Comparison of Shadow Banking System in Selected SEE Countries

Lorena Škuflić, Danijel Mlinarić and Tajana Štriga

***Abstract* —** After the financial crisis and Seoul Summit (The Group of 20 leading economies - G20) in November 2010 between all stakeholders, scientific and public releases were more used expression shadow banking. Shadow banking is, exactly, effect of dramatically changes in the structure of the financial systems in a lot of countries around the world last decades and increasing significance of off-balance sheet activities. That is also result of all known transformation from bank-based to market-based financial system. Today it has become a critical part of the infrastructure of the modern financial system and authorities must provide and define new concept and functioning for directly shadow banking entities, for the banks that interact with the shadow banking system, for the activities of shadow banking and for macro prudential measures. Without that rules financial system can be efficient and sustainable what is precondition of economic growth and is the most significant factor of a country's economic policy. This paper examines the question of measuring shadow banking system in selected countries of Southeast Europe (Croatia, Slovenia, Bosnia and Herzegovina, Montenegro and Serbia) with their comparison. It includes critical review of usual shadow banking characterization between scientists and policy makers with special remark on correlation between financial sector development and macroeconomic perspective for each country.

***Keywords* —** bank-based, market-based, SEE countries, shadow banking

I. Introduction

THROUGHT history banks were and they are still today most important financial institution for each economy in the world. Doesn't matter if is talk about well or less developed financial system, banks are main point for all parts of economy. But there are some facts which started to change that picture. First of all, it is obvious that market-based financial systems have lowest banking significance between other types of systems. Those bank importance declining had started with financial computerization, innovation, liberalization, etc. few decades ago. Also, there was strong pressure on banks through other financial institutions because they started to be real substitution for essence of bank business. All that circumstances push banks in very volatile and unstable future doing business field, what specially going on after the financial crisis in 2007.

Even shadow banking has always existed, expression shadow banking system started its popularity between scientists and financial workers after 2007. What means shadow banking system? Shadow banking includes a wide variety of activities and entities but there are two main problems: systemic risks and regulatory arbitrage. That is obvious from most cited definition of shadow banking from Financial Stability Board - the system of credit intermediation that involves entities and activities outside the regular banking system. There are many diverse interpretations of its definition (depending on financial system development, business circumstances, heterogeneous, different jurisdictions, etc.) and it is difficult to set unique definition which will be applicable all around the world. First task has to be to take shadow banking out of the shadows. That is one of the main reason for researching this theme. Main target of this article is to investigate shadow banking system in bank based financial systems in countries with same geographical features (Southeast Europe). Selected countries also have similar economic and political environment what puts their data more comparable. Those countries are Croatia, Slovenia, Bosnia and Herzegovina, Montenegro and Serbia.

This article is divided into five parts. After introduction, it gives literature overview which starting point is to shed light of definition and all aspects of it. Third part is about financial system structure and business circumstances in selected countries. After mentioned explanation, fourth part deals with shadow banking importance for financial stability and economic growth. Concluding remarks with future survey recommendations are briefly given in last part of article.

II. Theoretical Review

The term "shadow banking system" was firstly introduced by McCulley in 2007 although Rajan two years before recognized characteristics of same system which was later named by already mentioned McCulley. There is doubt about exact term because institutions involved in shadow banking was doing their business much before McCulley named shadow banking. He thinks the beginning of shadow banking was in 1971 in the U.S. when was introduced first Money Market Mutual Fund (MMMF). He claims it to be highly

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leveraged and unregulated financial institutions that do not benefit from a safety net or other official guarantees [1].

Shadow banks or non-bank financial intermediaries like traditional banks intermediate between borrowers and lenders of financial resources. They operate parallel to the formal banking system (because it is also sometimes called parallel banking system) and provide credit, liquidity and money-like financial instruments. Shadow banking comprises a set of intermediaries and activities that operate partially (or fully) outside the traditional commercial banking sector, and, as such, are either lightly regulated or not regulated at all [2]. These intermediaries include finance companies, asset-backed commercial paper ('ABCP') conduits, limited-purpose finance companies, structured investment vehicles, credit hedge funds, money market mutual funds, securities lenders, and government sponsored enterprises [3]. As was mentioned, there are many shadow banking activities: maturity transformation-use of short-term assets to finance long-term liabilities creating liquidity for the saver and exposing intermediary to rollover and duration risks; leverage-use of debt financing in order to multiply gains; liquidity transformation-use of liquid instruments to finance illiquid assets; credit transformation-enhancement of the credit quality of debt issued by an intermediary through the use of priority of claims (seniority of deposits or equity); securitization-pooling of loans into a portfolio, selling such portfolio to special purpose vehicles that finances them by selling securities in the capital markets; credit risk transfers-way of credit risk separation from other types of risks by passing it to other investors; repurchase transactions (REPO)-short-term transactions between two parties in which one party borrows cash from the other by pledging a financial security as collateral; securities lending-lending of securities by institutional investors to banks and broker-dealers against collateral of cash or securities; deposit-like funding-use of funds with characteristics of deposits but outside the regular banking system.

