

# FINANCIAL SYSTEM STABILITY DURING CRISES<sup>1</sup>

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## **Abstract:**

*The problem of financial system soundness become important in last decade because of the recurrence of regional and international crises. During latest times, financial crises have been a common occurrence in emerging market (and transition) countries with negative influence for the economies. Financial crises have had negative effects on real output, work force, poverty and political instability. Latest crises (2008) that struck US become international, its consequence being received in European countries too. This paper wants to discuss some financial indicators of the financial system and their importance for signaling crises. Also, Basel arrangements are taken into discussion. Possible mutations in the Romanian financial system are presented..*

**Key words:** *financial system stability, financial system functions,crises,Basel III requirements, Romanian financial syistem during actual crises*

**JEL classification:** *G10, G20*

The problem of financial system soundness become important in last decade because of the recurrence of regional and international crises. During latest times, financial crises have been a common occurrence in emerging market (and transition) countries with negative influence for the economies. Financial crises in Mexico (1994), the East Asian countries (1997), the financial crises in Russia (1998), to name only some of it have had negative effects on real output, work force, poverty and political instability. Latest crises (2008) that struck US become international, its consequence being received in European countries too. These harmful effects and increased frequency of financial crises in global and emerging market countries issue the necessity for prevention specifically related to financial policies that can help make crises less likely. As S. Fischer argued, the problem of banking and financial system soundness has shifted to center stage, related to international debt crises that threatened the health of major central banks and banking systems. US savings, sub-prime and loan crises demanded huge injection of public funds. Banking crises in Scandinavian countries , Japan and Latin America exacerbated the system weakness of banking systems. As economic literature shows, financial crises are costly for economy and reduce the effectiveness of monetary policies (Fischer, 1997:14).

## **Functions of financial system and the occurrence of crises**

Economic literature usually illustrate links between the financial system functions and the occurrence of the crises. It is considered that major functions of the financial system can be summarized as follows: clearing and settling payments, pooling resources, transferring resources, managing risks, producing information and managing incentives (Neave, 2010:15). Some national literature groups the functions of financial

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system in general functions (related to finance – repartition, distribution and stabilization) or specific functions - intermediary related functions. The approach of financial system as overall financial flows in the economy emphasizes the appearance of financial crises because of the discontinuity of real flows and delayed financial flows. (Fîrțescu, 2010: 41).

One principal function involves clearing and settlement payments, both domestic and international. Clearing and settling payments means that a payment order requiring one agent to pay another is executed by a third party who affects the transfer of funds from the payer's to the payee's institution. The actual structure of financial system makes it easy and cheap to transfer funds quickly between almost two points in the world and usually in whatever currency the payer desires.

Pooling resources is a second financial system function. Savings are pooled at the retail level through bank deposits, mutual funds and other stock investments, or insurance policies. Mutual funds pool savings and invest the funds in marketable securities, principally shares. Funds are pooled at the wholesale and commercial level in transactions known as securitization. Rapid growth of pooling practices turned sharply negative, being a premise of crises and investors experience losses following the stock market – e.g. the declines of late summer and early fall of 2008 (subprime crises).

A third basic function is to transfer resources from one geographic region to another and from one time period to another. Resource transfers through time channel funds from investors to borrowers, thus implementing lending or investment transactions. Banks are good at lending short-term to provide small business with operating credit, but they are not usually skilled at providing start-up risk capital to fund new business, the latest being usually financed through specialized venture capital companies or private investors. Subsequent growth of the subprime mortgage markets represent a channeling of funds to a new type of business, but, sometimes, goes to the occurrence of crises.

Risk management, a fourth basic financial function, includes the management of risk associated with both retail and wholesale transactions (e.g. selling different types of insurance or trading derivatives in international markets). An economy with access to cheap and easy risk trading will undertake more viable risky projects, because it becomes easy to divide the risk into different components that can be tailored to the demand of specialized purchasers. But the danger of abuses of risk trading appears, and corrective activity is required through regulation or deregulation. The crises can emerge, as shown in 2008 – the use of collateralized debt obligations in the US subprime mortgage markets seems to have stimulated the parties involved to exercise less due diligence than previously.

