Development of Commercial Mortgage Loan Institution
In one of the constituents of Russia (Tula Region Case Study)

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Keywords
Mortgage models, commercial mortgage loan, commercial mortgage institution, trends in small business development.

Abstract
The article explains such a notion as “Commercial Mortgage Loan Institution” as well as proves that such institution started its development in the Russian Federation. The article also presents the results of polling of small and medium-sized businesses in Tula Region and their statistical processing by means of factor analysis and a principle component method. The article dwells on the difference in perspective visions of further development between small and medium-sized businesses. As a part of the research, devoted to the establishing of commercial property mortgage institution, the author conducted a survey interviewing small and medium-sized businesses in one of the constituents of the Russian Federation - Tula Region. The poll was being conducted during 2015-2016s. The amount of the respondents comprised more than 400 people. The sample group was created by a spontaneous method, i.e. included all the representatives of small and medium-sized businesses who agreed to take part in the survey. Tula region is an old industrial region of Russia where one can find mainly industries of the third technological mode. Until recently Tula region used to be a diversified and depressed region. The questionnaire form contained 20 questions that allowed to find the actual number of employees, the size of production area, pattern of use (either rented property or proprietorship); whether the respondents are aware of the mortgage loans and whether they have ever used them; would they make use of mortgage loans if lending terms change; whether the respondents plan to develop their businesses and create new working places, etc. The results of the survey are analyzed in this article.

1. Introduction
Small business in our country, as well as in many other developing countries, gets government-backed support and stimulation. The meeting of the State Council under the chairmanship of the President of the Russian Federation, held on April 7, 2015 [Meeting of the State Council, 7th April, 2015], was devoted exactly to the issues of small and medium-sized businesses (further SMB) support. The problem of available lending opportunities for SMB was one of the key issues as it is exactly the problem that hinders the development of business activities in Russia. In the course of the workshop of the Presidium of the State Council for promotion of the investment prospects in the constituents of the Russian Federation it was accepted that the investment climate nationwide has improved only by 0,8 points [The Workshop of the Presidium of the State Council, 4th October 2016]. It is quite probable that such improvement is due to the activities of the regional corporations for development whose aim is to promote solid investments into the constituent regions of the country. Along with that the problems of small businesses that are supposed to and are able to contribute up to 50% into GDP of our country still remain unsolved. In particular, the mechanism of regional commercial mortgage financing is still “out of the eye” of the mentioned above corporations, despite the fact that it is an extremely promising way to support small business.

Modern system of mortgage loans in Russia traces its roots to the end of the 20th century. Exactly at that time there were made single attempts to use gage standards mentioned in one of the Civil Code chapters - “Securing Performance of Obligations”, 1964 [Civil Code 1964, art.186].
1990s opened a new page in the history of the mortgage loans in Russia. At that time a law "About Mortgage Loans"[Federal law “About mortgage (mortgage security)” art.2] was passed, in 1997 an Agency for Housing Mortgage Lending was organized and the sphere of mortgage loans experienced the inflow of investments.

At the beginning of the 1990s “Sberbank” was the first to give single mortgage loans charged upon the property that the debtors already possessed. In 1994 to the Civil Code of Russian Federation (Book 1)[Civil Code of Russian Federation, art.334] there were added some pledge laws: exactly it was § 3 “Gage” that was added to part three - “General Part of Law of Obligation”, Chapter 23 “Securing Performance of Obligations”. At that moment the country had to face a lot of economic woes, one of which was the housing problem, so the worthy decision was taken - to develop the progressive institution of mortgage loans.

In September 1997 mortgage development institution was created – “Agency for Housing Mortgage Lending” – and in July 1998 the Law “About Mortgage” became effective. New rules were implemented to stimulate banking institutions to expand their credit portfolios by giving mortgage loans and citizens to buy real estate property borrowing money from banks (mortgage). Unfortunately, everything fell off the expectations as in August 1998 – only one month after the law was passed- Russia suffered from a default.

The development of the institution stopped for several years for the reasons stated above. But the main aim of those legal regulations was achieved - new “rules of economic behavior” created the outline of the mortgage loan institution which came down to our days.