Official enhancements to credit intermediation activities in shadow banking have four levels of “strength” and can be classified as either direct or indirect, and either explicit or implicit [4]:

1. A liability with direct official enhancement must reside on a financial institution’s balance sheet, while off-balance sheet liabilities of financial institutions are indirectly enhanced by the public sector. Activities with direct and explicit official enhancement include on-balance sheet funding of depository institutions; insurance policies and annuity contracts; the liabilities of most pension funds; and debt guaranteed through public-sector lending programs.
2. Activities with direct and implicit official enhancement include debt issued or guaranteed by the government sponsored enterprises, which benefit from an implicit credit put to the taxpayer.
3. Activities with indirect official enhancement generally include the off-balance sheet activities of depository institutions, such as unfunded credit card loan commitments and lines of credit to conduits.
4. Finally, activities with indirect and implicit official enhancement include asset management activities such as bank-affiliated hedge funds and money market mutual funds, and securities lending activities of custodian banks. While financial intermediary liabilities with an explicit enhancement benefit from official sector puts, liabilities enhanced with an implicit credit put option might not benefit from such enhancements ex post.

A main component of shadow banking is the secured lending markets, particularly the repo market. In the U.S., the money market funds are usually included in the shadow banking sector and were an important source of funding for other shadow financial institutions, like securitization vehicles, via the purchases of their short-term debt. They are much less important in the euro area. However, in this respect, the relevance of their intermediation activity varies across countries and they are more closely tied to banks, therefore providing a powerful link between the shadow and the regulated banking sector [5]. That is one of important reason because data about shadow banking size vary across countries. Some of them are bank-based and some are market-based what implies different understandings about what fits in shadow banking sector among countries. Most comparable data are given through the Financial Stability Board (FSB). The Financial Stability Board (FSB) he assets of global other financial intermediaries (OFIs) have increased by 20% (USD 13 trillion) since the outbreak of the financial crisis in 2007. As the euro area economy has gradually shifted from bank-based towards market-based funding, the OFI sector has expanded significantly. Growth of the euro area OFI sector has outpaced growth in the U.S., but has lost in share globally due to other regions expanding at a faster pace. According to FSB statistics, euro area based entities accounted for 36% of global OFI assets at the end of 2014, compared to 32% for the second largest region, the United States [6]. Shadow banking is undoubtedly one of top interest finance area for all stakeholders and general public because of its large influence on economy.

However, in practice, shadow banks usually act procyclically, while an intensive use of leverage, the circumvention of regulations and lack of rules governing the failure of such institutions additionally threaten the overall financial system, especially if they are systemically important. Risks to financial stability include risks of potential budget expenditures for the bailing out of these institutions, risks to investors in shadow banks and risks to affiliated institutions with large exposures to such institutions, which can also be materialized in the form of fiscal costs. Given that shadow banks are not isolated from the remaining part of the financial system, problems that they might have can spread very quickly through financial markets and other financial intermediaries to other financial institutions, especially banks, and can also result in the cross-border spillover of instability [7].

III. DEVELOPMENT OF SHADOW BANKING IN SEE COUNTRIES

According to the World bank' definition of shadow banking, in advanced financial systems, the shadow banking typically includes money market, credit hedge, investment, and exchange-trading funds, conduits or special purpose vehicles as well as finance, insurance, and leasing companies. That said, in this paper we are using the measure of non-banking asset in total asset of financial intermediaries as an approximation of shadow banking. In extension of this paper (Figures 1 and 2) are given ratio of non-banking system excluding pension funds and banking system at the end of 2006 what represent pre-crises period and 2015 as last known situation. Furthermore, when discussing the importance of shadow banking for both financial stability and economic growth it is important to point out that there is significant distinction between the shadow banking in developed economies and the one in emerging market. It is worth mentioning that SEE savers are greater users of bank saving than their counterparts across Europe and in particular in the US, who traditionally hold a greater proportion of their savings in shares and bonds. In the latter, shadow banking system is much simpler and as will be showed, concentrated in insurance sector, leasing and factoring companies as well as investment funds. As all of the observed economies belong to the developing ones, the views presented in this part regarding growth and stability will refer to them.

