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## Mortgage Securities as Funding Source for Mortgage Loans in the European Union<sup>1</sup>

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**ABSTRACT** – *In this paper we analyzed mortgage securities as a source of financing credit activities in the mortgage market of the European Union. Although they basically provide the same products – mortgages, credit institutions differ in the way of financing their activities. While some institutions finance their activities by deposits, others issue mortgage securities (mortgage bonds and mortgage-backed securities) through the capital market. This analysis based on relevant literature and appropriate statistical data showed that the importance of mortgage securities vary from country to country. At the level of the European Union its overall importance is very high, since more than ¼ of all credit activities on the mortgage market are financed by these instruments. Moreover, it has been proved that mortgage bonds and mortgage backed securities in many ways satisfy various needs of creditors. The selection of the instrument depends on the creditor's and investor's requirements and it is determined by historical, legal and regulatory framework, as well as with the structure of the mortgage market in which the creditor operated. In many countries, mortgage bonds and mortgage backed securities are accepted as alternative and complementary source of finance, which results in the coexistence of these two types of mortgage securities. Historical data and recent trends suggest that, in the future, both of these instruments (especially mortgage bonds) will represent a significant source of financing credit activities in the mortgage market.*

**KEY WORDS:** *mortgage, mortgage market, mortgage securities, mortgage bonds, mortgage-backed securities.*

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## **Introduction**

The performance of the EU mortgage market in the last fifteen years has been positive, despite the economic weakness in some European countries, particularly in the period during and after the economic crisis. Year after year, the share of the mortgage compared to total bank lending is increasing, leading to increased competition among financial institutions in order to preserve or strengthen their market positions.

The growth of mortgage lending in the EU is a result of many factors. Among them the most pronounced are the decline in interest rates, deregulation of the financial sector, the rapid development of technology (especially the Internet) and in some European countries benefits from lower taxations and an increase in households' disposable income. The aforementioned increase in the total amount of outstanding mortgage loans indicates that mortgage loans are gaining in importance in the European economies. At the same time, the share of mortgage loans in total loans in the last decade significantly increased, reflecting the growing importance of the mortgage market in the financial system. As a result of these trends, credit institutions are trying to create new products to win the market, as well as to diversify and find cheaper sources of funding for their lending activities.

Despite the growth in the mortgage market, individual markets are separated and not related to each other - cross-border loans account for only 1% of the total loans. The main reason for the underdevelopment of cross-border lending is the existence of multiple barriers, such as different regulations related to the registration of real estate, foreclosure and insolvency. That is why the European Commission has set itself the goal to achieve greater integration of the mortgage lending sector, as part of the road towards a single market for retail financial services.

In the European Union, the creditors in the primary mortgage market can be classified into a few dominant groups: mortgage banks, building societies, universal banks, cooperatives and saving banks. As the participants of the primary mortgage market are financial institutions with different missions, their financing activities are carried out by different mechanisms and financial instruments. Savings institutions are established and operate in order to promote citizens' savings, and use retail deposits as their main source of funding of mortgage loans. On the other hand, mortgage banks, are non-deposit financial institutions that are financed through the capital market, primarily by issuing mortgage bonds in the process of "on-balance-sheet" securitization. Also, development of the "off-balance-sheet" and, to a lesser extent, synthetic securitization (MBS issuance), offered an one more alternative way of financing the primary mortgage market, in order to deepen its liquidity and risk transfer.

In order to present methods of financing credit institutions through the capital market for mortgage lending purpose, in this paper, after defining the main characteristics and the size of the mortgage market of the EU, we will present the funding mechanisms through mortgage bonds and mortgage-backed securities, importance and the size of their markets, and carry out a comparative analysis of these instruments, and points to the prospects of their use in the future.

## Basic characteristics and mortgage market volume in the European Union

The European Union makes a single economic market, but yet within its borders maintained the diverse legislation governing not only the area of the primary mortgage market, but also the conditions and terms under which they may take the contemporary financial transactions related to the raising of funds for funding mortgage lending activities (Stefanović, 2009, p.39).

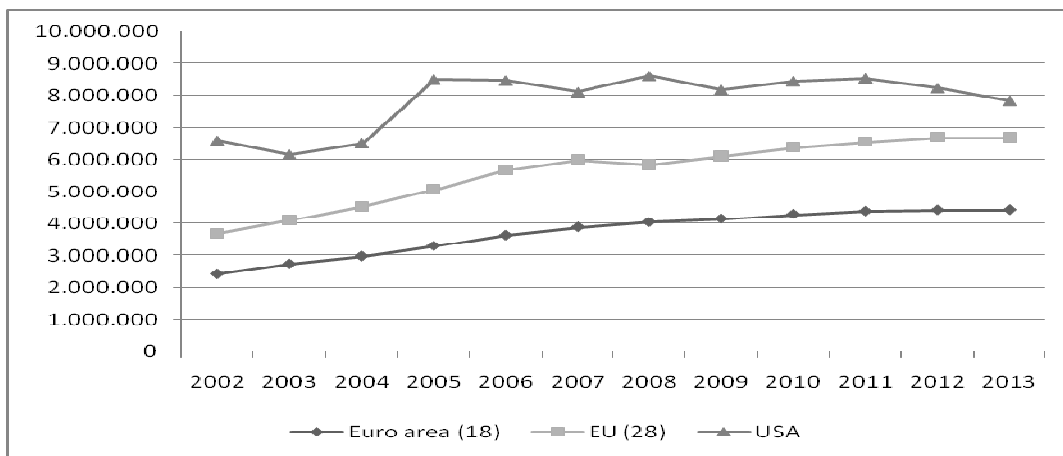
Mortgage lending is regulated at the level of each country individually. For now, there is no single regulation that deals with mortgage loans, except *The European Code on Home Loan Banks (Code of Conduct)*, whose guidelines creditors themselves accepts. Some are indirectly related to mortgage finance, for example Directive 89/647/EEC which determines the level of solvency of the credit institution, and in Directive 92/121/EEC concerning the permissible risk exposure of credit institutions to a single client or group of connected clients, in the amount of 25% of capital. In addition, the Basel Capital Accord is used, which defines the level of capital for financial institutions engaged in mortgage lending.