Only during the early 2000s the mortgage market started its coming to life. A significant milestone of that time was the approval of HMLA (Housing Mortgage Lending Agency) Standards for processing, refinancing and administrating of mortgage loans.

According to the analytical observations of the mortgage market the amount of originated mortgage loans in 2016 made a total of 1, 5 trillion rubles, which 30% higher than the previous year. The subsidy program will provide for a bit less than 40% of all the takedowns and by the end of the year the program will be almost 100% accomplished (950 milliard rubles with the limit of one trillion rubles). Interest rate cut will allow the banks in the fourth quarter draw their average rates near to 13% though the gap between these rates and government-backed rates will still remain noticeable – 0,5-1 %. As a result the windup of the government support will lead to the increase in mean rates and as a result to lower demands for mortgage at primary housing market[Mortgage Loans: will there be any increase…, 2016].

As for the development of the commercial mortgage institution, the securitization of commercial mortgage was slowed down by the absence of interest from the government side (in comparison to residential mortgage) and, consequently, by the absence of the appropriate legislation, federal standards for commercial mortgage and certain mortgage conduits (something like Agency for Housing Mortgage Lending)[L.Khusnetdinova, 2010. p.102].

The development of modern lending market is based on:
- property rights protection;
- transactions cost saving
- free flow of stocks

So, property rights with no perfection and vague forms of protection of these rights hold off the development of the certain segments of the lending market – and this is a major problem for Russia.

And there exists a reverse situation, when specified property items could be accepted as a pledge and it is a good way to secure the performance of obligations. This situation may stimulate banks to create new lending products as the risks of banks in this case (when they have liquid assets as a pledge) are lower and economically the deal will be more appealing for the creditor. Likewise, when the loan is secured by a good pledge then there is a possibility to rely on the lowering of the interest rate.
While residential mortgage is gaining momentum similar bank products on commercial mortgage are still not very popular in the domestic market. It is first of all explained by the absence of the effective procedures for the appraisal of such type of property, by certain difficulties at selling it and by other quite important factors (long period and considerable expenses for drafting an agreement, great amount of the necessary documents, etc.).

Surely there exists a possibility to get this type of a mortgage but banks approve such loans only to their corporate customers on an individual basis and on special terms and conditions. To support this statement find the given below Drawing 1 which shows the increasing dynamics of loans originated by the bank to small and medium-sized businesses for the period of more than 3 years.

![Drawing 1. Dynamics of the small and medium-sized businesses loans](image)

The share of the mentioned period loans for SMB in total amount of loans given to SMB within the relevant month

<table>
<thead>
<tr>
<th>Month</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2015</td>
<td>8%</td>
</tr>
<tr>
<td>July 2015</td>
<td>9%</td>
</tr>
<tr>
<td>August 2015</td>
<td>5%</td>
</tr>
<tr>
<td>Sept. 2015</td>
<td>12%</td>
</tr>
<tr>
<td>Oct. 2015</td>
<td>19%</td>
</tr>
<tr>
<td>Nov. 2015</td>
<td>8%</td>
</tr>
<tr>
<td>Dec. 2015</td>
<td>14%</td>
</tr>
<tr>
<td>Jan. 2016</td>
<td>9%</td>
</tr>
<tr>
<td>Feb. 2016</td>
<td>8%</td>
</tr>
<tr>
<td>March 2016</td>
<td>3%</td>
</tr>
<tr>
<td>April 2016</td>
<td>9%</td>
</tr>
<tr>
<td>May 2016</td>
<td>2%</td>
</tr>
<tr>
<td>June 2016</td>
<td>2%</td>
</tr>
</tbody>
</table>

Fig. 1. Dynamics of the small and medium-sized businesses loans
Resource: RAEX calculations (PA expert), reported by the Bank of Russia

