EUROPEAN ACADEMIC RESEARCH, VOL. I, ISSUE 7/ OCTOBER 2013
ISSN 2286-4822, www.euacademic.org
IMPACT FACTOR: 0.485 (GIF)
DRJI VALUE: 5.9 (B+)

Financial stability and banking harmony. Is Basel III heading us in the right direction?

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Abstract:

The financial system in general and the banking system in particular have their clear influence on the good (or bad) health of an economy. The importance of banks in the economy inducts a major interest from public authorities. Although the role of banks has undergone several changes, banking remains the basis for all financial mechanisms. The monetary and supervisory authorities have long sought the path leading to the imposition of constraints in the banking business in the context of formulating the safety and soundness of the banking system. Indeed, with the collapse of the German Herstatt Bank in 1974, and the quick propagation of the financial crises that followed showed clearly the need of an international coordination and regulation system. The Basel Committee of Banking Supervision (BCBS) started compiling an accord based on international convergence of capital measurements and standards. The work done in this article, emphasizes precisely the need of the creation and the evolution of these international regulations and the most recent package such as the Basel III accord. The question stands, what will provide the Basel III accord? Is the international financial environment finally going to find the right equilibrium? Did the proposition of this accord "patch" all the leaks in the previous ones? In order to answer these questions, the work presented in this article will provide a "guided tour" from the theoretical need of these regulations to the concrete actions proposed by the Basel III accord.

Key words: Financial crisis, Basel Committee of Banking Supervision, banking regulatory accords, international capital measurements and standards, Basel III

Introduction and literature review

Banks play a major role in the economy. Efficiency, integrity and stability of the banking system are thus a pre-condition for a stable financial system and for a proper functioning of an economy. Therefore, the banking sector is such that a bank failure can quickly affect other healthy banks through what is known as the contagion effect.

Banking supervision is of paramount importance to the government of a country. According to A. Richard and M. Taylor (2000), supervision is the process of monitoring banks to ensure that they are carrying out their activities in a safe and sound manner and in accordance with laws, rules and regulations. Supervision is a tool for determining the financial position and ensuring compliance with rules and regulations set forth at any given time. They argue that effective supervision of banks leads to a healthy banking industry. Initially, it is necessary to understand the usefulness of the government itself from the banking system that makes those regulations and supervision an indirect governmental mean for a healthy banking and financial system.

David Llewellyn (2001) states that banking regulation is a set of specific rules or agreements on binding behavior by the government or other external agencies or self-imposed by explicit or implicit agreement within the industry that restricts the activities and business operations. He further pointed out four key objectives of regulating the banks: 1-the stability of the system, 2- the safety and soundness of financial institutions, 3-ensuring protection of consumers against risky behaviors of individual financial institutions and 4- maintaining consumer confidence in the financial system and the integrity of financial institutions and markets.

Although banks operate for their own profit and bankers are free to take many decisions in their daily operations, banking is usually treated as a matter of public interest. Bank

failures are actually perceived as more harmful to society than other failures and are more likely to spread to other banks, even to other countries through international interconnections. Bank failures not only impose credit losses to depositors, but also the loss of liquidity from depositors after the failed banks are not able to return the cover until the assets of the bank deposits are sold and the funds recovered. This procedure usually requires very long time to complete. This resulting illiquid nature leads to increased fear of bank failures and greatly reduces the money supply in the market, as short-term deposits will tend to become suddenly long-term deposits. If the bank in question was of large size, the efficiency of the payment system is likely to be affected significantly.

In many countries, in fact, more banks operate through the payment system by enabling credit and debit cards, electronic interbank transfers and service checks. A payment system that operates efficiently is a prerequisite for an efficient economy, while the payment system failures significantly reduce trade and thus the aggregate income. In the absence of an efficient system, government intervention is required to promote the development of basic infrastructure. After a crash, credit relationships are likely to be influenced, sitting or pushing new lending by other banks geographically nearby, banks that can take it over.

However, evidence from history suggests that any adverse effects of bank failures at the macroeconomic level are less important than the negative effects of poor macroeconomic performance of bank failures. The failure of a bank is perceived to be easily and quickly spread to other banks because banks tend to be closely linked through interbank loans and deposits and because banks may appear to be more homogeneous. For example, if one or a set of problems are faced by some banks, depositors at other banks may begin to doubt the financial health of their banks and the operating speed. Thus, an interbank exposure of a bank can cause on its interbank

exposures and so on, failures leading to chain-type "domino effect". Much of the regulatory system was developed in response to the financial crisis and other historical and political events, so the banking regulation has evolved to serve multiple goals, goals which have changed over time.

Justification for any banking regulation usually stems from market failures such as externalities, market power and information asymmetry between buyers and sellers. In the case of banking, there is still debate whether banks should be regulated or not and, if so, how they should be regulated. According to Dowd (1996), Benston and Kaufman (1996), this debate partly reflects the lack of consensus on the nature of market failure that makes the service of free banking not optimal. However, there are two excuses that are often presented to the regulation of banks: the risk of a systemic crisis and the inability of depositors to monitor banks (Goodhart 1998).