Although mortgage loans can be approved for other purposes, in 2013 over 80% of mortgage loans were housing loans (EMF, 2014). This trend was encouraged by fiscal policies which favored the purchase of homes in relation to the rent (e.g. in The Netherlands) and the expectations of an increase in income due to lower interest rates, which reduce the cost of borrowing and raise consumer confidence. Another important factor that influenced the outstanding mortgage loans balances is generally an increase of house prices in many European countries. Year on year, the share of the mortgage lending compared to total bank lending is increasing, leading to increased competition among financial institutions in order to preserve or strengthen market positions. To this day they created new products such as mortgage loans that can be used as consumer loans, loans related to pension funds, or flexible mortgage loans, which can be adapted to the uncertain revenue developments. In EU countries there are several different types of mortgage loans, with different interest structures. They can be classified into three groups: mortgage loans with fixed, mixed and variable (floating) interest rates. The duration of mortgage loans varies. In Sweden, The Netherlands, Denmark and Portugal the usual period is 30 years, in Spain about 20 years, while in Italy is the shortest, usually 10 years.

According to the European Mortgage Federation (EMF, 2014) lending based on mortgage is increasing. Growth of European mortgage market is especially evident, if one takes into account the fact that the outstanding debts under the mortgage loans almost tripled in the last 15 years - from 2.3 billion euros in 1996, more than 6 billion euros in 2007 (before the escalation of the mortgage and financial crisis), to 6.7 billion euros in 2013, recording significant annual growth rates, especially in the pre-crisis period.

Comparison of movement of mortgage debt in the EU and the euro zone compared to the US (where the decline of mortgage debt in the post-crisis period) are given in the following graph.

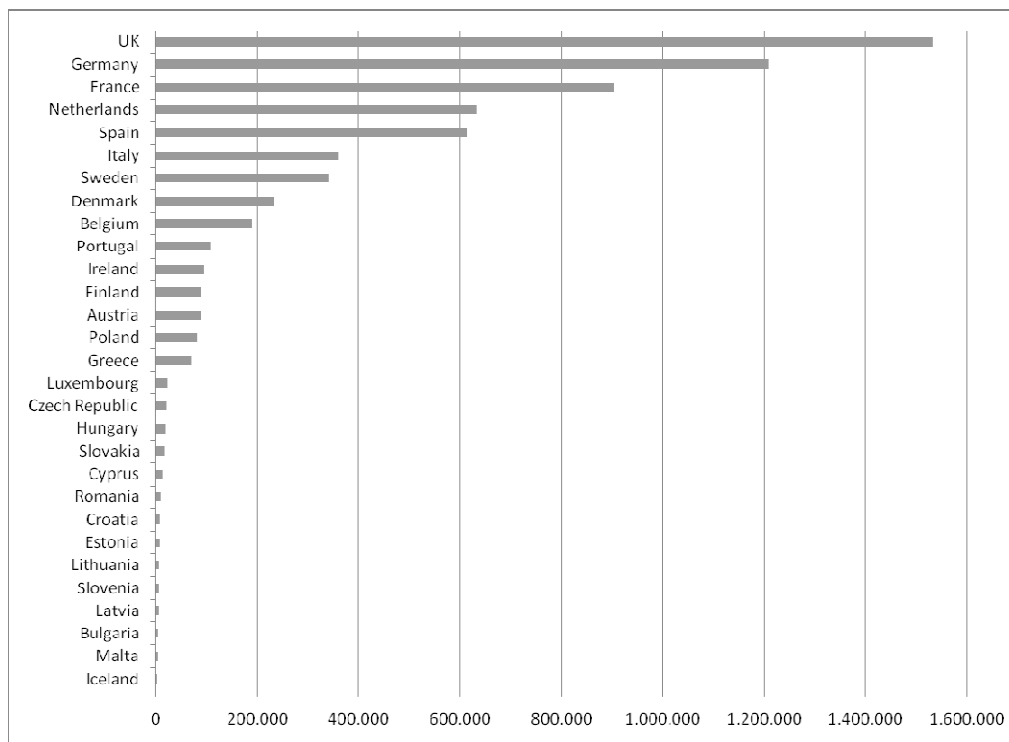
Graph 1. Mortgage debt outstanding in the EU and the euro zone compared to the US, 2002-2013 (million euros)



Source: EMF, 2014

From a total of 6,680 billion euros mortgage debt outstanding at the end of 2013, the largest part refers to the United Kingdom (1,532 billion euros), Germany (1,209 billion euros) and France (902.6 billion euros), which together represents more than 55% of the European mortgage market, followed by The Netherlands (632 billion euros) and Spain (613 billion euros), while at the least are Croatia (8 billion euros), Slovenia (5.3 billion euros), Bulgaria (3.51 billion euros), Malta (3.3 billion euros) and Iceland (2.8 billion euros), as shown in the graph below.

Graph 2. The total mortgage debt outstanding in the EU, 2013 (million euros)



Source: EMF, 2014



Total mortgage debt outstanding in 2013 compared to the previous year at the EU level registered a decrease of -0.2% (in the euro zone recorded a modest growth of 0.1%). The highest growth rates of the surveyed countries, were recorded in Romania (6.4%, France (3.7%), and Belgium (3.2%), while the greatest decrease had Spain (-4.5%), Greece (-4.8%) and Hungary (-7.4%).

## **Mortgage funding mechanisms**

In the European Union, the creditors in the primary mortgage market can be classified into several dominant groups: mortgage banks, building societies, universal banks, cooperatives and savings banks (Suarez, 2009, p. 154). Although mortgage borrowers are offered the same product - a mortgage loan, these institutions are distinguished by the way of financing its assets. While some of them are based on the savings of its citizens, promoting savings as their primary mission, and through various incentive s, others its mortgage lending activities finance by issuing mortgage securities - mortgage bonds (MB) and mortgage-backed securities (MBS).

Savings institutions are established and operate in order to promote citizens' savings, and retail deposits are their main source of mortgage loans funding. Mortgage banks are non-deposit financial institutions that are financed through the capital market, primarily by issuing mortgage bonds in the process of the so-called "on-balance-sheet securitization", and mortgage-backed securities issuance in the process of the so-called "off-balance-sheet securitization" and represent an alternative system of financing the primary mortgage market, in order to deepen its liquidity and risk transfer.

According to the latest estimates by the European Mortgage Federation (EMF, 2014), mortgage credit institutions provide funding as follows: deposits from individuals about 67 per cent of all sources of financing, mortgage bonds account for about 20 per cent and about 5 per cent MBS – in difference of 1 per cent in 1998 (Hardt & Manning, 2000, p. 10), while the rest belongs to other forms of financing. As you can see the dominant source of funding for credit institutions in the EU are still savings deposits, while the mortgage bonds are the second most important source of financing, while MBS in the third place, with a notable increase in the pre-crisis period, stagnation and decline participation in certain the last few years.

