

THE IMPACT OF THE FINANCIAL CRISIS ON THE THEORY AND PRACTICE OF FINANCIAL SYSTEM SUPERVISION

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Abstract

The recent global financial crisis has reopened the debate about macroeconomic policies' objectives, but also the need and extent of state involvement in the functioning of the economy, either directly or indirectly. This has exposed some weaknesses in the system of regulation and supervision of the financial system and the its architecture, especially in the treatment of systemic risks and vulnerabilities, but also the financial implications of the globalization process. The global nature of financial crisis highlighted the fact that, although integrated financial markets offer a number of significant benefits, risks involved are not negligible. Therefore, to ensure the financial stability of an increasingly integrated landscape there was felt the need for reform of the financial system architecture, both nationally and internationally.

Key Words

Financial markets, banks, supervision, regulation, financial crises

JEL Classification

E02, E44, E59, E61, E65

Introduction

History shows that in capitalist economies phases of economic expansion alternate with periods of recession. Thus, even in the highest phases of expansion that took place from mid 1990 to the subprime mortgage crisis in the summer of 2007, it was understood that a crisis would strike one day the world economy. However, no one anticipated the magnitude of its anticipated. Depth of the current recession and the amazing speed with which it spread internationally seems to surpass even the most pessimistic scenarios. In fact, to find a crisis similar in magnitude and effects should go back to the Great Depression of the 1930s. What is not clear is whether what has been learned from that crisis is useful for solving the current crisis.

The current crisis has reopened debate on the focus of macroeconomic policies on asset price booms and increasing indebtedness. It has also highlighted the shortcomings of national systems of supervision and regulation of financial systems and showed how the international financial architecture has failed to incorporate with sufficient speed the integration of international financial system. Thus, recent events have brought new challenges for financial supervision and regulation of the financial system.

While traditional business of commercial banks continue to dominate the global landscape, the integration has increased banks' exposure to systemic risk and the ever closer links between international financial intermediaries increased the likelihood of contagion phenomena. Increasing number of multinational financial institutions increased the number of institutions seen as *too big to fail*. On the other hand, the amplification of the financial innovation process increased the need for strengthening and expanding regulatory framework and oversight of this segment. All these developments emphasize the need for rethinking of the financial supervisory system.

Internationally, opinions are divided between those who advocate for more active involvement of the state in the economy in general and the financial system in particular and those who argue that crises are imminent (they cannot be avoided and existing remedies simply will develop roots of new crises). However, it is

apparent that the regulatory discussion forums focused on two directions: to address the current crises and reforming the supervisory and regulatory systems in the long term.

1. Specific dimensions of the regulatory and supervisory framework

The financial system is usually subject to two forms of control, the control achieved by *regulating* the activity, thus indicating the role of various financial institutions and *prudential supervision*. In particular, the banking system is exposed to any third form of control exercised by the central bank, through its monetary policy instruments.

By regulation, in a broad sense, one can understand the supervision and control exercised by the government on the activities of private companies aiming to efficiency, reliability and safety (Bannock and Manser, 1990, p. 172). In a narrower sense, unlike legislation, which refers to rules governing the conduct of financial service providers, monitoring is designed to verify compliance (Barth et. all., 2006). Liberal economists have promoted the idea of laissez-faire market in the belief that once market forces are left free to run the economy will function effectively without the intervention of the state. However, there are areas of the economy that sees a need for state involvement in the guidance and direction to verify the consequences of developments in these areas have on the economy.

Financial services and companies providing such services, as well as financial markets, are regulated and supervised throughout the world in a far greater extent than other categories of products and services (exception can make only those that may affect public health and safety). Reasons for increased regulation and oversight of the financial system are the negative consequences that the financial system failures have on people, companies, and the economy in general.

The state regulates financial system, more obvious or less obvious, for centuries. Regulating the financial system took various forms over time as market entry restrictions, controls on products offered and the assets held, restrictions on the prices received or paid, etc. (Benston, 1998, p. 14). Both, participants in financial markets and products offered on the market conditions were to be approved and, in some countries, they were even restricted. While countries such as Germany, have allowed banks, for more than a century, to offer a wide range of financial products, in other countries like the U.S., these institutions were strictly controlled. In the U.S., since 1933, the Glass-Steagall Act separated commercial and investment banks, prohibiting commercial banks to underwrite and to transact any class of securities, except government and municipal bonds, although in most other countries, such practices were allowed (Benston, 1998, p. 15).