The provision of liquidity by banks leaves them exposed to potential series of unexpected and urgent demands from depositors (Diamond and Dybvig 1983). The reason is that a bank needs to operate with a balance, where the liquidation value of its assets is less than the value of liquid deposits in order to provide liquidity services. Under these circumstances, since the depositors' expectations about the value of their deposits depends on their place in line at the time of withdrawal under the principle of "first presented first served", a series of urgent requests can happen without the publication of adverse information about the bank's assets and even when information about the bank's assets is perfect. For example, if depositors are in panic, they may try to withdraw their funds caused by the fear that others will do so firstly, forcing a bank, even though a "sound" one in bankruptcy.

If there were no aggregate uncertainty and if each bank investment in short-term asset is publicly visible (transparency on bank assets) then depositors can feel completely assured

from the liquidity risk that the bank faces. However, when there is asymmetry of information about the assets of banks, as it happens when banks own a significant portion of their assets in illiquid forms of loans, interbank market will not be able to provide depositors full liquidity. Asymmetric information about the assets of banks makes them susceptible to a series of urgent requests. A series of urgent claims caused by the publication of information that shows poor performance by the bank can be useful because it is a source of discipline. In contrast, a series of urgent requirements caused by the panic of depositors or from an information leak when there is asymmetry of information between depositors and banks, returns unhelpfully. In this case, a series of urgent requests is costly because it requires early liquidation of assets, disrupting the process of "production". Moreover, it can cause contagion of this series of urgent requirements, which can lead to a system failure. It is this risk of failure of the system that forms the basis of the classic argument that proposes mechanisms to ensure banks against liquidity shocks, regardless of their intervention in the functioning of free markets.

Deposit insurance by the government has proved a very successful tool in protecting the banks of urgent or banking panic, but at a cost, because it leads to "moral hazard". By providing a guarantee that depositors are not subject to loss, the deposit insurance provider bears the risk that banks would have had otherwise afforded. As a result, the deposit insurance reduces the banks depositors' encouragement of monitoring and seeking from them an interest payment in proportion to the risk of the bank. Moreover, the insurance scheme of bank charges a flat premium, the bank fails to internalize the full cost of risk and therefore it is encouraged to take more risk.

According to many authors (Hellmann, Murdock and Stiglitz 2000) a bank appetite for risk tends to increase with a further increase in the banking sector competition and a reduction of the value of the bank's charter. Exchange

introduced by deposit insurance against the series of bank runs is at the expense of moral hazard. This fact has motivated many proposals to change the design of the deposit insurance scheme or inserting complementary regulations aimed at reducing moral hazard, while maintaining protection for depositors. The most common proposals to deal with moral hazard caused by deposit insurance is charging banks with insurance premiums associated with risks and promoting the regulation of the structure of their capital.

The argument on the systemic risk is built on the instability arising from monitoring measures and their liquidity services, which leaves banks with a balance that combines a large part of the liabilities in the form of deposits with a large part of the assets in illiquid form of loans. Dewatripont and Tirole (1994) propose a rationale for banking regulation, which builds on corporate governance problems created by the separation of ownership from management and the inability of depositors to monitor the banks. The starting point of their argument is that banks, like most businesses, are subject to moral hazard and adverse selection problems. Therefore, it is important for investors to monitor them. Monitoring is costly and requires, among other things, access to quality information. In the case of banking, this is complicated by the fact that bank debt is held mostly by unsophisticated depositors, without the information necessary to carry out effective monitoring.

In fact, understanding finance is not easy. Thus, there are fears that "more sophisticated" bankers can benefit from the “less sophisticated" clients and force them into commitments and contracts signed by not equal parties. As long as this is true, there is no evidence that bankers are or are not "smarter" in protecting their interests than the bank’s clients are. Focusing on education, regulation, simplification of terms, and detection, these can serve to increase understanding of customers and improve the efficiency and fairness of the financial markets. Such regulations may also protect against

fraud and misrepresentations. In addition, because most of the clients only hold small deposits, they don't have an incentive to perform any of the functions to monitor a bank. This problem creates the need for a public or private representative of depositors. This need can be met by a regulation that mimics control and monitoring exercise that depositors would if they had the right information. In short, the research indicates the reason for the regulation of banks.

To ensure stability, banking regulation should encourage the development of strong banks with adequate liquidity and banks should discourage practices that may undermine depositor and disrupt the payments system. In fact, the consequences of inadequate risk management have been felt these recent years with the global financial crisis. Hence, the banking sector is one of the target sectors arranged to monitor a country's economy. Banking regulation usually refers to rules that govern the behavior of banks and supervisory authorities exercise oversight to ensure that banks comply with these rules. The special role the banks plays in the economic system means that the banking system should be regulated and supervised not only to protect investors and consumers, but also to ensure the stability of the economic system as a whole. Under this aspect we can refer to the works of Parker and Kirkpatrick (2012). More specifically, as stated above, there are regulations for the banking industry to maintain systemic risk, protecting consumers from excessive prices or opportunistic behavior and finally to achieve certain social objectives, including stability (Llewellyn 2006). So banking regulations also serve to stimulate and ensure the efficiency of the banking industry.