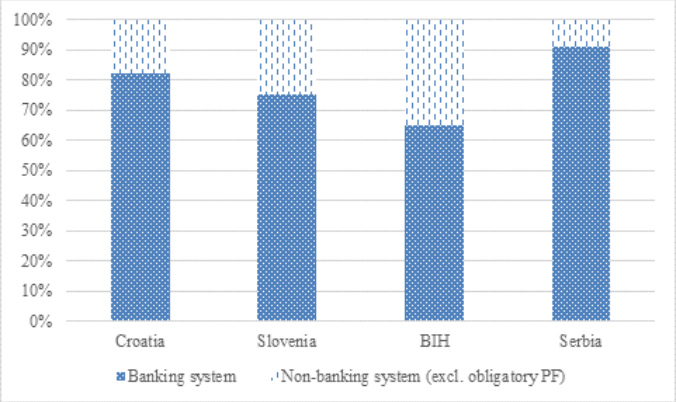

Fig. 1 Ratio of non-banking (excl. pension funds) and banking system in selected SEE countries at the end of 2006 [8]

We have observed the financial system of Slovenia, Croatia, Serbia, Bosnia and Montenegro as a representative of SEE economies and its development given certain common characteristics that arise from mutual influence through the development of the economy and banking sector alone. Furthermore, although our initial assumption was that any unified conclusion will be hard to get (as we have bear in mind the underdevelopment of certain economies and absence of data), we decided to made a pioneering research to launch a public debate on the relevance of non-banking institutions for economic development of selected economies.

Due to the lack of the available data in observed countries (beside Croatia) we have excluded the obligatory pension funds from the observed total asset of financial intermediaries. However, we must note that in Croatia, the share of obligatory pension funds in total asset of financial intermediaries amounted as much as roughly 10% of asset, and due to the similarity of the nature of financial systems of observed economies we suggest similar situation can be seen across the board, yet leaving the system highly bank-centric. That said, we have examined the share of banking system and non-banking system asset without obligatory pension funds in order to improve comparability among selected countries.

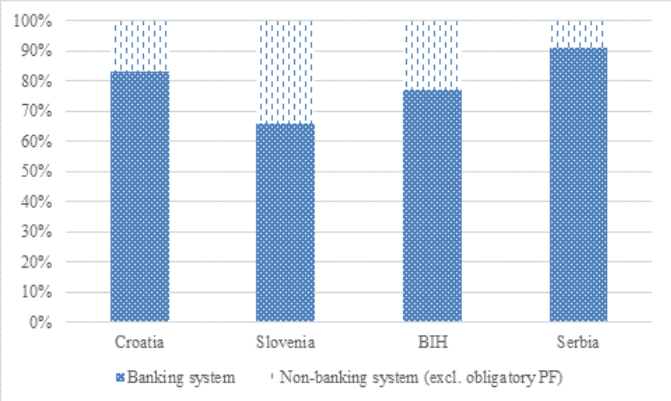

Fig. 2 Ratio of non-banking (excl. pension funds) and banking system in selected SEE countries at the end of 2015 [8]

In Figures 1 and 2 are given ratios of non-banking system excluding pension funds and banking system at the end of 2006 and 2015. Among the observed economies, Bosnia and Herzegovina has the highest share of shadow banking, standing at 35% at the end of 2015. However, we must note that certain discrepancies are arising from uneven methodology as through the entire period of observation the share of subjects classified as other financial institutions that includes some of the insurance companies and pension funds (excluded from the observation in other countries) as well as other financial intermediaries is standing at roughly 50%. Beside the mentioned, we relate Bosnia's strong share of shadow banking (but however declining) to the generally underdeveloped economy and banking system. As for Slovenia, the share of shadow banking is rather high, standing at 25% in 2015, same as in 2006. Opposite to the Slovenian performance, in Croatia after peaking in 2007, we have seen continuous standardization in share of shadow banking through the observed period (standing at 18% in 2015). Looking at Serbia, due to lack of data on certain subjects in the period before 2013 we cannot make justified development conclusions. However, in last three years Serbia saw a 0.5pp increase to approx. 9 % of shadow banking share in total asset of financial intermediaries, thus being below all of the observed economies. According to Montenegro, there is no available data on even general data like this one what is pretty pessimistic when we talk about transparency on financial data for country which first national target is to be member of European Union.

