GIVEN THE SPECIFIC FEATURES OF THE INSURANCE ACITIVITIES WOULD IT BE REASONABLE APPROACH TO SUBJECT THE IDNUDSTRY TO THE SYSTEMIC RISKS SUPERVISION?

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Abstract: The recent financial crisis has seriously impaired the economic stability and there is a broad consensus that lax supervision and weak regulation contributed to the crisis. As a result, substantial changes in supervision and regulatory environment are going to be implemented. The crisis unveiled that some financial institutions had been so interconnected with other financial companies that they might pose a risk to the whole financial system. Systemic risk supervision is also likely to increase globally. However, it was not proved that insurance industry has been the source or amplified the systemic risk, some segments of the industry were identified as a potential threat of the systemic risk to the financial sector. Therefore the new regulatory rules have been being drafted currently, we can expect that they provide some incentives for more effective operations of the insurance companies.

Keywords: Systemic risk; insurance activity and its systemic relevance; macro-prudential supervision; effective regulation, financial crisis.

Introduction

We have witnessed how increasingly globalized financial markets have become in recent years. This development has fostered concerns for plenty of issues; in fact the most discussed topic in recent months has been dealing with the question to which extent financial globalization contributes to financial instability and crises. The latest financial crisis has raised concerns over the systemic nature of the crisis. Since the economies have become increasingly interconnected and hence interconnections among risks have also moved upward notably, the importance of understanding and managing systemic risks has come into focus. Systemic risks are inherent to every system, not only the financial system. Nevertheless, the universal scope of the latest crisis has raised awareness of the mentioned interconnections and it has revealed the need to think differently about risk landscape.

Financial crisis has shown how urgent the need to reform global financial system has become. It has been clarified that the response to the current financial crisis must be systemic as well as global; i. e. significant improvement of our insights into these interdependencies is a core matter for us to be able to tackle the origins of the crisis and to avoid its eventual repetition in the future. Effective regulation appears to be part of the solution. Systemic risk supervision is also likely to increase globally. Among the many proposals under consideration there is an effort to apply more stringent supervision and onerous regulation to "systematically relevant institutions". Persson (2007, p.1) suggests *"Regulation, supervision, crisis management, and crisis resolution need to be internationally coordinated, in the end, formalized."*

Currently there are plenty of ongoing discussions on addressing systemic risk in insurance and the way the insurance industry should be handled in terms of regulation and supervision. Preliminary considerations have introduced macro-prudential supervision. The main issues concern the problem to what extent insurers and reinsurers should be subjected to systemic risk supervision as some large financial institutions have been so interconnected with other financial institutions recently, that their problems might impair the whole financial system. The most policymakers agree that there is little evidence that insurance industry could pose systemic risks. Nevertheless, some segments of the industry were identified as potential sources of systemic risks; these will be specified later in this paper.

The aim of this paper is to highlight the differences between business models of the banks and insurance companies, to point out the problem arising from applying the same regulation principles to banks and insurers, and to identify the possibilities for regulation of financial institutions that could potentially cause systemic crises.

1. Insures and their performance during the crisis

The insurance industry passed through the crisis quite well and proved its resilience. In addition, (re)insurers have been rather affected by the crisis, than causing main instability problems. For many insurers direct exposure to the epicentre of the crisis, the U. S. mortgages market, seems to have been limited. Those (re)insurers that have encountered the most severe difficulties were hit as a consequence of their own over-exposure to non-core activities. Also a number of concentrated exposures to credit and market risks has been pointed out; i. e. mortgage and financial guarantee insurers or financial conglomerates. In general, the negative impact of the crisis varies on their business models. The highest losses have been experienced by the insurers with large banking operations or exposure to credit risks. This can be demonstrated by the fact that more than 90 % of the total support provided to the insurance industry flew to the few ones with significant banking activities.

Specifically, limited incurred losses have been reported by insurers with limited banking operations. The insurers operating in the frames of this business model have been negatively affected mainly due to mark-to-market decreases in assets valuations, reduced liquidity of certain types of assets, a high level of financial markets volatility and an exposure to the defaulted banks. However, recent higher levels of confidence in finance markets powered by the recovery in assets valuations have almost restored (re)insurer´s capital to its pre-crisis levels.