Banks have traditionally been regulated and supervised by their countries. In recent years, advances in technology and communications have reduced the cost of banking services to large distances, including banking services beyond national borders. With the increasing demand for such services, and the

globalisation process being spread more and more, banks have expanded physically as well as across national borders without the physical presence of conducting business across borders. In response to this trend, many of the same concerns that led governments to regulate local banks have pushed to increase the pressure on banking regulation and international harmonization.

Banks have increasingly recognized that the traditional methods of risk management have become obsolete and that they require new measures to assess the risks of new financial instruments. The objective of reducing risk in complex financial markets has led to the diversification of the bank's income, that has increased their international banking activity, pushing banks to use new financial instruments to diversify income among several countries so that, in each given year, a negative result as a consequence of inadequate investment in one country can be compensated by a positive result of appropriate investment in another country. Enhanced operations require adherence to various international common regulatory and supervisory standards which are accepted by the largest global financial regulators.

Moreover, the main international standards require effective international supervision to reduce systemic risk. The first step for achieving effective international supervision is the presence of an international authority to facilitate effective coordination of national regulatory responsibilities and to promote minimum standards and best practice standards for the supervision of international banking.

With the transformation of banking to globalisation and disorders, national regulatory authorities remain the main supervisor to monitor cross-border banking activities. The presence of an international regulatory framework for financial markets is necessary for effective coordination of international banking supervision. Banks that operate on a cross-border basis locate more of their operations outside national

jurisdictions to provide cross border services in which the lender and borrower reside in different countries. That's why the Bank for International Settlement (BIS) and more precisely, the Basel Committee on Banking Supervision (BCBS), has proposed and complied several supervisory and prudential accords that aim at the harmonization of international standards and financial as well as economic stability.

Indeed, any financial crisis the world has experienced has brought its problems, but also, after long studies, it has brought some answers and solutions. In the years 1975-1988, the creation and implementation of the first Basel agreement, have met the needs of the market and could provide a financial harmony, which unfortunately lasted only until the next financial crisis. The events of 1990-2000 followed by many bank failures introduced the need for an upgrade of the international banking regulations. With the Basel II agreement in 2004, "leakage" of the first package of Basel I was fulfilled, but the system was still incomplete. The financial crisis of 2008 proved that the Basel II accord failed again in providing international financial harmony. Let's step up to the next section for a better understanding and analysis of the last banking supervision regulations accords known under the name of Basel III.

The late need of a revision, the brand new Basel III accord

Wild crises that affected the international financial markets show the need for "severe" improvement of the regulatory system of banking supervision. In fact some "leakage" of the financial market observed over time, repeated or not, guided the supervisory authorities to establish more stringent framework and clear about the harmony of international financial markets. Basel III agreement was built on the existing "skeleton" of the Basel II regulatory framework

and the improvements in its version 2.5. Basel II, released in 2004 was recognized for improvements in the measurement of credit risk, and was implemented in late 2006. Later on in 2009, Basel 2.5 was published, designed to improve risk measurement mechanisms on securities and commercial exposures, and thought to be implemented in late 2011. But due to the financial market situations shocked by the late 2008 crisis, in December 2010, the Basel Committee on Banking Supervision met again to resolve the third agreement, Basel III, which introduced a liquidity framework and the main purpose was to satisfy higher levels of capital requirements. Basel III is a set of changes that were scheduled to begin on January 1, 2013 and, based on the time schedule, the application period will be held until 2022. Figure 1 below displays the key dates of the agreement.

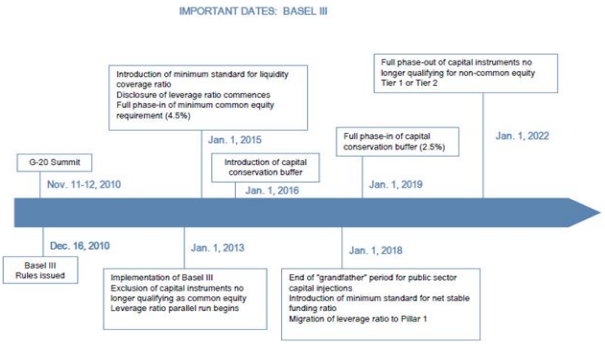

Figure 1 Key dates of the Basel III implementation process

On Sunday, September 12th, 2010, the Basel Committee voted Basel III. This agreement was confirmed at the G20 Summit in Seoul on 11th and 12th of November, the same year. As with previous agreements on banking regulation, the aim is to ensure that in the future banks can absorb losses and avoid failures, such as the Lehman Brothers bank. Basel agreements can be seen as the "matryoshka dolls" - every new agreement incorporates the previous one, containing it but most importantly enriching it with new adequate regulations. In this

way the new regulation is more comprehensive than the previous one and meets its constraints. The most important point of Basel III is the introduction of a new capital definition and structure. The main goals of the new Basel III agreement were: 1 - Strengthening the capital structure and 2 - Introduction of global liquidity standards[1].

