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THE NEW IMPROVED PROCESS OF SECURITIZATION

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ABSTRACT: Even through the global financial crisis started with defaults on USA mortgages, USA and international banks suffered about equally. The most mentioned reason for international spreading out the effects of the crisis is the process of securitization. It brought many advantages for the banks at the beginning, but as it become more popular it grew more complex and opaque. It needs to be re-regulated with several structural changes in the future in order to reestablish the investors' confidence.

KEYWORDS: Securitization, Regulation, Financial crisis

JEL Classification: G21, G28

Introduction

This paper's focus is on the process of securitization, which lied at the core of the subprime mortgage crisis in USA financial system in 2007-2008. The analysis seeks to explore the events and the reasons that led to the subprime crisis, mainly

through the actors' involvement in the process of securitization. We draw the attention to the need of a better regulation of the financial system in the future.

Securitization presupposes process of conversion of one part of assets (often with reduced market value) of the bank in a form (securities) that are acceptable (liquid) for the investors on the secondary market. That is an instrument (innovation), helping banks to regulate their liquidity, protecting them from interest rate risk, providing them with an important source of income that come from provisions and also, protecting them from the obligations, such as capital adequacy, that they have towards regulatory bodies (Nenovski, 2005).

What assets are eligible for the process of securitization? In general, all the assets that can generate cash flow. Most of the securitized assets include: auto loans, credit card receivables, residential and commercial mortgages, franchise/royalty payments that somehow are collateralled or supported with contracts. In order to pool together all the assets, they need to have relatively homogeneous maturity structure, as well as almost the same credit and interest rate risk. This characteristic is important because the main goal of the banks is to provide liquidity before the day of duration of the asset (by grouping the loans and issuing assets-backed securities). The applied securitization mechanism is aimed to free the bank's capacity for further loans and other investments.

The process of securitization helps banks to better manage the interest rate risk. For example, if there are long term loans with fixed interest rate which are not securitized, eventual changes of the interest rates can cause huge losses for the bank. In the process of securitization, the interest rate risk is transferred to the issuer of the securities. Also, the credit risk of banks is lowering through the process of securitization, because the bank eliminates the risk of an eventual default of the client to repay the loan. In that sense, the credit risk is transferred to the issuer of securities.

Finally, the process of securitization increases the profitability of the banks. If the bank is authorized to make the payment and servicing of the securitized loans (on name and behalf of the issuer of securities), it charges adequate provision. If the provision is higher than the cost of the service that the bank provides, the net revenue increases the profitability of the bank.

The process of transferring the financial risks is achieved through the creation of a so called "special purpose entity" (SPE). These entities are also identified by the name SIV (special investment vehicle), SPV (special purpose vehicle) and SPC (special purpose corporation). Banks or other issuers of loans (creators) group the

loans (claims from issued loans) and tranched to the SPE. Tranching means that the loan portfolio is sliced with respect to the risk characteristics of the loans. The tranches are rated by one or several credit rating agencies independent of the rating of the loans' originating institution. Therefore, the procedure of purchase of loans by the SPEs is especially important in order to insure autonomy of the asset and mortgage backed securities from the loan originating institution (Gehrih and Kotz, 2010).

This entity is legally separated from the creator. That is a positive attribute: in case of bank's (creator's) bankruptcy, the credit status of the clients will not be in danger. Still, during the 2007-2008, some SPEs were supported by financial firms, which made the SPEs' activities (the prospect) depending on those of the financial institution. That is one of the reasons, explaining why SPEs and clients suffered the consequences from the banks' failure during the crisis. The problem is also due to the poor risk management and to a misunderstanding of the risks related to SPEs.

Through redemption, concerning usually long term claims or illiquid claims of the banks, these institutions issue short term securities (back up by mortgage loans or other assets), and sell to the interested investors in form of mortgage/asset backed securities. SPEs make profit from the difference between the market value of the securities and the cost for their issuing (purchase of the loans and servicing the liabilities to the owners of the securities).

