FINANCIAL INNOVATIONS AND PRUDENTIAL REGULATION - IMPACT OF NEW RULES OF BASEL III

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Abstract

The recent financial crisis, that has left its mark on the global economy, highlighted the problems of ensuring the stability of the banking sector. At the end of 2010 year, G20 meeting has determined the need of approval of new standards of banking regulation and international settlement named Basel III. The present study is an attempt to present the changes imposed to the new supervisory agreement and to determine the preparation of banking sector for implementation of new provisions.

Keywords: financial crisis, BASEL III committee, financial innovation, financial derivates.

JEL Classification: G01, G15, G18

1. Introduction

One of the many useful lessons that the crisis has taught to regulators and governments authorities from many countries was that regulatory models, at the national level, are doomed to fail in an integrated and interconnected global financial system, in case when financial institutions and the "shadow banking system" know no borders. (Berger, A. N., 2003).

Several factors can explain the rapid growth of the financial sector. First, technological progress in communications and information technology has given a fillip to the expansion of trade in financial services. The use of innovative processes and technologies in the financial sector has transformed its *modus operandi* (Financial Stability Board, 2011)

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Tendency of practical application of financial innovation continues with the growing use of banking services based on Internet. More, deregulation trends have dominated for a long period of time, while regulation highlights some niches in the financial sector, that led to a situation when considerable amounts of capital that have been directed towards such options.

Financial innovation is linked with prudential regulation when first may help to the latter. Such-called “regulatory arbitrage” has been one of the reasons why financial innovation has been criticized so much during the past three years. Taking into account the recent financial crisis, financial innovation was blamed for allowing prudential regulation to be bypassed.

Regulatory arbitrage and short-term profits were considered as one of the notoriously sad ‘achievements’ of financial innovation, at least in the last decade, enhancing the welfare of few to the detriment of the many.

Nonbank institutions were active in equally dangerous financial instruments, without having to comply with prudential requirements relating to capital adequacy or liquidity that banks abided by, thereby distorting competition and creating leverage in the world economy which proved to be disastrous.

The main arguments in favor of financial innovation were function of coverage, that means increasing the completeness of financial markets and investment function, the realization of which contribute to growing of the stable efficiency of the economy.

The importance of innovation for the contemporary financial market, characterized by a high degree of information asymmetry is mentioned by Stiglitz and Weiss (1981) remark seeing in them the only constructively way in forming the new economy, resistant to future hazards and exposures. The need of use the financial innovations is approached and in Principles of innovative access to finance resources made by G20 in order to remove barriers to financial services.

Research of specialized literature has shown that in case of evaluation of financial innovations is need to take into account their nature, that are observed in both negative and positive effect in the process of formation and development of competition in the banking system. Their essence is researched (studied) in such key aspect as: increasing the efficiency of the financial system, their role in risk management and the degree of influence on changing of banking system.

New reality of the financial world is characterized by increasing interdependence between the banking sector and financial markets. That´s why, ensuring a correct regulation of the activity of commercial banks on the financial market requires a globally coherent legislation. This problem was solved by the BASEL I and BASEL II, but the financial crisis has forced the appearance of new and more stringent and actual regulations.

The financial crisis has led to the need for reform of market of financial derivatives as first financial innovation, which was started in the USA, which in 2010 approved the Law of Dodd - Frank about regulation of financial derivatives. The same measures were applied and in EU in 2012.

The Basel III standards are formulated requirements about the need of evidence of liquidity risk for derivative financial instruments and the need to ensure additional liquidity, taking into account changes in the market value of derivative contracts. Implementation on time (appropriate) of legislative changes and regulatory mechanisms of the world states will allow changes of off-balance derivatives market[1].

Most economists attribute to financial innovations the main role in financial crisis of 2007 - 2009, but do not forget about the influence of macroeconomic disproportions, of the cheap money, of increased financial leverage and failures of the regulatory authorities.

Next we try to present the development of financial innovation that will allow us to characterize further the need for and role of BASEL III.