Another form of financial system function involves managing incentives, especially those arising from informational differences (Neave, 2010:25) (e.g. asymmetric information, adverse selection, moral hazard).

As showed above, the essential function of channeling funds to those individuals or firms that have productive investment opportunities, arising problems of asymmetric information, that leads to two basic problems in the financial system: adverse selection and moral hazard. As economic literature explained, adverse selection occurs before the process of financial transaction and intermediation, because, generally, potential bad credit risks are the ones who most want a loan. The process is imperfect and fear of adverse selection will lead lenders to reduce the quantity of loans they might otherwise make. Moral hazard occurs after the transaction when a borrower wants to invest in projects with high risk. The borrower wins if the project succeeds, but the lender bears most of the loss if the project fails. This approach offers a possible definition of what a financial crisis is – a disruption to financial markets in which adverse selection and moral hazard problems become much worse, so that financial markets are unable to

efficiently channel funds to those who have the most productive investment opportunities. A financial crisis thus results in the inability of financial markets to function efficiently, which leads to a sharp contraction in economic activity (Mishkin, 2000:3).

A review of economic literature suggests that there are four types of factors that can lead to increases in asymmetric information problems and thus to a financial crisis: 1) deterioration of financial sector balance sheets, 2) increases in interest rates, 3) increases in uncertainty, and 4) deterioration of nonfinancial balance sheets due to changes in asset prices (Mishkin, 2000:4).

### **International background**

The international financial system faced during latest period severe stress tests and criticisms of the authorities and civil society around the world, the banks being made responsible for the financial crisis started in 2008. Recently, the Basel Committee on Banking Supervision, the agency to monitor international banking activity, said the world's largest banks have a cash deficit of 1.730 trillion Euros (2.287 trillion U.S. dollars), a problem are required to solve in the next three years. Also, the 91 largest banks and a capital deficit of 577 billion Euros compared to 7% level that you must meet to enter into class I, a measure of financial stability. Although markets were ready to hear capital deficit, and the reduction of liquidity shock could be more difficult to repair, since the euro area faced market dysfunctions.

For the first time since 1980, world economic growth fell into negative trend (-0.6%), with the euro area economy declining 4.1 %. Trade has been adversely affected, dropping more than 20% at global level and 16% at European level. It is estimated that the performance of EU Member States will be among the weakest, with a growth of 1 % against 4.6%, on average, at world level. Government stimulus was significant in 2009: average fiscal deficit at EU level reached almost 7% of GDP and public debt as a share in GDP increased by 12 %age points (and an additional rise by around 6 %age points is foreseen for 2010). These developments are not sustainable and therefore call for fiscal consolidation measures in most European economies. The withdrawal of fiscal stimuli may hamper the resumption of economic growth in Romania's main trading partners and could adversely affect demand for Romanian exports in the future. The international financial system received a strong support from monetary and fiscal authorities in 2009. Central banks in many developed economies resorted to extraordinary policy measures to provide liquidity<sup>2</sup>. Monetary policy rates dropped to historical lows (1 % in the case of the single European currency and near 0 % in the case of the US dollar). Given that the standard monetary policy easing measures have been almost exhausted, some central banks switched from the yield-based approach to a quantitative one.

The central banks of those advanced economies saw a significant increase in the size of their balance sheets and in the maturities of their asset holdings. Most major global banks meet minimum capital requirements, but many would be forced to restrict the payment of bonuses and dividends, if the new rules of Basel III (which regulates banking activity) should be applied immediately. That is why, according to the agreement, the requirements will be met by one, over eight years. It is believed that new regulations, much tougher to maintain a capital "healthy" for at least 7% (compared to 4.5% as it was before), will have a modest impact on the overall economy, despite business feared a negative impact on output and unemployment (see below - 1.4. Basel Accords requirements). Basel Committee said that if measures are implemented over a period of eight years, as is planned, would result in a maximum decline of 0.22% of global GDP. In addition, given that Basel III will be introduced between 2013 and 2019, the maximum impact on GDP would not be seen only in nine years. These new

regulations could "cut" 3% of economic growth over the next five years in the U.S., Euro zone and Japan could eliminate 10 million jobs.