2. **The Concept of the Institute of Commercial Property Mortgage**

Nowadays one can hardly find a unified approach to the concept “commercial property mortgage loan”. According to M.E.Berkaliyeva the proper definition for such a mortgage is “business-mortgage” [M.E.Berkaliyeva, 2016, p. 37]. Business (engl. business – “enterprise”, “industry”) – an activity that is aimed at gaining profit; any type of activity or work that brings money or personal profit. But the term “business” can’t be found in Civil Laws though the term “commercial” is used permanently through the whole Civil Code of Russian Federation (CC RF). V.I. Passik and K.M. Yeroshenkov insist on the term “business-mortgage” as the term “commercial mortgage” may lead to certain ambiguities as the term is often used with reference to any deals with charge on real property and the latter, in their turn, more often than not are not mortgage loans at all [V.I. Passik, K.M. Yeroshenkov, 2006, p. 27]. Such explanations are typical of applied works.

From our point of view, fundamental or theoretical works that use neo-institutional terminology offer another and a more exact definition – “commercial property mortgage institution”. Let us explain the definition commercial property mortgage institution in more detail with reference to our research. Commercial mortgage institution is the socio-economic institution that allows businessmen to obtain long-term loans with a view to purchase estate property (non-residential property) for business activities, using the purchased property to secure performance of obligations (pledge is a guarantee of repayment).

The definition offered by the author has legal grounds, in other words it is grounded on socially accepted formal ways of behavior which allow economists, as well as lawyers, to understand the very core of the idea correctly. Moreover, this definition reflects the economic essence and purpose of the emerging socio-economic relations. There is no unified opinion among the scientists
about the process of emerging of the institution, nor about the reasons; there exist a lot of different, controversial views on whether it is working or not and since what moment [I.V.Fomicheva, O.A.Gulyaeva, 2015. p.454].

So, mortgage is the pledge agreement on immovable property where “one side is the pledge or bond creditor secured by the mortgage may have the first claim on their money secured by the pledged property of the other side (a debtor)” [Federal Law “About mortgage (mortgage security)” art.1].

Residential as well as non-residential property may become subject to this agreement. Since 2006 the government has taken a lot of effort to actively implement such mechanism of purchasing residential property and got perfect results and public approval. The same steps should be taken with reference to commercial property and the experience gained should be used for the promotion of the commercial property purchasing schemes for small business.

It is worth mentioning that one of the major sources of long-term economic growth is physical capital (i.e. such resources as buildings and equipment) [P.Krugman, P.Wells, M. Olny, 2011. p.634]. Greater amount of investments raises the amount of physical capital and it leads to the development of economic growth [Refer to: Vikram Nehru and Dhareshwar Ashok, 1993. p.39]. The analysis of the real comparison data of Chinese and Indian economic growth, conducted by the economists of Brookings Institution Barry Bosworth and Susan Collins, gives evidence to the fact that China economic growth was quicker than Indian (from 1978 to 2004) [P. Barry Bosworth, M. Susan Collins, 2003, p.141]. It happened thanks to higher levels of investments of China that raised the level of physical capital faster than it happened in India. This experience should be taken into account while working out the policy of long-time economic growth in Russia.

3. Analysis of the factors influencing small business desire to purchase commercial property using mortgage loans

As a part of the research, devoted to the establishing of commercial mortgage institution in Russia, the author conducted a survey, interviewing small and medium-sized businesses in one of the constituents of Russian Federation - Tula Region. The poll was being conducted during 2015-2016ss. The participants of the survey were represented by commercial property owners (33%) and leaseholders (67%). The amount of the respondents comprised more than 400 people. The sample group was created by spontaneous method i.e. included all the representatives of small and medium-sized businesses who agreed to take part in the survey.

Tula region is an old industrial region of Russia where one can find mainly industries of third technological mode. Until recently Tula region used to be a diversified and depressed region.

The poll was conducted by the author herself in cooperation with Tula campus of Federal State Educational Institution “Financial University under the Government of Russian federation” and with the support of some community organizations such as Tula Chamber of Commerce and Industry and others.

The questionnaire contained 20 questions that allowed to find the actual number of employees, the size of production space, pattern of use (either rented property or proprietorship); whether the respondents are aware of the mortgage loans and whether they ever used them; would they make use of mortgage loans if lending terms change; whether the respondents plan to develop (grow) their businesses and create new working places, etc. The results of the poll are described below.