Basel Committee aims to strengthen the regulatory capital framework, being based on the three pillars of the Basel II framework. Pillar one englobes the Minimum Capital Requirements, pillar two englobes the Supervisory Review Process and Pillar three concerns the Market Discipline. The reform targets the increase in the quality and quantity of regulatory capital base and the increase of the risk coverage of the capital structure. The Committee also supports the leverage ratios that serve as an aid against risk in order to limit excessive leverage in the banking system and provide an extra layer of protection against model risk and measurement error. Finally, the Committee has introduced a number of macro elements in the context of capital to help contain systemic risks arising from the cyclical nature of financial institutions and interconnections.

Under Basel II, there were three categories of capital:

- *Tier 1 capital*: consists of two parts. First, the Core Capital, which comprises common shares and retained earnings. Secondly - the capital which is located between the core capital and subordinated debt.
- *Tier 2 capital*: subordinated debt that has an ability to absorb losses.
- *Tier 3 capital*: capital instruments that are used to hedge market risk to ensure that risk is managed with equal quality compared with operational and credit risks.

[1] Presented in two separate documents that you can find on www.bis.org, under the Basel III section.

The first important detail is the redefinition of the capital; in fact Basel III redefines the regulatory capital. To enhance sustainability, quality and transparency of regulatory capital, the commission determined that the capital under the category "Tier 1" should consist mainly of common equity and retained earnings. According to current standards, there are two types of capital to meet its adequacy rules: core capital and additional capital.

Basel III conserves the categories Tier 1 and Tier 2, but limits their composition with the highest quality of capital which is able to absorb losses. As for Tier 3, this is eliminated. Under Basel III, Tier 1 capital should be mainly composed of "core capital", which consists of equity capital and retained earnings. In addition, many equity instruments that were previously included in the calculation of bank capital under Basel II, including some forms of subordinated debt, would be eliminated under Basel III. These equity instruments that do not qualify as "capital" under Basel III will fade from the calculation of bank capital during a ten-year period, starting from 2013. This transition period will help banks that currently do not have sufficient amounts or types of capital to match the new requirements in time. Indeed, there are some equity instruments that do not meet the definition of capital. This is goodwill, minority interests, supplies the deficit and deferred tax assets and the investments in other financial institutions such as shares or those of its bank in an insurance company. The purpose of these exemptions is to avoid double counting of capital.

Regarding the amount of capital, Tier 1 shall increase from 4% to 6% and core capital will exceed from a 2% level at a 4.5% level of total risk weighted assets. As for the Tier 2 category, it can be up to 2%, taking into account that the total amount of required capital remains at 8%. As with Basel II, banks under Basel III must also maintain a minimum ratio of total capital of at least 8% of risk weighted assets. At a first

glance, the minimum capital requirement of 8% still remains, which may suggest that there is no increase in the capital. In reality, there is a growing demand of capital with the introduction of two "cushions" of capital, the capital conservation buffer and countercyclical capital buffer, which are intended to ensure that banks have adequate capital levels to absorb losses of assets, particularly during periods of financial and economic stress. By application and full implementation of Basel III in 2019, banks are expected to maintain a total capital ratio of 10.5%, an increase in the requirements of a capital level of 8% under Basel II.

Regarding the quality of capital, we can easily and clearly see that it has improved to the extent where the capital is more specified and has more quality and ability to pay off. In the end, banks will not only provide a greater share of capital to their balance sheet, but they also should take into account the fact that the new agreement includes in the calculations less equity instruments. In the following table, Table 1, we can observe the comparison between Basel II and Basel III, and we can also observe the innovations introduced by the Basel III agreement.

The ratio	Basel II	Basel III
Ratio of Tier 1	4%	6%
Ratio of Tier 1 on common equity	2%	4.5%
Total Capital Ratio	8%	8%
Leverage ratio	3% (only for the U.S.A)	3%
Conservation buffer	N/A	2.5%
Countercyclical Buffer	N/A	2.5%
Liquidity Coverage Ratio	N/A	Liquid assets covering cash out flows on a 30 day period
Net Stable Funding Ratio	N/A	Stable funding excessing the need on a year basis

Table 1 Comparison between Basel II and Basel III

On the chart below we can see a descriptive presentation of the timing of all the components of capital requirements ratios. Starting from 2012 until 2019, full implementation is planned by increasing progressively each ratio.

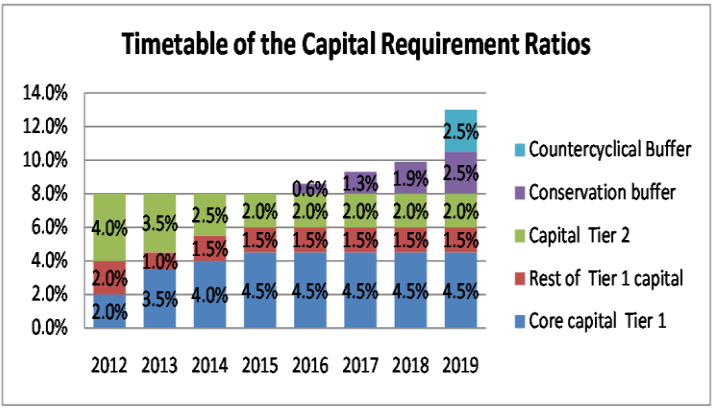

Chart 1. Timetable of the Capital Requirements under Basel III

Innovations and improvements of Basel III

In the previous section we have seen the purpose of revising the Basel III agreement and its main part was redefining and recalculating the minimum capital requirements. But as seen on Table 1, there are also other components added to the Basel III structure. To achieve its main goals, the stability and harmony in international financial markets, the Basel III agreement module also focuses on some new elements, such as:

- Creating capital conservation capital buffers;
- Creating countercyclical capital buffers;
- Creating Liquidity and Leverage ratios;
- Risk Coverage.

