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Banking supervision and regulation: Possible changes as a consequence of the global financial crisis

Master Thesis

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Affirmation

Hereby I declare I have elaborated this thesis on my own with the help of the listed sources only.

In Prague, July 28, 2011 Jaroslav Mihok

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Abstract

The thesis is devoted to the analysis of recent global financial crisis and subsequent reform of the regulatory and supervisory framework. After the discussion of the causes of the crisis the proposed reforms are presented. The presentation of the reforms is divided into three parts. The first one consists of the global initiatives and general recommendations. Subsequent two parts focus on the specifics of the reforms in the United States of America and in the European Union. Afterwards the reforms are compared and subjected to the critical analysis.

Key words: Dodd-Frank Act, De Larosière report, financial crisis, reform of the regulatory and supervisory framework

Abstrakt

Diplomová práca sa zaoberá nedávnou globálnou finančnou krízou a následnými reformami regulácie a dohľadu nad finančným trhom. Po analýze príčin krízy sú prezentované navrhovaná reformy. Reformy sú rozdelené do troch skupín. Prvá sa pozostáva z globálnych iniciatíva a všeobecných odporúčaní. Nasledujúce dve časti sú venované implementácii reforiem v Spojených štátoch a Európskej únii. Následne sú oba prístupy porovnané a podrobené kritickej analýze.

List of Abbreviations

AIFM – Alternative Investment Fund Managers

BCFP – Bureau of Consumer Financial Protection

CDO – Collateralized Debt Obligations

CEBS – Committee of European Banking Supervisors

CEIOPS – Committee of European Insurance and Occupational Pension Supervisors

CESR – Committee of European Securities Regulators

CFTC – Commodity Futures Trading Commission

CRA – Credit Rating Agency

CRD – Capital Requirements Directive

EBA – European Banking Authority

EC – European Commission

ECB – European Central Bank

EIOPA – European Insurance and Occupational Pensions Authority

ESA – European Supervisory Authority

ESFS – Establishing European System of Financial Supervision

ESMA – European Securities and Markets Authority

ESRB – European Systemic Risk Board

FDIC – Federal Deposit Insurance Corporation

FSOC – Financial Stability Oversight Council

GDP – Gross Domestic Product

GSE – Government Sponsored Enterprise

IMF – International Monetary Fund

MBS – Mortgage-Backed Security

MoU – Memorandum of Understanding

OFR – Office of Financial Research

OLA – Orderly Liquidation Authority

OTC – Over the Counter

S&L – Savings and Loans

SEC – Securities and Exchange Commission

SIFI – Systematically Important Financial Institutions

SIV – Structured Investment Vehicles

VAR – Value-at-Risk

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1. Introduction

Recent financial crisis broke out after the relatively calm and benign period characterized by readily available liquidity, low interest rates and low perceived risk. First signs distress appeared after the burst of the housing bubble in U.S. in 2006 The burst was combined with extensive financial innovations that disguised accumulated risk, financial institutions that failed to apply proper risk management procedures, and regulators and supervisors that failed to prevent excessive risk taking and identify the systemic risk lead to the largest global financial crisis in decades.

Soon after the crisis the work on identifying and analysing its causes has commenced and preparation of regulatory and structural reforms that would prevent the similar crisis form emerging in the future followed. Even today many of the reforms are still unfinished. It will take another few years until they are fully implemented and their impact can be fully assessed. So far the outcomes of the work have materialized in G-20 agenda, the Dodd–Frank Wall Street Reform and Consumer Protection Act, series of reforms in EU and have affected the development of the Basel III.

This thesis attempts to summarize the identified causes of the crisis and provides the brief the brief overviews of the reforms that were already introduced or implemented, their comparison and criticism.

The thesis is structured as follow. Chapter 2 gives the brief overview of the recent financial crisis and its causes. It investigates macroeconomic causes, regulatory failure and causes market developments that combined caused the crisis.

Chapter 3 focuses on the global initiatives to repair regulatory and supervisory frameworks specifically, the G-20 agenda and proposals of the Basel Committee on Banking Supervision. Reoccurring themes in the proposed reforms are also discussed here as well as some general ideas towards the regulatory repair.

Chapter 4 is devoted to the reform of the EU regulatory environments. It follows the initial proposal of De Larosière report and subsequent legislative acts that transformed its ideas into actual regulatory framework.

Chapter 5 follows the reform in the USA. The reform was presented as a single framework law, Dodd-Frank Act that is expected to be brought to practice by ensuing rulemaking of the relevant regulatory bodies.

Chapter 6 compares the reforms in the US and EU and attempts to illustrate how two jurisdiction following the same goals adopted different philosophies and strategies to achieve them.

Chapter 7 presents some of the criticism that was generated by the reforms and highlights shortcomings of both US and EU reform. Final chapter summarizes and concludes the thesis.

2. Origins of the Crisis

2.1. Macroeconomic development

Development prior to the crisis was characterized by specific macroeconomic development (The Turner Review, 2009). It was a period of mild, relatively stable economic growth and low inflation, which was a direct result of monetary policies and globalisation. Borio (2009) argues that the introduction of credible policies designed to maintain low and stable inflation by central bank could create an environment where traces of unsustainable economic growth would rather manifest as unsustainable increases in credit and asset prices than as rising inflation. And in many countries, credit and asset prices, especially residential property, had been growing at unusually rapid rates and in the same time low interest rates, risk premium and volatilities were maintained.

Borio (2009) states that by acting as a series of positive “supply shocks” the globalisation has created an environment where the individual shocks could disperse more easily stabilizing both inflation and output. The period is often referred to as Great Moderation. In addition to stabilizing growth and inflation liberalization and globalization deepened the interconnectedness of countries, both emerging and developed. Effectively creating an environment where financial and real factors are more likely to influence economic development in other countries.

Other factors that contributed to the Great moderation are mentioned by Elmeskov (2009):

- More efficient inventory management and shift towards services diminished the destabilizing effects of the stocks on the output
- Mitigated need for potentially destabilizing policy as inflation was low and stable
- Increase in financial depth and competition weakened the liquidity constraints and allowed households to smooth their demand.