General awareness of different mortgage loans among the respondents from small and medium-sized businesses is over 70%.

Fig.2 shows all the respondents of the survey according to the type of their businesses.
As it becomes clear from the chart, the great majority of the respondents (64%) are businessmen in the market for retailing and personal services, but the amount of the businessmen who work in the market for comforts or continue the industrial process reaches only 30% of all the respondents interviewed.

To understand the connection between the type of business activity and type of proprietorship shall we analyze the amount of property owners and leaseholders within different types of businesses (fig. 3 & 4).
Chart 3 clearly shows immense differences in business activities of property owners while Chart 4 shows the same with reference to lease holders. While the ratio of retailing businesses is almost equal for both types of respondents (44-45%), material production industries gained 36% within property owners and 25% within leaseholders. Such industrial division allows us to come to conclusion that private premises correlate with material businesses, while leaseholders prefer to work in nonmaterial services sector.

Further the author conducted the factor analysis of the respondents’ (commercial property owners) answers to specify the degree of the mentioned above correlation as well as reasons and intentions of small and medium-sized businesses to invest in commercial property.

The general model of the factor analysis looks as follows:

$$ x_i = \sum_{j=1}^{k} \left( b_{ij} \cdot F_j \right) + c_i \cdot U_i + e_i ; i = 1, ..., p ; k < p ;$$

(1)

Where $x_i$ - original variables in the range of measurements; $F_j$ - general factors in the range of $k$ measurements; $U_i$ - specific factors; $e_j$ - random errors.

As we are interested in general aspects of the entrepreneurs’ investment policy, the given above model should be driven to the model of principle components. This model was used in our analysis:

$$ x_i = \sum_{j=1}^{k} a_{ij} \cdot Z_j ; i = 1, ..., p ; k < p$$

(2)

where: $x_i$ - original variables (questionnaire data); $Z_j$ - principle components (factors); $a_{ij}$ - conversion factors from the system of variables $x_i$ to the system of components $Z_j$. [A.P.Kulaichev, 2002. p.238]

Analyzing this model we put forward a supposition that several principle components are not correlated and principle factors are chosen from the first components which are characterized by the greatest variance. Accidental components whose proper values are lower than 2% of the cumulative variance are not taken into consideration.

Factor analysis was carried out with the use of Statistics Package STADIA 6.0. Standard results of STADIA 6.0. Include creation of complete correlation matrix; isolation of principle components with their proper values which are proportional to the part of the general variance of the experimental data; percentage of total variance for every factor and percentage of cumulated variance.

At the initial stage the Statistics Package assesses correlation of the given data. The obtained results show that critical value in the correlation matrix is 0,7879 and the number of significant coefficients is higher than 55%, which proves a substantial connection between the variables and shows that the number of principle components (factors) can be significantly smaller than the number of original variables. It gives us hope for positive interpretation of original variables.

To make the interpretation of the factors easier we used a Varimax method. The method was used as the one that provides better separation of the factors with sacrifice of the number of variables connected with every factor. In the final phase we are given the diagrams of objects positions in the system of factors and new factor loadings.

Proper values and explained variance values are given in Table 1.
<table>
<thead>
<tr>
<th>Factors ratings</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper value</td>
<td>72,1</td>
<td>2,154</td>
<td>0,4484</td>
</tr>
<tr>
<td>Variance percentage</td>
<td>72,1</td>
<td>21,54</td>
<td>4,484</td>
</tr>
<tr>
<td>Cumulated variance percentage</td>
<td>72,1</td>
<td>93,64</td>
<td>98,13</td>
</tr>
</tbody>
</table>

Table 1: Proper values and the percentage of the explained variance of factors

As a result of varimax-rotation we obtained factor axes within which all the variables had generality within 95 – 99,6 % and specificity not more than 2% in absence of correlation of factors. The data of object positions in the system of factors and of factor loadings on the variables were divided according to the degree of their connection into groups: strong connection (1,0000 – 0,7000), weak connection (0,6900 – 0,4000) and inessential (0,3900 – 0,0000). Table 2 shows the summarized results of the connection between original variables and singled out principle factors