According to the type of securities that are undertaken there can be two types of SPEs: "generic" that take balance sheet items and turn them into securities and "synthetic" that are comprised of items merely linked to other securities and are often called collateralized debt obligations – CDOs (Gehrih and Kotz, 2010). CDOs differed from previously issued assets backed securities in the sense that interest and principle were not directly passed through from borrowers to investors by full amortization of principle over time, but were accumulated according to maturity preferences of the investors. So, investors could choose the security according to both their risk appetite and maturity preferences. Therefore, the synthetic SPEs (CDOs) allow market participants to speculate on the probability of default of securities, thereby increasing the spectrum of different financial assets. Meanwhile, this situation has a negative impact because the introduction of different financial assets is confusing for the market participants who are not aware of the level of risks in the process of risk transformation.

Banks that sold the loans to SPEs transferred all the liabilities that came from the loans to SPEs. For these loans, banks do not have an obligation to keep money as a reserve (banks are not obliged to keep an adequate level of capital adequacy)

which is another advantage for the banks in order to increase their liquidity. The buyer of the loans asks the bank to be an arbitrator (to service the liabilities towards the debtors, but on name and behalf of the buyer), the bank asks for a provision but it is not obliged to supply capital adequacy (the loans are registered out of the balance sheet). Concerning all other loans that are not securitized, the banks are obliged to reserve and sustain an appropriate level of capital adequacy. Because of profit incentives, the banks are not interested to the quality of the clients, but to the quantity of issued loans (moral hazard) as long as they transfer the risk to the another actor.

The securities are proposed to institutional and individual investors who are the final creditors in the process of securitization bearing the risks: interest rate risk, market risk (fluctuation of real estate prices) and credit risk (default). This situation makes necessary to determine the risk of issued securities so that investors get familiar with what kind of securities they invest into. In the process of securitization, the level of risk is generally estimated by the credit rating agencies.

Credit Rating Agencies

The Credit Rating Agencies (CRAs) use a simple system of evaluation enabling to invest in international securities and complex financial products. CRAs operate as gatekeepers of risk. However, they are now widely perceived as the global financial crisis' key contributors given all the negative aspects of their activity. We present below a brief overview of the CRAs and their regulation on the USA and EU financial markets.

In the USA, credit rating agencies have been subject to a regulatory regime since 1975. Security Exchange Commission (SEC) did not oversee rating methodologies or the way the agencies operate (Pagliari, 2010). For a long period, this situation did not change significantly and three credit rating agencies existed on the market. New credit rating agencies appeared, but they did not benefit form the same privileges. SEC protected the interests of the biggest CRAs, providing them an oligopoly position which provocated unrealistic rating of securities, caused by profit incentives.

Manns (2008) argues that ratings agencies were virtual prerequisites for most debt issuances, and yet had no accountability or incentive to perform their role as gatekeepers of risk. The author advocates accountability through the use of SEC-administered user fee systems where creditors, and not the issuers of the debt, would finance the ratings. Here comes the question about the conflict of interest between the CRAs and the issuer of the securities. Most of the CRAs were

financed by the same issuer of the products they rate, so they were financially dependent on the issuer. The conflict of interest between the issuer and the CRAs is known as "rating shopping". In other words, as the issuer is searching for the best rating, CRAs could not be objective giving a fair rating on the securities.

The SEC received regulatory authority over CRAs only after the Enron collapse in 2001. The SEC report did not satisfy the USA Congress, who decided to legislate on this issue by approving the Credit Rating Agency Reform Act (2006). The regulatory regime introduced by this Act has become effective only a few months before the beginning of the crisis, in June 2007. Very soon, following its introduction, this regulatory regime became the object of new significant reforms (Pagliari, 2010).

The situation in Europe was similar with no any direct regulation from the supervisory authorities, before the crisis. Only some Directives were applicable to CRAs (Market Abuse Directive and Capital requirement Directive), combined with self regulation on the basis of the International Organization of Securities Commission Code - IOSCO (Parker and Bake, 2009). By 2007, the IOSCO code was implemented by the larger CRAs, including Standard & Poor's and Moody's & Fitch. However, neither the IOSCO Code nor the existing directives were seen as adequate in the face of the 2007 financial services firestorm.