Figure 1. Logistic chain of the development of financial innovations

[1] http://www.bis.org/list/basel3

Financial innovation has changed the risk profile of financial institutions and significantly contributes to increase the interconnection between financial institutions and among non-financial institutions. Following the crisis, prudential regulations are being revised and made more stringent in order to reinforce financial sector. The design of the regulatory framework for financial services is important because of speculative nature and complexity of the financial system, which emphasizes the significance of building trust and protection of reputation in this sector.

The important potential of financial innovation represents the efficient allocation of capital and risk of reduction the cost of capital, which is reflected in increased productivity and economies around the world.

2. The characteristics of BASEL standards

Rules of capital adequacy of BASEL I and II were not sufficient to cover risks arising from banks' exposures to the transactions and instruments, such as securitization or derivatives instrument and also, is not taking into account the systemic risk presented by the accumulation of leverage effect in the financial system.

Several non-banking institutions, on the outskirts of prudential regulation are guilty for excessive leverage effect. Pension funds and asset managers bought dubious financial products or were exposed in such way to the sellers of such products. Private companies caused increasing of financial leverage in the corporate sector, while credit rating agencies failed to quickly warn about the dangers of certain financial instruments. All these events suggest that prudential regulation should not focus exclusively on banks.

Following the recommendations of several study groups that have been established to examine possible responses to the crisis, the new framework of BASEL III sets higher requirements for capital and liquidity, both in terms of quantity and quality, to ensure that banks are better equipped to absorb losses such as those relating to the global financial crisis. BASEL III supposes a better risk coverage, especially on activities from capital market.

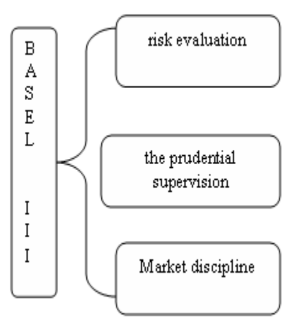
Of course, under BASEL III is charged continuation of provisions of BASEL II in direction of optimizing assessment of lending risk of bank's portfolio based on internal models of commercial banks, according to which, size of capital was determined according to VaR model credit as:

- Credit Metrics;
- Credit Risk+;
- Credit Portfolio View;
- Portfolio Manager.

General Secretary of the BASEL Committee for Banking Supervision affirms that "many thought that BASEL III is related to promoting models which are taking into account the entire credit cycle. In light of the recent crisis, during which financial institutions did not realized modeling correlations between bank risk assessment, especially in the mortgage market, I do not think we should continue with implementation of this model" (this is about application of VaR model). (Basel III and European Banking: Its Impact, How Banks Might Respond, and the Challenges of Implementation, 2010).

According with many scientists, BASEL III is "a combination, a symbiosis of new methods, innovative in ability to assess risks (operational, credit and market) and creating the necessary capital for prudential supervision of market discipline".

Figure 2. The elements of BASEL III



Only the combination of the three elements can be called supervision risk - oriented, which according to the ideas of Basel Committee on Banking Supervision, is able to ensure financial stability.

BASEL Committee, in collaboration with other organizations, has developed new regulatory standards that will be gradually implemented till 2019.

In the category of factors that influenced on new regulations are included financial innovations that we were talking about till now.

The main changes of BASEL III are relating to the tightening requirements for Tier 1 capital, which includes only simple actions and undistributed profit.

The capital is the resource attracted by the bank throughout its existence and will be used to cover bank losses. Much of the capital is made up of simple actions and undistributed profit. The Basel III makes clear distinction between capital and financial bonds. This separation is caused by market invasion with instruments of the financial engineering of second generation, meeting itself features both capital and debt and allow investors in good times for bank to make profits close to those of capital, but do not wear identical responsibility to shareholders.

Thus, Basel III increases the loss-absorbing capacity of banks and therefore their resilience to crises by introducing capital requirements which oblige banks to build up capital in good times, which can be used in periods of distress. Such capital buffers will allow cyclicality in the banking system to be mitigated. First, at a micro-prudential level, the Tier 1 capital requirement, which incorporates common equity and other financial instruments, increases from 4% to 6% (without taking the conservation buffer into account).