Let's start with the first one, *the capital conservation buffers*. The capital conservation buffer is made from common stock and is attached to add common equity. In view of the first two requirements (definition of capital and conservation buffer),

the capital requirement is raised at 7%. Thanks to this buffer, we can see a clear increase in the quality and quantity of capital adequacy. The capital conservation buffer will be implemented between the 1st of January 2016 and the end of 2018, becoming fully effective on January 1st, 2019. This level will start with the value of 0.625% of risk-weighted assets on January 1st, 2016 and will increase each subsequent year by an additional 0.625%, reaching its final value of 2.5% of risk-weighted assets on January 1st, 2019.

Countries that experience excessive credit growth should consider accelerating the construction of these buffers. National authorities have the discretion to impose shorter transition periods and should do so where appropriate. Banks that already meet the minimum requirements, but remain below 7% of common equity, should take measures to develop the policies to maintain profits in order to meet the full requirements as soon as possible. In fact, this pad is designed to ensure that banks can hold a minimum level of capital during the economic recession (in the case of losses). Banks that do not meet this measure may not pay dividends or bonuses to their employees.

Losses incurred in the banking sector can be extremely big when a recession is preceded by a period of excessive credit growth. These losses can destabilize the banking sector and will launch a vicious cycle, where problems in the financial system can contribute to a decline in the real economy that then feeds back a drop in the banking sector. These interactions highlight the importance of building special safeguards in additional capital to the banking sector through periods where systemic risks are significantly increased. The buffers aim to ensure that countercyclical capital requirements of the banking sector will take into account the macro-financial environment in which banks operate. Banks will have to create these "*countercyclical capital buffers*", which will provide liquidity to banks in case of major losses, thus avoiding the need to raise new capital immediately. This buffer is composed of common shares and

other forms of capital, and will vary from 0% to 2.5% of total assets. This counter-cyclical buffer responds to the pro-cyclical problems stemming from Basel II agreement.

According to Basel II, "In a recession, capital requirements are pro-cyclical, which means that they amplify the recession". Let's refer to the figure below to better understand the phenomenon of the vicious circle and the placement of the countercyclical buffer.

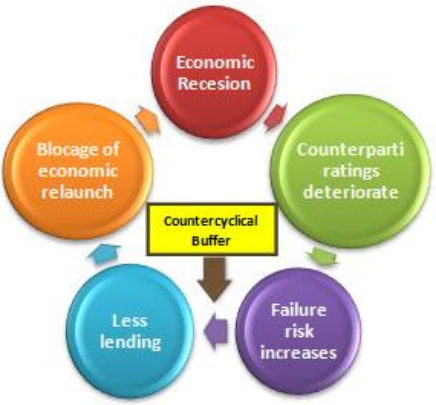

Figure 2.6. The pro-cyclical effect of capital

During a recession, third-party assessments fall significantly. So, there is a risk of default, which carries an even greater risk, the risk of failure. It is at this point that the counter-cyclical capital buffer of Basel III makes sense. With Basel II rules, banks will give less credit since it is transformed into very dangerous. For a certain amount of capital (amount equivalent to 8% of risk weighted assets), if the loans are much riskier, banks will naturally give less loans. This reduction in lending does not allow the revival of the economy, this is the case of the pro-cycle. Meanwhile, with the new rules, countercyclical capital buffers mechanism is a tool to "combat" the pro-cycle (it is detected by its name). Thus, having more margins in the recession period, banks will lower less than usual loans. In fact, increase in the risk of failure does not

require banks to take credit tightening measures, but they can be supplied by buffers. In this way individuals and companies can have access to borrowing in recession and doing so could re-launch the economy. As a result of the introduction of this buffer we find resolved the problem of pro-cycle, a problem that was not solved by the Basel II accord.

Creating Liquidity and Leverage Ratios. Strong capital requirements are a necessary condition for the stability of the banking sector but these are not sufficient alone. A strong liquidity base in order to reinforce strong supervisory standards and this component is even more important. To date, there has been harmonized international standards in terms of liquidity ratios. The Basel Committee has therefore introduced such "ingredients" to the international standards on global liquidity. As international capital standards, liquidity standards will establish minimum requirements and will promote a fair international competition.

During the financial crisis many banks, regardless of their levels of capital, experienced many difficulties because they failed to carefully manage their liquidity. The crisis raises seriously the importance of liquidity for the proper functioning of financial markets and the banking sector in particular. Because of the rapidly changing market the crisis showed how quickly liquidity can evaporate and a non-liquid period can last. The banking system passed a very difficult moment, without central bank support not only in the functioning of money markets but also in the functioning of individual institutions. Difficulties experienced by some banks were due to errors in the basic principles of liquidity risk management.