### **Mortgage bonds**

Mortgage bonds (Suarez, 2009, p. 181) are bonds covered by mortgage loans and are a category of covered bonds, which include bonds covered by the public-sector loans and by ship loans.

Mortgage bonds are secured by clearly identified mortgage assets. In accordance with the a "cover principle" issued mortgage bonds must be all the time secured by mortgage loans, at least the same nominal amount and at least the same interest rates.

In all European countries, issuance of mortgage bonds is regulated by laws which define the criteria for qualifying assets that can serve as collateral for bonds and other specific requirements. In most cases, mortgage loans are designated as collateral for covered bonds

and kept as separate pools of coverage. In some countries, the total mortgage loans and total assets from the balance sheet of the issuer serve as cover for bonds.

Instead of binding of each individual mortgage bonds for individual claims from a pool of mortgage cover all mortgage loans serve as collateral for the total amount of mortgage bonds issued on the market. Simply, every mortgage loan, when it satisfies the legal requirements added to the existing pool of mortgage loans. Also, from a pool automatically withdrawn all loans which are paid prior to maturity or who for some other reason no longer satisfy the criteria.

A high number of mortgage loans in a pool are an important factor to neutralize credit risk. In addition, the security of mortgage bonds contributes to the right of preferential claim over the collateral, which is enjoyed by the owners of these bonds in the event of bankruptcy, as well as strict control requirements and supervisory authorities, which are subject to all the institutions of the issuers of mortgage bonds. Security features in these financial instruments, allows providers of mortgage loans in the primary market to finance on the capital market at lower interest rates, which, in turn, enables credit borrowers financing residential real estate at the lowest and most stable interest rates.

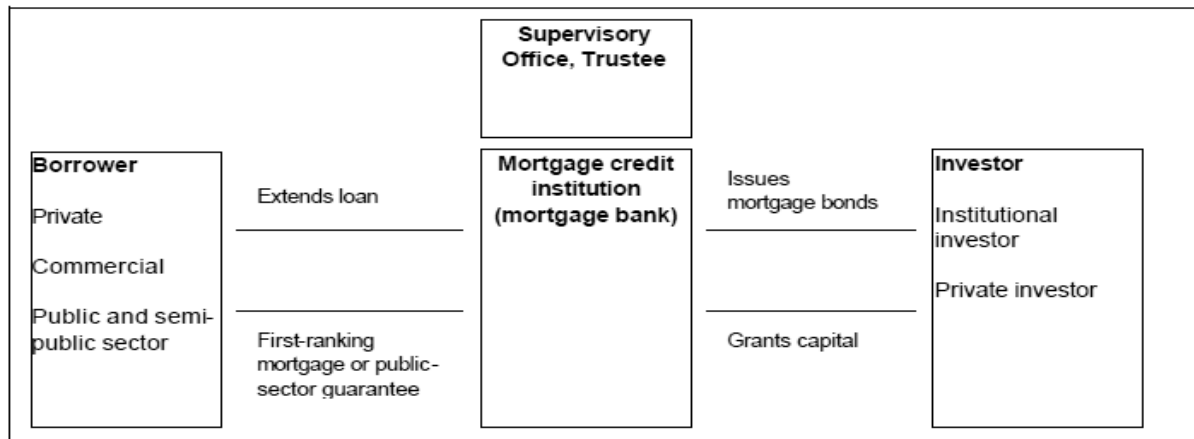
The special character of mortgagebonds (as type of covered bonds) has been enshrined in the amendments of the Directive 85/611/EEC - Directive on Undertakings for Collective Investments in Transferable Securities (UCITS) in 1988. Article 22(4) of this Directive sets out a number of criteria that mortgage bonds must meet (Directive 88/220/EEC; Hardt & Lichtenberger, 2001, p. 21; Suarez & Vassallo, 2004, p. 37):

- They must be issued by credit institutions, and in accordance with legal provisions, to protect bondholders;
- They are subject to special supervision by public authorities;
- The sums deriving from issuance of mortgage bonds must be placed in assets that provide sufficient cover for the liabilities deriving from the bonds until maturity;
- In the event of bankruptcy of the issuer, sums deriving from the issuance of mortgage bonds must be used as a priority to repay principal and interest becoming due.
- Issues must be notified to the European Commission.

Another cornerstone of covered bond regulation at EU level is the Capital Requirement Directive (CRD). Basel II has been implemented in the European Union via the CRD. Transposition of the CRD corresponds to the national authorities.

Mortgage bonds creation process is shown in the figure below.

Figure 1. Mortgage bonds creation process



Source: Hardt & Manning (2000)

When a mortgage lender issues mortgage bonds, it keeps both the bonds and the loans on its balance sheet. That is mortgage bonds are “on-balance-sheet” instrument (Suarez, 2009, p. 181). This means that the mortgage lender is responsible for the bonds credit risk, and the source for payment of principal and interest on bonds makes the overall cash flow of the issuer. In this process, the mortgage bank executes all phases of the process: from issuing bonds to financing loans. From the standpoint of the investors, mortgage bonds, in essence, represent the credit risk of the issuer, but at the same time include additional security claims on the underlying mortgages and precise and strict legal standards governing the issuance of these bonds. In fact, in most countries, in case of a issuers bankruptcy, mortgage loans, which were used as collateral for bonds, are put aside from the bankruptcy estate and cash flow that is generated by the same, used for timely payment of bonds (quasi bankruptcy isolation), and because of this, mortgage bonds, usually do not carry high risk. The level of security that mortgage bonds offers to investors, allows credit institutions to raise funds from capital markets at low cost, so that they can approve more mortgage loans at attractive interest rates.

Mortgage bonds in the financial system of the EU play a similar role as government bonds. They, as well as government bonds, can be used (Stefanović, 2009, p. 72):

- Issuance of mortgage bonds in the As a relatively safe investment for financial institutions that the law mandates a conservative investment strategy (lower risk and higher liquidity), i.e. as a source of financial assets for pension funds, insurance companies and credit institutions;
- By the central bank in the process of monetary regulation that is as the basis for repo and reverse repos or as collateral for granting Lombard loans to commercial banks;
- As a basis for the assessment of interest rates on risk-free or low-risk assets that are used in the process of calculating the value of other bonds in the financial market, especially in the case when there is reduced liquidity and activity in the government bonds market.