As both commercial activities, as well as financial ones, have started to become increasingly international, the regulatory and supervisory process of financial institutions with international activity had to adapt to the new trends. Thus, the national regulatory bodies, which were monitoring financial activities, had to coordinate their activities with those of other countries, seeking a harmonization of the rules. Thus, the Basel Accord has developed a unique regulatory framework for banks' capital, a framework adopted by most developed countries, not only for banks with international activity, but to all banks that operated in those countries. There have also been proposed uniform capital requirements for companies on the capital markets and the intensifying of cooperation between the regulatory bodies on banking and capital markets.

Although it is apparent that the banking sector, as part of the financial system, is not the only one to direct the legislation, one can say that, this sector was oldest and most highly regulated sector. We believe the evolution of financial system structure, with a predominance of the banking sector, is one of the arguments for this. Even in economies with developed financial markets, banks remain the center of economic activity in general and financial ones in particular, standing out from other institutions through their role as providers of payment services, in the money creation process and through the role played in the monetary policy transmission.

The design of regulatory and supervisory system of the financial system is not an easy task because one must take account of the important functions they perform in the system and economy, so as not to disrupt the achievement of these functions. Therefore, a key element in designing the regulatory system is to check what it wants to achieve by *imposing a particular behavior or inducing a particular behavior*. Thus, there are two approaches to the regulatory process: *direct and indirect*.

The *direct approach* is to restrict the activities of financial institutions, in an explicit way. Although the benefit of this approach is clearly restriction of potential negative consequences of the actions of financial intermediaries and other financial market participants, it is however not without risks, one of which is the inhibition in the development of financial activities, or even the possibility of regulatory inefficiency in the new developments. The other approach, *indirect*, does not draw limitations on market participants, but rather brings specific incentives designed to induce good behavior, but also desirable for regulators. The aim of this approach can be judged as higher pricing undesirable actions of financial institutions. An example of this is to limit risky activities by imposing an indicator of capital adequacy based on the risk category of activities involved, is more

stimulating as compared to restricting the employment of risky operations. The high quality of information available to the regulator gives a prerequisite for the proper functioning of the indirect approach. Therefore, it is necessary, in this context, promoting market discipline of the participants in the financial system as well as a well-defined legal structure.

Existing regulations, regarding the financial system cannot be seen as strictly following one of the two approaches, but rather there is a combination of those two, however a different combination depending on each country. In general, developed countries tend more towards an indirect approach, while the least developed and transition countries are forced to impose clear restrictions, at least for a certain period, therefore the direct approach gaining greater importance than the indirect one.

The reasons are necessary to regulate the financial system, regardless of the approach taken by the authorities, primarily relate to consumer protection and prevention of market failure. A difference from the regulation of other sectors is that at most times, the financial supervision and regulation authority is itself a participant in the financial market.

Supervision of financial institutions is done both at the individual level and at the level of the entire financial system, thus making the distinction between aggregate and individual supervision. In terms of individual supervision, it can be further divided into official and private supervision. In terms of official supervision of financial institutions can say that it takes place along two axes:

- prudential supervision
- conduct of business supervision

Holopainen (2007) finds the objective of prudential supervision of financial system in promoting safety and soundness of financial institutions, the systemic evaluation of their risk profile and risk-taking capacity, so that it can ensure their solvency. Regarding the supervision of business conduct, by promoting a fair, non-discriminatory and transparent behavior, as well as promoting market discipline of the institution, the intention is to protect investors and consumers.

A quality prudential supervision is a necessary but not sufficient condition for a healthy financial system. Other conditions are for example:

- ensuring a stable macroeconomic framework, enabling financial market participants to make accurate assessments of business prospects, and thus to increase the chances of repayment of the funds necessary for business plans;
- a functional legal system, to ensure compliance with contract provisions;
- an accounting system based on correct principles, to ensure a realistic assessment of the assets of financial institutions (to allow investors and depositors to make correct decisions on relations with them) and companies (for loans granted by banks to be based on realistic analysis) ;
- a fair system of taxation on profits, allowing tax deduction for risk provisions for bad loans and other banking specific risks;
- disengagement of the state from the banking sector so that credit be granted on grounds of prudence, not on political grounds;
- the existence of a well-developed non-bank financial system (capital market, leasing companies, insurance, etc.) so banks will not be forced to perform roles that they are not prepared for.