Furthermore, Basel III adopts a countercyclical buffer (between 0 and 2.5 per cent) which comprises common equity or other capital. This buffer is regarded as an extension of the conservation buffer range. The countercyclical buffer will alleviate the risk of less available credit due to capital requirements (European Commission, 'Proposal for a Regulation of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories', 2010).

During the implementation of provisions of Basel III, financial institutions are advised to cut dividends and awards paid to create the two forms of capital supporting.

Table 1

Minimum value reached at 1 January of each year

Indicators (%)	2013	2014	2015	2016	2017	2018	2019
Shareholding capital	3,5	4	4,5	4,5	4,5	4,5	2,5
The buffer			0,625	1,25	1,875	6,375	100
Shareholding capital - the buffer	3,5	4	4,5	5,125	5,75	8	9,875
Decrease the pillow of 15% for financial instruments that enter into the calculation of capital adequacy		20	40	60	80	4,5	2,5
Capital Adequacy Ratio	8	8	8	8	8	6,375	100
Capital Adequacy Ratio - the buffer	8	8	8	8,625	9,25	8	9,875

Source: European Commission, 'Proposal for a Regulation of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories', 2010

Non-banking institutions have been active in trading with dangerous financial instruments, without having to comply with the prudential requirements on capital adequacy and liquidity that banks have respected, distorting competition and creating leverage in the global economy, which proved to be disastrous.

Prudential regulation can negatively affect the scope and speed of financial innovation. However, this may also lead to a reorientation of financial innovation back to its initial, socially valuable function of managing risk and allocating capital. In the long term, well-designed prudential regulation and appropriate incentive mechanisms can delay, but will ultimately enhance well-thought out financial innovation. Be this as it may, financial innovation has come to the forefront and has drawn regulators' attention.

In USA, security and exchange commission created a new subdivision that deals only with innovations. Especially, was assessed risk of financial innovation and realized shining of complex financial instruments. As result, supervisory authorities around the world have been criticized for their failure to understand the mechanisms of derivatives markets and deployment of hedge funds.

In addition, the new regulatory framework for banks introduces minimum global liquidity standards. Two standards are central in this respect:

- the short-term liquidity coverage ratio (LCR), which aims at promoting short-term resilience of the liquidity risk profile of a given bank;
- the long-term (i.e. one year) standard, which is called the structural net stable funding ratio (NSFR), is expected to give incentives to banks to look for more stable sources of funding rather than rely too heavily on short-term wholesale funding. A transitional period ensures that the LCR will not be introduced until 2015 and the NSFR is to be introduced by 2018. (Basel III and European Banking: Its Impact, How Banks Might Respond, and the Challenges of Implementation, 2010)

An important development constitutes the strengthening of capital requirements and risk management in case of counterparty credit exposures stemming from derivatives, repo and securities. Thus, banks are required to have additional capital to cover possible risks caused by the deterioration of the credit quality of the counterparty. Regarding derivatives instruments, objective is to stimulate banks to move from over-the-counter (OTC) to central counterparty's (CCP) derivatives contracts.

Importantly, Basel III foresees the establishment of an internationally harmonized leverage ratio to constrain excessive risk-taking and to serve as a backstop to the risk-based capital requirement. The ratio will include both on- and off-balance sheet exposures and derivatives and will be tested at 3% from 2013 to 2017 (European Commission, 'Proposal for a Regulation of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories', 2010).

These activities with financial derivates will be affected in two main ways by introduction of BASEL III regulations.

First, the stressed value at risk, the incremental risk charge (IRC), and the comprehensive risk measure (CRM) for correlation trading under the European Union's Capital Requirements Directive III (CRD III) will require banks to hold more capital for market risk.

