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SECURITIZATION IN EUROPE AND THE ROLE OF SHADOW BANKING INSTITUTIONS

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Abstract: *Shadow banking system came into focus of numerous studies and policy debates, after the crisis emerged. Concerns about financial stability were especially highlighted, due to very high systemic risk capacities of institutions that compose shadow banking system, but also other (more regulated) institutions that perform activities that might be classified as shadow bank activities.*

Paper explains the reasons that influenced the rise of shadow banking in the world, and analyze the data on the relative size of shadow banking in advanced economies. It than analysis the structure and main characteristics of European shadow banking system, and focus on their role in the securitization process. This is especially important since European traditional banks are increasingly engaged in the securitization process- both in Europe and US, and they became increasingly dependant on the conditions on different markets of structured financial products.

Keywords*: shadow banking system, securitization, systemic risk.*

1. Introduction

Introducing Financial Services Modernization Act (Gramm-Leach-Bliley Act) in 1999 in United States, that erased boundaries between commercial and investment banking, established the road towards bank holding companies- companies that control one or more banks and also different financial institutions. This significantly increased the competition on financial markets. Traditional banking activities include various deposits taking, as the main source of financing and granting different loans. Those deposits are insured, banks are the subject of very strict regulation and supervision, and in the period of crisis they have the

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access to the central bank liquidity. Compliance with strict regulation causes different costs, so banks are increasingly trying to find ways to bypass some regulatory requirements by redirecting their funds into less regulated activities. Also, low level of interest rates caused increased race for higher profits. The solution was found in investment bank activities, the process of securitization and the creation of very complex financial instruments-derivatives, like mortgage backed securities-MBS and asset backed securities ABS.

In Europe banks are universal, which means that beside credit and deposit activities they can provide other financial services. Expressed process of financial deregulation during the 1990s, caused by the creation of common financial and bank services market, influenced changes in the traditional way of bank business. The significance of investment bank activities rose sizeable. European banks have begun increasingly to rely on the financial markets and the securitization process- in rising funds and investing them. Derivatives and complex securities were especially interesting due to higher earning opportunities, while integration and deregulation caused significantly higher competition and lower profits. Large and unique European financial market attracted also large banks from United States. All of these influenced the rise of shadow banking system in Europe, not just in US.

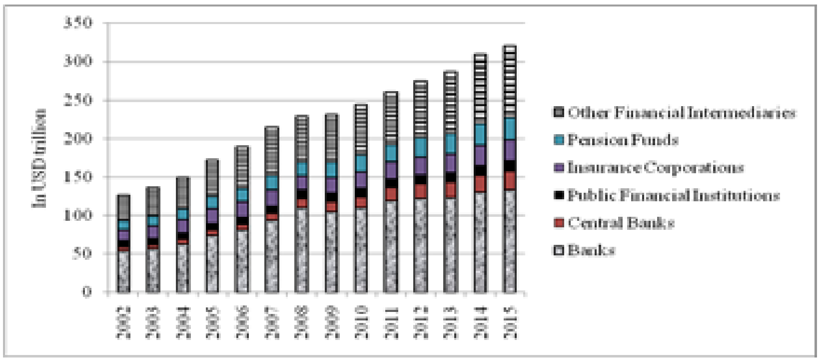
There is no unique and universally accepted definition of shadow banking system. Financial Stability Board defined shadow banking system in broad and narrow sense. According to broad definition, shadow banking system (SBS) is the system of credit intermediation that involves entities and activities outside the regular banking system. Narrow approach, in shadow banking institutions includes institutions that perform non-bank credit intermediation which raises systemic risk concern (especially maturity and liquidity transformation, imperfect credit risk transfer and/or leverage), and indications of regulatory arbitrage (FSB, 2011, p.3). FSB approach was accepted by ECB.

2. Shadow banking system in Europe

In the last decade and a half there has been a constant rise of financial assets of global financial intermediaries, even when the crisis emerged, according to data from Global Shadow Banking Monitoring Report (it covers 21 areas of jurisdiction and Eurozone). Global financial assets increased from 126 to 321 trillion USD (2.5 times) from 2002 to 2015, as shown on the graph 1.