A problem that appears in the financial system's regulatory activity is a possible reduction of profitability of financial institutions and a reduction of the innovation process. An excessive regulation can also affect system performance and financial stability. On the other hand, an efficient and good regulatory oversight and risk management can contribute to management of vulnerabilities and risks, with beneficial effects on stability.

The quality of financial system supervision is important not only to protect clients' interests. By providing entry and maintaining in the system only those participants who meet the standards of prudential supervision helps to direct financial resources to healthy sectors of the economy, capable of growth in terms of efficiency.

2. Vulnerabilities highlighted by the global financial crisis

The recent financial crisis, that has stuck in 2007 the world economy and still persists to this day, is a remarkable mix of factors, both new and old, that have seen before in a serious of smaller scale financial crisis:

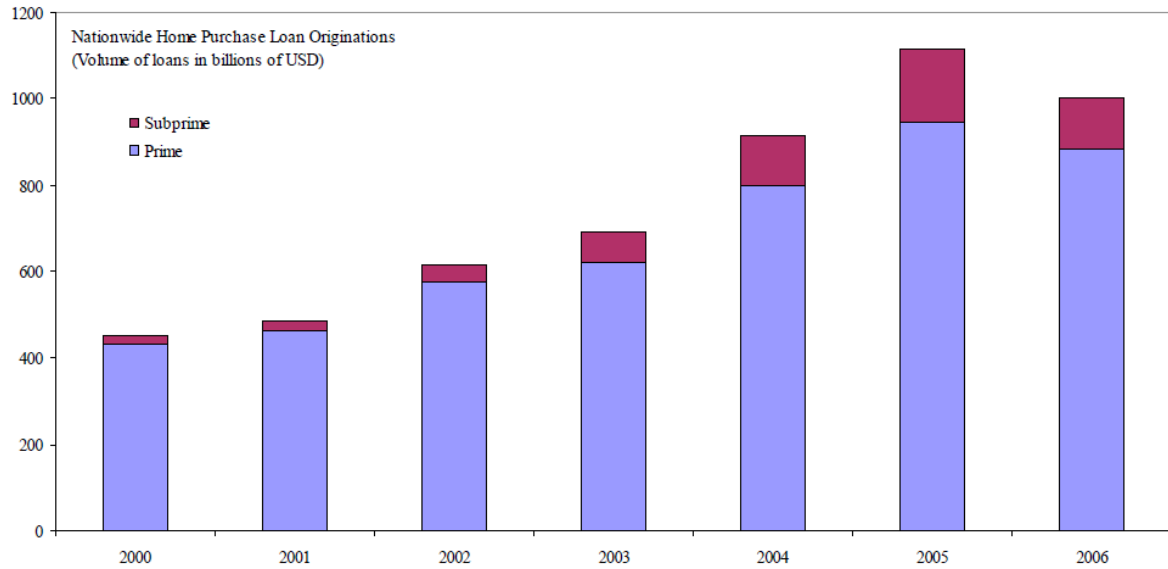
- a) asset prices that have increased to become unsustainable;
- b) credit booms that have increased the debt to new levels unseen before;
- c) the accumulation of systemic risk in the lending process;
- d) the inability of the supervision and regulation to contain the wide spread effects of the crisis.

However, the recent crisis had turned up with new factors that gave it the global magnitude that we are still seeing today:

- e) the widespread use of toxic assets;
- f) the interconnectivity among the global financial markets;
- g) the central role that the housing sector played in this crisis, with all its implications.

