Peculiarities of Organization of the Foreign Mortgages and Mortgage-Backed Securities Market

Bazhanova G.

Kazan Federal University, Institute of Management, Economics and Finance, 18 Kremlevskaya St, Kazan 420008

Shakiryanova A.

Kazan Federal University, Institute of Management, Economics and Finance, 18 Kremlevskaya St, Kazan 420008

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Abstract

The development of Russian efficient market economy requires creation and functioning of the financial market with modern stock instruments. The Mortgage-Backed Securities Market is an important segment of the financial market. Considered European and American models of the mortgage securities market organization are significantly different in: sources of mortgage loans financing; mechanisms of mortgage operations regulation; methods of mortgage institutions supervision; mortgage-backed securities investment environment; mortgage market infrastructure; role and functions of state at the mortgage market. The authors, basing on the analysis of foreign literature, considered models of the Mortgage-Backed Securities Market organization in developed countries, which allows them to develop and offer recommendations for improving the functioning of the Mortgage-Backed Securities Market.

Keywords: *investors, mortgage, mortgage market, mortgage-backed securities market, mortgage bonds*

1. Introduction

Under the conditions of Russian Mortgage-Backed Securities Market formation the research works aimed at ensuring its cost-effective, stable and secure functioning becoming really significant. The mortgage market is a prerequisite for development and formation of the mortgage-backed securities market. Currently, the mortgage market is underdeveloped but it has the potential for growth. The World Bank considers the share of residential mortgage loans at the level of 25% of GDP as a benchmark for middle-income countries. EU average share of mortgage loans is 51.7 % of GDP. The highest level is in the Netherlands (106.2%) and Denmark (100.9%), the lowest one is in the Czech Republic (13%). The share of mortgage loans in Russia is 2.6 % of GDP.

2. Models of Mortgage-Backed Securities Market Organization

The analysis of the practice of mortgage securities market development reveals two basic models of market organization: American (two-tier) and European (one-tier). They were formed by the impact of factors arising from the peculiarities of legal mechanisms, specific development of credit institutions, business practice, historical and economic conditions of the country development. The comparative characteristics of these models are shown in Table 1.

Table 1. Comparative characteristic of American and European models of the Mortgage-Backed Securities Market.

	American model	European model
Sources of housing financing	Savings deposits	Collective accumulation of savings in private banks and public savings banks Cumulative contributions to the housing construction are encouraged by the state premium at a certain value; or these contributions (up to a maximum amount) are exempt from income tax
Primary lenders	Savings banks Mortgage banks	Specialized institutions (mortgage banks, building societies, savings banks and land banks, mutual and cooperative banks) Universal banks Insurance companies
Issuers of mortgage securities	Specialized operators (Fannie Mae; Ginnie Mae; Freddie Mac), investment banks Savings institutions Conduits	Mortgage banks Universal banks
Types of Mortgage-Backed Securities	Pass-through (transferable), structured	Mortgage bonds (pfandbriefe and jumbo pfandbriefe), social bonds secured by the governments guarantees
Mortgages options:	Average loan amount is about 327 thousand U.S. Dollars. Maturities from 10 to 30 years Fixed interest rate Floating interest rate Coefficient of credit capacity (credit availability) is 28 - 30 %	Average loan amount is about 100 thousand Euros LTV = 70 Maturities from 10 to 30 years Fixed interest rate
Size of indebtedness under mortgage loans	7 trillion U.S. Dollars	1 trillion U.S. Dollars
Share of mortgage loans funding through Mortgage-Backed Securities	Over 54%	About 30 %
Amount of securities issue	1.4 trillion U.S. Dollars	1.1 trillion Euro
Regulatory documents	Securities Act of 1933 Securities Exchange Act of 1934 Trust Indenture Act of 1939, Law Investment Company Act of 1940 Sarbanes - Oxley Act of 2002 Securities and Exchange Commission Self-Regulatory Organizations of Professional Securities Market Participants	Exchange Act (end of the XIX century) Credit Transactions Act (the end of the XIX century) Securities Trading Act (1994) Securities Commission Stats - Commissioner Federal Chamber for Banks Supervision Special legislation - Mortgage Bonds Act
Investor protection	State guarantees State insurance Credit ratings set by international rating agencies	A special status of the mortgage collateral Legislative restriction of permitted operations for mortgage banks Institute of the trustee controlling the mortgage collateral and issuer compliance with mortgage legislation

2.1 European Model of Mortgage-Backed Securities Market Organization.

In the European model of Mortgage-Backed Securities Market organization the bulk of financial resources comes from a specially organized secondary market for secured bonds. The primary lenders are specialized institutions (mortgage banks, building societies, savings banks and land banks, mutual and cooperative banks) and universal banks, their share is over 90%; the share of insurance companies is 10%.