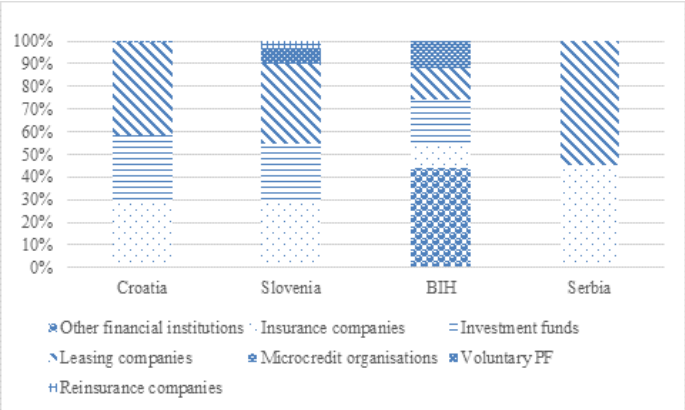

Fig. 3 Structure of non-banking system (excl. pension funds) in selected SEE countries at the end of 2006 [8]

In previous and below figures are shown structure of non-banking system excluding pension funds in Croatia, Slovenia, BIH and Serbia in 2006 and 2015. In Slovenia, a consistent share of shadow banking can be seen through the observed period as an increased regulation in the aftermath of euro zone entrance shifted financial subjects to the less regulated territory. The majority of shadow banking in Slovenia is comprised in insurance companies, followed by leasing companies and investment funds where it has to be noted that due to the prolonged period of low-interest rates environment, the share of investment funds in total has been increased recently after seeing a significant decline in the aftermath of 2008 global financial crisis, while at the same time leasing companies share continues its downward trajectory. With the low interest rates staying in place for the time being, we see similar performance going forth.

A brief look at the composition reveals insurance companies are taking slightly less that 50% of overall shadow banking in Croatia, followed by investment funds that have a tendency of increase while leasing companies share is facing downward path as lower interest rates enabled banks to provide similar services at lower costs. Furthermore, we must note that the latter is also the main culprit behind the decreasing share of shadow banking in Croatia as both insurance (41.4%) period and investment funds (+36.3%) increase was not enough to offset more than halved leasing companies asset in period 2008-2015. Similar performance was also seen in Slovenia but was substituted by strong increase in other segments. Bearing in mind Croatia is in period with low interest rates, it will force depositors to switch more and more to the asset under management we see potential for Croatia's shadow banking to increase stake in the near time future.

Looking at the contributions, as was the case in Slovenia and Croatia, the biggest stake is taken by insurance companies that account by roughly 65% of entire Serbia's shadow banking. Furthermore, leasing companies are once again losing their market share (from 55% in 2006 to only 20% in 2015). Indeed, the low share of shadow banking in Serbia does not come as a surprise as we bear in mind significantly looser regulation rules banks must apply compared to Slovenia and Croatia and underdeveloped business market in general with the investment funds barely accounting for 6% of overall shadow banking (17% in Slovenia and 21% in Croatia). However, its share seems to be growing in recent years and we see similar performance going forth as Serbia's recent reforms efforts in order to access EU seem to be starting to bear fruit.

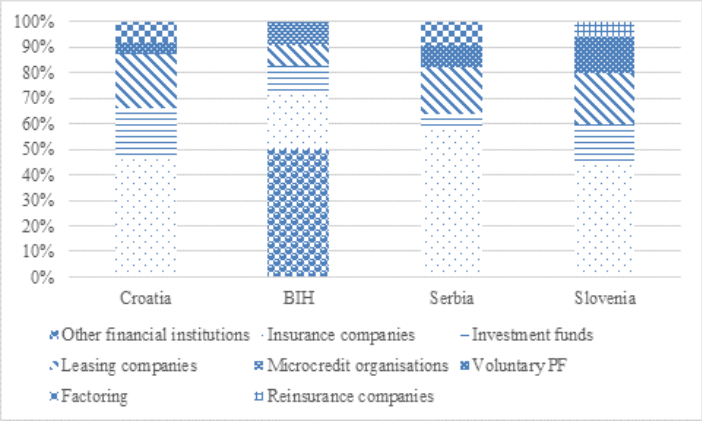

Fig. 4 Structure of non-banking system (excl. pension funds) in selected SEE countries at the end of 2015 [8]

According to Bosnia and Herzegovina, we relate strong share of shadow banking. The latter is thus resulting in existence of microcredit organizations (9% of total shadow banking in 2015) that are unknown to the other observed markets and other financial intermediaries. While comparing insurance companies and investment funds stake it is notable not only are both of them significantly below the average of other observed economies but are seeing stagnation in the recent period.