Some authors, (Claessens et al 2010) consider that the catalyst of the crisis was the US overloaded housing and mortgage markets, with its increased securitization, and the increasing share of subprime loans within the lending activity between 2000 - 2006 (Figure 1)

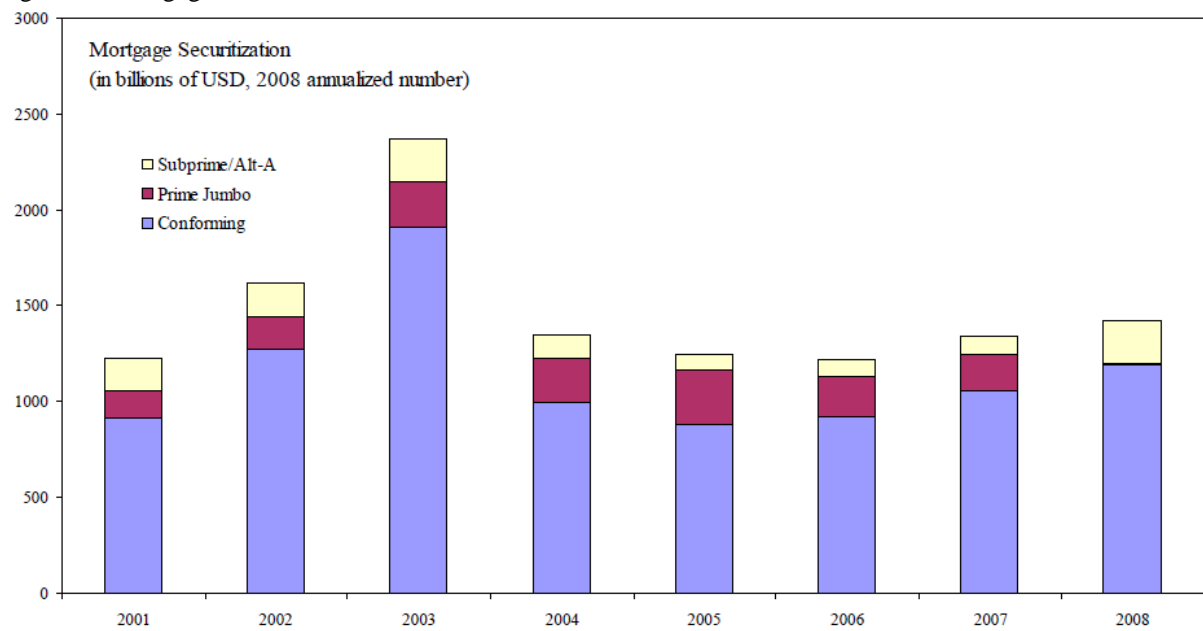
Figure 1 - Prime and subprime loans



Sources: HMDA, IMF staff estimates.

The subprime loan crisis has affected the entire U.S. financial system and a good part of the international financial markets. The increase in mortgage arrears can be explained, to a large extent, by how smooth and even fraudulent the granting of loans on this market was, together with a key role in creating a framework for easy development and emergence of the crisis played by the process of financial innovation (Figure 2).

Figure 2 - Mortgage securitization



Source: IMF staff estimates

Today, the supervisory authorities reassess their financial system supervision framework. Although the wave of reforms in financial system supervision architecture began about 10-15 years ago, in the light of the current crisis, reform of financial system surveillance appears to be imminent. Thus it can be argued that the need for reform stems from the fact that the main objective of monitoring the financial system, found in limiting financial institutions' exposure to risk, is hampered by the esoteric nature of the instruments offered by financial institutions and, on the other hand, the probability of radical change in the degree of exposure. Due to the rapid changes in the risk exposure profile of institutions, the effectiveness of traditional methods of supervision and prudential regulation is significantly reduced. Therefore, the need to reform the process was one of the themes currently discussed by international organizations and forums (1).

TUAC (2) argues that, in light of current events, there is a need for both increased regulation and supervision of financial markets in order to adapt to the needs of the real economy. Regulatory process should aim to promote responsibility among institutions and markets as well as social protection objectives.