Currently, European countries have over 100 mortgage banks and a professional organization - European Mortgage Federation (EMF). European mortgage banks are entitled to issue mortgage bonds (pfandbriefe and jumbo pfandbriefe) and social bonds secured by the guarantees of governments for the purposes of social infrastructure financing. These bonds are considered collateralized (byreal estate or guarantees) bonds, also known as covered bond [1]. The standard of the European model of Mortgage-Backed Securities Market is the German system of market organization. Generally, the largest number of European banks is concentrated in Germany - up to 4 thousand (in France there are 1.2 thousand banks, in the UK there are 500), as well as a developed branch network - 57 branches for every

100 thousand inhabitants (at an average in Europe there are 48 branches for every 100 thousand inhabitants; in Russia - as of 01.01.2009 there are 18 branches, the number of banks is 1058). [2] The European model of Mortgage-Backed Securities Market organization is shown in Fig. 1.

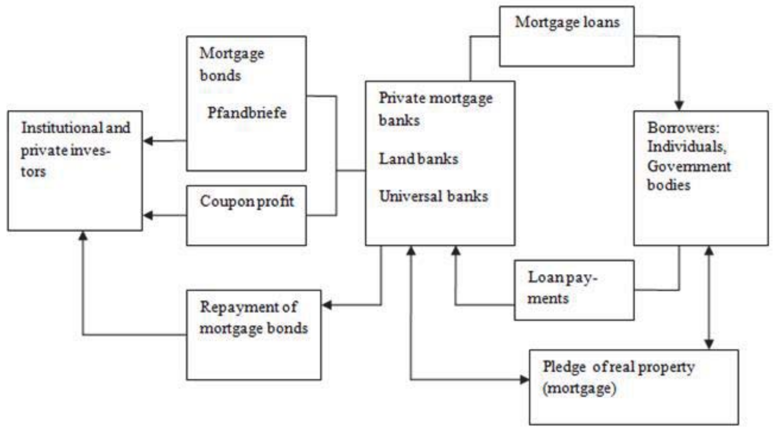

Fig. 1. European Model of Mortgage-Backed Securities Market Organization. [3]

German Pfandbrief market is the largest debt market in Europe and the sixth largest in the world. At the end of the year 2008 the share of covered bonds was about 40% of the total country's stock market, in Denmark - 66%, in Sweden - 35% [4].

Pfandbriefe can be issued by 45 financial institutions: 25 private mortgage banks, 18 state (land) credit institutions and 2 private mortgage banks dealing with courts lending. Recently, due to entrance to foreign markets, pfandbriefe have got ratings. The share of private mortgage banks in mortgage bonds issue is 70%. In Germany since 1997 the volume of pfandbriefe issue has grown averagely 10% per year and reached 261.2 billion Euros in 2007. The total amount of outstanding commitments on the mortgage bonds is kept at the level of 1.1 trillion Euro [5].

The dominant position among investors in the financial market is occupied by credit institutions (43%), investment funds (22.8%), central banks (13.2%), pension funds (6.6%), insurance companies (5.2%), and foreign investors (10%) [6]. The internal high investment demand for pfandbriefe is provided by: a possibility to be used as collateral to obtain a lombard credit from the central bank; investment funds generally can not invest more than 10 % of assets in securities of a single issuer, for pfandbriefe the figure is 20 %, the pfandbriefe share of insurance companies in reserves may be up to 30%; funds held in fiduciary management (the trust) are invested in pfandbriefe without limitations.

The second Europe's largest mortgage market is Danish market. It is financed almost at 100% by eight mortgage banks possessing the right to issue mortgage bonds [7]. The mortgage-backed security is issued immediately after the credit provision. High degree of bonds security is provided by a so-called principle of balance: payments of the borrower on the loan and payments of the bank on the bonds must be balanced within the prescribed limits, thereby the mortgage bank's risk is reduced only to default of the borrower.