EU is regulated in different ways. In many countries the rights to issue these bonds are assigned to specialized credit institutions whose activities are strictly regulated and supervised by regulators. This is the situation in Germany, France, Austria, Switzerland, Luxembourg, Poland, Hungary and the Scandinavian countries. In some countries, however, the issuance of mortgage bonds is not limited to specialized institutions - Greece, Spain, Czech Republic and Portugal.

Germany has the longest tradition of issuing mortgage bonds (*hypothekendarlehenbrief, pfandbrief*). The model of German mortgage bonds, almost 250 years old (first issued in Prussia in 1767), to a large extent, has been used in other European countries. *Pfandbrief* issuances are under strict regulation and are issued by 45 German financial institutions.

Denmark has a very strong mortgage market. Issuers of mortgage bonds (*realkreditobligationer*) are specialized mortgage banks, and in their operations are restricted from mortgage lending and related activities.

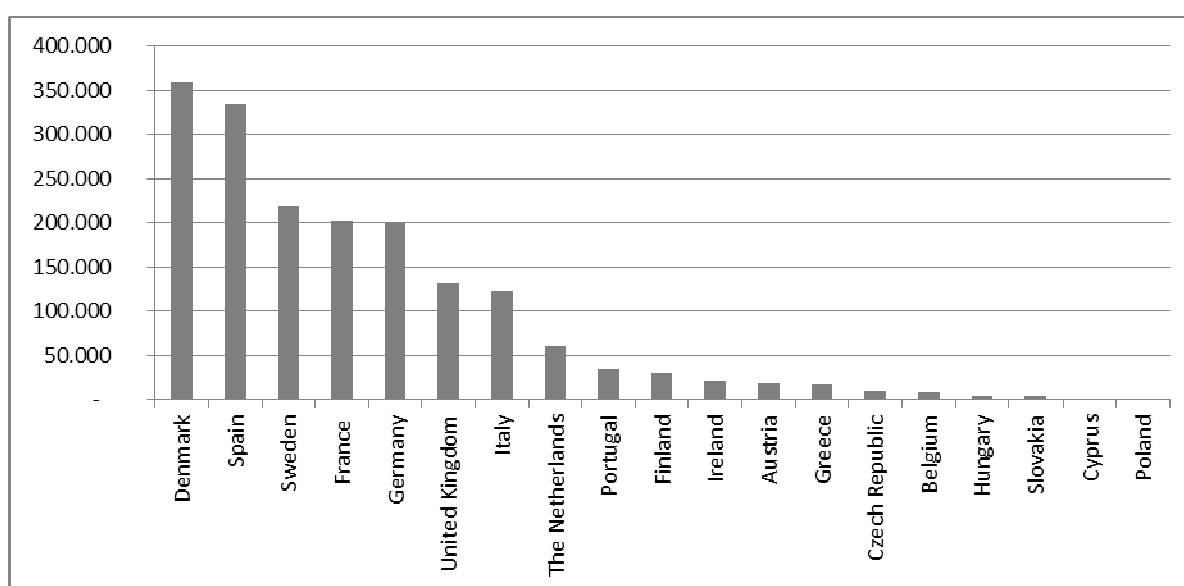
Swedish mortgage bonds (*bostadsobligationer*) are issued by specialized licensed mortgage companies. There are five of these institutions, four of which are in the ownership of commercial banks and one that is government owned.

In France, mortgage bond - *obligations foncières (OFS)* are issued by *Sociétés de Crédit Foncier (SCF)* and *obligations de financement de l'habitat (OH)* are issued by *Sociétés de financement de l'habitat (SHF)*.

Austria, also has *pfandbrief* and only three institutions are responsible for issuing them. Of these, two are mixed mortgage banks, and one is a regulatory institution (*pfandbriefstelle der österreichischen landeshypothekenbanken*) that combines the issuances of mortgage bonds for eight public mortgage banks (*landeshypothekenbanken*).

In Spain mortgage bonds (*cedulas hipotecarias*) may be issued by any credit institution: commercial banks, savings banks, credit cooperatives and specialized financial institutions (Hardt & Lichtenberger, 2001; Suarez & Vassallo, 2004; Stefanović, 2009).

Graph 3. Total mortgage bonds outstanding in the EU, 2013 (million euros)



Source: ECBC, 2014

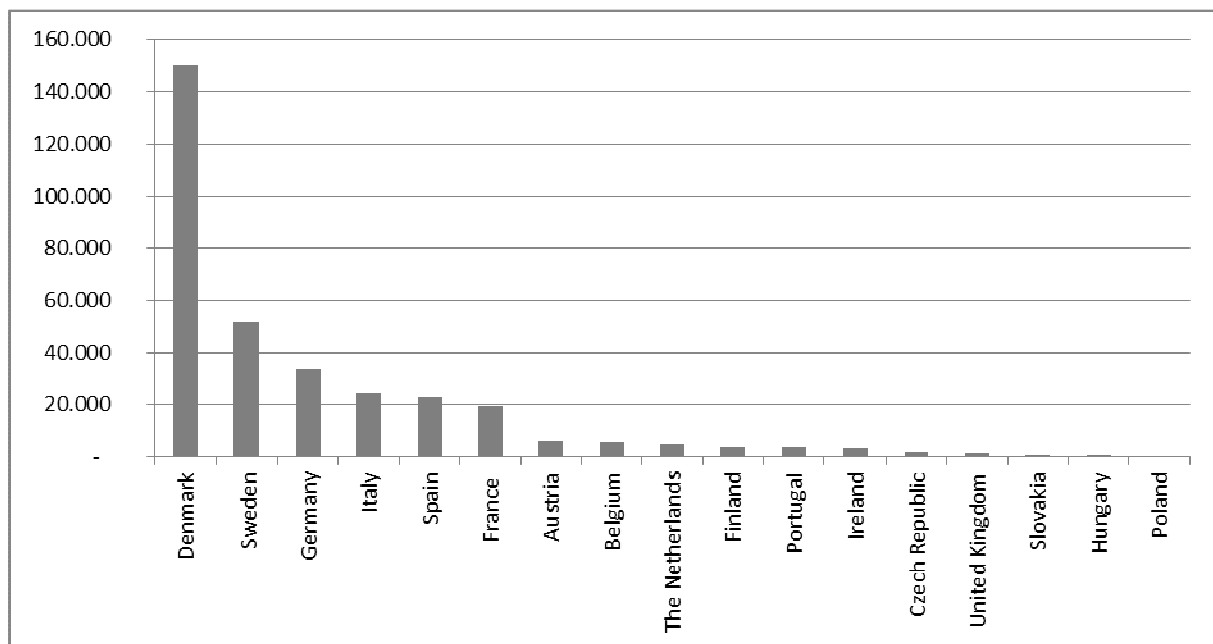


The total amount of covered bonds outstanding in EU countries in 2013 (ECBC, 2014) accounted to slightly more than 2.4 trillion euros. Mortgage bonds accounted for 1.9 trillion euros, public sector bonds 429 billion euros, 11 billion euros of ship bonds, and 73.5 billion euros in bonds based on a combination of the previous three types of collateral.