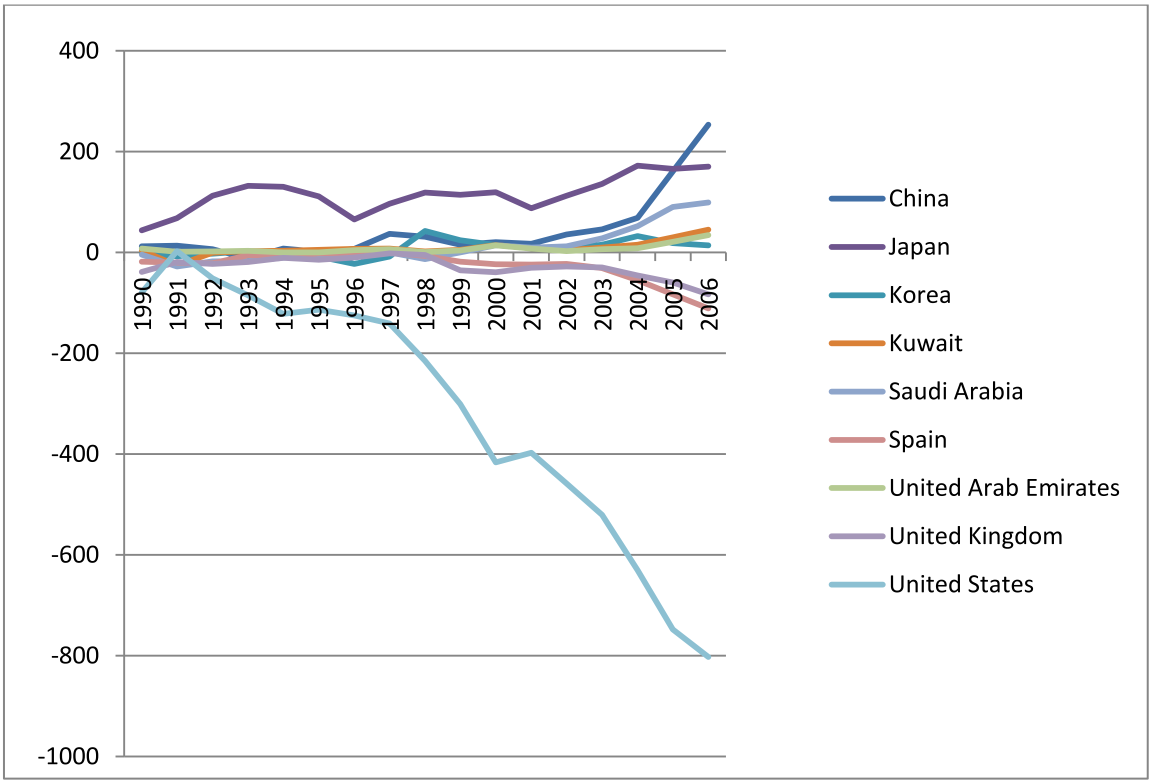
- International competition prevented enterprises form raising their prices relatively to their competition.

- Increase in labour demand elasticity made wage earners less likely to demand higher wages.

- Lack of significant price increases on commodity markets prior mid-2007

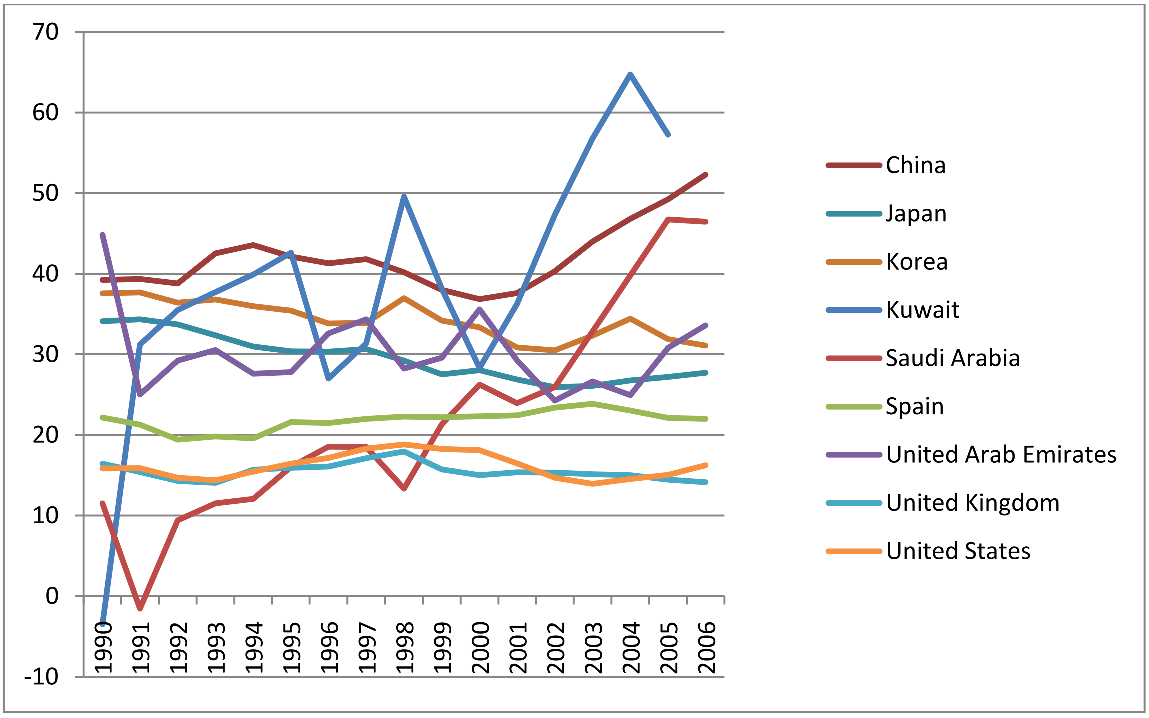
In the same time specific relationship between the debt-financed growth models in several countries, such as the United States, and the export-oriented ones in others, mainly in Asia had, developed. As a result oil exporting countries and important Asian economics, like China and Japan, have developed significant current accounts surpluses. On the other hand many western countries were developing sizeable current account deficits (USA that has the highest current deficit in the world). One of the causes of the phenomenon lies in relatively high saving rate in countries like China, Japan and some oil exporting countries, on the contrary western economies are typically characterized by low savings and high borrowings. Savings in several Asian economies surpassed domestic investing opportunities; hence they were able to invest heavily on the international financial markets accumulating significant stocks of foreign exchange reserves. Firstly the policy was motivated by creation of precautionary balance and later it was also utilized to fight appreciation pressures on their currencies (Borio, 2009). Resulting foreign currency claims were then used as central banks reserves. These were invested into the various fixed income risk-free or low-risk instruments, typically government bonds or government guaranteed bonds adding pressure to lower the risk-premium on long-term rates, mainly US Treasuries.

Figure 1: Current account (in billions USD)



Source: http://www.imf.org/external/data.htm

Figure 2: Saving rate (as % of GDP)



Source: http://www.imf.org/external/data.htm

The combination of above mentioned factors resulted in lower risk free rates and risk premium that has fallen dramatically since 1990's. Additionally, US Federal Reserves decided to keep interest rates low to help the US economy recover from the 2001 recession and they were steadily declining in period between years 2000 and 2004. Eventually, during the years 2003 and 2004 Fed held the interest rates as low as 1%. As a result two important effects took place.

Firstly it was possible to observe unprecedented expansion of credits in certain developed countries and substantial part of it was in form of mortgages. Particularly in the USA considerable portion of the credit expansion was also a result of deterioration of credit standards. We are aware that decrease of the interest rate was not the only reason for such a credit expansion. However we believe it was an important factor.

Figure 3: Nominal interst rates of 2-years US Treasausry Bonds

Source:http://www.treasury.gov/resource-center/data-chart-center/interest-rates

Secondly such a development of risk free rate has a major influence on the behaviour of institutional investors like pension and hedge funds. As the interest yields got lower they faced two options. Either they were struggling to cover their expenses and provide any positive yield or they had to find new sources of yield. Mortgage and other assets backed securities seemed to be a good choice as they offered higher yields and they had good ratings. Combination of favourable economic environment and low interest rates motivated investments into riskier types of asset, such as mortgage and other assets backed securities that offered higher yields and still had very positive ratings.