Expectedly, financial assets of central banks had the highest rise, almost 5 times, due to their massive interventions in the subsequent of financial crisis, and that growth has not stopped yet (Popović & Živković, 2016). Other financial intermediaries, that constitute shadow banking system in the broad sense also had strong growth, their assets increased almost 3 times. Although those institutions were in the epicenter of financial crisis, it stopped their growth only in 2008, already the next year the growth continued.

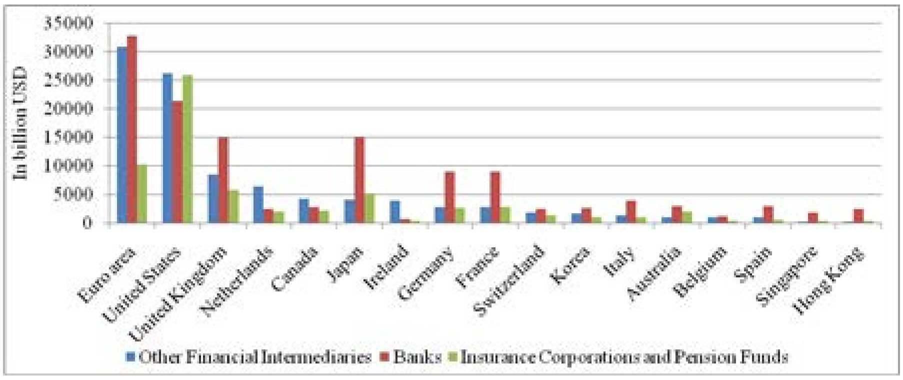
Figure 1: The structure of financial assets of global financial intermediaries



Source: Authors presentation based on data from: Financial Stability Board, 2016, Global Shadow Banking Monitoring Report

Majority of shadow banking activities, ECB classifies as Other financial intermediaries (OFIs). It includes all financial institutions except monetary financial institutions, pension funds and insurance corporations. OFIs sector in Eurozone manages the assets higher than OFI sector in USA, both in terms of amount in USD and as % of GDP (Graph 2).

Figure 2: Structure of financial system in advanced economies



Source: Authors presentation based on data from Financial Stability Board, 2016, Global Shadow Banking Monitoring Report

Data show how important in Europe is financial intermediation process that occurs outside regulated banking system. That creates significant systemic risk. Shadow bank entities are very interconnected with regulated banks, which is another source of systemic risk. They are also very exposed to US financial markets, where they heavily engaged in the securitization process. These are the reasons for very quick spread of contagion from US to Europe, and from shadow into traditional banking sector. Among European countries, United Kingdom had the highest size of other financial institutions, as well as Luxemburg, Netherlands and Ireland, where its size is higher than the size of traditional banks.

ECB doesn't follow data on shadow banking directly, it has to calculate it. It uses two measures of SBS. Proxy for shadow banking size in narrow sense is calculated as the sum of data for OFIs and money market funds (MMFs), minus data for investment funds other than MMFs. This measure points out financial institutions that have higher potential to create systemic risk, due to their role in the process of credit, maturity and liquidity transformation, leverage and interconnectedness with regulated banking sector. Broad measure treats all financial institutions other than banks, insurance and pension funds as institutions of shadow banking system, while its goal is to monitor all areas where shadow banking system risks may occur (ESRB, 2016, p.7).

European Systemic Risk Board (ESRB) publishes from 2016 the report: EU Shadow Banking Monitor, in which it gives and analyses data on shadow banking system in narrow and broad definition in Europe. OFIs sector is divided into 5 categories:

1. Financial vehicle corporations, that are engaged in securitization transactions (FVCs). They are established mainly with the aim of issuing securities based on assets such as mortgage, consumer and car loans, various types of claims, even on the basis of securities based on assets issued by other FVCs (resecuritization). Unfortunately, these are the only type of shadow banking institutions (in narrow sense) which balance sheet data ECB gathers directly.

2. Security and derivatives dealers (SDDs), that are investment companies that invest in securities for their own account, providing that way financial services to third parties. They are characterized by very limited disclosure.