IV. IMPORTANCE OF SHADOW BANKING FOR FINANCIAL STABILITY AND ECONOMIC GROWTH

Regarding growth, according to the FSB's Global shadow banking monitoring report for the 2015, the growth of shadow banking has been associated with economic growth in recent years. That said, when adjusted for exchange rate effects, the FSB proved that among the observed jurisdictions, the ones with a greater increase in shadow banking assets between 2010 and 2014 tended to have greater increases in GDP in the same period. In context of the latter it is worth mentioning that among the countries that we have observed the strongest growth was seen in period before crisis which also happens to be the period where share of shadow banking in total financial asset has peaked. However, with the evidence presented above it is still not clear what comes first, shadow banking or GDP growth and what is the cause and what the consequence. However, there are same reasons that go in favor of shadow banking increase boosting economic growth. First of all, in economies with the underdeveloped banking sector and underdeveloped economy in general (such as Bosnia) the institutions of shadow banking like microcredit institutions (also exist in Montenegro) provide funding to the individuals or (more rarely) organizations that would not be

able to get them through usual banking system. With the assumption that money is well invested, it boosts growth on a longer time horizon, especially if we bear in mind that it is easier to have stronger growth when starting from a low base. Furthermore, institutions of shadow banking such as investment funds enable large deposit holders to have higher returns on their investments. At the same time investment funds aim to have a profit increase so they are naturally reallocating the available money to the most profit-giving sectors, thus supporting the general economy. The World Bank also highlighted that shadow banks can also provide funding and risk diversification as they can facilitate credit extension to certain sectors that might otherwise not have access to credit, and provide banks a range of tools for liquidity, maturity and credit risk management.

While bearing in mind the aforementioned, we must not forget to mention the possible impact of shadow banking on the stability of overall financial sector. The mere definition of shadow banking that says that it is either lightly regulated system or not regulated at all, suggest that it raises certain worries regarding the financial stability. In context of the latter, it is worth reminding that the risks related to the shadow banking sector are the main culprit standing behind 2008 global financial crisis. As was learned then one of the major risks of shadow banking lies in possibility of creating excessive leverage through using the asset that was once bought with the collateral to become the collateral itself for buying another asset and so on and on. Although the latter is not the problem in periods of economy expansion when in general the worth of assets gets bigger, it has a tendency to become the problem in the lower end of economic cycle when the worth of first collateral starts decreasing, all of which results in the market collapse. The shadow banking needs to offer higher yields to its depositors in order to compensate for stronger risk which can be a difficult task to fulfill once the economy enters recession and might even lead to the increase withdrawal of means that is not supported by some sort of central institutions as there is no lender of last resort. Last but not last, according to the World Bank commercial banks are often part of shadow banking chain, or provide explicit or implicit support to the shadow banking entities to enable maturity and liquidity transformation which means that the failure of an institution in the shadow banking sector could possibly generate significant contagion and effect the overall financial stability.

Complex financial institution participants are mutually, directly and indirectly, significantly interconnected intragrouped transactions what contributes riskiness of financial system. Their characteristic is systemic importance because they are source of new risk forms which require constant research and developing methods for their successful managing [9].

V. CONCLUSION

While doing this research the largest problem arise in the form on unavailable data in certain markets in general (like was the case in Montenegro) or the unavailability of longer time series and uneven methodology. That said, we must note the necessity of data publication and methodology compliance as the necessary key aim of observed economies in order to get some more clarity on shadow banking in the future. The latter would thus give us stronger insight on how we can more efficiently use shadow banking in order to boost growth and also help us deal with the negative aspects of shadow banking like increased systemic risk. Furthermore, as was discussed in forth part, beside positive effects, shadow banking may lead to the serious damages to the both financial sector and economy in general whereas the developing economies observed in this study should use the fact that their shadow banking is currently underdeveloped and much simpler than the ones in developed economies, all of which suggest that the stronger regulation and consistency of shadow banking could be imposed from the start, thus preventing the possible damage scenarios like the ones occurred in 2008. That said, although our initial assumption was that any unified conclusion will be hard to get given the underdevelopment of certain economies and absence of data, we see value in this paper as a pioneering research to launch a public debate on the relevance of non-banking institutions for economic development of selected economies.

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