<table>
<thead>
<tr>
<th>Types of economic activities closely connected with the factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catering, construction industry and manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freight traffic, wholesale business, hotel business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realtor activities, retailing, personal services</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: The grouping of the data according to the factors

According to the data given in Table 2, factors received as a result of the respondents’ answers were interpreted in the following way:

The first independent factor which explains 43,19% of the data that characterize variance of factors after rotation was identified by the author as the factor of volume, popular, stable business (construction business, manufacturing, catering, ranching). This factor is very tightly connected with the ability of a small business to purchase property either on their own funds or on borrowed funds; it is connected with the readiness of the owner to start work immediately and with necessary infrastructure nearby.

The second independent factor which explains 43,19% of variable scattering is interpreted as the factor of specific, stable and perspective business (freight traffic, wholesale business, hotel business). It reflects the preferences of a small business to use their own funds to purchase new-built property and then modernize it to the special business needs.

The third independent factor (20, 42 % of variance) is identified as the factor of volume, popular but badly predictable business (retailing, personal services). It is connected with the absence of preferences for the type of property (new-built/resale property) and with the desire to have no mortgage at all.

With references to the foregoing, in the model of principle components (2), industrial sector of small and medium-sized businesses (commercial property owners) gives the following coefficients under factors (x); \( a_1 = 0,4319; a_2 = 0,3452; a_3 = 0,2042 \), where \( r \) represents the three factors of investment activity, chosen and interpreted by the author.

4. Analysis of the small and medium-sized businesses with commercial property on lease

The figures given in Table 2 give reasons to claim that the factors worked out as a result of the answers of commercial property owners can be successfully used to group and analyze the leaseholders.

On the basis of the carried out calculations and figured out factors leaseholders were divided into several groups by analogy with the groups of commercial property owners: the first factor gave the group of leaseholders involved in volume, popular, stable business. The second factor gave the group of leaseholders involved in specific, stable and perspective business. The third factor – volume, popular but badly predictable business.
Taking into account these classification principles, we created the structure of SMB-leaseholders and it looks as follows;

![Figure 5: Distribution of leaseholders according to the factors worked out by the author](image)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>17%</td>
</tr>
<tr>
<td>Second</td>
<td>14%</td>
</tr>
<tr>
<td>Third</td>
<td>69%</td>
</tr>
</tbody>
</table>

Such structure gives rise to the conclusion that business carried out with leased property doesn’t stimulate business owners to long-term activities on the market and/or to further development in the material sphere.

An indirect proof to the suggestion that a small business that “lives” in the leased property doesn’t have any desire to develop in “manufacturing” sphere is found in the answers of the respondents to certain questions which, according to the authors opinion, prove the suggestion best of all. The amount of the respondents-leaseholders planning to purchase some property has decreased on 5% since 2015 but still comprises almost 40% of all the respondents.

Subjective estimation of the stability of their business demonstrates surprising tendencies: the activities that we associate with the first factor gained just a bit of stability at the market in 2016, in comparison to 2015. Business activities associated with the second factor, quite on the contrary, seem to be much more stable in 2016 when compared to 2015. Business that represents the third factor is less stable in 2016, than in 2015.

Such a surprising result, in the author’s opinion, proves conclusively that it is necessary for small and medium-sized businesses to purchase industrial property if they want to work more actively in the manufacturing sphere.

Only 32% of the respondents in 2015, when asked about the possibility to buy property with commercial mortgage, said that they were able to do it. In 2016 this amount reached 45% of all the respondents, mainly thanks to the enterprises of the second factor. Those who are involved with the businesses which represent the first and the third factor are quite pessimistic.

Thus, the results of the survey prove the emerge of new socio-economic relations within the commercial property mortgage institution. Statistical data processing, with one of the regional constituents of Russia (Tula region) as a sample, proves the demand for this institution in modern conditions. Moreover, it was estimated that small businesses in the manufacturing sphere demonstrate more stability when they use their own property but not the rented one, while small businesses in the market of personal services are mainly leaseholders. The survey proves the interest of small and medium-sized businesses in purchasing industrial property with commercial mortgage loans.

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