Bank-insurance conglomerates have been hit much harder. As an example ING can serve. It was provided with more than USD 40 billion in State support. Its problems arose from banking operations, namely the acquisition of the U.S. thrift when performing an expansion of its online savings division. The acquisition subjected ING to the rules of thrift regulation and in order to comply with them, ING had to acquire more than 55 % of mortgages backed securities (MBS). Since the default rates on these mortgages began to rise, the market value of MBS portfolio decreased significantly and ING had to increase the quantity capital they held against the portfolio. Finally, the Dutch government had to take over 80 % of the portfolio. Nevertheless, we should bear in mind that not all the insurers operating in this business model have been hit by the crisis.

Insurers with wholesales banking operations have gained negative popularity. In this group it is AIG which had the largest problems. Most of them arose in their Financial Products division, this division sold credit protection through credit default swaps. The protection buyer does not need an insurable interest in the underlying security; therefore CDS are not considered as insurance products. Hence the Financial Products unit was not supervised by the British insurer´s regulator, FSA. Although, the Financial Products division had always only a small share of the AIG´s revenues, their transactions were highly leveraged. As banks were the most important counterpart for the AIG´s book of business, it has turned out that the AIG could not meet collateral requirements for their CDS. At the end, an intervention by the U.S. Treasury saved the company.

Insurance companies may not be frequent counterparties to credit default swap operations, while the capacity of the sector to take part in these operations is strictly limited by the regulation. Actually, the capacity of insurers to participate in derivative activities varies across different types of jurisdiction; e. g. European insurers are strictly limited to sell but not necessarily to buy credit default swap protection. However, the fact that the AIG was engaged in these non-core activities at such a leverage scale was a factor that has worsened the global crisis deeply. On the other hand, and rather surprisingly, these operations have caused only a limited damage to the core-insurance business of the company. Nevertheless, the AIG´s problems have pointed out the need for an effective group supervision.

The last group refers to monoliners, these have come under a heavy pressure during the crisis. It has been argued that monoliners have played a large role in generating and amplifying the crisis. Monoliners have quite a different business model from other insurers because they sell financial guarantees for other investors. It has been emphasized that problems encountered by financial guarantors have spread quickly to the banking sector and capital markets as there is a high level of interconnection through the guarantees. Market valuations and rating pressures have played a large role as the trigger of a downgrading spiral. A subsequent downgrading of the various entities presented in this sector has caused a huge wave of downward pressures on valuations of the linked securities presented in the portfolios of many other financial institutions. In fact, a monoliner´s risk profile is quite similar to that of a bank and that is why it has been suggested that a regulation of monoliners should be consistent with the banking regulation.

1.1 Differences in the business models of banks and insurers

There are no doubts that insurers have fared much better during the crisis than banks. The main reasons are fundamental differences in business models of insurers and banks. These have profound implications for the structure of new regulations. The key differences arise in their exposure to liquidity risks as insurers are considered not to be prone to "runs" and there are also fewer interconnections and a lower level of volatility in the industry.

Insurers, especially the life ones, are huge investors and they tend to have longer-term investment horizons than banks; thus their capacity to hold the major part of the investment portfolio until the maturity is much higher, which helps them to overcome short-term market shocks. Insurer´s liabilities consist mainly of reserves for claims, and these usually cannot be withdrawn by policyholders on request, but only when a loss event occurs. Also these liabilities are usually paid out over a prolonged period of time, while the insurer´s assets are usually quite liquid as they must be invested in accordance with regulation rules. On the contrary, there is a high liquidity risk exposure of banks. This is a result of fundamental duration mismatch of the assets and liabilities. The liabilities are represented mainly by the short term funding (often immediately callable), on the other hand their assets are usually long term and represented by loans. Secondly, insurers normally don´t lend each other as much as banks tend to do and that makes them far less interconnected. As the next plausible reason can be mentioned, that insurance companies face different risks in comparison with banks. Banks predominantly fear credit risks, which represent about three quarters of their retained risk. In comparison, credit risk represents less than one quarter or the insurer´s retained risk. As the most important risks for insurers market and underwriting risks are considered. Reinsurers face mainly credit, market, life and P & C underwriting risks.

2. Systemic risks and its significance for the insurance industry

The global crisis 2007-2009 has seriously impaired the economic stability and there is a broad consensus that lax supervision and weak regulation contributed to the crisis. As a result, substantial changes in supervision and regulatory environment are going to be implemented. The crisis unveiled that some financial institutions had been so interconnected with other financial companies that they might pose a risk to the whole financial system. Hence, systemic risks supervision is expected to increase globally. It was not proved that insurance industry had generated or amplified systemic risks; the points of views towards the industry and its role in systemic issues vary significantly. Some theories argue that insurers have not originated and repackaged subprime mortgages and have not acted as major investors in mortgage backed securities, but to the contrary they have presented themselves as the stable industry capable of absorbing market volatility. Others argue that it is the insurance product, the credit default swap (CDS), that has almost brought down the global economy.

