.3     | 1.3     | 14.5    | 0.7     |
| Power equipment                              | 0.4     | 0.8     | -42.7   | 0.2     |
| **Equipment for housing and communal services** | **0.3** | **0.3** | **14.5** | **0.2** |
| Other property                               | 3.5     | 4.2     | -4.6    | 2.4     |

Table 1 shows that the share of construction and road-building equipment, including special vehicles, in the leasing market structure amounted to 7.5% in 2018, and 8.9% in 2019. However, the share of equipment used in the housing and communal sector was less than 1% in 2018 and 2019.

An important task is to lease objects of the construction industry as one of the most effective investment mechanisms for the implementation of innovative construction technologies [1].

One of the leading trends in modern leasing is its quantitative (due to an increase in transactions and total volume) and qualitative (due to a significant increase in the level of quality of such services) development [2]. A qualitative change occurs due to the improvement of organizational forms and schemes. A variety of these forms and schemes depend on international and national reasons. The sectoral structure of leasing operations varies depending on the specific region, since each regional market of leasing services has its own characteristics. The most common classification criterion for leasing forms is a type of property (movable property vs immovable property).

The problems of technical re-equipping and modernization of equipment are characteristic of any construction company in the Russian Federation. A decisive factor in increasing the volume of construction machinery and equipment and modernizing the equipment based on the leasing schemes is centralization of leasing operations with the direct participation of a construction organization. This would allow subsidiaries with precarious financial positions to renew fixed assets of the construction industry. When market relations are created, construction infrastructure organizations have opportunities to attract investment resources [5].

Over the past five years, the economic feasibility and demand for the development of leasing relations in the construction industry are justified by a steady decline in the cost of financial leasing agreements (Figure 2.)
Figure 2. The cost and structure of financial leasing agreements for machinery and equipment by industries (2015-2019).

Figure 2 shows that a decrease in the cost of financial leasing agreements in construction has been observed since 2015. When comparing the cost and structure of financial leasing agreements in the construction industry with those in other industries, it becomes evident that the latter is a leader.

Leasing of construction equipment is one of the most difficult and labor-intensive segments of the leasing market. This is due to the strict requirements for reliability and safety of equipment and structures, professionalism of participants in the construction and financing processes. At the same time, it is the complexity that creates additional opportunities and allows you to reveal the advantages of leasing as a full-fledged investment mechanism. Large construction projects are the best way to show the financial and non-financial effectiveness of leasing and compare it with other financing options. Both Russian and foreign sources can be used to finance leasing transactions with construction equipment.

Financial leasing is commonly used in the Russian Federation. It accounts for 90% of the entire leasing market. The key leased objects are vehicles, construction and road construction equipment, real estate objects accounting for 8 and 11%. The share of the market is 9.5%, and operating leasing focuses on the railway and aviation segments.

The main fear of transferring financial leasing contracts to the operational ones is deterioration of clients' solvency and the lack of state support for leasing companies. Therefore, the extension of regulation is not promising in the Russian Federation [8].

The state is not able to finance every construction organization whose fixed assets need to be modernized. Thus, organizations have to update and replenish non-current assets in order to remain competitive in the market.

With the help of complex types and forms of leasing, an organization can purchase construction machinery and equipment on a profitable basis. Leased property transferred into operational leasing for a period shorter than the standard term of its operation will allow the lessee to reduce repair, insurance and maintenance costs.

In the Russian Federation, leasing companies pay special attention to the type of an object the lessee wants to acquire. Lessors pay attention to solvent objects which can be easily sold. For example, leasing
organizations are more likely to sign a contract for the supply of construction and road-building equipment rather than for housing and communal equipment.

To avoid risks when applying leasing types that are not common in the Russian Federation, it is advisable to develop a system of aggregated leasing, which takes into account interests of the counterparties in leasing transactions.

Figure 3 shows the system of aggregated leasing (a special case: financing of international leasebacks with the involvement of interstate financial and credit institutions and investment companies for the subsequent sale of a lease contract with further modernization of equipment by the aggregate leasing system).

The system of aggregated leasing focuses on several types of leasing and combines elements of leasing financing into a single investment tool.

The system of aggregated leasing reflects each stage of interaction between counterparties in leasing transactions and meets their needs in various economic conditions.

The results of the study made it possible to identify advantages of leasing relations in the construction industry: for the lessee, the risk of moral and physical deterioration and obsolescence of property is reduced; payment rates can be floating and fixed; a lease agreement is more flexible than a bank loan agreement, since one of the conditions of lease agreements is a payment scheme that is convenient for both parties; the possibility of warranty service; accelerated depreciation.

The use of combination of leasing financing elements in a single investment instrument is most acceptable depending on the stage of leasing transactions. It contributes to the improvement of the investment mechanism.

The leasing financing complements the traditional relations with financial and credit institutions in order to modernize, restore and develop the construction industry.
Figure 3. The system of aggregated leasing,
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