The debt crisis emerged in the Euro area , where banks are deeply involved. German banks have borrowed amount equivalent to 6% of GDP in Germany to Ireland and another 6.2% to Spain. Thus, over 12% of the GDP of most powerful countries in the European Union is in the hands of two countries with the highest risk. Also, British banks such as Barclays and HSBC should be to recover loans to Ireland, which is equivalent to 9.4 per cent of UK GDP. Amounts equivalent to 5.7% of British GDP is in the form of bank loans in Spain.

Dutch banks appear to be located in the worst case, the amount representing 16.4% of GDP of the country borrowed Spain. Amounts due to banks equivalent are closed to 13% of GDP in Portugal, and 8.9% of GDP in France. Ireland, which just received a loan of around EUR 85 billion from the IMF and the EU. Irish banks have lost a third of deposits due to fears of bankruptcies and, moreover, have borrowed amount equivalent to 14.5% of GDP. American banks are not better from this point of view, borrowing, together, 353 billion dollars to Portugal, Ireland, Greece and Spain. To prevent a real disaster, Ireland is already the fourth nationalization of the banks, Allient Irish Banks (AIB), which offered 3.7 billion Euros. (all data is in concordance with ). The world economy deteriorated significantly in 2009 (down 0.6 %), its first contraction in 30 years, while the EU economy saw a sharper fall (more than 4 %), the important government stimulus packages notwithstanding.

The Romanian economy followed a similar trend as the other countries in Central and Eastern Europe, except Poland. The economic contraction was sharp (7.1%) and the fiscal deficit widened substantially (to 7.4 % of GDP).

### **Basel Accords requirements**

The changes in Basel II related to Basel-I appeared because of several problems that became increasingly obvious over time, such as: lack of sufficient risk differentiation for individual loans; no recognition of diversification benefits; unacceptable treatment of sovereign risk; some incentives for better overall risk measurement and management. [Stephanou & Mendoza, 2005: 3-4]; few distortions related to cross-border lending [Ford & Sundmacher, 2007: 3]. The overriding goal of the proposed Basel II Accord is to bring capital requirements more closely in line with risk of banks' assets. The Basel Committee proposed three alternative approaches [Fîrțescu, 2007: 85]: 1) a standardized approach, which increases risk sensitivity compared with the current approach by introducing further risk buckets; 2) the internal ratings based foundation approach, which gives banks the opportunity to use internal risk measurement techniques; 3) the internal ratings based advanced approach, which extends the possibilities of banks to use internal risk measurement techniques. The framework should provide banks with incentives to improve their risk management techniques. [Weder, Wedow, 2002, 9] The risk weights under the Standardized Approach are shown in the table below:

*Table 1- The risk weights under the Standardized Approach*

	Investment Grades		Speculative Grades				Unrated
	AAA to AA-	A+ to A-	BBB+ to BBB -	BB+ to BB -	B+ to B-	Below B-	
<b>Sovereign</b>	0	20	50	100	100	150	100
<b>Banks - a</b>	20	50	100	100	100	150	100
<b>Banks – b</b>	20	50 c	50c	100 c	100	150	50 c
<b>Corporate</b>	20	50	100	100	150	150	100

*Source: personal approach of the author after Weder, Wedow, 2002, p. 9*

The table suggests that banks determine the required minimum capital of lending by applying the risk weight that corresponds to the borrower's rating and then multiply the risk weight by the usual 8 per cent minimum requirement of capital. For this reason, a sovereign rated BBB would be assigned a risk weight of 50 and a risk weighted minimum regulatory capital requirement of 4 per cent. Given the large number of borrowers without ratings, the Basel Committee introduced a further bucket for unrated borrowers. Given the lower risk weights in the unrated bucket, critics have pointed out that borrowers will have no incentive to obtain ratings and that there exists an incentive for regulatory arbitrage towards riskier but unrated borrowers.

Basel III requirement proposed some transition arrangements to be implemented until 2015. Compared to actual agreements (e.g. minimum requirement for common equity, the highest form of loss absorbing capital), indicators will be raised from the current 2% level, before the application of regulatory adjustments, to 4.5% after the application of stricter adjustments. The Tier 1 capital requirement, which includes common equity and other qualifying financial instruments based on stricter criteria, will increase from 4% to 6%. The capital conservation buffer above the regulatory minimum requirement be calibrated at 2.5% and be met with common equity, after the application of deductions. The objective of sound supervision and bank governance is to reinforce stability and address the collective action problem that has prevented some banks from curtailing distributions such as discretionary bonuses and high dividends, even in the face of deteriorating capital positions.