Second, the newly introduced credit valuation adjustments (CVAs) under CRD IV will require banks to hold more capital for counterparty credit risk. The CVA requirements remain high despite their mitigation in the July 2010.

Most affected will be transactions with counterparties with less rating and transactions with counterparties with limited capacity of placement. Sales of products of risk management to companies would be one of the solutions for these transactions. (Basel III and European Banking: Its Impact, How Banks Might Respond, and the Challenges of Implementation, 2010).

For banks, maintaining profitability would represent costs compensation through a combination of improved security and compensation arrangements, a more efficient management of the CCP, and the movement of enterprises and products for central compensations platforms in counterparty outside the bank.

For example, proposal of regulation Commission about OTC financial derivatives instruments, about CCP registers of transactions is in the process of being adopted (Degryse H.; Ongena S., 2004). This proposal introduces reporting requirements for OTC transactions, an obligation of compensation for certain categories of OTC derivatives, measures to reduce credit risk of counterparty for bilaterally cleared OTC derivatives; common rules for central counterparties and central registers and rules for establishment of interoperability between CCP.

Detailed information about OTC derivative transactions signed by financial companies from EU (such as banks, insurance companies and funds) and non-financial firms (for example, energy companies, airlines and manufacturers), with significant positions on OTC derivatives market should be reported by the central registers and accessible supervisors authorities.

More than that, central registers of transactions should publish aggregate positions by categories of financial derivatives instruments that should be available to all market participants. Given the systemic importance of CCP, the proposal provides that they must respect stringent capital requirements, organizational and business conduct standards (for example, disclosure of prices). CCP compensation for standardized contracts become compulsory, while are prescribed standards for risk attenuation, like exchange of collateral not cleared contracts by a CCP.

There are, however, a number of additional interventions, both general and specific to Basel III, which banks should consider:

- a set of interventions "no regret" to reduce capital and liquidity inefficiencies for effective implementation of the new rules;

- restructuring of balance sheet for improving the quality of capital and reducing capital needs generated from Basel III deductions and more efficiently management of balance limited resources;

- adjustments of creating capital model, models of efficient liquidity and new products.

Following those mentioned till now and in specialized literature, changes in Basel III and their consequences can be summarized in the following table.

Table 2

Rules and consequences of Basel III

Basic Changes	The Consequences
1. Increase the minimum requirements to tier 1 capital	The refusal of banks to use hybrids and quasi bonds
2. Balance requirements to Tier II with the exact determination of those scope	In conditions of keeping of growing return of capital and dividends
3. Partial renunciation of the hybrid components of Tier I capital including innovative tools	Using the conventional convertible instruments to achieve the requirements for additional capital
4. The pressure limit of bonds is fixed	Pressure limit debt is incentive: - strengthening bank capital positions; - applying maximum credit risk exposure and maximum profit.
5. Performance standards on liquidity management	Tough requirements for liquidity ratios will lead to changes of the business - model[1)]

Note 1): Business purpose of the model is determined by the unitary system of management of financial assets and is based on the connection of policies of bank liquidity management, of financial investments and bank risk.
Source: European Commission, „Proposal for a Regulation of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories”, 2010

Finding the balance between the two goals, seemingly contradictory, of avoiding overregulation and strength ensuring for institutions, markets continuity, appetite for innovation and competitiveness of the financial system is back in the reflectors. This exercise seems to be more difficult in the present.

3. Conclusions

Finally, it is worth noting that financial innovation has remained somewhat neglected in recent attempts to reform, regulatory mainly because financial innovation, in the last decade, at least, served as regulatory arbitrage and tax evasion. Ethical values also should have a role in the new landscape. This refers not only to financial innovation, but touching and "mechanics" of the financial markets.

The crisis was not the result of non-conformity to certain rules, but rather the result of capitalization the advantages of gaps, ambiguities or deficiencies and omissions in the regulatory framework applied in time.

So, goal of BASEL III is to reduce the involvement of banks in excessively risky activities, reducing the probability of adverse effects of following crises and offering the possibility to face the shocks without relying on support from the state.

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