The need for change is felt to provide better coverage through regulation and supervision of international financial markets and to ensure better cooperation between institutions, nationally and internationally, for the early detection of risky behaviors of participants in the national and international financial market. Furthermore, the new framework should address the global financial system's weaknesses that have led to, or have intensified the crisis:

- Unsustainable growth model;
- Accelerating the process of financial innovation that gave rise to an uncontrolled structured finance industry; the risks were not spread out, but concealed, the pace of innovation in this area went beyond the companies' ability to assess risks in derivatives, and the ability of supervisors and regulators to monitor;
- Institutional arbitrage between jurisdictions and financial institutions, which helped to blur the border between the regulated and shadow banking system, allowing financial groups to practice a double accounting, using off-balance sheet transactions, also encouraging irresponsible risk-taking, and investment strategies based on the leverage;
- Prevalence of shareholder value over market integrity and long term interests;
- Poor quality assessment of loans that were transferred to other entities through the process of securitization;
- Lack of supervision of systemic risk - although the increase in indebtedness and the underestimation of credit risk have been identified before the crisis, their magnitude and implications for systemic risk was underestimated. There has also been found a failure in determining the connections between regulated and unregulated market participants;
- Weaknesses in the rating agencies - has seen a very high trust in rating agencies, failure in the models and methodologies used by them, and conflicts of interest in the rating process;
- Procyclical tendencies, fed by the existing regulatory framework and accounting procedures;
- Weaknesses in risk management practices, techniques and models using historical data based on short periods, unsuitable for estimating the likelihood and size distribution of potential losses from credit risk through structured products. More high compensation encouraged excessive risk-taking, without prior analysis of long-term risks;
- Weaknesses in the framework of disseminating information about the risks involved, thus undermining public confidence;
- Inadequate procedures for solving the problems of ailing institutions;
- Lack of transparency in OTC markets.

It is considered essential that regulatory and standardization bodies put efforts to achieve a prudential regulatory framework designed to protect the stability of financial institutions. Feeble regulation and supervision, such as those relating to the underwriting standards in the U.S. mortgage market have aggravated the current crisis, making it essential to strengthen prudential regulation and provision by the individual national regulatory authorities of a first line of defense in preventing imbalances in the financial system. (G-20, 2009)

3. Developments in the regulatory and supervisory framework at the international level

In response to increased financial instability, some countries have adopted a series of measures, including the provision of comprehensive packages to recapitalize the banking system, ad hoc measures to recapitalization or providing emergency funds to individual financial institutions, deposit insurance and ensure that any financial institution will not be allowed to go bankrupt.

Some proposals have even considered it appropriate to establish a global regulatory framework for the financial system. G-20 does not support the idea of establishing a global forum for regulators, but rather the

voluntary cooperation and coordination of regulatory measures and supervision of national regulatory bodies. The principles underlying the G-20 recommendations are:

- strengthening transparency and accountability by promoting market discipline;
- promoting sound legislation through prudential supervision and risk management;
- promoting market integrity and investor financiered the consumer;
- promoting international cooperation;
- reforming the international financial institutions, by increasing the role of the Financial Stability Forum and the promotion of representation of poorer countries

Although many measures have been taken to address weaknesses in the supervisory and regulation framework, it is still felt the need for reinforcements of the frame. The measures taken so far, following proposals made by the G-20 in 2008, can be grouped as follows (G-20, 2009):

- *Measures to remedy the problems caused by the current market and procedure transparency.* Some authorities with responsibilities in providing accounting standards published guidelines intended to clarify expectations for the valuation of financial instruments, including complex securities. The supervisory authorities have also encouraged international institutions' work to improve the dissemination of information by adopting the practice of disseminating information about proposed exposures of the Financial Stability Forum in its 2007 report. It can be argued that the response of the financial institutions was to disseminate more meaningful information about exposure to risks of complex financial instruments (both quantitatively and qualitatively). The BCBS (International Monetary Fund, 2009) has made public the proposals to strengthen the standards offered by Pillar 3 of the Agreement through an improved dissemination of information related to securitization activities carried out by banks.