The transitional arrangements are shown in table below.

Transitional arrangements	Period / Dead line	Minimum Requirements
<b>obligation that member countries must translate the rules into national laws and regulations</b>	1 January 2013	3.5% common equity/RWAs; 4.5% Tier 1 capital/RWAs, 8.0% total capital/RWA
<b>requirements related to banks</b>	1 January 2014	minimum common equity - 4% Tier 1 requirement - 5.5%.
<b>requirements related to banks</b>	1 January 2015	common equity - 4.5% Tier 1 requirements - 6% total capital requirement - existing level of 8.0% the difference between the total capital requirement of 8.0% and the Tier 1 requirement can be met with Tier 2 and higher forms of capita
<b>aggregate/required deductions</b>	1 January 2018	amounts above the aggregate 15% limit for investments in financial institutions, mortgage servicing rights, and deferred tax assets from timing differences, would be fully deducted; the regulatory adjustments will begin at 20% of the required deductions from common equity on 1 January 2014, 40% on 1 January 2015, 60% on 1 January 2016, 80% on 1 January 2017, and reach 100% on 1 January 2018
<b>capital conservation buffer</b>	1 January 2019	begin at 0.625% of RWAs on 1 January 2016 and increase each subsequent year

Transitional arrangements	Period / Dead line	Minimum Requirements
		by an additional 0.625 %, to reach its final level of 2.5% of RWAs on 1 January 2019
<b>existing public sector capital injection</b>	1 January 2018	out over a 10 year horizon beginning 1 January 2013. Fixing the base at the nominal amount of such instruments outstanding on 1 January 2013, their recognition will be capped at 90% from 1 January 2013, with the cap reducing by 10 %age points in each subsequent year. In addition, instruments with an incentive to be redeemed will be phased out at their effective maturity date
<b>capital instruments</b>	January 2013	capital instruments that no longer qualify as non-common equity Tier 1 capital or Tier 2 capital will be phased instruments meeting the following three conditions will be phased out conditions:: issued by a non-joint stock company 1 ; treated as equity under the prevailing accounting standards; receive unlimited recognition as part of Tier 1 capital under current national banking law
<b>final adjustments</b>	first half of 2017 - 1 January 2018	any final adjustments will be carried out in the first half of 2017 with a view to migrating to a Pillar 1 treatment on January 2018 based on appropriate review
<b>Phase-in arrangements for the leverage ratio</b>	1 January 2011 - 1 January 2018	the supervisory monitoring period will commence 1 January 2011; disclosure of the leverage ratio and its components will start 1 January 2015. any final adjustments will be made in the first half of 2017 with a view moving around to a Pillar 1
<b>the liquidity coverage ratio (LCR)</b>	1 January 2015 - 1 January 2018	the liquidity coverage ratio (LCR) will be introduced on 1 January 2015
<b>revised net stable funding ratio (NSFR)</b>	1 January 2018	revised net stable funding ratio (NSFR) will achieve a minimum standard by 1 January 2018. rigorous reporting processes to monitor the ratios during the transition period are taken into discussion the review the implications of these standards for financial markets, credit extension and economic growth, addressing unintended consequences as necessary will be taken