2.2 Regulatory failures

Traditionally financial sector is heavily regulated and various institutions have to fulfil specific regulatory requirements to be allowed to operate. During the recent crisis the question has raised whether the regulation itself could be blamed for contributing to the crisis and if it can be what the flaws of the regulation were.

In identifying the regulatory failures behind the late crisis it is crucial to examine the early 1990s when use Congress was dealing with the Savings and Loans imposing stricter regulation on the institutions. However, in order to pursue the affordable housing program goals, it failed to establish bank-like regulation over government sponsored enterprises (GSE), Fannie Mae and Freddie Mac (Tarr 2009). Despite both being the private enterprises (Fannie Mae privatized in 1968, Freddie Mac in 1989) both GSEs were able to borrow at very low interest rates as it was believed that government would help them out in event of default as it actually happened in September 2008 (Tarr 2009). The regulatory and political failure was later magnified in mid-1990s when Community Reinvestment Act introduced quotas on credit to be provided to the undeserved areas by the commercial banks. In pursuit of political objective of promoting the home ownership the banks were motivated to relax their mortgage lending standards. Afterwards, the lower mortgage standards spread to the other sectors of mortgage markets, such as speculative borrowers and borrowers whose goals was to swap their homes for more expensive ones. Hence borrowers had an access to the mortgage they could not afford. In the given environment banks have opt for securitization to safeguard their profit from the risky mortgages. The problem was further underscored by the presence of the unregulated market participants. According to (Baily, Litan, 2008) during the years 2004-2005 during the greatest subprime mortgages lending expansion half of the mortgagees was provided by the institutions that were not supervised by Federal Deposit Insurance Corporation (FDIC), Federal Reserve, or federal regulation, but only by state regulation.

From more general point of view one of the mistakes that can be identified is excessive reliance on bank's risk management capabilities and on the ratings in definition of capital requirements. De Larosière report (2009) even suggests that the regulated financial institutions were the major source of problems. To amplify the problem some of the capital requirements (e.g. on the proprietary trading) were particularly light while the risks involved in these transactions were substantially higher than the internal models had expected.

In addition little and inadequate attention was given to the liquidity of markets. Generally the regulators did focus on individual firms dedicating little attention to the general developments of whole sectors or markets as a whole. Sum of the problems that took place in various markets and many countries contributed significantly to the development of the environment suitable for the crisis. Additionally once the crisis has begun, the problems of information exchange, collective decision making and cooperation between central banks, supervisors and finance ministries has emerged.

Another problem that was given a lot of attention was the rapid expansion of derivatives markets and off-balance sheet vehicles. Neither U.S. nor EU supervisors were able to identify the deterioration in mortgage lending standards and react accordingly. EU supervisors not seeing the problem did not assess properly the degree to which a number of EU financial institutions were exposed to highly complex financial products often registered off-balance sheet (de Larosière 2009).

After the savings and loans (S&L) crisis it was decided that accounting rules needed to be adjusted and mark to market principle was introduced in 1993. In was meant to address the situation that had emerged after S&L crisis when some thrift had seemed to be solvent on the books, where records were kept in historical prices, even though the value of their assets was seriously diminished (Baily, Litan, 2008). Nevertheless the new problem has arisen. Mark to market overprices the assets during the bubble motivating the banks to increase their leverage. But once the bubble bursts the price of the assets diminishes swiftly leading to possible contraction of lending and may even result in insolvency.

The situation prior to the crisis implies that for various reason the supervisors did not have needed information or they were unable to evaluate them correctly on both national and international level. Even though there existed awareness about the imbalances and risks that were accumulating in the international financial system. There existed no agreement on the seriousness of the situation and preferred course of actions to be taken. International competition among the major financial centres might have also contributed to the reluctance to take combined action on both national and international levels (de Larosière 2009).

2.3. Securitization

In response to the low yield and demand for the increase in earning, financial markets came up with series of innovations. The innovations were centred on origination, packaging, trading and distribution of the securitized credit instruments. The basic variation of securitised credit existed in the USA since the creation of the Fannie Mae in 1930s. But from the mid-1990s they grew immensely and they became more complex.

The idea behind such financial innovations was simple. It was assumed that by slicing, structuring and hedging it would be possible to offer the investors more appealing combinations of yield and risk than were available with direct purchases of the underlying credit exposure. At first securitisation was considered to be means to reducing bank system risk and cutting the transaction costs of credit intermediation by reducing the need for bank capital as it gave the opportunity to link borrowers directly with creditors.

The problem arose when at the outbreak of the crisis it became apparent that the most of the securitized assets were not held by the investors intending to hold on to them until the maturity[1]. Instead they were held by the banks and similar institutions. Typically the securitized credit was not simply sold and it did not disappear from the bank's balance sheet. It was either bought by the trading desk of another bank or it was sold by the originating bank but the portion of the risk was retained by use of the credit derivative. Eventually it was re-securitised to create more complex and opaque instruments or used as collateral to raise short term liquidity

[1] Turner review

The process resulted into the creation of complex and opaque structure of mutual relationships between the financial institutions where risk was retained within the financial sector but in the less transparent form.

In The USA the securitization was used to promote mortgage lending. Two Government Sponsored Enterprises (Fannie Mae and Freddie Mac) were commissioned to buy mortgage loans that matched certain conditions (conforming loans) from banks. The mortgages were than pooled re-packed and sold as mortgage-backed security (MBS) to the investors. It is important to note that GSEs retained the risk of default of the underlying mortgages by guarantying investors against default losses and pre-payment losses effectively shielding the investors from the risk of the underlying loans. Additionally MBS were considered to be implicitly guaranteed by US government (Baily, Litan, 2008).

The GSE were never meant and allowed to buy whole subprime mortgages directly. However to support government's affordable housing goals they could buy subprime MBS from private issuers. Despite buying subprime and Alt-A MBS worth between $340 and $660 billion in period 2002-2007 the role of GSEs was not as prominent as it seems and was even decreasing during 2000s. In 2002 Fannie Mae purchased just over 2% of private-label subprime and Alt-A MB, in 2004, when the market has significantly expanded, it bought 10% of the total, and in 2007 it bought only 4.5%. In 2000 MBS issued by the GSEs accounted for78% of total MBS issued but in 2006 their share of MBS issuance had fallen to 44% (Baily, Litan, 2008).

2.3. Maturity transformation

Maturity transformation is considered one of the key functions of the banking sector. Traditionally banks hold long term assets and short term liabilities. As result banks face liquidity risk. To manage it complex set of risk management devices has been created. Their goal is to be able to measure and limit the extent of the maturity transformation. But in the last decades certain amount of the maturity transformation has moved from the banking books and it took form of the so called "shadow banking". It has taken several forms:

First of them would be the usage of structured investment vehicles (SIV). The maturity transformation takes place between the assets with a long term maturity on the asset side of SIV's balance sheet and short term promises on the liabilities side.

Secondly investment banks decided to fund their long term assets by increasing amounts of outstanding repo operations, especially overnight repos.