The Swedish Mortgage-Backed Securities Market is third in Europe according to trading volume. Until 2004 the Swedish mortgage securities were not regulated by special legislation and were guaranteed not by a specific pool of mortgage loans, but by all mortgage assets on the balance sheet of the bank. The privileges of mortgage bonds holders were observed by strict restrictions and specialization of activities of mortgage institutions that provided mortgage loans with a maximum LTV (Loan-To-Value ratio), that is 60 % for commercial property and 75% for residential loans. [8]

The analysis of markets allows us to mark out mortgage securities markets models in European countries depending on the type of the issuer of mortgage-backed securities:

- French model (France, Ireland, Finland, Norway, Sweden) presupposing complete isolation of the issuer activities (SPV) from the parent company (universal bank);
- Model of a specialized bank with its own staff but partly external management, that enables greater managerial independence of the issuer from the parent company in comparison with the French model (Hungary and partly Sweden);
- Model of a central financial trust assumes availability of one or several companies-issuers of covered bonds in the country, whose shareholders are other credit institutions (Switzerland, Austria, partially France);
- Model of a specialized bank with a small amount of non-core operations, thereby it minimizes the risk of the issuer by means of priority operations with covered bonds (Denmark , Poland, Hungary, Luxembourg, partly

Sweden);
- Model of a specialized bank with a greater amount of non-core operations (Germany);
- Model of a universal bank which established requirements for issuers of covered bonds, i.e., any bank intending to issue mortgage bonds shall comply with the requirements established by the supervisory authorities (Russia, Latvia, partly in Germany, Slovenia);
- Model granting all credit institutions the right to issue covered bonds without special authorization or compliance with certain requirements, or simplified licensing procedure (Spain, Bulgaria).

Thus, an important feature of European Mortgage-Backed Securities Markets infrastructure is that it is private corporations acting as intermediaries at the mortgage bonds market. The reason is that in Europe the state regulation of the mortgage market is directed more towards the support of credit organizations in the form of tax exemptions and preferential loans. As for the mortgage securitization, in Europe only 5 % of mortgage loans were refinanced through securitization [8].

In summary , we can conclude that the European Mortgage-Backed Securities Market is characterized by the following features: the main source of mortgage loans financing is retail deposits; strict regulation of mortgage operations; supervision of specialized mortgage credit institutions; creation of favorable conditions of placement of mortgage bonds in pension funds and insurance companies; provision of budget guarantees on securities, attracting resources for residential, commercial and social real estate mortgage loans.

2.2 American Model of Mortgage-Backed Securities Market Organization

Another Model of the Mortgage-Backed Securities Market operates in the USA. The specific feature of the Mortgage-Backed Securities Market organization is that at the stage of modern mortgage system development (from the 1930s to the 1970s) the State not only generated a legal basis for the mortgage system functioning, but also directly created specialized institutions of the secondary mortgage market. These institutions were responsible for effective functioning of the whole mortgage system of the country, its unification and standardization, as well as for the achievement of strategic goals of economic development of the State. The number of personnel involved in real estate market servicing was approximately 6.9 million of people or 5.3% of the total working population in the USA [10]. In the American model the primary lender and the issuer of mortgage-backed securities are separated. This means that functions of long-term residential mortgage loans allowance and servicing are separated from functions of resource mobilization and financial risks management. Primarily, the reason for this is the support of liquidity of credit institutions participating in long-term mortgage lending. The size of indebtedness on residential mortgage loans in the United States coming up to more than 7 trillion USD is significantly higher than in Europe. On average, more than 54% of debts are financed through mortgage-backed securities issue. According to the data presented in Table 3, the total volume of mortgage securities issued by agencies Fannie Mae, Freddie Mac, and Ginnie Mae in 2007 amounted to 1.4 trillion USD [9]. Guarantees of securities of the mortgage agencies are perceived by investors as government guarantees; and the rate of return on these securities is comparable to the rate of return on U.S. government ones.

Table 2. The annual volume of mortgage-backed securities issue in the United States, in billion US Dollars.