As we can observe the opinions differ notably, nevertheless there is broad consensus that some segments of the industry have been identified as a potential threat of systemic risks, and these must be subjected to an additional focus.

2.1. Defining the Systemic Risk

Defining the systemic risk in highly securitized and globalized markets, it is agreed that the systemic risk is created by unexpected events that heighten uncertainty significantly and impairs market liquidity. The created illiquidity leads to price gaps in individual markets and in the pricing of specific assets. Subsequently related stress extends to the funding liquidity of financial institution across the World (Lipsky, 2007, p.1). Mishkin (2007, p.1) defines the systemic risk as *"the risk of a sudden, usually unexpected, disruption of information flows in financial markets that prevents them from channelling funds to those who have the most productive profit opportunities."* Kane (2007, p. 4) argues that *"systemic risk concerns the chance of a system breakdown or devolution. Breakdowns may come from damage that spreads contagiously from one part of network to another or from the disintegration of one or more network connections."*

As we can observe there is no uniform definition of systemic risk. Generally it is understood as the risk of economic disruption that stems from the financial sector and seriously impairs the economy. Most recently referenced definition of the systemic risk is the one from Financial Stability Board (FSB). FSB mutually with BIS and IMF (2009) define the systemic risk as *"a risk of disruption to financial services that is, first, caused by an impairment of all or parts of financial system and, second, has the potential to have serious negative consequences for the real economy*." Fundamental to this definition is that the systemic risk causes negative externalities and/or market failure.

In order to asses and identify the systemically relevant institutions FSB has posted the set of criteria, i. e.: size, interconnectedness, substitutability. IAIS argued that also the speed of a loss transmission should have been concerned. Hence the fourth criterion, time, was added. FSB also specified the set of secondary criteria, which are understood as the contributing factors that might increase a vulnerability of some units, i. e: complexity, leverage and liquidity risk and large mismatches.

Despite the fact that the stated criteria have been broadly accepted, it is important to note that their impact on financial system might differ from different activities. Therefore it is crucial to apply these criteria to the particular activities, not to the institutions. While focusing blindly on the list of the systemically risky institutions may pose additional regulatory burden on some units whilst potentially skipping some units which do carry out activities subjected to the systemic risk. In addition, the Geneva Association warns that this may encourage risk migration, leads to underestimation of systemic risk and creates a moral hazard.

To point out the importance of assessing the institution´s activities as a potential source of the systemic risk, we will try to perform more scrutiny evaluation of the criteria and potentially risky insurance activities. First, we would like to evaluate the criteria towards the systemic risk concerning the whole entity. Subsequently, we will bring up the list of the most discussed and the most frequently raised concerns toward the systemic relevance of insurer´s activities.

Size

Size is a basic measure of the risk. As large insurers tend to be well diversified both geographically and across the lines of business, they are exposed to the wide range of risks (market, business, insurance risks). Since these risks are highly uncorrelated, the sum of total risks institution faces is smaller than the sum of the individual risks. Usually, the typical large insurer appears to be more diversified than the typical large bank. This can partially explain why insurers have performed much better during the crisis, than banks have.

Nevertheless, the significance of the size for the systemic risk depends on the structure of institution´s activities, its respective importance and possible influences of other systemic risks factors, such as interconnectedness. The Geneva Association highlights that it is not the size that represents the danger, but the undiversified size.

Interconnectedness
Only at condition that the risk can be transmitted, the institution or its activities can pose a risk to the entire financial system. There are several types of interactions and interconnectedness within the financial sector, however apparently identical types of interconnectedness may have quite different effects on the financial system. Reinsurance operations between insurers and reinsurers and the CDS operations between banks can be mentioned as an example. Both activities involve several parties, however, reinsurance transactions can have potential to mitigate the systemic risk, whereas the CDS operations can amplified it. There is no argument that interconnectedness is not relevant factor for the systemic risk assessment, but interconnectedness can be highly important factor for some activities and its relevance to the systemic risk, however for other activities it might represent a little of importance.

Substitutability
Substitutability is assessed by answering the following questions: Whether the institution poses any technical specificities or play such an unique role in the market that it would be impossible to find a substitute in the market in short-run in the case the former unit had ceased to exist. The second question concerns whether the capacity of the company deploys market to such extent that other are unable to enter with the capacity sufficient to enable the market to clear. Following these test, the insurance industry is substitutable and hence not systematically relevant by this criterion.