The third practice was especially popular among the US mutual funds. It became common to hold long term assets against the liabilities for which immediate redemption was promised. Additionally promises were made about the minimal worth of the capital. Once the liquidity crisis appeared massive attempts to sell their assets to back up redemption claims has occurred putting the additional strains on systemic liquidity and assets price falls.

In addition many institutions began rely on "liquidity through marketability". It was assumed it is safe to hold the long term to maturity assets and to fund them by short term periodically renewed liabilities. In case of liquidity strains it was thought that the assets can easily be sold on the liquid market. Such an attitude proved to be incorrect in mid-2007 when many market participants attempted to gain liquidity by simultaneously selling their assets.

2.4. Credit rating agencies

Growing complexity of the credit derivatives and asset backed securities resulted in an environment where many investors were unable to assess the riskiness of the assets they were trading. Hence the investors were forced to rely on ratings of the rating agencies to reduce the information asymmetry and to address the certain principal-agent issues by quantifying the risk (expressed as rating) agent is allowed to take on behalf of the principal (Katz, Salinas & Stephanou, 2009). Because of the heavy reliance of the market participants on the ratings the CRAs protect themselves from possible litigations regarding the given ratings by claiming that the ratings are not financial recommendations but just mere opinions effectively absolving CRAs form the existing legal standards in both EU and USA (Katz, Salinas & Stephanou, 2009).

Since their introduction the ratings have gradually become an important part of the regulatory framework and regulators relied heavily on them when formulating the regulatory requirements. By doing so, the regulators have de facto outsourced the parts of their responsibilities (Katz, Salinas & Stephanou, 2009) onto CRAs. Yet despite being the crucial part of the regulatory framework the rating agencies themselves were subjected to very little regulation and no license was required to establish CRA. The prominent position was achieved through competing on the market and adopting the best practice standards. Combination of high barrier of entry, based on reputational capital and the breadth of coverage built by successful rating agencies over time has resulted in highly concentrated market dominated by few companies, Standard & Poor's, Moody's and Finch (Katz, Salinas & Stephanou, 2009).

The ratings were calculated using complex Monte Carlo simulations to predict the probability of default of underlying assets. Additionally the same models were used to construct collateralized debt obligations (CDO) and MBS. The risk was divided into various tranches and calculating the required amount of subordination and credit enhancement for each tranche as computed by the model. The model was calibrated by the information on characteristics of the credit pools such as borrowers' credit scores, documentation of income and historical defaults rates of similar mortgages.

The problem with the approach was that historical information used to calibrate the models was based on the data series beginning in early 1990s. This period was characterized by low default rates and steadily increasing prices on the real estate's market. As a result the models were unable to take into account the possibility of a widespread housing bust when the default rates would increase significantly (The Turner Review, 2009). The assumption behind the pooling of the mortgages was that the default rates of individual mortgages are not correlated or the correlation is low. The possibility of the countrywide downturn that would increase the probability of default for the mortgage pool as a whole was not taken into consideration.

The rating agencies were not only rating the commercial instruments they were given by a company. They were actively participating on the process of creating the CDOs. Their role was to help optimise the structure so that the size of low risk, low yield tranches is maximised. CDOs issuers were paying for the service and clear conflict of interests was in place as issuers could have their CDOs structured and rated elsewhere if the rating agency had refused to grant required rating. As a result the CDOs did not get the appropriate ratings, Instead of it issuers paid for specific rating and CDOs were structured to according to the rating model to get the requested rating.

2.5. Procyclicality

Growing occurrence of the securitization meant that investors had to rely heavily on the existing ratings as they were less able to asset the riskiness of their investment by themselves. Eventually increased reliance on rating resulted in investment rules based on the ratings. Additionally growing complexity of the securitised assets resulted in the usage of more advanced rating process and there existed very few to no historic records of their performance. Once the ratings have proven to be faulty the process of downgrading followed shortly.

Simultaneously market value based and rating based triggers were used widely to improve investors' protection. Senior tranches bonds of structured investment vehicles (SIV) were often granted very high ratings as they possessed very little risk. Consequently lower tranches were awarded lower ratings as they represented more risk to the investors. As a result once the crisis emerged and market value and ratings of specific assets began to fall values/rating triggers were off causing simultaneous asset sale by multiple SIVs pushing the price even further down and reinforcing the cycle.

Another procyclical factor was the requirement to increase the value of the collateral in case the rating is lowered. This holds mainly for the CDS and OTC derivatives. Once the credit began to deteriorate in September 2008 the collateral had to be replenished resulting in a downward spiral of increased liquidity stress and falling perceived credit worthiness. Similar procyclical logic applies to the usage of haircut.

2.6. Private sector failures

To avoid excessive risk taking and to exactly evaluate the exposure to the risk firms have developed complex risk management procedures to follow. However the rules were often disregarded in the pre-crisis boom years (Baily, Litan, 2008). Due to the series of failures in corporate governance seniors managers failed to realize that significant portion of the risky assets were not sold. Instead they have stayed on balance sheets of the banks because of the lag between the issuance of the securities and their sale and because it was highly profitable in the time.

Market participants were aware of the increasing complexity of the market and related risk. But it was believed that the development of the complex risk evaluating methods and sophisticated mathematical valuation models was adequate. Most common model used in different modifications by both market participants and regulators was Value-at-Risk (VAR). Bur there are few imperfections related to VAR.

First of all there is an assumption of normal distribution which combined with the short-term observations used to calibrate the model resulted in serious underestimation of high impact low probability events. Even more important is its inability to capture systemic risk. Under VAR it is assumed that no market participant is able to influence the market and network connection between markets participants leading to self-propelled spirals are neglected (The Turner Review, 2009). As a result systemic risk might be very high even though measured individual risk is low encouraging behaviour which generates more systemic risk.

Additional problem was caused simply by the complexity of the models. As the models grew more complicated it became harder for the top managers and board members to understand them. Hence instead of revealing the risk the complex models ended up obscuring it.

The features of the market described all developed all within the market with strong global growth, low inflation, relative macroeconomic stability and low interest rates. These factors resulted into the low perceived risk and very optimistic expectations. But it was also very fragile environment which proved to be unsustainable once the increase in risk, decrease in confidence or worsening of the expectations took place.

2.9. Implication for the regulatory reform

To summarize, the crisis began as a combination of macroeconomic imbalances, unsustainable credit boom and asset price inflation, monetary policy and government program. These economic factors were later combined with the characteristic of the financial system and regulatory failure that played an important role in transition from the original subprime mortgage crisis into the global financial crisis and its subsequent impact on the real economy through credit crunch.

Hence if any regulatory reform is to take place it has to address both sources of the crisis, which caused by overextensions of the credit and factors that prolonged and deepened the crisis.

Such factors would include extensive growth of the securitized credit model, extensive involvement of commercials banks in the trading activities with high leverage, expanded maturity transformation heavily dependent on the marketability of the assets, complexity and opacity in the credit derivatives market, procyclicality and lack of capital buffers, inappropriate regulation and lack of systemic oversight.