One of the major weaknesses of the system was related to the weak CRAs' reactivity to the market signals. Indeed, when the crisis occurred, they did not lower the ratings of securities while it was obvious that investors started to withdraw from the market. CRAs diminished the credit rating of the mortgage backed securities in July 2007, one year after the prices of real estate started to decline. According to the words of the Nobel price winner Joseph Stiglitz (UN, 2008) CRAs are one of the main culprits of the world economic crisis. In any case, the delayed reaction of the CRAs confirms their unrealistic rating and the failure of the existing regulation.

The investors compare the rate of return of the securities issued by the Central banks (CB) - the interest rate of these securities is used as a prime rate, because these types of securities have low risk - and the rate of return of the securities they are willing to invest into. The rate of return of assets and mortgage (or asset) backed securities before the beginning of the financial crisis was significantly higher compared with the rate of return of the CB bills and the level of risk, according to the CRAs, was the same. Investors confident in the credit rating given by the CRAs, did not realized that these securities are not as safe as they believed.

Securitization as a factor of credit expansion

In the USA, the first securitization was implemented in February, 1970, by a public law of the US Housing Ministry. The Government National Mortgage Association (GNMA or Ginnie Mae) has purchased mortgage loans and issued securities on them in the framework of a secondary market for mortgage loans creation, in order to support undercapitalized regions (Kotz, 2010).

The process of securitization was more intensively used during the credit expansion during the period 2006-2008. Slippage of the interest rates in 2001 and 2002 was an aggressive way to stimulate demand in the USA economy and to come out of the crisis. Decreased interest rates stimulated productive investment and household spending. The latter, was crucial in boosting growth and dragging the country out of the recession.

The policy of "cheap money" (low interest rates), as well as the expectations of a further increase of the real estate prices given the steady growth, encouraged large number of subprime clients to enter the real estate market as mortgage loan borrowers. If we take into consideration that the decrease of the interest rates was significant in 2001/2002, one could expect significantly higher rates of GDP growth during the following years. However, in 2002 and 2003, growth has culminated to 1%-2%, compared to 4%-5% during the previous years. Unsynchronized movement between the volume of loans and the growth in real production, parallel to the increase of the home price assets, led to the mortgage price bubble. According to Greenspan (2010), the long term interest rates and not the overnight rates of the FED galvanized home price assets and created the bubble

The secondary market of the mortgage backed securities was around $ US 7.5 trillion, in the middle of 2008 (FED, 2009). The intensive use of the process of securitization becomes a fast way for generating profit. By bursting of the price bubble of real estate, between the end of 2007 and the middle of 2008, credit rating agencies decreased (with delay) the credit rating of mortgage backed securities and decreased their market value. The decreased credit rating caused panic and institutional investors that were not allowed (by law) to possess securities with low credit rating were the first ones to react by selling their securities.

Almost all the securities` owners reacted in the same way in order to get back the money invested. As the supply of securities was getting higher, prices were falling down. Fall in the prices of mortgage backed securities meant fall of the real estate prices. In such conditions, the value of the loan exceeds the value of the mortgage which is a counter-incentive for the debtors to repay the loan. Banks as issuers of

mortgage loans were faced with increased amount of non functional loans. They undertook the mortgages of the loan i.e. real estate and offered them for sale, in order to compensate the value of the given loan. Increased supply of real estates caused additional fall in their market prices.

Why these mortgage prices bubble burst at once? When aggregate demand is higher than aggregate supply, more construction industries are entering into the market. By the time the market recognizes supply has outstripped demand, construction has already begun on many construction projects. This tends to exacerbate oversupply and create downward pressure on long run prices.