3. Financial corporations engaged in lending (FCLs), provide financial services to households and non-financial companies, such as financial leasing, factoring, mortgage loans and consumer loans.

4. Specialized financial corporations (SPEs) include companies that finance imports and exports, financial intermediaries which receive deposits and grant loans only to monetary financial institutions and central clearing counterparties, venture and development capital companies and other. They don't perform securitization.

5. OFIs residual- financial auxiliaries (institutions engaged mainly in activities closely related with financial intermediation, but are not direct financial intermediation, like insurance, loan and securities brokers, insurance and pension consultants, investment advisers, flotation corporations that manage the issue of securities, corporations which arrange derivative and hedging instruments, such as swaps, options and futures- without issuing them, corporations providing infrastructure for financial markets, managers of pension funds, mutual funds and other) Regulation (EU) No 549/2013, captive financial institutions and money lenders (Financial corporations and quasi-corporations which are neither engaged in financial intermediation nor in providing financial auxiliary services, and where most of either their assets or their liabilities are not transacted on open markets. They include legal entities such as trusts, estates, agencies accounts, SPEs that qualify as institutional units and raise funds in open markets to be used by their parent corporation, special purpose government funds and other) (Regulation (EU) No 549/2013, S127). Data on these institutions are not available, but the proxy is calculated as the difference between total financial sector assets and the assets held by all known sub-sectors (ECB, 2016b, p.54; ESRB, 2017, p.13).

Beside those institutions, several types of investment funds are exposed to shadow banking risks. They are: bond funds, money market funds, real estate funds, exchange-traded funds, hedge funds and private equity funds. Balance sheet data of those funds are gathered on regularly basis. Bond funds perform credit intermediation by investing in debt securities. There don't have large leverage, but are exposed to liquidity risk due to the significant maturity transformation. Some funds invest predominantly in bonds with longer maturities while investors can withdraw their investment units in a very short time. That is why they might be exposed to panics in financial markets and very rapid spread of contagion, therefore posing a significant systemic risk. Money market funds invest mainly in short-term debt securities. Often their investment units are treated as safe as bank deposits and with similar liquidity. But their units are not insured, they don't have access to central bank liquidity, and they perform maturity and liquidity transformation. Investors might withdraw quickly if they suspect the quality of MMFs loans. Besides, their activity is closely related to the activity of credit institutions. Hedge funds are high-risky type of funds, characterized by a pronounced speculative nature. Investors are usually very wealthy individuals or institutions with higher risk tolerance. They are often characterized by very high levels of leverage, especially in certain investment strategies, like the purchase of securities on margin, repo arrangements, financial derivatives, borrowing through banks and similar. Hedge funds perform liquidity transformation, and there is a significant credit risk, for example through the sale of credit insurance on credit default swap market or with investments in financial institutions engaged in securitization. Real estate funds invest in securities offered by public real estate companies- mostly commercial and corporate properties, but they also invest in raw land, apartments complexes and agricultural space. These assets are illiquid since they are not frequently traded. They are exposed to credit, interest rate and market risks, and Open-ended real estate funds to significant liquidity risk. Exchange-traded funds hold assets like stocks, commodities or bonds, their units or share classes are traded close to net asset value during the day. They can perform significant liquidity transformation. Private equity funds invest in equity of non-listed companies, like young and specific growth companies, but usually without control stake. They don't perform significant liquidity transformation, but can facilitate credit growth and leverage in the financial system.

The broad measure of shadow banking system in European Union (EU) amounted 40 trillion euros at the end of 2016, while in Eurozone (EMU) it was 31 trillion of euros. Total assets of EU shadow banking entities reached 272% of EU GDP. In the last five years there has been a strong growth trend of shadow banking assets, the broad measure increased 30% since 2012. On the other side, during the same period assets of credit institutions fell 6%. Slightly above 2/3 of broad SBS assets constitutes assets of financial institutions categorized as OFIs, the rest is investment funds assets, while MMFs assets presents only 3% of SBS assets.