The volume outstanding of mortgage bonds at the end of 2013 is as follows: Denmark (360 billion euros), Spain (335 billion euros) and Sweden (218 billion euros), followed by France (203 billion euros) and Germany (200 billion), while at the very bottom Slovakia (4 billion euros), Cyprus (1 billion euros) and Poland (0.7 billion euros).

During 2013, mortgage bonds were issued in the amount of 334.5 billion euros. The issuance volume of these securities is shown in the graph below.

*Graph 4. Total mortgage bonds issuance in the EU, 2013 (million euros)*



Source: ECBC, 2014

The largest issuances of mortgage bonds in 2013 was recorded in Denmark (150 billion euros), Sweden (52 billion euros) and Germany (33.6 billion euros), while the least emissions were in Hungary (0.6 billion EUR) and Poland (0.1 billion euros).

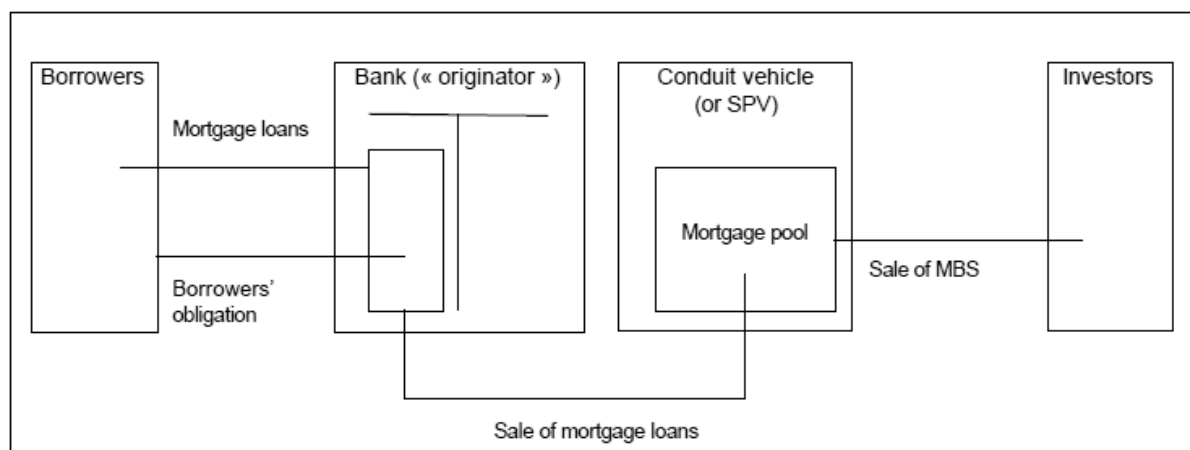
### **Mortgage-backed securities**

Mortgage-backed securities (MBS) are usually created in the process of off-balance sheet (true sale) securitization. This type of financing is the so called "off-balance-sheet" financing. Basically in this process mortgage loans are removed from the balance sheet of credit institutions, and transferred to a separate (bankruptcy remote) legal entity - special purpose vehicle (SPV), which creates, and issues MBS to the secondary mortgage market. SPV issue MBS while credit institution usually continue to participate in the process as servicer (a "collector" of interest and principal of underlying mortgage loans) and perpetrator of other "back" function. The purpose of the introduction of the SPV in this process is the isolation of

the cash flow underlying mortgage loans from the credit risk of the originating institution (Stefanović, 2006, p. 420).

As Figure 2 shows, sales of loans resulting in their removal from the balance sheet of originating institution. Mortgage originator frees any requirement for capital adequacy and provisions for risks on these assets.

Figure 2. Mortgage-backed securities creation process



Source: Hardt & Manning (2000)

MBS investors are buying securities that are based on cash flow of securitized assets, and these investors have no any right of recourse to the mortgage creditor and even in the event of its bankruptcy. Also investors assume the full credit risk and prepayment risk of underlying mortgage loans (Suarez & Vassallo, 2004, p. 44).

Unlike the United States, in EU MBS are created not only through off-balance-sheet securitization, but also (to a lesser extent, especially after the crisis of 2008) in the process of synthetic securitization. The main feature of synthetic structures are that assets are not remove from the balance sheet of the originator, which is suitable for European credit institutions, especially when the mortgage collateral are often from different countries and are subject to different jurisdictions. Most of the structural elements of this type of securitization are similar to off-balance-sheet securitization. The key difference is that the originator does not sell any assets of the issuer MBS (SPV or some other institution). Instead originator enters credit default swaps (CDS) or e.g. credit linked notes (CLN) with the issuer in respect to the specified pool of mortgage loans (reference pool). MBS issuer pays originator an amount equal to any credit losses incurred by a pool of assets, and originator pays a fixed premium to the issuer, usually quarterly, and therefore, the originator's exposure to credit risk is transferred to the MBS issuer. However after the outbreak of the global financial crisis, the use of this mechanism is significantly reduced (Stefanović, 2009, p. 27).

The development of securitization markets in the EU began in the 80s of the 20th century, firstly in the UK (where today is, in addition to The Netherlands, the largest market for MBS), and then in other developed EU countries. Looking for cheaper sources of funds and the need for liquidity in the capital markets, some EU countries have developed their own

models for securitization. The process of securitization is a preferable source of funds only in the event of large issuance. The costs of securitization in developed countries are ranging between 1.5 per cent and 3.5 per cent above EURIBOR (Blommestein et al., 2011, p.6). Also, assets need to be rated. The rating is a very expensive (and has been shown in the case of MBS also an unreliable, and subject to manipulation – especially before the financial crisis of 2008) process. The solution to this problem is the creation of a reliable ratings methodology.