Because of the abrupt decline in the real estate prices and uncollectibilty of mortgage loans, the price of the mortgage backed securities started to fall down. Many of the banks (which were issuers and/or buyers of mortgage backed securities) did not succeed to restore the losses by the amount of their own capital. Financial crisis first occurred into the US economy and spread out the negative effects in the world almost immediately, as a result of interconnections between financial markets, causing destabilization of the system.

The process of securitization as core of the subrime mortgage crisis

The process of securitization created many opportunities for financing, given that the US financial system is much diversified and does not depend only on bank financing. Indeed, a long chain of intermediaries are involved in channeling funds from the ultimate creditors to the ultimate borrowers.

The simple model of intermediation chain would consist of households (borrowers), mortgage bank and household (depositor). On the contrary, a long intermediation chain includes borrowers, a passive firm whose role is to hold mortgage assets securities (MBSc) and issue liabilities, an issuer who pools the MBSc into another layer of claims (such as CDOs), an investment bank which buys these securities and finance itself by collateralized borrowings through repurchase agreements (repos) with a large commercial bank, instead of issue short term securities on the money market in order to fund its lending. The last link of the chain is the households who will to invest their savings for higher yield.

The establishment of a long intermediation chain enables the dispersion of credit risk to those who can better bear losses (rather than concentration in the bank's balance sheet that was a case in the traditional model). It makes easier to perform maturity transformation (from long term to short term claims) and it enables some financial intermediaries to specialize in screening borrowers, others in arranging

initial short-term financing, and others in securitizing the assets and selling them to investors. But the final investor does not know who is the debtor and what risk present the product he is buying.

The lengthening of the intermediation chains was supported by the new model of the banking industry, known as "Originate and distribute" which appears on the USA financial market at the beginning of the 90s. When originators sell off loans they originate, they may have weaker incentives to carefully screen mortgage borrowers. In the "Originate to hold" model of mortgage lending, the originator bears the loss if it originates a mortgage that goes bad (traditional model). This gives the originator strong incentives to gather information about the borrower's creditworthiness and the value of the home that serves as collateral. If instead the originator plans to sell the loan, it does not bear any loss if the borrower fails to repay. Hence the originator may have little incentive to observe appraisals and the borrower's capacity to repay (a typical moral hazard problem).

A related incentive problem occurs when originators have better information about the quality of the mortgages they have already originated and are considering selling than secondary market purchasers. The originator may have an incentive to sell the worst loans in its portfolio, and retain the best loans with the lowest default risk. This is a typical adverse selection problem (Financial Crisis Inquiry Commission, 2010). The new model, introduced numerous "fee collecting" firms that intermediate between the borrower and the ultimate creditor and did not care about the risk of the securities, as long as they transfer the securities to the next actor in the chain. Securities issuers' earnings were based on sale volumes, with little concern about the long term performance of the securities.

According to Shin (2009), raising the amount of lending also lowers the probability of default in the short run, because a larger amount of loans makes the proportion of defaulting loans relatively smaller. This is often the reason why credit booms run out of control: the increased lending creates a false sense of safety as more loan output makes the default component smaller as a proportion of the total. Alternatively, new segments of the population - riskier subprime borrowers - were offered loans.

The final investors relied on CRAs for due diligence. The complexity of the intermediation networks meant that participants can not understand how reliant they had become on a few large core institutions and how those institutions were related with each other in very complex ways. When vulnerabilities started to become evident, market participants became worried about who of their counterparties were exposed to. The credit expansion caused by the process of

securitization created the bubble in the housing market and indirectly contributed to the sharp rise in defaults when the bubble burst.

The future of the securitization (proposed recommendations)

On April 21, 2010, the Redwood Trust filed with the Securities and Exchange Commission (SEC) the first private-label non-conforming Residential Mortgage-Backed Security (RMBS) issuance since the financial crisis. This is the first mortgage issuance outside the protective hug of the Federal government's housing agencies. The repurchase market, where lenders of funds are given collateral as a security for a short-term loan, remains below its early 2008 peak (Herzog, 2010). But investors are still having the feeling of uncertainty about the future. What can be done to restore the confidence of the market?