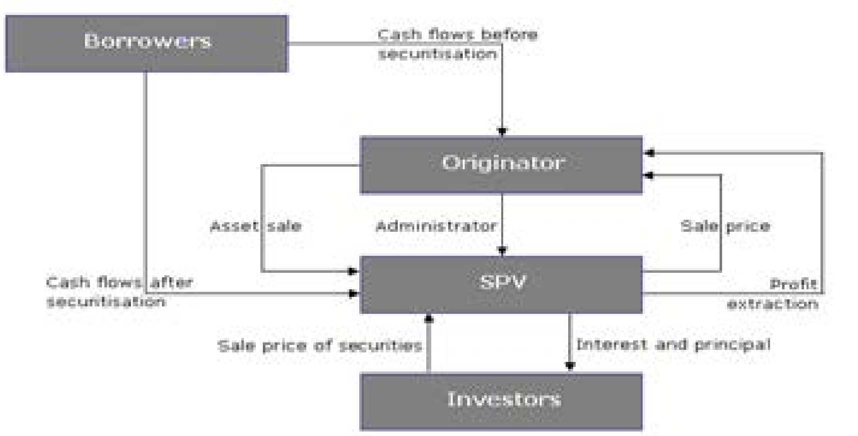
Another characteristics of shadow banking system in Europe is strong geographical concentration. Two countries- Luxembourg and Netherlands have 60% of total SBS assets in Eurozone, together with Ireland, France and Italy, they hold 85% of total SBS assets, and when adding Germany, Belgium and Spain that makes 95% of total Eurozone SBS assets, as shown on the graph 3.

3. The securitization process

Securitization is a process of illiquid assets transformation into liquid securities. Securitization process provides additional liquidity to banks involved in maturity transformation of financial resources. It allows banks to reduce their balance sheet size and capital requirements. With on-balance-sheet securitization traditional banks concentrate both – risk and profit in their balance sheet. With off-balance-sheet securitization investment risk is transferred to investors in derived securities. Profitability predominantly remains with the shadow bank that usually involves in this type of securitization. As stated, shadow banking represents a system of financial institutions other than banks involved in credit intermediation. In order to raise funds, shadow banks use securitization, a process of loan portfolio transformation into liquid securities. While doing so, shadow banks are not deposit takers, nor are subject to traditional capital requirements and liquidity provisions in times of distress.

Although securitization (pooling and trenching) increased significantly in the decade before the latest global financial crisis, shadow banks' involvement in securitization processes came to light in the aftermath of the crisis. Even after the crisis the total amount of outstanding asset backed securities remains on the very high level. At the end of 2014 they reached approximately USD 10 trillion in US and USD 1.9 trillion in Europe (SIFMA (2015, a, b, c).

Figure 3. Securitization process



Source: Authors' presentation

Shadow banks had significant role in home mortgage and other loans' transformation to mortgage and other asset backed securities. Loans sold from banks' balance sheets to Special Purpose Vehicles (SPV), were repacked and formed a basis for the issuance of new securities that promised interest and principal payments to investors. As loan annuities were paid each month, the cash flow was used to repay the obligations to investors in asset backed securities. The value of the derived security depended on the value of the underlying assets. The whole securitization process happened beyond the traditional financial regulation. There was no problem in the phase in which the underlying asset prices were rising. The problem occurred once the prices started to fall. That was especially profound in the mortgage market after significant number of borrowers defaulted on their loans, and their houses were sold in the market, increasing the supply. When the houses lost their value, the whole structure of derived securities was losing value too. The buyers of mortgage backed securities and collateralized debt obligations started to withdraw their funds by selling the securities. Shadow banks had to sell their assets in order to meet investors' liquidity requests. The falling value of these securities in both banks and non banks balance sheets decreased their assets' value that raised solvency issues. Many financial institutions, traditional and shadow ones, faced defaults. The generated risks through shadow banking activities became systemic. Many of the traditional banks were caught in the shadows too (Kodres, 2013, p.43). They held the derived securities in their balance sheets and were often controlling the securitization vehicles. The interconnectedness between traditional and shadow banks was lacking transparency. Shadow banks increased information asymmetry in financial markets, were poorly or completely unregulated, without capital buffers and access to liquidity provisions in times of distress.