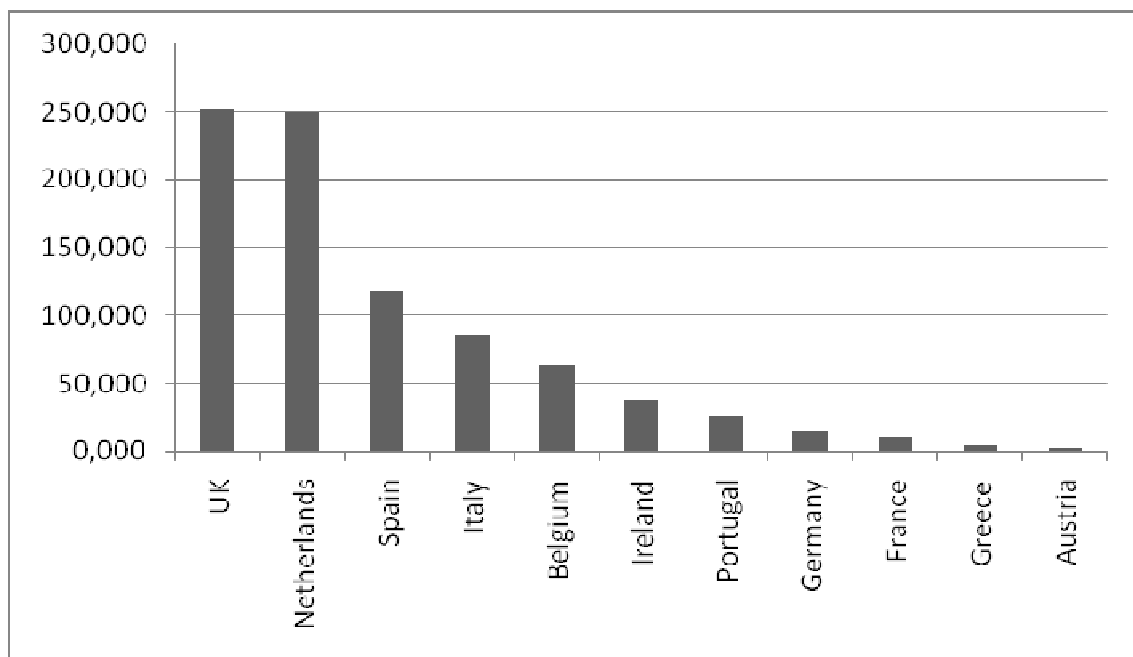
In order to promote securitization in the EU, the European Securitization Forum – ESF (now days it is division of The Association for Financial Markets in Europe - AFME), was established, which represents the interests of all participants in the process of securitization in the EU. Membership is open to all institutions involved in the process of securitization.

Many European countries have adopted (and after the crisis redefined) specialized laws on securitization, while some of them, such as the United Kingdom thanks to the present Anglo-Saxon legal system, carried out only amendments to the existing laws in the segment relating to the specifics of securitization transactions. Administrative and legal national requirements are often barriers that are overcome with improvised solutions.

European monetization of assets through securitization (similarly as in the United States) is the largest in the area of mortgage lending – 67 per cent of the total securitization whereby the residential mortgage backed securities (RMBS) represents 54 per cent, and the commercial mortgage-backed securities (CMBS) 13 per cent of total MBS issuance in the EU (AFME, 2014).

The total volume of MBS outstanding at the end of 2013 (EMF, 2014) accounted in the UK (252.1 billion euros) and The Netherlands (249.7 billion euros), followed by Spain (118 billion euros), while at the very bottom were Greece (4.2 billion euros) and Austria (1.8 billion euros), as shown in the following graph.

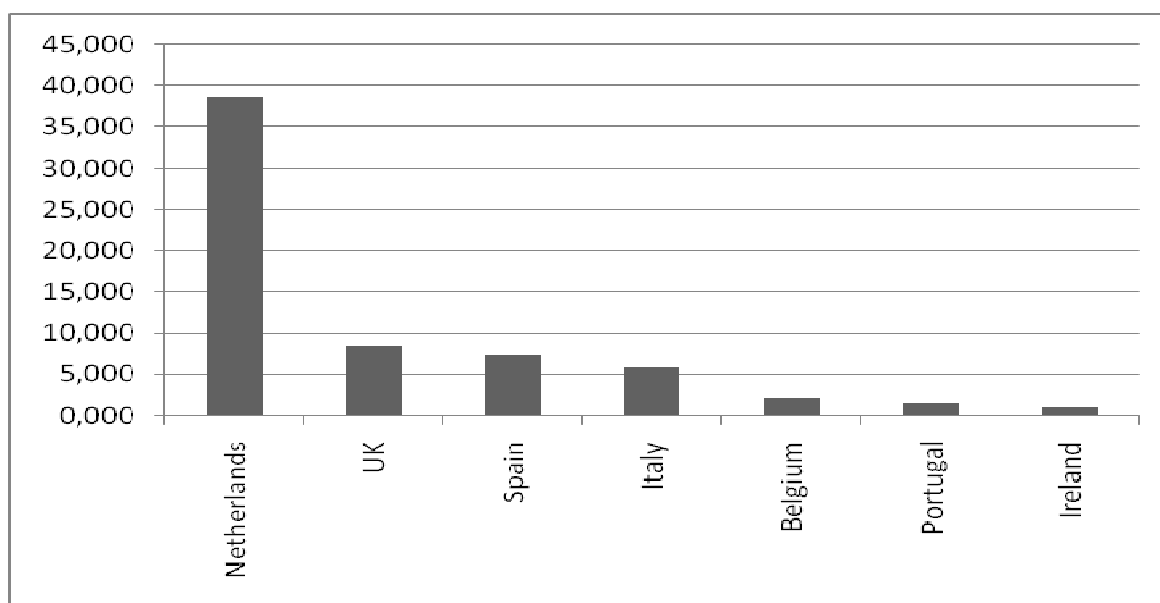
*Graph 5. MBS outstanding in the EU, 2013 (million euros)*



Source: EMF, 2014

During 2013 MBS (Graph 6) were issued in 7 EU countries. The largest volume of MBS issuance was recorded in the Netherlands (38.6 billion euros), UK (8.4 billion euros) and Spain, followed by Italy (5.7 billion euros), Belgium (2 billion euros), while the volume in Portugal (1.3 billion euros) and Ireland (1 billion euros), was at a much lower level and recorded a historical minimum.