- *Medium and long term measures on:*

- *regulatory regimes* - IOSCO (3), IAIS (4) and BCBS (5) have promoted initiatives to address regulatory differences between different sectors, to identify shortcomings of the regulatory process and to identify issues related to the expansion of the regulatory process's objective. Revised IOSCO Code of Conduct for Credit Rating Agencies in May 2008, developed a framework of coordination between regulatory bodies to ensure that the requirements in the Code are met. In addition, some jurisdictions are in the process of adopting laws designed to regulate credit rating agencies (G-20, 2009). The rating agencies have played an important role in the triggering of the crisis. A feature of this sector is the lack of a consistent standard for assessing the ratings for structured securities. Lack of such a standard of evaluation may lead to arbitrary decisions. The first that recognized, post-factum, the regulatory gaps, is the current president of Moody's, Brian Clarkson. The lack of single standards of evaluation, the lack of legislation to penalize the assessment practices that allow changing the rating from one day to another, the lack of competition, the conflict of interest that appears at the financing of a ratings evaluation project, are sufficient grounds to trigger a crisis of loan markets. Rating agencies were in no position to rate securitized transactions (CDO and MBS), backed by subprime mortgages. The high ratings given to these securities were justified by various improvements in the lending sector, by the greater value of the collateral than of the loan itself, as well as by the existence of the investors in securities willing to take over the risk of losses. On the other hand, rating agencies have asserted that they only took into account the risk of default, and not liquidity risk or market risk, which investors often tend to neglect. Some critics of these agencies say that conflicts of interest also appeared in this process, because rating agencies are paid by companies that organizes and place such instruments to investors, companies like investment banks. On June 11th 2008, the Securities and Exchange Commission in the USA has proposed a set of rules designed to eliminate the perceived conflicts of interest between rating agencies and structured securities' issuers. The proposal prohibited rating agencies to rate the issue of such securities, if no information is available about the assets that guaranteed them, as well as structuring the same products that they valued. It also demanded the public dissemination of information used by rating agencies in determining the rating of a structured product, including information about the assets that these were guaranteed by.

- *Recommendations to reduce pro-cyclicality of bank capital related procedures, provisioning, valuating and indebtedness.*

- *Prudential supervision* - in January 2009, the BCBS made proposals to improve risk assessment procedures under the Basel II capital requirements including improved instruments and securitized off-balance sheet exposures. These measures are part of a broader strategy to strengthen regulation, supervision and risk management of banks with international activity to address weaknesses brought to the surface by the crisis. The strategy also includes measures to improve the firmness and quality of capital and to reduce pro-cyclicality. A group of international and national prudential supervisors is working to strengthen the infrastructure of OTC derivatives markets, with steep edges implementation of a central counterparty for CDS clearing. The European Union implemented such consideration in 2008, expecting that number to increase in 2009 both the EU and the U.S. (IMF, 2009 and G-20, 2009).

○ *Compensation schemes and risk management.* A working group of the FSF has developed a set of sound practices for compensation schemes. The BCBS and national regulatory bodies have issued guidelines to improve risk management practices in several areas that tests response to stress factors, risk concentration, off-balance sheet exposures, evaluation, and liquidity risk. (G-20, 2009)

○ *Transparency.* The IASB (6) and FASB (7) have established a consultative group composed of leaders with extensive experience in financial markets to provide recommendations to the two councils on matters related to accounting systems arising from the crisis. Moreover, the IASFC (8) validated in January 2009, established a formal link with the new External Monitoring Council, composed of public authorities. Members have also approved the extension of the IASB to 16 members and have developed new lines of guidance related to the geographical diversity of the members (G-20, 2009).

In addition to their core mandate, regulators, central banks, supervisory authorities, and international financial bodies (IASB, BCBS, IAIS and IOSCO) should take into account the financial system stability. The authorities concerned should ensure they have the tools at their disposal to limit the accumulation of imbalances, which might lead to financial instability. Analysis of these instruments before their implementation should be conducted in a comprehensive manner, taking into account the interaction between the various instruments considered. Within each country, it is proposed an efficient collaboration between different authorities for proper evaluation of the domestic financial system to assess systemic risk in the financial system and to coordinate national policies in response to possible occurrences of systemic risk. The structure of this coordination mechanism should be transparent, with clear tasks and responsibilities for each authority.

Once the conditions in the financial system recover, international standards relating to capital and liquidity requirements should be enhanced, promoting the consistent provisions and reserves, in order to absorb losses in more difficult times (IMF, 2009). Through the expanded powers of the Financial Stability Forum, International Monetary Fund and other international bodies that give financial standards, international standards, including the macro prudential regulations, the scope of capital adequacy and liquidity must be coordinated to ensure common and coherent international framework that the national financial authorities should apply. It promotes the publication of periodic review and validation of supervisory and regulatory framework of the financial system (G-20, 2009).