In response, the Basel Committee suggested "principles for sound liquidity risk management and supervision." This one provides detailed guidance for the management and supervision of liquidity risk and funding. To meet these principles, the Committee has further strengthened its liquidity framework by developing two minimum standards for funding liquidity. These

standards are developed to achieve two separate but complementary objectives.

The first objective is to promote short-term resilience of the liquidity risk profile of the bank by ensuring that there are sufficient high-quality liquid assets to survive an acute stress scenario lasting for one month, and to achieve this objective, the Committee has developed the Liquidity Coverage Ratio (LCR).

The second objective is to promote resilience over a longer time horizon by creating additional incentives for a bank to finance its activities with more stable sources of funding on an ongoing structural basis. So the Committee created the Net Stable Funding Ratio (NSFR), which owns a one-year horizon and is developed to provide a stable structure of maturity of assets and liabilities. These two standards are mainly composed of specific parameters which are internationally "harmonized" with the prescribed values.

First, the Liquidity Coverage Ratio, LCR, is a short ratio that requires banks to hold risk-free assets readily marketable (converted into cash very quickly) in order to cope with a crisis over a 30 day period. These include certain assets of Treasury bonds and corporate bonds with high quality. LCR report is as follows:

$$LCR = (\text{high quality assets}) / (\text{net cash outflows within 30 days}) \geq 100\%$$

Where "quality assets" may include correlated assets, related, in poor-risk assets, and "net outflows" account for differences between inflows and outflows of cash, cash funds therefore.

Secondly, Net Stable Funding Ratio, NSFR, is a long-term report that meets the same purpose as a short-term relationship. It aims to encourage banks to finance themselves with more stable sources. NSFR requires a minimum amount of stable sources of funding relative to a bank's liquidity profiles of

the assets, and the potential for contingent liquidity needs resulting from off-balance sheet obligations, during a one-year period. NSFR aims to limit reliance on short-term funding, and encourage better assessment of liquidity risk for all voices in and off balance. Here, the bank must be able to withstand a crisis for a period of one year. NSFR ratio is as follows:

NSFR = (Sustainable Financing available) / (Stable Funding Required) ≥ 100%

Where sustainable funding represents the totality of Tier 1 and Tier 2 and preferred shares with maturity over one year, not included in Tier 2. Sustainable financing necessary or required is based on-balance and off-balance sheet exposure. Specifically, it includes cash on hand and securities maturing within one year.

The guidelines of the Basel Committee on "Principles for Sound Liquidity Risk Management and Supervision", taking into account lessons learned during the crisis, are based on a thorough review of the practices of sound liquidity risk management at banking organizations. Liquidity framework includes a common set of monitoring measures to assist supervisors in identifying and analyzing liquidity risk trends at both the bank and in the whole system.

One of the basic characteristics of the crisis was the accumulation of excessive leverage and outside the banking system balance. In many cases, banks built excessive leverage, while the reports were still strong on risk-based capital. During the worst of the crisis, the banking sector was forced by the market to reduce leverage, which resulted in falling asset prices, further exacerbating losses in the collapse of bank capital, and contraction in credit availability. Therefore, the Committee agreed to introduce the report on the use of leverage. The Leverage Ratio is calibrated to act as a reliable measure of the additional capital requirements based on risk. This report aims to achieve the following objectives:

- Limit the collection of leverage in the banking sector, helping to avoid the process of "deleveraging";
- Reinforce the risk-based requirements with a simple preventive measure not based on risk.

The Leverage Ratio is not a ratio based on risk exposures, including off balance sheet; it will serve as additional help on capital requirements based on risk. Leverage ratio is used to evaluate the size of the liabilities of a bank compared to the size of its balance sheet. Basel III introduces a new feature for the leverage ratio, which existed in the previous agreements; thus, the ratio does not measure risk exposure of the bank (Pillar 2), but will serve as a tool to calculate capital requirements (Pillar1). This new position will enable to prevent the use of excess, leading to the tightening of credit in crisis situations. This is actually a simple ratio based on Tier 1 capital treatment at 100% of all net risk exposures of provisions. The basis of calculation is the average of the monthly leverage ratio during the quarter based on the definitions of capital and total exposure. On the 26th of July 2010, this ratio was announced by the Basel Committee but there was not adopted a specific level of the leverage ratio, leaving it flexible in each member country. Supervisory monitoring period started on 1st of January 2011, where the Committee tested a minimum leverage ratio of 3%, while the definitive minimum leverage ratio will be determined and implemented on January 1st, 2018.

One of the main lessons of the crisis has been the need to strengthen Risk Coverage of the capital structure. Failure to capture the significant risks on and off the balance, and exposures related to derivatives, was a key destabilizing factor during the crisis. In response to these shortcomings, the Committee outlined a number of reforms to increase capital requirements for trade activities and derivatives (under Trading Book) and exposure to complex securities, a major source of losses for many internationally active banks.