Graph 6. MBS issuance in the EU, 2013 (million euros)



Source: EMF, 2014

### Mortgage bonds and mortgage-backed securities: A comparative analysis

Despite the fact that mortgage bonds and MBS belong to the group of insured bonds issued on the capital market, which, ultimately, using the same collateral (mortgages), these two instruments have almost no other common characteristics. The isolation of underlying mortgage loans and their removal from originator balance sheets, are the fundamental difference between mortgage bonds and MBS. Mortgage bonds differ from MBS (Suarez, 2009, p. 196) that the loans are not transferred. Instead of that, the originator itself sets up the fund and issues the securities. Because they are covered by the underlying mortgage loans and originator's other assets mortgage bonds have a very strong guarantee. The downside of this is that the bonds are also subject to the originator's business risk. The credit institution retains responsibility for the bond's credit risk until maturity, as well as for prepayment risk. On the contrary, MBS are not subject to the originator's risk, as they are held by an SPV. Because the originating institution transfers the credit risk, the prepayment risk and the market risk to the SPV along with the loans themselves, these risks are assumed by the investor, who will require much higher rates of interest than on mortgage bonds. Comparison of these securities is presented in the table below, see Table 1.

Table 1. Comparison of mortgage bonds and mortgage-backed securities

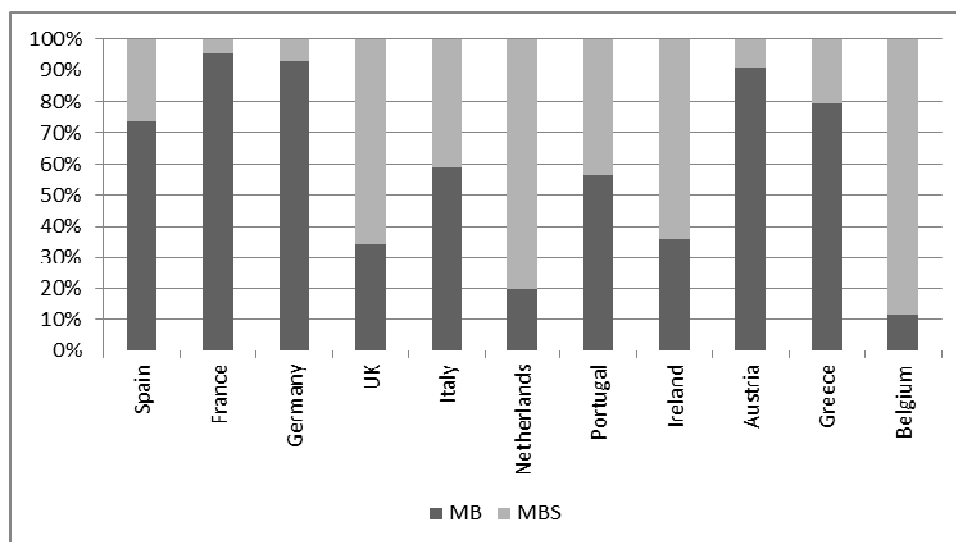
Criteria	Mortgage bonds	Mortgage-backed securities
Mortgage bond production	Bundled process	Unbundled process
Type of securitization (balance sheet treatment)	Assets remain on the balance sheet of the originating institution („on-balance-sheet securitization“)	Generally, assets are removed from the balance sheet of the originating institution („off-balance-sheet securitization“)
Source of principal and interest payments	Issuer cash flow	Collateral cash flow
Credit risk	Issuer	Investor
Market risk	Investor	Investor
Prepayment risk	Issuer	Investor
Investor protection in event of issuer bankruptcy	Bankruptcy privilege: The bondholder has a priority claim on assets in the event that the issuer becomes bankrupt (quasi-bankruptcy remoteness)	Bankruptcy remoteness is built into the structure of the MBS. (The bankruptcy of the originating institution does not affect the servicing of the MBS.)
Credit quality	In addition to the asset quality, it depends mainly on the strength of the originating institution and the legal framework	In addition to the asset quality, it depends mainly on the strength of the structure created
Over-collateralization	Defined by law	Usually required for a high credit rating
Tiered capital	Subordination is inherent in the system (e.g. requirement to respect certain LTV ratios)	A structure distinguishing structure between senior and subordinating securities needs to be created
Collateral pool	<ul style="list-style-type: none"> <li>– Individual components of the asset pool are substitutable</li> <li>– Mainly heterogeneous assets</li> <li>– Eligible assets defined by law LTV ratios and sound property valuation methods)</li> </ul>	<ul style="list-style-type: none"> <li>– Individual components of structure the asset pool are (in general) not substitutable</li> <li>– Mainly homogeneous assets</li> <li>– Eligible assets are not necessarily defined by law</li> </ul>
Interest payment	Typically yearly	Typically monthly
Principal redemption	Bullet form	Amortization and prepayments

Sources: Hardt & Lichtenberger, 2001, p. 27; Suarez, 2009, pp. 197-198

Mortgage bonds and MBS are instruments that in various modes satisfy the financial needs of creditors. The selection of instruments depends on the needs of creditors and investors. It's determined by the historical, legal and regulatory frameworks and the structure of the mortgage market of the country where the lenders operate. In many countries, mortgage bonds and MBS are considered complementary and alternative financing instruments (MBS are sometimes used as collateral to issue mortgage bonds),

which results in the coexistence of these two types of mortgage securities, as is the case in Spain, France, Germany, UK, Italy, The Netherlands, Portugal, Ireland, Austria, Greece and Belgium.

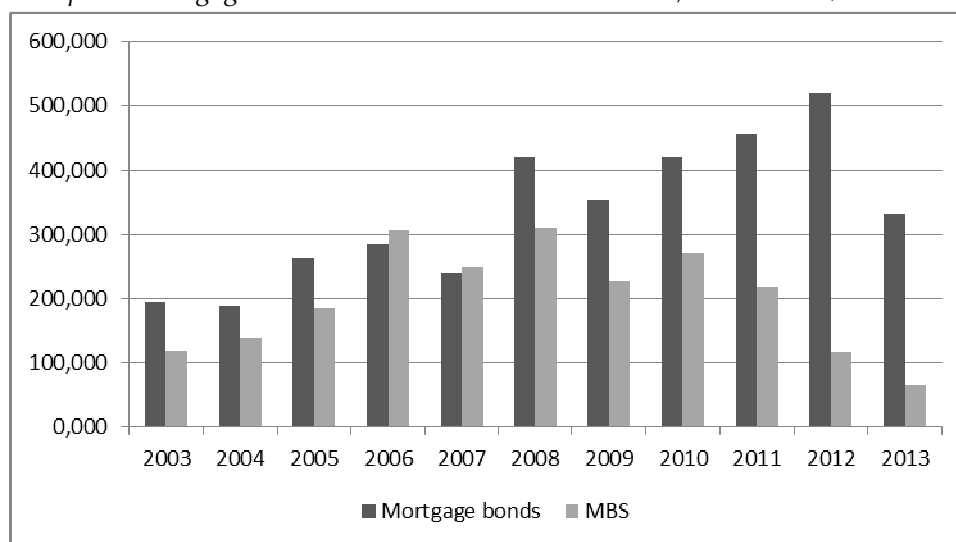
Graph 7. Mortgage bonds vs. MBS in percent of total mortgage securities outstanding, selected EU countries, 2013



Source: Author's calculation based on EMF data

In the graph, there is a noticeable difference in the use ratio of the mortgage bonds and MBS across the EU. In some countries (Italy and Portugal), both instruments are equally represented. We note that some countries (France, Germany, Spain, Austria, Greece) prefer the system of mortgage bonds, on the other hand in the UK, Belgium, The Netherlands and Ireland MBS representing a more used source of financing for mortgage lending purposes.