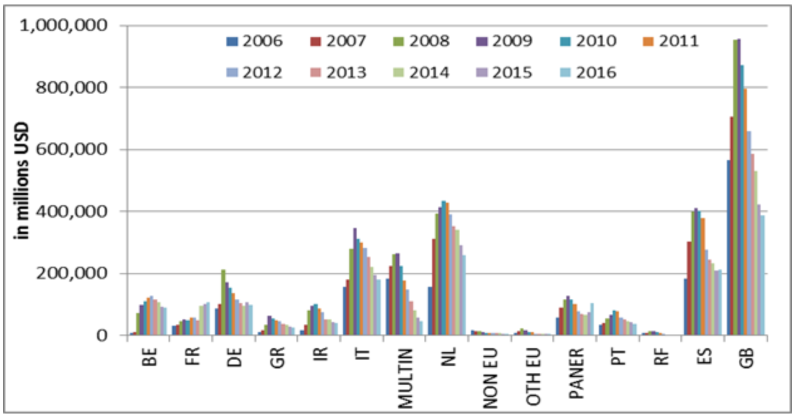
4. The securitization process in Europe

Starting from late 1970s model of securitization had spread from the USA, thanks to the Salomon Brothers investment bank who first developed it, to the rest of the world. In France the first securitization transaction occurred in 1989, in Spain in 1991, while in Italy in 1985. Yet, the world waited for 2000s when it gained strong momentum on a global scale, and particularly in Europe. Although securitization mechanism is held responsible for the global financial crisis by many observers, ECB released a consultation paper in 2014 with the aim to examine how better functioning securitization markets in EU could be delivered and with which special measures. This action confirms generally viewed importance of the set of social and economic benefits that arise from this market, having in mind effect on economic growth in first line through the meaning of funding assets or transferring risk.

In order to assess size and structure of the securitization market in Europe authors used available data from Association for Financial Markets in Europe (AFME) and Securities Industry and Financial Markets Association (SIFMA). Figure 4[1] shows outstanding volumes of securitized products segmented by country of collateral from 2006 to 2016. Category Multinational refers to CDOs and CLOs issues in euro with collateral from multiple jurisdictions or where location of collateral is not clarified. Category Pan Europe comprises cases where collateral comes from multiple European countries, and provided that it is not over 90% located in one country.

[1] Abbreviations used in Figure 4 are as follows: BE – Belgium, FR – France, DE – Germany, GR – Greece, IR – Ireland, IT – Italy, MULTIN – Multinational, NL – Netherlands, NON EU – Other Non EU, OTH EU – Other EU, PANER – PanEurope, PT – Portugal, RF – Russian Federation, ES – Spain and GB – United Kingdom.

Figure 4: European balances outstanding by country of collateral in 2006-2016.

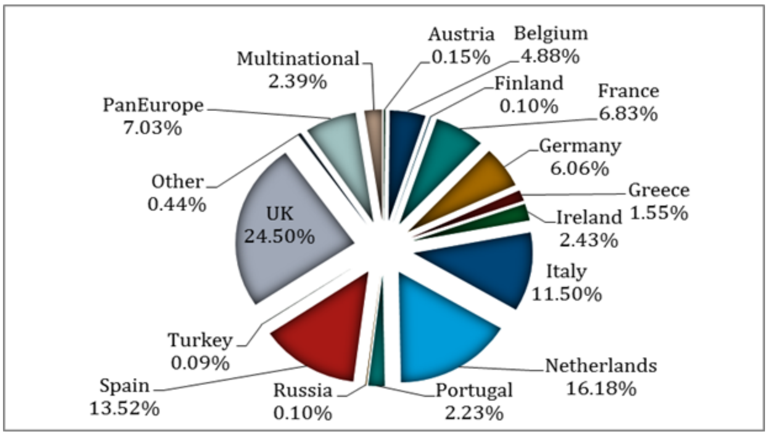


Source: Authors' presentation based on data from AFME and SIFMA

One can observe intensive expansion in all national markets up to the outset of financial and economic crisis. In spite of peak in market size reached in some countries in 2009 or 2010, downward trend is predominant feature in all markets afterwards. France accounts for a precedent in this regard. Another feature from Figure 4 is that countries with a fastest rise in market suffered a steepest fall in the period after the crisis. In sum, the whole market literally contracted in half, from 3.1 trillion USD in 2009 to 1.55 trillion USD in 2016.