3. Proposed Reforms

3.1. Global approach to the supervision

The origin of the crisis was no doubt global. Asset price bubble originated in English speaking countries, dominantly in USA, but it was also observable in UK or Spain. But purchases of the asset backed securities were realized all over the world. In the same time extensive wave of the globalization in the banking sector took place. European investments banks extended their operation in USA; US investment banks expanded their operation all over the world, especially in Europe. Generally cross/border activity saw massive growth, particularly in Europe, between Europe and USA, and through online banking.

The consequences of the crisis were global too and they have revealed shortcomings in the supervision and regulation of the cross-border firms and bank. The case of the Icelandic bank Landsbanki illustrates the problematic situation well. Despite the existence of international institutions authorized to address financial regulatory and supervisory issues their activities are often too fragmented especially when level of interconnections and risk transfers between various segments of international financial market is considered. Furthermore the current situation is viewed as unacceptable in terms of existence of general minimum standards and general framework for financial regulation. Additionally there is currently no functional arrangement that would address the cross border crisis management (de Larosière, 2009).

Figure 4: Landsbanki

According to the EU single market policy if a bank operates in one member country it is then allowed to establish a branch in any member country. The solvency and liquidity supervision remain in the jurisdiction of home country and supervisor of the country hosting the branch has only limited supervisory authority over the branch. Under the policy Icelandic bank Landsbanki HF founded branches in UK. The clients' deposits were to be protected by Icelandic deposit insurance and UK insurance in which Landsbanki voluntarily participated in. Once the Landsbanki collapsed the Icelandic deposit insurance was not ready to meet the claims immediately and certain amount of deposit was covered from UK insurance scheme. Additionally UK government decided to protect the deposit exceeding £50 000 to prevent the panic. Hence British taxpayers had to compensate the depositors despite the bank not being under full prudential supervision of British authorities. The example illustrates how under current EU policy the situation may arise when one member country may bear the costs for irresponsible behaviour of other country.

(The Turner Review 2009)

Afore mentioned issues begun to be addressed by the international community at the G20 Summit in Washington on 15 November 2008. Facing the global character of the financial markets the strengthening of the international cooperation of the regulators, international standards and their consistent implementation and protection against adverse cross border and global effects threatening the financial stability was recognized necessary. Support of market discipline and prevention of adverse spill-overs, regulatory arbitrage, together with support of innovation and competition were to be implemented. In addition representatives of the 20 countries[2] expressed their desire that financial institutions were also expected to take responsibility for the crisis by recognizing losses and improving their disclosure, governance and risk management (Declaration from Summit on Financial Markets and the World Economy, 2008).

Such convergence of international regulatory environment is to be pursued in two ways. First would be the strengthening of existing bilateral cooperation between the influential financial centres. The second would be the strengthening and clear definition of jurisdictions and authority of international standard setter such as afford mentioned G-20.

De Larosière report (2009) identifies two candidates that seem to be capable of handling the task of international cooperation and coordination in the field. The first would be the Basel Committee that already does have the experience in developing and implementing

[2] G-20 members: Argentina, Australia, Brazil, Canada, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, United States

the international standards. The second is Financial Stability Board (FSB) as the task includes more than just the regulation of the banks. However the FSB would have to be reformed before it can undertake such a task. It must be given more resources and better governance structure. Additionally it was suggested that it would be accountable to the IMF and its number of employees would have to be increased to be capable of effectively fulfil the potential tasks. Naturally it has to be independence from political influence and the new transparent standards have to be prepared in cooperation with market to reflect its reality.

Deeper and enhanced cooperation and collaboration in supervision of the large cross-border conglomerates is needed to avoid supervisory failures from the past. It was suggested that the international supervisory colleges would be established along the lines prepared by FSB and the largest banks' representatives should meet at least once a year to discuss the proper evaluation of their risk.

3.2. Systemic reforms

In the process of designing the regulatory reform it is crucial to realize that risks arising in the banking sector are substantially different from those that exist in the real economy or non-banking financial institutions.

The first important source of the risk comes from the banks' function as the providers of the maturity transformation. Bank holds long term assets that are financed by the short term liabilities, allowing the non-bank sector to hold long term liabilities and shorter term assets. This position is inherently risky no bank would be able to repay all its creditors at any given time. Hence the need for the lender of last resort arises.

The liquidity risk of a bank can have potentially systemic effect as lack of confidence in one bank can easily undermine the positions of the other banks. Once the bank faces liquidity problems it may react by drawing down the wholesale lines or reducing wholesale placing effectively spreading the liquidity problems to other banks in the system. Similarly if bank decides to solve the problem by selling its assets at large the drop in prices will also affect other banks holding the same assets resulting in solvency and liquidity risk.

The consequences of the bank failure or bank system failure are severe and felt by the whole economy. It is important that the banking system is considered as an interconnected unit. Such an approach is in contrast with the current approach which is rather idiosyncratic. There was not enough attention paid to the systemic nature of the banking sector and systemic risk was overlooked.

3.3. Changes in capital, accounting and liquidity

In the proposed reforms of the reforms of the banking supervision there is a reoccurring theme of adjusting the capital adequacy, accounting and liquidity policies. The aim of the changes should result in more resilient banking sector that is more prepared to withstand the shocks. Crucial ideas can be categorized as follows:

1. Changes of the quantity and quality of bank capital
2. Introducing counter-cyclical measures
3. Gross leverage ratio limits
4. Addressing liquidity risk

3.3.1. Changes of the quantity and quality of bank capital

There are two different approaches towards the definition of the adequate capital. The first one is concerned about protection of the senior creditors and depositors in the event of default of the on particular ban while the system remains stable. Another approach focuses on the capital form macroeconomic and systemic point of view. The regulator has to take into account how capital requirements will affect the behaviour of the individual banks and their influence on the whole economy. Under this view it is important that the capital is able to absorb loses without having the negative effect on the economy through unhealthy decrease in lending (The Turner Review, 2009). Traditionally the regulators focused more on the first approach but recent crisis have revealed the importance of the second approach which is reflected in the proposals regarding the adjustments to the bank capital. The Basel Committee proposed the series of reforms to strengthen the resilience of individual banks and in the same time keeping in mind the macro-prudential dimension addressing both possible systemic risk and avoidance of the pro-cyclicality. The Basel Committee intends to raise the quality, consistency and transparency of the capital base so that the bank will be better equipped to absorb the losses from the possible future financial turmoil. To achieve the goal Tier 1 capital should predominantly consist of common shares and retained earnings. Both Tier 1 and Tier 2 capital are to be harmonized internationally and Tier 3 is to be abolished (Basel Committee on Banking Supervision 2010).

In addition the capital requirements for the counterparty credit risk from derivatives, repos, and securitization are to be strengthening through raising the capital buffer covering the exposures. Under the current capital regime the banks were required to hold only very little capital against their trading books. The underlying logic was simple. The risk is low because the assets can be swiftly sold in the market. But this assumption has shown up to be faulty and allowed for the development that ultimately resulted in the crisis.

The current attitude towards the trading book originates as an amendment to the Basel I and has been adopted unchanged into the Basel II without significant changes. It is based on VAR estimates of the probability of losses which could be incurred before positions can be closed. The problem with this measure is it can generate pro-cyclical behaviour; it has problems depicting the probability of the high-relevance tail events. It can be misleading by stating that risk of the individual is low even though the systemic risk is high.