Graph 8. Mortgage bonds and MBS issuance in the EU, 2003-2013 (million euros)



Source: Author's calculation based on EMF, ECBC, and AFME data



Mortgage bonds at the EU level represent a significant and more stable source of funding for mortgage loans in comparison to the MBS. It is noticeable (Graph 8) that the mortgage bonds (except for the period 2006-2007) all the time more important source of funding.

Comparison of movement of mortgage bonds and MBS issuance in the EU (where the MBS issuance decline in the post-crisis period), using historical data, suggest that both of these instruments (especially mortgage bonds) in the future will represent a significant source of financing credit activities in the mortgage market.

## Concluding remarks

Despite the growth of the mortgage market in the European Union, individual markets are quite separate and not related to each other to great extent. In each country there are a great variety of mortgage products, prices, customers, and the available contracts and institutions that are active in the market. Differences in the mortgage products and institutions are the result of historical differences in the demographic, political and regulatory frameworks, as well as consumer preferences. Mortgage lending is increasing, which indicates that mortgage loans are gaining importance in European economies. In the European Union, the creditors in the primary mortgage market can be classified into: mortgage banks, building societies, universal banks, cooperatives and savings banks. Although, mortgage borrowers are offered the same product - a mortgage loan, these institutions are distinguished by the models of financing its assets. While some of them are based on deposits and through various incentives, others, however, its activities finance by issuance of mortgage securities - mortgage bonds and MBS on the capital market.

The dominant source of funding for credit institutions in the EU are still savings deposits, while the mortgage securities second most important (1/4 of all sources), which makes them a significant funding mechanism. Mortgage credit institutions provide funding as follows: deposits from individuals about 67 per cent of all sources of financing, mortgage bonds 20 per cent, and MBS about 5 per cent (with a notable increase in the pre-crisis period, stagnation and decline participation in certain the last few years), while the rest belongs to other forms of financing.

Mortgage bonds are a very important component of financial intermediation in the mortgage markets of most countries in the EU. They belong to a group called covered bonds that are secured with a clearly identified mortgage assets.

In this process, the mortgage bank executes all phases of the loan approval, from issuance of bonds to finance loans. From the standpoint of investors, mortgage bonds, in essence, represent the credit risk of the issuer, but at the same time include additional security claims over the mortgage and precise and strict legal standards governing the issuance of these bonds.

MBS are usually created in the process of off-balance sheet (true sale) securitization. This type of financing is the so called "off-balance-sheet" financing. Basically in this process mortgage loans are removed from the balance sheet of credit institutions, and transferred to a separate (bankruptcy remote) legal entity - special purpose vehicle (SPV), which creates, and issues MBS to the secondary mortgage market. The purpose of the introduction of the SPV in this process is the isolation of the cash flow underlying mortgage loans from the

credit risk of the originating institution. In addition to this mechanism MBS may arise from synthetic securitization, but this mechanism is now less used.

Despite the fact that the MBS and mortgage bonds belong to the group of insured bonds issued on the capital market, which, ultimately, using the same collateral (mortgages), these two instruments have almost no other common characteristics.

Mortgage bonds and MBS are instruments that in various ways meet the financial needs of creditors. The selection depends on the needs of creditors and investors and is determined by the historical, legal and regulatory frameworks and the structure of the mortgage market of the country where the lender operates. In many countries, mortgage bonds and MBS are considered complementary and alternative financing instruments, which results in the coexistence of these two types of mortgage securities, what leads to a moment where MBS can be used as collateral for mortgage bonds.

Mortgage bonds at the EU level represent a significant and more stable source of funding for mortgage loans in comparison to MBS. Statistical data and recent trends, suggest that both of these instruments (especially mortgage bonds) will represent a significant source of financing credit activities in the mortgage market in the future.

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## Hipotekarne hartije od vrednosti kao izvor finansiranja hipotekarnih kredita u Evropskoj uniji

**REZIME** - U radu je izvršena analiza hipotekarnih hartija od vrednosti kao instrumenta finansiranja kreditnih aktivnosti na hipotekarnom tržištu Evropske unije. Iako u osnovi nude isti proizvod – hipotekarni kredit, kreditne institucije se razlikuju po načinu na koji finansiraju svoje aktivnosti. Dok se neke od njih baziraju na depozitima, druge, pak, svoju delatnost finansiraju putem tržišta kapitala emisijama hipotekarnih hartija od vrednosti - hipotekarnih obveznica (mortgage bonds - MB) i/ili hipotekarnih založnica (mortgage-backed securities - MBS). Analiza zasnovana na relevantnoj literaturi uz korišćenje odgovarajućih statističkih pokazatelja ukazuje da njihov značaj varira od zemlje do zemlje, ali da je na nivou EU izuzetno velik s obzirom da se preko  $\frac{1}{4}$  svih kreditnih aktivnosti na hipotekarnom tržištu EU finansira ovim putem. Takođe, pokazalo se da su MB i MBS instrumenti koji na različite načine zadovoljavaju finansijske potrebe kreditora. Izbor instrumenta zavisi od potreba kreditora i investitora, a određen je istorijskim, pravnim i zakonskim okvirima kao i strukturom hipotekarnog tržišta zemlje u kojoj kreditor posluje. U mnogim zemljama ovi instrumenti se smatraju alternativnim i komplementarnim izvorima finansiranja što ima za posledicu koegzistenciju ova dva tipa hipotekarnih hartija. Analiza istorijskih podataka i aktuelnih kretanja na tržištu pokazuje da će i u budućnosti ova dva tipa instrumenta (naročito hipotekarne obveznice) predstavljati značajan izvor finansiranja kreditnih aktivnosti na hipotekarnom tržištu.

**KLJUČNE REČI:** hipotekarni kredit, hipotekarno tržište, hipotekarne hartije od vrednosti, hipotekarne obveznice, hipotekarne založnice

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