Timing
Timing of the claims payments takes usually much longer, which has stabilizing effect on insurer´s balance sheets. For example, according to data provided by Swiss Re (2010, p.6) it takes about 9 years to repay 90 to 95 % for medical malpractice liabilities, furthermore, less than half of the claims on World Trade Centre were settled two years after the event (The Geneva Association, 2010, p. 28). As a consequence, insurance books of business can usually be liquidated by regulatory authorities in orderly manner. To the contrary the failure of bank and consequent closer of the wholesale funding markets may immediately trigger a funding crisis and collapse of the banking system very quickly. This makes the process of winding down banks in orderly manner much more complicated. Thus man can argue that insurer´s bankruptcy represents less systemic risk than failure of the bank. However, The Geneva Association notes that according to judgments of the U.S. policy-makers, the difficulties encountered by the AIG FP division presented huge immediate systemic threat. This again highlights the fact that in order to assess the systemic risk relevance, it seems more appropriate to consider rather activities than the institution.

2.2 Application of the criteria the particular activities

In addition, the previous paragraphs have revealed some inconveniences when using these criteria towards assessment the systemic risk concerning the single entity approach. Consequently for the regulatory purposes, to apply these criteria rather to the particular activities that insurers engage than to the single institution appears to be more reasonable approach. There was the scrutiny analysis of the specific insurer´s activities that are interconnected to other parts of the financial system and might have a potential to pose the systemic threat performed in the report on Systemic Risk in Insurance provided by The Geneva Association. The activities carried out by insurers were divided in to 5 categories, i. e. Investment Management activities, liability origination activities, risk-transfer activities, capital, funding and liquidity management, selling credit protection. Next, I will try to summarize the outcomes and point out whether there is a potential of the systemic threat.

Applying the FSB´s criteria to the industry relevant activities we can conclude that typical insurance activities do not pose any systemic risk. However non-core activities have been assessed as a potential treat concerning the systemic risk. These are derivates trading on non-insurers balance sheets, including the CDS trading, the mis-management of the short-term funding raised using commercial paper or securities lending. As potentially systematically relevant activity is considered as well credit protection, namely selling financial guarantees. Thus it has been argued that monoliners should be subject to the same regulation and restrictions as a bank carrying similar activity.

In general, the most frequently discussed are hypothesis whether (re)insurers could cause a systemic failure through direct impact of default on the real economy, their role as a large investor in the financial assets and their interconnectedness to the banking industry. Concerning the impact of (re)insurance companies default, there is an orderly process of resolving the insurer´s liabilities in the most of jurisdictions. By doing so the regulatory authority takes over the insurance company, in the mean time company is not allowed to write any new business. The company´s assets are invested and matched with the liabilities and thus claims can be paid when due. If the insurer´s assets are insufficient to cover all liabilities, the regulator turns to the insurance industry to pay outstanding claims.

Speaking about the second issue, (re)insurers represent one of the most important investor in the financial markets. There were some worries that in the case of distress, the large portfolio shifts by performed by insurers could trigger significant pressure on asset prices and thus to cause financial instability. However, it is broadly agreed that unless forced by the regulatory or accounted rules, insurers don´t tend to sell assets in panic which could amplify asset value declines.

The last issue deals the interconnectedness with banking sector. For instance concerns were raised about possibility of insurer´s massive sales of the bonds issued by banks; however it is agreed that the amount of the bank depending on the insurers for financing is very negligible. As the well known potential channels of contagion are often mentioned derivates and letters of credit, which insurers in most cases purchase. Thus default of insurers will not cause significant harm to the banking industry. However, vice-versa problems in banking sector may have negative impact to insurers.

2.3 Addressing the systemic risk

To mitigate possible systemic threat arising from insurance activities it is inevitable to establish an efficient risk monitoring and to figure out whether the regulations in major financial services jurisdictions are well designed or whether they must be supplemented with new measures.

Since the derivates activities at non-insurance balance sheets and the CDS writing pose a systemic risk, there is a need to mitigate the risk arising from these activities. As a plausible solution appears an establishment of effective group supervision. Under this is usually understood, supervising the international insurers, which are mostly operating within the holding company, or group framework, by one regulator responsible for the entire entity. Thus the capital and liquidity requirements would be laid down for the entire group, based on risks arising from all its activities. Another possible solution for addressing the risk from derivates activities is the idea of establishing clearinghouses. This institution provides clearing and settlement services for the financial and commodity derivatives and securities transactions.