Year	Agencies	Other	Total
1999	884.9	161.2	1146.1
2000	582.3	125.8	708.1
2001	1454.8	217.3	1672.1
2002	1985.3	233.9	2219.2
2003	2725.8	345.2	3071.0
2004	1375.2	403.9	1779.1
2005	1321.0	645.3	1966.3
2006	1229.5	773.1	2002.6
2007	1371.7	655.6	2027.3

In the United States the investment banks performing securitization of mortgage pools insured by state insurance agencies or private insurance companies are of importance at the Mortgage-Backed Securities Market. For example, the volume of annual issue (2007) of mortgage-backed securities by private operators totalled to 0.6 trillion US Dollars, for agencies 1.4 trillion US Dollars. (see Table 3) [11]. The aggregate nominal value of American agency mortgage bonds being currently in circulation amounts to 5.63 trillion US Dollars. The securities amounting to 965.9 billion US Dollars (not including issued obligations for mortgage-backed securities purchase) are on the balance sheet of the Federal Reserve System of the USA (FRS); i.e. more than one third of all the securities are on the balance sheet of the US Central Bank. 92% of the FRS assets are an investment in securities, the share of the mortgage here is 35% [11].

Table 3. The United States mortgage market volume in 2007-2012, bln.USD [6].

Period	2007	2009	2011	2012
Consumer mortgage loans	2,447.91	1,951.02	1,440.89	1,819.93
Commercial mortgage loans	326.72	62.50	45.95	36.50
Total	2,774.63	2,013.52	1,486.84	1,856.43

Table 4. Top-5 of banks according to the volume of provided mortgage loans in the United States in 2007-2012., bln. US Dollar. [12]

Period	2007	2009	2012
Wells Fargo & Co.	271.93	427.21	528.14
JP Morgan Chase & Co.	210.20	187.13	185.7
U. S. Bank Home Mortgage	—	34.26	88.42

We can conclude on the basis of the presented banks financial indexes that the banking sector is in a stable condition. Thus, the volume of consumer loans grew by 14.8% from 2009 to 2012. The total debt on mortgage loans in the United States is gradually reducing. The level of "bad" mortgages fell to 7.5% (2012) from 9% (2009). Near-term sector prospects will depend entirely on steps of the USA Federal Reserve System aimed at further regulation of the sector.

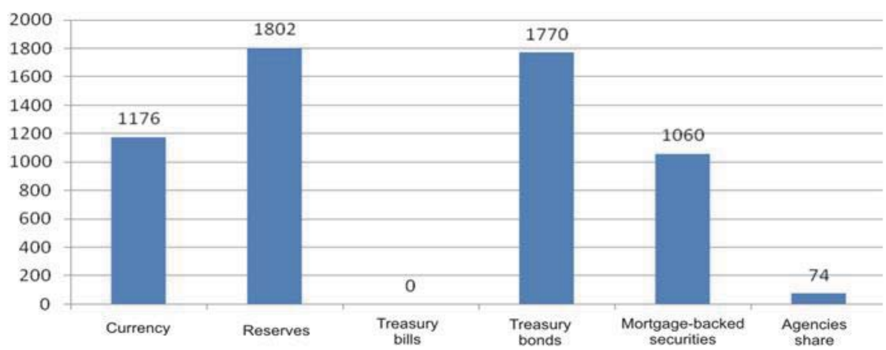

Fig.2 FRS balance sheet (as of March 14, 2013), in billion US Dollar

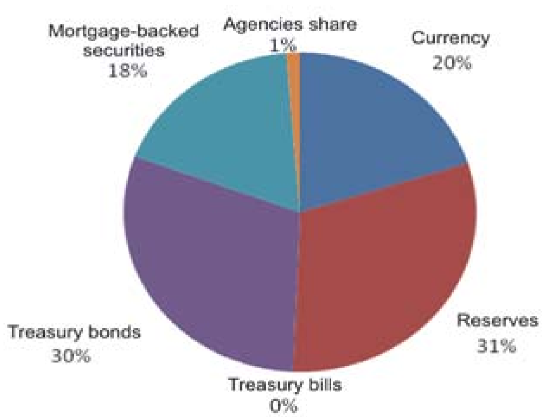

Fig. 3 Structure of the FRS balance sheet (as of March 14, 2013) on a percentage base [13]

A Primary lender can refinance his loans at the U.S. capital market in various ways: through their direct sale to the investor (large banks act as investors); through their sale to specialized operators of the secondary mortgage market; through exchange of loans collected in pools for mortgage-backed securities issued by a specialized issuer.