First, the investors should modify their own perspective of the risk. When an investor is taking a risk it is always compared with the rate of return which varies with the economic cycles. So, the investor should not rely always on the short term rate of return, but evaluate the long term benefit. Firms also tend to underestimate liquidity risk in market upswings and vice versa. Market liquidity tends to be pro-cyclical as well - volumes rise and bid-ask spreads narrow during upswings and reverse in downturns. Marketability tends to be overestimated during good times, particularly for assets that are customized or complex. Furthermore, banks may anticipate the provision of public sector liquidity support under extreme conditions, yahoo grammar underinsuring themselves for such cases (Vinals, 2010). This is closely connected with the inappropriate due diligence before the beginning of the financial crisis. Were the banks aware of the level of risk taking? Did they fully understand the products that they were investing into? And did they hold sufficient level of capital against these risks? Instead of reliable calculations about the investment, the investors were relying on the rating of the CRAs. In this way, bank management and shareholders, the bank's counterparties, and bank supervisors were not aware of the level and source of risks.

One lesson from countries that have gone through a financial crisis is that the biggest losses arose in banks where the owners have no enough capital to cover the losses. That is the second area where changes should be made. Capital provides an essential buffer that enables banks to absorb unexpected losses giving banks the ability to safely expand and enter new lines of businesses, and the flexibility to continue to operate and prosper during economic downturns.

The current turmoil in bank liquidity in Europe and North America has demonstrated that when benign economic conditions come to an end, a bank with a

strong capital base sufficient to cover its risks will fare much better than institutions that have been skating near the edge of their regulatory capital requirement (Fiechter, 2007). In the last twenty years there has been a tremendous growth of investment banks portfolio that created high yields but that means assets equivalent to 24 times their equity capital (high capital adequacy ratio). The level of capital adequacy should be controlled and reduced by the supervision regulatory bodies. That will decrease profits, but it will decrease the systemic risk also.

Thirdly, setting higher standards is also needed to offset the effects of moral hazard. The "Originate and hold" model makes the banks more careful in evaluating the default risk of the borrower. It can decrease the profitability due to "mass sell of loans" but can involve a sustainable development by decreasing the risky loans. The SEC proposed changes requiring issuers of consumer loan asset-backed securities to retain 5% of their products on their books, a so called "skin in the game" requirement. That will not end the process of securitization, but it will require originations to recalibrate their business models slightly due to higher levels of "skin in the game" (Herzog, 2010).

Fourthly, the regulation has to be harmonized in the US and in Europe. Appling the same regulatory standards on both markets, will contribute to higher transparency and efficiency.

The European Union set up a registry for rating agencies as a first step toward tighter regulation and lay down rules for the procedures the agencies should follow as a condition for them to do business in Europe. Also credit rating agencies are requested to enhance disclosure concerning the procedures and methodologies they use in rating structured finance products as well as in the surveillance of these ratings according to new regulations from the SEC. The final point is to secure competition in the rating industry. The European Regulation in 2008 (adopted April, 2009) suggest that the ratings can only be used for regulatory purposes if they are issued by a registered credit rating agency. The Regulation adopts a very wide definition of a CRA, as "a legal person whose occupation includes the issuance of credit ratings on a professional basis' – with "credit ratings" acknowledged as being "opinions" (Parker and Bake, 2009).

The Regulation clearly does not impose any obligation on investors, only to invest in rated instruments. Since this only applies to credit institutions, non-bank investors will be free to choice the ratings they use. That will make the rating of the rating agencies optional for the investors. The problem is that Regulation will only affect the banks which use the standardized approach to calculating capital requirements (small banks). That means measuring the risk of the bank according

to the credit rating from the CRAs. The bigger, more sophisticated and systemically important "Internal Ratings Based" (IRB) banks are unlikely to be affected. When it comes to calculating capital requirements, many of the larger and more systemically important banks calculate their capital requirements using the IRB approach. That is to say, they do not rely on published credit ratings from CRAs when calculating capital (Parker & Bake, 2009).