This grants certain level of transparency to the markets and regulators. Addressing the risk arising from the sales of financial guarantees, it is suggested that monoliners should be subjected to the same regulation and restrictions as a bank carrying the similar activity.

The crisis also revealed the need for improvement in liquidity risk management. Since the traditional insurance business does not give rise to liquidity risk, some non-core activities during the period of market stress suddenly needed additional liquidity. It is essential that both the insurers and the supervisors must improve their liquidity risk monitoring and understanding.

Currently, new regulatory systems, based on risk approach and group supervision concepts, are being put in place or have been already in place. Concerning Europe, these are Solvency II and the Swiss Solvency Test respectively. In the U.S. the Dodd-Frank Wall Street Reform and Consumer protection Act were passed lately, these frameworks also address the issue of the group supervision. As the new regulatory changes have been being drafted at the moment, we can expect that they provide some incentives for more effective operations of the companies. Also Enterprise Risk Management have been brought in to the focus, this will intensify the usage of scenarios and stress tests, which should mitigate the probability of any future financial crisis. As the crisis was global, the awareness of establishing effective international regulatory framework increased and to widen cross-border cooperation seems inevitable.

Conclusion

In addition, insurers weathered crisis relatively well, with some notable exceptions. Insurance regulation has been considered to be reasonably adequate however, it is clear that some areas of the supervision and regulation must be immediately improved. This should benefit supervisors, insurers and as well as policyholders. In this point there arises a danger, that in order to create additional safety for policyholders more stringent capital requirements will be implemented. Nevertheless, excessive capital requirements may negatively impact insurance business and hence ultimately hard would be policyholders. Excessive regulation may as well give a rise to competitive distortions, e. g. between companies performing in the different jurisdictions. Therefore careful analysis of the gaps and deficiencies in the regulatory and supervisory frameworks is essential. Since (re)insurers are very unlikely to pose the systemic risk to the financial system, it is assumed that there is no need to subject the insurance sector to the systemic risk supervision. As the insurance sector is impacted by the systemic risk, therefore the introduction of macro-prudential surveillance is broadly accepted.

Literature:

1. *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations,* [online], Monetary and Capital Markets Department, International Monetary Fund Monetary and Economics Department, Bank for International Settlements and the Secretariat of the Financial Stability Board, 2009, [cited 9thJanuary 2010]. pp. 30 (PDF). <http://www.financialstabilityboard.org/publications/r_091107c.pdf>
2. KANE, E. J. Incentive Conflict in Central Bank Responses to Sectoral Turmoil, in *Globalization and Systemic Risk*, 1. iss. Singapore: World Scientific Studies in International Economics, 2009. pp. 121-145 ISSN: 1793-3641
3. LIPSKY, J. Through the Looking Glass: The links between Financial, in *Globalization and Systemic Risk,* 1. iss. Singapore: World Scientific Studies in International Economics, 2009. pp. 3 –12. ISSN: 1793-3641
4. MISHKIN, F. S. Remarks on Systemic Risk and the International Lender of Last Resort, in *Globalization and Systemic Risk,* 1. iss. Singapore: World Scientific Studies in International Economics, 2009, pp. 27- 38. ISSN: 1793-3641
5. PERSSON, M. Crisis Resolution in a Global Context: Regulation and Supervision for Cross-Border Banking. In *Globalization and Systemic Risk,* 1. iss. Singapore: World Scientific Studies in International Economics, 2009, pp. 379-389. ISSN: 1793-3641
6. STIGLITZ, J. *Making globalization work,* Penguin Books, 2007, ISBN 978-0-141-02496-7
7. *Striking the right balanace: Insurance and systemic risk regulation*, [online], Zurich, Swiss Reinsurance company, 2010, dokument [cited 9th January 2011], pp. 12. (PDF). Available at WWW: <http://media.swissre.com/documents/Striking_the_right_regulatory_balance2.pdf>
8. *Sigma No 3/2010, Regulatory issues in insurance,* [online]. Zurich, Swiss Reinsurance company, 2010. dokument [cited 9th January 2011], pp. 32. (PDF). Available at WWW: <http://media.swissre.com/documents/sigma3_2010_en.pdf>.
9. *Systemic Risk in Insurance,* [online]. Geneva, The Geneva Association, 2010. [cited 7th January 2011], 122 pp. (PDF). Available at WWW: <http://www.genevaassociation.org/Portals/0/Geneva_Association_Systemic_Risk_in_Insurance_Report_March2010.pdf>

Primary Paper Section: A

Secondary Paper Section: AE, AH