3. Types of American Mortgage-Backed Securities

The main instrument of the American Mortgage-Backed Securities Market are so-called MBS - mortgage-backed securities (hereinafter MBS) which are characterized as securities giving their holders the right to receive cash flows from a pool of mortgage assets. The pool of mortgage assets is the receivables for mortgage loans collateralized by real estate. Holders of mortgage -backed securities backed by the pool of mortgage assets receive most of the mortgage payments depending on the method of distribution of cash flows from mortgage loans. On the basis of this feature, the following types of securities presented in Table 6 can be distinguished at the American Mortgage-Backed Securities Market: Pass-through (transferable) - mortgage payments are transferred to investors on a pro rata basis after deduction of fees for the mortgage loans administration and servicing; structured - emission is divided into classes between which the payments and risks are redistributed in accordance with a certain set of rules for structuring and servicing, which provides investors with greater certainty regarding the maturity and incoming payments.

We can mark out some features of organization of trade in US mortgage-backed securities:

- Firstly, mortgage securities are listed as treasury securities; for example, the organization of securities parameters assumes assignment of index and pool number established by governmental agencies. The index indicates the type of transferable bonds; for example, the index 20 for PC of Freddie Mac means that the pool being collateral of the bonds consists of ordinary mortgage loans with an initial period of 15 years. AR index for MBS of Ginnie Mae indicates that the pool includes mortgage loans with variable rates. The pool number serves as reference to specific mortgage being collateral for securities and reference to the issuer of the securities. Many transactions are made when the parameters of the pool are not yet defined (TBA (to be announced) transactions). Such transactions presuppose the right of short supply or oversupply of pools by the seller in amount not exceeding 0.1%. The seller selects pools for sale at his own discretion. Ordinary transactions involve the sale of a specific pool, with its number known in advance. Thus, important characteristics of the American Model of Mortgage-Backed Securities Market organization are: dependence on the general state of the financial credit market; expanded infrastructure of the mortgage market; state assistance in the form of guarantees and government insurance; control of the issue of securities traded on the secondary market; use of mechanisms for internal and external support.

4. Causes of US Mortgage-Backed Securities Market Instability

Analyzing the American Mortgage-Backed Securities Market, it is necessary to mention the reasons that led to destabilization of the mortgage market:

- Loan growth. That was the reason for: increase in real estate prices (before 2006); decrease in mortgage rates; introduction of new mortgage products; relaxation of requirements for borrowers. According to the US Mortgage Bankers Association, the total volume of mortgage loans amounted to 10 trillion US dollars, which was 75% of GDP [14];
- Weak control of mortgage assets securitization transactions. Credit institutions have reduced requirements for borrowers because of the possibility to transfer credit risk in the process of securitization. It resulted in huge pools of loans with undervalued credit risk. The development of securitization also allowed new non-deposit organizations to enter the market. These organizations were minimally regulated; and their business has been primarily focused on high-risk borrowers;
- Investors' high demand for mortgage-backed securities. Statistics shows that more than 110 investment companies held in their investment portfolios the mortgage-backed securities in the amount of more than 12.1 billion US Dollars [15];
- Poor quality of the internal system of mortgage risk management, including mortgage-backed securities risks; a narrow attention on the ratings of leading international rating agencies.

5. Conclusion

The study of foreign practice of Mortgage-Backed Securities Market organization with due account for the crisis phenomena in the financial market allows us to make the following recommendations which can also be used in the Russian practice for the purposes of preventing the negative phenomena:

- Need to improve regulations applicable to securitization as related to liquidity and risk management of financial institutions-members of the mortgage market;
- Increase in the number of personnel in the field of asset securitization;
- Improvement of risk management systems, in particular, management and assessment of credit risk arising from the use of securitization mechanism by banks;
- Expansion of the knowledge base on transactions in the financial market;
- Use of independent legal and auditing expertise in the mortgage-backed securities issue;
- Need to regulate the activities of credit rating agencies;
- Introduction of residual risks stress testing tool (which is used only by rating agencies on the stage of initial rating assignment) to the practice of banks - participants of the securitization market;
- Introduction of the planning system in the creation of reserves of credit institutions;
- Use of measures aimed at improving the process of rating assignment for securities backed by low-quality mortgage loans;
- Additional checks of credibility of information provided by borrowers, appraisers and mortgage brokers by independent parties;
- Determination of scope of liability of such transactors as trustees, main mortgage loans servicing agents;
- Improvement of licensing requirements for mortgage originators;
- Establishment of additional requirements for issuers to disclose information about the structure of transaction and quality of assets.

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