As mentioned previously, in January 2009, the BCBS conducted proposals to improve risk assessment procedures under Basel II, giving rise to the Basel III Project. Basel III aims to reconfigure the entire regulatory and supervisory framework for banking activities, with emphasis on early warning component of the risk of escalation. Concrete proposals for new international regulatory framework, supervision and risk management in the banking sector were presented in December 2009. The measures proposed in this project are defined by two complementary axes: micro and macro prudential, having as objectives: (i) the enhancement of the banking sector's ability to absorb shocks caused by economic and financial turbulence, (ii) improving risk management systems and (iii) enhancing transparency of banking practices and the degree of dissemination of information. It is designed to combine capital and liquidity standards.

The transition to the new requirements in Basel III is expected to be done in a period of 5 years, so that their introduction is planned for 2013 and full implementation by the end of 2017. The implementation requires a significant period of transition because the new regulations will introduce requirements for significant amounts of additional capital over current requirements and the transitional arrangements are designed to ensure that banks can meet the new standards by deductions from income and capital gains without affecting the lending process. However, the international banking community has differing views regarding the immobilization of larger amounts of capital requirements, arguing that profitability will be reduced not only for banks, but at the same time, inevitably they will reduce the flow of funds in the form of loans, thus contributing to lower economic growth.

The BCBS (BIS, 2010) examines the benefits and costs of increased capital and liquidity requirements, in terms of their impact on production. Thus, the main benefits of a stronger financial system reflects a lower probability of occurrence of banking crises and their associated losses, since a stronger banking system helps reduce the magnitude of any crisis. Another benefit identified results in a reduction of amplitude fluctuations in production levels during periods of stability. To determine the costs, the analysis assumes that greater restrictions relating to capital lead to increased cost of bank credit. Thus, the costs identified are related to increase lending rates likely to lead to a downward adjustment of production, however, without affecting the trend of the economic growth rate.

While empirical estimates of costs and benefits are subject to uncertainty, the analysis suggests that, in terms of impact on production there is sufficient space for tighter capital and liquidity requirements, while providing positive net benefits. However, it is recognized that the cost-benefit analysis at the macroeconomic level is dominated by uncertainty, since one approach is considered to be unable to capture all the implications of such regulations in terms of behavior such as banks and in the economy overall.

Conclusions

One lesson derived from the current crisis is that effective supervision at the individual level, although necessary, is not sufficient to protect the soundness of the financial system as a whole. This underlines the need for enhanced regulation and supervision in order to ensure more effective monitoring and addressing risks posed by excessive liquidity, excessive debt, systemic risk and high degree of concentration financial system.

Given that, the risks to the financial system are not simply the sum of their individual components; the impact of collective behavior of economic agents should be considered explicitly. An example can be found in the increased indebtedness of a bank in a period of economic expansion. This increased risky behavior can be viable at the individual level, but when this behavior is widespread, the overall indebtedness of the banking sector can create potential for financial instability. Thus, micro and macro-prudential authorities must assess the situation differently. Increased indebtedness cannot be regarded as a micro concern, if it is supported by appropriate safety measures at institutional level, for example, by adequate capital. However, even if such safeguards are appropriate for a particular institution, prudential regulation may still be concerned about the potential emergence of a systemic imbalance, resulting in a widespread increase in the indebtedness of the banking sector. As another example, if the behavior of individual institutions acting in the financial markets is subject to capital requirements for securities transactions, risk management practices, rules and practices relating to requirements for safety margins, this may lead to pro-cyclicality in financial market prices.

A challenge for policymakers is to ensure the appropriate balance between micro and macro-prudential approach to supervision of the financial process. Traditional micro surveillance objectives must be pursued vigorously to maintain financial stability as stressors affecting the financial system are likely to be less frequent – and with more reduced costs - if individual institutions are well managed, the markets are working effectively and if the infrastructure of the financial system is robust

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- (3) The International Organization of Securities Commissions
- (4) International Association of Insurance Supervisors
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