The agreement introduces measures to strengthen capital requirements for exposures to third parties arising from credit derivatives and financing activities with securities. These reforms will increase capital reserves to support these exposures would, will reduce pro-cycle and will provide additional incentives to move OTC derivative contracts to central parties, helping to reduce systemic risk across the financial system. The agreement also provides incentives to strengthen the risk management of credit exposures of the other party. The Committee then compiled the following reforms:

- Over time, banks must determine their capital requirements for credit risk of the counterparty. This will address concerns about capital obligations becoming too low during periods of market volatility and select pro-cycle.
- Banks will be subject to an obligation of potential capital losses from mark-to-market, credit risk valuation (CVA) associated with a deterioration in the loan to another party. While Basel II standards cover the risk of a counterparty's bankruptcy, it did not refer to techniques such as CVA risk, the risk that during the financial crisis was a major source of losses.
- The Committee has hardened standards for collateral management and initial margin. Banks with large exposures and illiquid derivative against another party would have to apply a longer period of initial margins as a basis for determining regulatory capital requirements. Additional standards are also adopted to strengthen risk and collateral management practices.
- The Committee has also set the standard credit risk management by other parties in many areas, including the treatment of so-called "wrong direction", in cases where exposure risk increases when the credit quality of the counterparty deteriorates.

The reforms also raise the standards of the second pillar of risk management and surveillance and the third pillar of the market discipline. The new components of the second pillar target corporate governance and risk management, capture off-balance sheet risk exposures and securities activities, management of risk concentrations, providing incentives for banks to better manage risk and return in the long-term period, sound stimulus to compensation practices, delivery of valuation practices, stress testing, provision of accounting standards for financial instruments, as support through supervisory colleges.

Regarding the third pillar, namely the discipline of market innovation, the requirements presented in securities exposures and sponsorships with off balance sheet vehicles, enhanced disclosure about details of the components of regulatory capital and reconciliation of their accounts reported that will be required, including a full explanation of how a bank calculates its capital regulatory ratios. In Annex 1 you may find a summary of the main elements of the Basel III. (This is an official document from BCBS, presented on www.bis.org)

Conclusion

Banks are the oldest type of financial institutions and have been regulated in one way or another, but the nature of regulation has changed over time with changes in economic development and in the form of economic organization in question. Liberalization of financial markets and the disruption of international financial systems exposes them against a growth of systemic failure risk. In fact, the growing interconnections between global financial markets have led to a considerable expansion in the number, size and types of activities and products, pushing the organizational complexity of multinational financial institutions. Although this generally increases efficiency to capital markets, the scope of international banking activity has highlighted the difficulty of

assuring an effective supervision, thus having in some cases increased systemic risk, where losses in a banking group may contaminate the entire financial system. In this situation systemic risk is a negative externality that imposes costs on society at large, while financial firms fail because the fault of their speculative activities are associated with risky behaviors.

With the transformation of banking to globalisation and disorders, national regulatory authorities remain the main supervisor to monitor cross-border bank activities. The presence of an international regulatory framework for financial markets is necessary for effective coordination of international banking supervision. The internationalization of financial services has changed the nature of traditional commercial banks through the establishment of complex organizations, known as "financial conglomerates". While financial conglomerates offer diversified asset benefits, risks, and sources of income, their structure presents some problems for regulators.

When banking systems in a number of industrialized countries have boomed in the late 1980s, pressure grew for banking regulations and harmonization at least among these countries with large international banks active in them. Reconciliation was intended to increase safety by reducing the likelihood of individual failures that can spread negative effects beyond national borders, and to ensure a fair level of competitiveness, so that banks in different countries should not benefit from any competitive advantage due to subsidies from their governments (such as lower capital ratios in a deposit insurance explicitly or implicitly or any other government support). International regulations will resemble prudential regulations, but should take into account that differences in institutional and legal structures in different countries will affect the quality of regulatory oversight and market discipline.

Development of cross-border regulations delegated to the Basel Committee on Banking Supervision (Basel Committee on Banking Regulations), located at the Bank for International

Settlements (Bank for International Settlements) in Basel, Switzerland and composed of representatives of central banks and banking regulators economies developed. The first agreement was concluded in 1988 and was implemented by member states at the end of 1992. Its contributions were the main focus closely against equity risk exposure of individual banks measured by risk-weighted assets and to encourage higher capital ratios. Over time, the desire of standardized capital rules accepted by other countries, will include emerging economies as well.

After the financial problems touching international banks in the year 2000, the need of a revision of the international banking regulations was inevitable. Basel II introduced a three pillar structure, defined the capital in three categories an enhanced detailed supervision and monitoring. The regulation accord appeared not to be sufficient for the international financial stability and market harmonization. In fact, in the year 2008, the sub-primes and "house bubbles" in the U.S.A. started a pretty heavy international financial crisis. The Basel Committee proposed then the Basel III accord that has revised all components of the first two accords and presented lots of new components in measure of rick weighting, calculations and redefining the core capital to ensure a better conservation strategy for banks to avoid or better absorb financial difficulties or liquidity shortages.

The year 2013 marks the beginning of the Basel III implementation. Indeed, this process is going to be phased in until the late 2019, a period of years to let each country the proper time to adapt and implement properly. Each year, a component is included or arranged in the final level. The first and most important change proposed by the Basel III framework is the definition of capital, a more strict capital, aiming at a better quality to limit failure. In fact, the capital adequacy, or minimum required capital, has been increased so we can visualize a better quantity as well as the better quality

of capital, all this to make banks more prepared for any losses, or even rethink the risk taking (because of the raised levels of capital to conserve if the activities undertaken are riskier). Not only did Basel III target the minimum required capital but it also created liquidity ratios, leverage ratios as well as other capital conservation or countercycle buffers. It is very important to measure the risk coverage along with the enances in the supervisory process and market discipline.