The data from Q1 2017 is the most recent and used for constructing Figure 5 which gives overview of relative shares of countries involved in European securitization market as a whole. United Kingdom leads with accounting for about a quarter of the European market. While Spain and Italy rank 3rd and 4th respectively, France and Germany fall behind ranking 5th and 6th. The share of other countries, with the exception of Belgium, is rather marginal.

Figure 5: Relative shares in European securitization market in 2017



Source: Authors' presentation based on data from AFME and SIFMA

The second important characteristic of European securitization market relates to its structure according to the type of collateral used for issuing securities backed by financial claims. The whole market may be separated in following asset classes: 1) asset-backed securities, 2) collateralized debt/loan obligations, 3) mortgage backed securities, 4) whole business securitizations and 5) small and medium enterprises asset class[2]. With the varying relative share, absolutely predominant asset class in the market is mortgage backed securities. Within it, residential mortgage backed securities strongly dominate over commercial mortgage backed securities and mixed mortgage backed securities. If we look at ABS, the sub-class Other ABS dominated before 2009, and together with sub-class Leases has been undergoing negative trend ever since then. On the other side, sub-classes Auto and Consumer have exhibited sustainable upward trend and presently dominate in ABS class.

5. Conclusion

Sizeable process of financial intermediation in Europe occurs outside regulated banking system. That creates significant systemic risk, that materialized after the emergence of financial crisis in US. Controlling that risk is very challenging. ECB doesn't even have the full, precise and enough granulated data about financial institutions that can be classified as shadow banking system. Beside, some regulated financial institutions perform activities that belong to shadow banking, and there is very high level of interconnectedness in the financial system.

Especially important role shadow banking system has in the process of securitization- the process of loans portfolio transformation into liquid securities. This enables additional supply of liquidity to banks and also the reduction of their capital requirements. Risk is transferred to investors in those derived securities, among which are also banks. The value of those securities depends on the value of the underlying pool of loans. If the underlying loan takers default on their obligations, derived instruments will lose value and investors will suffer losses. If the fall in value is significant, it might lead to systemic crisis. That is why it is crucial to find appropriate way to control these activities, without creating distortions in the financial markets, jeopardizing the financial intermediation process efficiency or creating incentives for new “regulatory arbitrage”. This is also important while the securitization process changed the structure of traditional bank balance sheet in Europe. They are increasingly dependant on the conditions on different markets of structured financial products.

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[2] This asset class comprises CDOs related to claims on small and medium sized enterprises.

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SEKJURITIZACIJA U EVROPI I ULOGA INSTITUCIJA BANKARSTVA U SENCI

Apstrakt: Bankarski sistem u senci je postao predmet brojnih studija i debata, nakon izbijanja finansijske krize. Posebno je istaknuta zabrinutosti oko finansijske stabilnosti zbog veoma visokog kapaciteta za kreiranje sistemskog rizika institucija koje čine bankarski sistem u senci, ali i drugih (više regulisanih) institucija koje obavljaju aktivnosti koje bi mogle biti klasifikovane kao aktivnosti banaka u senci.

Rad objašnjava razloge koji su uticali na porast bankarstva u senci u svetu i analizirati podatke o relativnoj veličini ovih institucija u razvijenim ekonomijama. Posebno posmatra strukturu i glavne karakteristike evropskog bankarstva u senci i fokusira se na njihovu ulogu u procesu sekjuritizacije. Ovo je naročito važno jer se evropske tradicionalne banke sve više uključuju u proces sekuritizacije - kako u Evropi tako i u SAD-u, i sve više zavise od uslova na različitim tržištima strukturiranih finansijskih proizvoda.

Ključne reči: bankarski sistem u senci, sekjuritizacija, sistemski rizik.