Imperfections of the VAR were present even before, but they were amplified recently as the composition of the trading books changed. It was originally designed to be used for the assets considered to be very liquid. But the development in the recent decade led to the trading book being full of less liquid assets as they were able to generate higher capital charges if kept in banking books. After the outbreak of the crisis VAR became useless as the liquidity disappeared.

According to the proposal adopted by Basel Committee VAR could remain in use but following adjustments to the trading book capital are made to be made (Basel Committee on Banking Supervision 2009):

(i) stressed market VAR risk capital charge applied to all trading book exposures to avoid dangerous drops of the capital charges during the volatile period;

(ii) capital charges for market-to-market loses related to deterioration of the credit worthiness of the counter party are to be introduced to address credit valuation adjustment risk ;

(iii) Additional collateral and margin requirements for illiquid derivatives exposures to strengthen collateral risk management practices

(iv) Establishing strong standards for central counterparties and exchanges on derivative markets combined with additional capital requirements for bilateral OTC derivatives exposures to reduce systemic risk emanating from the interconnects of the financial institutions

3.3.3. Introducing counter-cyclical measures

When discussing the capital requirements it is equally important to consider development of capital during the cycle as it is to set proper minimum capital requirements. Maintaining the capital adequacy ratio can have strong procyclical effects. If capital ratio falls during the economic boom spurting further lending and contributing to the creation of the bubble and increases during the economic slowdown when banks cut down lending and worsen the recession it is definitely a procyclical behaviour. It has been argued that Basel II does have such an effect (The Turner Review, 2009, Basel Committee on Banking Supervision, 2009).

Basel II has introduced more elaborate risk measure than the one used in Basel I. Under Basel I assets are divided into few broad risk categories and then weighted accordingly. Hence all the mortgages are given the same risk weight. Basel II on the other hand introduces more detailed system using the banks' estimates for various categories of the same assets. Hence the capital adequacy ratio is more adequate to the risk profile of the bank.

Provided the Basel II has been properly adopted the current crisis might have been less severe as banks would be required to hold higher level of capital compensating for the riskier mortgagees hence lower the loans and limit the growth of the bubble (The Turner Review, 2009). On the other hand once the crisis has begun Basel II combined with mark-to-market accounting, held-to-maturity loans, margining practices, and leverage among financial institutions, firms, and consumers have strong procyclical effect as banks were forced to increase their capital to offset growing riskiness of their assets (Basel Committee on Banking Supervision, 2009).

The level of procyclicality induced by the capital requirements is closely related to the details of the risk model used. To address the issue the British Financial Services Authority has proposed the replacement of "point in time" estimates by "through the cycle" estimates of loan losses in their internal risk models (The Turner Review, 2009). Committee of European Banking Supervisors (CEBS) on the other hand, presented an approach that would use *the Pillar 2 process to adjust for the compression of probability of default estimates in internal ratings-based capital requirements during benign credit conditions by using the probability of default estimates for a bank's portfolios in downturn conditions*[3].

Even though there exist serious of measures that can be implemented into the Base II to reduce it pro-cyclicality it still remains pro-cyclical in its core. Basel II is risk based measure and during the economic downturn the risk increases indeed. Additionally as mentioned above there are many other pro-cyclical factors built into the financial system.

Therefore there exists need for working counter cyclical measure. Such a policy would require banks to increase the capital during the economic boom to create capital buffers that could be utilized during the recession when the loan losses increase. The policy should include the limits on allowed capital distribution and dividend payment once capital reaches certain minimal level (Basel Committee on Banking Supervision, 2009). Supposedly introduction of the buffer would decrease the probability of both individual bank default and system-wide failure. Consequently there would not be need of public authorities' intervention. Additionally it should reduce the degree to which bank behaviour accentuate the economic cycle. Proposed counter-cyclical capital regime would limit the bank lending during the period of economic growth, and during the economic slowdown would lessen the banks' propensity to reduce lending to maintain capital ratios.

[3] Basel Committee on Banking Supervision, 2009

There are two important decisions to be made while designing the countercyclical measure: the process of determination of the level of the buffer and the presentation of its impact.

To determine the level of the buffer two main methods can be used. It be either determined by formula or by discretion (The Turner Review, 2009). If the discretionary system is chosen the regulator is required to analyse macroeconomic data to estimate the phase of the cycle and then to set the appropriate level of capital ratios. Such a system would benefit form the ability to finely tune the appropriate level according to the current economic situation however it would be heavily dependent on regulators quality and independency.

If the formula-based system is used required capital ratio would be determined by formula using known information about growth, bank's balance sheet or other available metric. Advantage of formula-based system would be its ability to produce the results independently of the regulator.

Once such a counter-cyclical measure would be implemented additional issues would arise, as it would be necessary to make a decision about setting the level of buffer for the international bank operating in the different countries with various cycles.

When considering the presentation two options are available. Required capital ratio can either vary through the cycle or buffer will be created as a standalone reserve excluded from the calculation of the required capital.

The first option would require minimal capital to increase during the period of economic growth. But once the economic downturn occurs, the banks would be allowed to decrease minimal required capital. Yet a problem might arise as market could interpret bank's decisions to decrease its capital as a negative signal. Hence banks might be forced to maintain high capital even in the downturn.

Under the second system the capital buffer would be created as separate reserve divided from capital during economic growth and once the downturn occurs, it would be released, minimum capital remaining unchanged. Similar system is currently in place in Spain where it is combined with formula based approach.

The problem of the countercyclical is explicitly addressed in proposed Basel III. Basel Committee on Banking Supervision seeks to introduce measures that would reduce the effect of capital requirements on cyclicality, promote the forward looking provisions and help to build capital buffers that could be used by banking sector in stress (Basel Committee on Banking Supervision, 2010).

The goal should be achieve through serious of measures that would mutually limit the procyclicality. The forward looking measures would require the change in accounting principles. The financial institutions would be required to report expected losses of their portfolio effectively limiting procyclical bias of currently used ex-post incurred loss approach. Capital conservation buffer would limit the banks' profit distribution once common equity tier 1 (CET 1) capital falls under the threshold established 2.5% over the regulatory minimum capital requirement. The limitations would become stricter as the capital would fall and would stay in place until the capital is restored. Additionally the countercyclical buffer is proposed. The size of the buffer would be set by national regulator between 0% and 2.5% and would present additional capital requirements added to the capital conservation buffer and would function similarly limiting the banks' ability to distribute profit once the capital falls under given threshold.

3.3.4. Gross leverage ratio limits

There has also been a suggestion to use maximum gross leverage ratio (total assets to capital) in addition to the minimal capital requirements. It may seem redundant in the environment where proper capital requirement ratio is defined however there exist some arguments to support its introduction.

First of all the current crisis showed us how quickly low risk liquid assets can change into high risk illiquid assets. Additionally there might always be difference of opinions on the risk model used between the regulator and the bank. Proposed leverage ratio should be simple and transparent to prevent the excessive leverage in the banking system and act as an safeguard against possible faults in risk modelling and measurement errors. As such it should be calculated in similar way in various jurisdictions (Basel Committee on Banking Supervision, 2009)

Such practise already exists today in Canada, USA (investment banks were excluded from the rule) and Switzerland where its introduction led to swift shrinking of major banks ’trading books (turner 2009).