Analyzing these components one by one, or comparing with the previous international banking regulations, it seems that Basel III is heading us in the right direction in stable and harmonized financial and banking systems. But there still remains a component to discuss: an analysis at a more national basis, the benefit/cost analysis that will give each country its proper verdict to the opportunity/threat presented by Basel III.

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Annex 1 Basel III reforms presented by pillar

Basel Committee on Banking Supervision reforms - Basel III

Strengthens microprudential regulation and supervision, and adds a macroprudential overlay that includes capital buffers.

	Capital					Liquidity
	Pillar 1			Pillar 2	Pillar 3	
	Capital	Risk coverage	Containing leverage	Risk management and supervision	Market discipline	Global liquidity standard and supervisory monitoring
All Banks	**Quality and level of capital** Greater focus on common equity. The minimum will be raised to 4.5% of risk-weighted assets, after deductions. **Capital loss absorption at the point of non-viability** Contractual terms of capital instruments will include a clause that allows – at the discretion of the relevant authority – write-off or conversion to common shares if the bank is judged to be non-viable. This principle increases the contribution of the private sector to resolving future banking crises and thereby reduces moral hazard. **Capital conservation buffer** Comprising common equity of 2.5% of risk-weighted assets, bringing the total common equity standard to 7%. Constraint on a bank's discretionary distributions will be imposed when banks fall into the buffer range. **Countercyclical buffer** Imposed within a range of 0-2.5% comprising common equity, when authorities judge credit growth is resulting in an unacceptable build up of systematic risk.	**Securitisations** Strengthens the capital treatment for certain complex securitisations. Requires banks to conduct more rigorous credit analyses of externally rated securitisation exposures. **Trading book** Significantly higher capital for trading and derivatives activities, as well as complex securitisations held in the trading book. Introduction of a stressed value-at-risk framework to help mitigate procyclicality. A capital charge for incremental risk that estimates the default and migration risks of unsecuritised credit products and takes liquidity into account. **Counterparty credit risk** Substantial strengthening of the counterparty credit risk framework. Includes: more stringent requirements for measuring exposure; capital incentives for banks to use central counterparties for derivatives; and higher capital for inter-financial sector exposures. **Bank exposures to central counterparties (CCPs)** The Committee has proposed that trade exposures to a qualifying CCP will receive a 2% risk weight and default fund exposures to a qualifying CCP will be capitalised according to a risk-based method that consistently and simply estimates risk arising from such default fund.	**Leverage ratio** A non-risk-based leverage ratio that includes off-balance sheet exposures will serve as a backstop to the risk-based capital requirement. Also helps contain system wide build up of leverage.	**Supplemental Pillar 2 requirements.** Address firm-wide governance and risk management; capturing the risk of off-balance sheet exposures and securitisation activities; managing risk concentrations; providing incentives for banks to better manage risk and returns over the long term; sound compensation practices; valuation practices; stress testing; accounting standards for financial instruments; corporate governance; and supervisory colleges.	**Revised Pillar 3 disclosures requirements** The requirements introduced relate to securitisation exposures and sponsorship of off-balance sheet vehicles. Enhanced disclosures on the detail of the components of regulatory capital and their reconciliation to the reported accounts will be required, including a comprehensive explanation of how a bank calculates its regulatory capital ratios.	**Liquidity coverage ratio** The liquidity coverage ratio (LCR) will require banks to have sufficient high-quality liquid assets to withstand a 30-day stressed funding scenario that is specified by supervisors. **Net stable funding ratio** The net stable funding ratio (NSFR) is a longer-term structural ratio designed to address liquidity mismatches. It covers the entire balance sheet and provides incentives for banks to use stable sources of funding. **Principles for Sound Liquidity Risk Management and Supervision** The Committee's 2008 guidance *Principles for Sound Liquidity Risk Management and Supervision* takes account of lessons learned during the crisis and is based on a fundamental review of sound practices for managing liquidity risk in banking organisations. **Supervisory monitoring** The liquidity framework includes a common set of monitoring metrics to assist supervisors in identifying and analysing liquidity risk trends at both the bank and system-wide level.
SIFIs	In addition to meeting the Basel III requirements, global systemically important financial institutions (SIFIs) must have higher loss absorbency capacity to reflect the greater risks that they pose to the financial system. The Committee has developed a methodology that includes both quantitative indicators and qualitative elements to identify global systemically important banks (SIBs). The additional loss absorbency requirements are to be met with a progressive Common Equity Tier 1 (CET1) capital requirement ranging from 1% to 2.5%, depending on a bank's systemic importance. For banks facing the highest SIB surcharge, an additional loss absorbency of 1% could be applied as a disincentive to increase materially their global systemic importance in the future. A consultative document was published in cooperation with the Financial Stability Board, which is coordinating the overall set of measures to reduce the moral hazard posed by global SIFIs.					