The Regulation encourages investors to use their own calculation of the level of the risk, since there is no any regulatory obligation. The losses that arose from investing in the securities rated from the CRAs, will make them more cautious and aware of the risk involved in their future transactions. The competition in the rating industry will make the ratings more objective and eliminate of problem of profit incentives, which we previously mention as one of the biggest problems on the CRAs market. But, attempting to encourage appropriate pricing of risk at the level of the bank through capital standards and regulation for the rating agencies may be too blunt to restrain bank risk-taking, since those standards can never be tuned so finely impeding traders to exploit regulatory loopholes. Also, the securitization products should be simplified and standardized. That will improve the transparency and the risk evaluation from both the market participants and the regulatory authorities. International institutions and Central banks promote such recommendations.

At the same time, not only the banks but the whole chain of intermediaries (SPEs…) in the process of securitization should be regulated, in order to identify evolutions that can lead to systematic weakness and contagion: capital structure, disclosure, documentation and compensation, dependance…

Finally, most of the economists blame the low interest rate (expansive monetary policy). According to Vinals (2010), the central banks should consider applying policy tools more symmetrically over the cycle and, in particular, fully taking into account financial imbalances when setting policy interest rates to achieve price stability over the medium term. This will provide for more leaning in good times so that there is less need for cleaning in bad times.

Critical discussion

Financial crisis revealed significant vulnerabilities of the global financial system. We need now to explain whether the regulation of systemic risk is possible in complex financial systems and what obstacles threaten such reforms.

The crisis had a devastating impact on economic activity in emerging markets in Asia and Latin America, as well as Japan, even though banks in the region were generally healthy and far from the U.S. housing boom and the subprime mortgage market. That is why the global financial crisis requires a coordinated international response. However, political obstacles stand in the way of a comprehensive solution.

The challenge arises also from the fact that in a global economy, regulatory regimes are implemented on the national level. That makes the regulation of large financial firms difficult. The financial firms that operate in multiple jurisdictions remain largely out of reach. Every regulatory regime has different treatment to bankruptcy and regulation of the financial institutions. At the same time, the resistance from the interest groups constitutes another obstacle. US Administration officials said that banking and business lobbyists have spent more than $ US 50 million during the year 2011 to influence the rules which has still not taken effect (The New York Times news, 2011).

Can regulators ensure accountability and transparency in a financial system characterized by complex instruments and a shadow banking system? According to Dudley (2011), if regulatory requirements for banks are increased significantly, the risk of stimulating the growth of the non-regulated shadow banking sector also increases. This suggests that the regulatory oversight effort has to be broadly applied so we just don't trade one problem (for example, undercapitalized large banks) for another (a shrunken regulated banking sector and an enlarged, unregulated non-banking sector).

Finally, the efforts should be oriented towards international regulation which would enable a sharing of supervisory information on a cross-border basis, especially when foreign banks and subsidiaries are involved on the domestic market. The sharing of the information can be partially enforced by the improved global payment infrastructure.

Conclusion

The process of securitization offered many advantages for the banks and other financial institutions introducing new sources of financing, changing the illiquid portfolio into liquid securities, transferring the risks (interest risk and credit risk) to the final investors and finally giving the possibility of higher profitability. But, the major financial innovation of the 20th century, turned to be the main accelerator of the subprime mortgage crisis in the US financial system in 2007-2008 and many weaknesses were revealed.

The process of securitization encouraged risky behaviors and the whole financial system suffered the consequences. So, securitization transactions should be based on simple products, enhancing the availability and quality of information, and improving the reliability and use of ratings. Whether securitization will remain the most used financial innovation on the long term will depend on the effectiveness of the regulation framework and the need for international cooperation is urgent.

Overall, it would be reasonable to say that the securities sector emerging from the current crisis will be characterized by higher regulatory requirements, by shorter intermediation chains, perhaps less profitable in aggregate, and with less maturity transformation. But, the process will probably continue to be the main driving force in the American as well as in the European financial system, even if the securitization probably will not have the same dynamic intensity in the future and its perception as a cheap way for loan generation is over.

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