3.3.5. Avoiding liquidity risks

It is obvious today that liquidity risk management is as important as capital and solvency management. Even though importance of the liquidity risk was recognized in theory in the years prior to the crisis it was given little attention by regulators and banks as discussion was focused on Basel II and capital adequacy. Considering the liquidity management we should consider few important things.

First of all liquidity risk has inherent systemic aspects as reaction of bank to its own liquidity problem can impose liquidity strains on other banks in the system. Last crisis was a practical example of how individual banks’ attempts to raise their own liquidity by diminishing their presence on the interbank market created illiquidity in whole system.

Secondly the sources of liquidity has become too numerous and the liquidity management too complicated. Combined with increasing reliance on obtaining the liquidity through the marketability it is hard to design regulation of liquidity that would rely on one or few simple measures or ratios like capital adequacy ratio.

Thirdly there exists a trade-off on the on the macroeconomic level. There are benefits to the real economy and non-bank sectors to be achieved by extending maturity transformation. But same extending of the degree of the maturity transformation results in increased systemic liquidity risk. Hence the opportunity for central bank liquidity assistance provides itself.

It is assumed that liquidity regulation would decrease the aggregate maturity transformation. This would carry some economic cost. The decision to be made is between the economic costs of lower aggregate maturity transformation during the good years and lowering the potential for the major liquidity crisis and subsequent recession that could be avoided. Today it seems that economic costs of lower maturity transformation are acceptable but once the economy recovers and memory of crisis fades such costs might seem as unnecessary.

Recently British Financial Service Authority has proposed the “core funding ratio” as one of the possible measures of the liquidity. It would limit bank’s funding of long-term assets with short-term funding. It should force banks to shift their funding to more stable and higher quality sources. Core funding would consist of assets like established retail deposits, medium term notes and covered bonds. Commercial papers and money market funds should definitely be excluded (The Turner Review 2009). Currently funding ratios are not common as regulatory tools but several Asian countries (Hong Kong, Singapore) and New Zealand use them in one or other form.

Addressing the issue of the liquidity the Basel Committee has proposed the introduction of two minimal standards. One would be a 30-day liquidity coverage ratio aimed at strengthening the resilience to potential short term liquidity disturbances. It would require the financial institution to accumulate the liquidity buffer made of unencumbered, high-quality assets that should cover all the institution’s liquidity needs over the period of 30 days. It should guarantee that global banks have sufficient high-quality liquid assets to withstand a stressed funding scenario specified by supervisors. The second measures should be the introduction of long-term structural ratio which should motivate the banks to use stable sources of funding for their operation and to deal with possible liquidity mismatches. It is meant to provide the long term stable source of funding relative to the liquidity profiles of the assets funded. *(*Basel Committee on Banking Supervision, 2010*)*

To supplement two new standards a set of monitoring metrics should be introduced to improve cross-border supervisory consistency. These metrics are designed to assist supervisors in recognising and analysing bank-specific and system-wide liquidity risk trends. The metrics will supplement supervisors’ evaluation of the minimum standards. (Basel Committee on Banking Supervision, 2010)

3.4. Institutional and geographic coverage

Important role in the progress of the crisis was played by the development of institutions and financial tools which were in fact behaving like bank but were banks legally and hence they were not regulated like banks. SIVs (often founded by banks) were highly leveraged and performed maturity transformations (discussed above in more details).

Similarly US investment banks has developed into the institutions performing among other functions maturity transformation yet they were not subjected to the bank regulation.

But SIVs were a clear case of regulatory arbitrage. And both SIVs and mutual funds were large funders of securitised lending: their behaviour in the crisis was therefore relevant. As a more effective regime for trading book capital is designed and implemented, moreover, the incentives for future regulatory arbitrage will increase.

Hence the crucial new principle that needs to be introduced worldwide is regulation according to the economic substance and not legal form. Vehicles that are formally off-balance should be treated as on-balance sheet if they present significant economic risk and are even capable to threaten the stability of the whole system. Consequently the procedures must be developed for regulators to be able to obtain information about the new forms of financial activities and their economic substance to be allowed to extend prudential regulation to them, if necessary.

Such a development is even more desirable in countries with highly fragmented regulatory system, like USA, then in most of the other European countries. In Europe the regulation is traditionally less fragmented and performed according to the legal substance and is often concentrated in fewer institutions.

3.5. Hedge funds

Hedge funds are not currently subjected to the prudential regulation considering their capital adequacy and liquidity, as they generally do not perform bank like activities. First of all their leverage ratio is well below leverage of the banks. Secondly they often do not deal directly with the retail customers, their funds are not typically on demand and they are able to use redemption gates if too many investors decide to withdraw their money.

Yet there is a certain level of procyclicality inherent to the hedge funds' mode of operation. As at certain point of financial assets' prices hedge there may occur parallel attempt to repay their investors which further depresses the prices. Such situation was indeed observed during the recent crisis. Additionally there exists a possibility of hedge funds evolving in the next few years to resemble banks more.

3.6. Credit ratings

Credit rating play an important role in the contemporary capital markets as they provide the investors with probability of default of given credit instrument. Such information allows the investors to properly diversify their portfolios and provide independent analysis of the risk for the subjects that cannot afford perform their own in-depth analysis.

Before the crisis ratings seemed to provide accurate information about the risk of different bonds. Hence many institutions decided to implement rating based procedures into their decision making. As discussed above it did introduce some level of procyclicality into the system, as downgrade of a bond would trigger a withdrawal of the investment, but it was considered to be a major concern.

To address the situation the G-20 countries proposed that all the credit rating agencies whose ratings are used in the regulatory framework are to be subject to regulatory oversight, registered and comply with the IOSCO Code. The compliance with the code is to be supervised by the national authorities and ratings for the structured products are to be distinguished and subject to increased disclosure (Declaration from Summit on Financial Markets and the World Economy of G-20, 2008).

Additional reforms are to address the conflict of interests and introduction of governance reforms that should focus on improving the rating methodologies, specifically ones concerning structured finance, increasing transparency and disclosure obligation and establishment of government oversight instead of current self-regulation. The issue of introducing a due diligence obligation and possibly some legal liability for their rating reports were also discussed. Other proposed reforms tend to focus on areas in which there has been much discussion but few reforms: promoting competition in the credit rating industry, rethinking the issuer-pays business model, and reducing the regulatory franchise of rating agencies (Katz, Salinas, Stephanou, 2009).

3.7. Remuneration

High levels of remuneration in banks and other financial companies became a subject of extensive criticism and public outcry as it had become obvious that executives and investment managers are responsible for the huge losses and were blamed for the crisis in the eyes of the general public.

There is a reasonable background for such exasperation especially within the institution which did receive the significant government bailout or were nationalized to some extend as loses caused were to be paid by the taxpayers' money. However it should not be in focus of regulators' as government's involvement is meant to be only temporary. On the other hand regulators should definitely be concerned about the rules that determine the bonuses as they can leave to an excessive risk taking and irresponsible shot-sighted decisions.