### **The Romanian Financial System during actual crises**

Financial stability has faced significant challenges in 2010 related to previous years, some of major issues being summarized as follows: bank capitalization has increased to comfortable levels and adequate liquidity was maintained, as a result of the efforts made by credit institutions, NBR's actions, along with the commitments assumed under the European Bank Co-ordination Initiative by the nine largest foreign banks operating in Romania, were the major catalysts of these efforts. Bank asset quality has recorded some worsening, with credit risk remaining the main vulnerability of the banking sector. Foreign-currency indebtedness is an ongoing concern of the authorities in terms of both prudential management of the existing loan stock and prevention, via an adequate and coordinated regulation at EU level, of resuming a fast growth of foreign exchange loans to the detriment of denominated loans, especially regarding the unhedged borrowers. In response to these risks, the banking system stepped up its provisioning efforts, along with those aimed at ensuring capital adequacy. As a result, the provision coverage of unadjusted exposure of non-performing loans (principal and interest overdue for more than 90 days) remained above 90%. Non-financial companies' capacity to continue their activity properly is constrained by the prolonged and deep economic contraction, as well as by liquidity constraints arising from the functioning of these entities. There is a risk that such constraints could be passed through from one business partner to another and even be magnified. In turn, households have a significant degree of indebtedness, which affected, for some household categories, the possibility of properly servicing their debt in the context of economic adjustments induced by the recession.

Related to financial structure appear the level of financing in the economy. Financial intermediation in Romania expanded in 2009, but the growth rate slowed down because of the turbulences in financial market activity and domestic economy. Heightening risks required capital inflows, cost restructuring and a better management of liquidity with a view to preserving financial system stability. The domestic financial sector, closely connected to the external one, chiefly the European financial sector, via capital or financing relations and, therefore, its development and the evolution of risks hinged largely on the financial system stability.

The level of financial intermediation, as a share to GDP, went up in 2009, but this development was also bolstered by the economic activity contraction, net assets of the financial sector posting a nominal increase of only 4.1 %. Credit institutions and non-bank financial institutions further accounted for more than 90 % of the financial sector, while private pension funds reported the fastest dynamics. At present, they hold an insignificant share in the financial system yet they benefit from the participants' ongoing contribution flows and, over a medium-time horizon, they will be able to manage a large volume of financial assets. However, the contribution receipts may decrease in the short run as a result of the fragile economic context and fiscal imbalances. The domestic financial system is dominated by credit institutions but the insurance sector and equity investment sector enjoy a high development potential in step with the convergence of financial markets with the European ones.

### **REFERENCES**

1. Fîrțescu, B., *Sistemul financiar al României*, Iași, Editura Universității Alexandru Ioan Cuza, Iași, 2010
2. Fîrțescu, B., *Actual stage of development for basel II and effects on romanian financial system soundness*, <http://ideas.repec.org/a/aic/journal/y2007v14p83-88.html>, <http://anale.feaa.uaic.ro/anale/en/Arhiva200720Firtescu/153> accessed: 19 March 2010

3. Fischer, S. (1997) "*Financial System Soundness*", Finance & Development / March 1997, available on-line at <http://web.cenet.org.cn/upfile/37547.pdf>, accessed: 17 February, 2011
4. Ford, G, Sundmacher, M, *BASEL II: A Research Agenda for Banks*, 2007, [www.ssrn.com](http://www.ssrn.com), Ford, G, Sundmacher, M, *BASEL II: A Research Agenda for Banks*, 2007, [www.ssrn.com](http://www.ssrn.com), accessed on 30 September 2007
5. Neave, H.N. (2009) *Modern Financial Systems*, New Jersey, John Wiley & Sons
6. Mishkin S.F. (2003) "*Financial Policies and the prevention of financial crises in emerging market economies*", available on-line at <http://ideas.repec.org/p/wbk/wbrwps/2683.html>, accessed: 17 February, 2011
7. Stephanou, C, Mendoza, H. C., *Credit Risk Measurement Under BASEL II: An Overview and Implementation Issues for Developing Countries*, 2005, [www.ssrn.com](http://www.ssrn.com), accessed: 16 March, 2011
8. VanHoose, D, *Evaluating the Policy Implications of the Other Two Pillars of BASEL II*, 2007, [www.ssrn.com](http://www.ssrn.com), accessed: 19 March, 2011
9. Weder, B., Wedow, M, *Will BASEL II Affect International Capital Flows to Emerging Markets?* , *Governing Finance and Enterprises: Global, Regional and National*, October, 2002, [www.oecd.org/dev/Technics](http://www.oecd.org/dev/Technics), [www.ssrn.com](http://www.ssrn.com), accessed: 17 March, 2011
10. \*\*\*, *Basel Committee on Banking Supervision - International Convergence of Capital*
11. \*\*\* - *Measurement and Capital Standards, A Revised Framework*