Before the crisis structure of bonuses was not a focus of regulator as it was considered institution internal issues that such be oversaw by firm's stakeholders. Additionally within the firms itself very little attention was given to the incentives and implications of the chosen remuneration structures. It is currently believed that improper structure of remuneration was one of causes of the behaviour that led to the crisis. However it is hard to precisely estimate the contribution of this factor as there seem to exist other and more relevant. The regulation in this area may then very well be more of a crowd pleaser then a substantial contribution to the health and stability of the financial system.

Nevertheless it seems appropriate to require the remuneration practices to become more interconnected with the prudent risk management to ensure that the remuneration policies will judge also form the point of view of incentives and resulting risk taking. The idea of deferred bonuses is also a reoccurring one as it is assumed that it would provide executives with more of long-term perspective.

Yet the question remains to what extent such regulation would actually change the behaviour of the top executives and traders. Even before the crisis the bonuses where often invested in to the stock of the employer or were in fact paid in form of stocks. As result top managers were also shareholders of their employers and as a result they have suffered the significant personal loss during the crisis. Additionally it did not prevent them from taking excessive risk.

Hence it is possible that excessive risk taking by the top managers is more of a result of cultural, behavioural, and prevailing mood than incentives introduced by remuneration practises. Even though the remuneration can play important role it should not be on the top of to do list.

3.8. Central counter party in derivative trading

Since the mid-1990s we have witnessed impressive growth in the value of the over-the-counter derivatives. Most of this growth can be attributed to the growth of the growth of the credit default swaps. In such short time credit default swaps (CDS) were able to grown to gross nominal value of $60 trillion by the end of 2007. Despite its huge nominal value net effective economic exposure is much lower. It is estimated to be about $3.7 trillion in 2008 (The Turner Review 2009).

Problem with the CDS comes for its size, complexity and the fact they are almost entirely traded over-the-counter. Hence it is likely that default of one significant counterparty may trigger disruptive procyclical effect that would threaten creditworthiness of counterparties through collateral requirements. Reducing of unnecessary multiplication of gross exposure would significantly decrease the threat. The easiest way to achieve that would be through the introduction of the netting out of offsetting bilateral positions. This process would greatly benefit from the creation of clearing system with central counter party. Support for this idea can be found in British, European and US regulators. Additionally European Commission is exploring the existence of the appropriate infrastructure and it was proposed that all euro-denominated CDS must be cleared within the Eurozone.

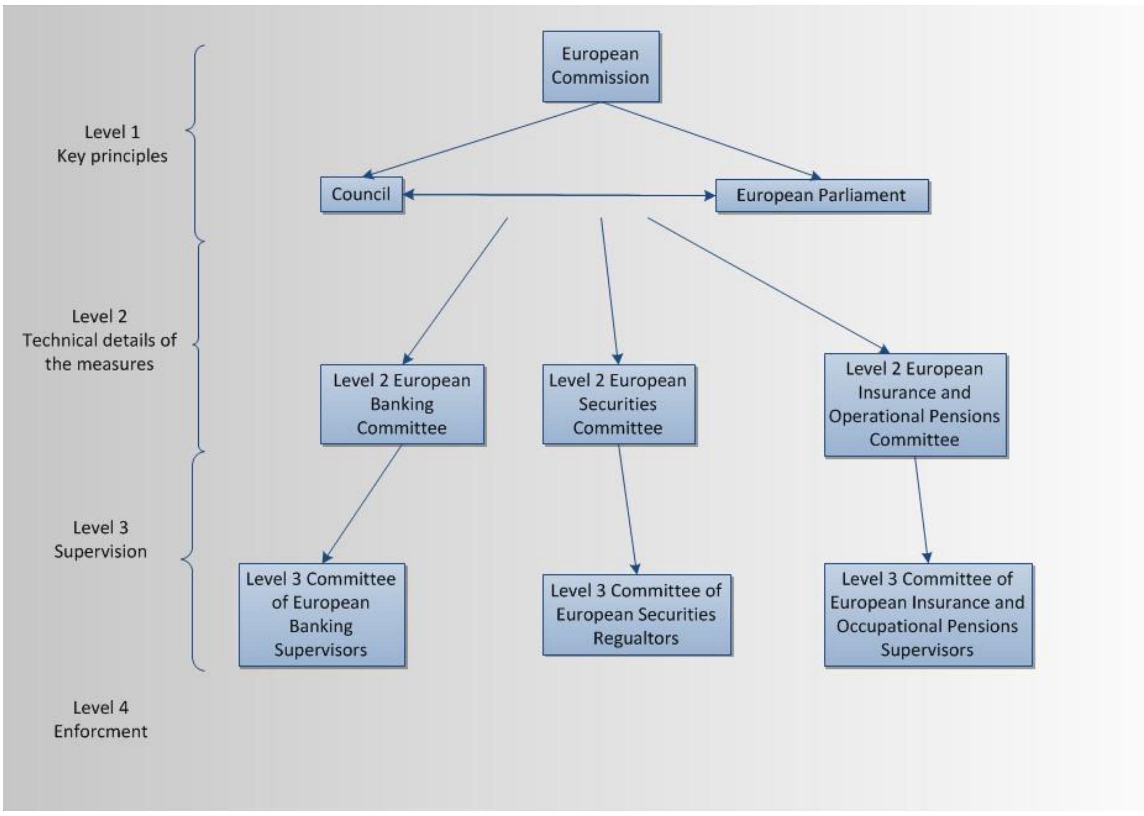
Despite the importance of creating the central counterparty for CDS it will not be able to completely remove the OTC trading for CDS. It is estimated that only 50-75% of the CDS are accounted by standardized contracts and hence suitable to be traded through the central counterparty.

4. Reform in the European Union

To create financial industry regulation the EU has used so-called Lamfalussy process since March 2001. The process consists of four stages and each stage deals with the specific faze of legislative implementation. At the Level 1 the framework legislation and its implementation guidelines are adopted by Council of the European Union, European Parliament, and European Commission by the process of co-decision. At Level 2 regulators, sector-specific committees adjust and discuss technical details of the given legislation. At Level 3 supervisory institutions (Committee of European Banking Supervisors (CEBS), Committee of European Securities Regulators (CESR), and Committee of European Insurance and Occupational Pension Supervisors (CEIOPS), present the interpretation and guidelines to ensure consistency and cooperation among national supervisory authorities. It is important to mention that Level 3 commissions' recommendations are not legally binding. At Level 4 the regulatory legislative implementation is checked and enforced by the European Commission. Generally the EU considered the introduction of the process a substantial improvement of the EU regulatory framework (Communication from the Commission, 2007). Nevertheless it was criticised for its complexity and fragmentation (Czech National Bank, 2009) and shortly after the outbreak of the crisis its review was presented and improvements were proposed (Communication from the Commission, 2007, Åkerholm, 2007).

In the reaction to the crisis EU has decided to reform its regulatory and supervisory framework. The High-Level Group on Financial Supervision in the EU (De Larosière report) published in March 2009 has become a basis of the reform. It covers the issues that are common to the proposition of other regulators, international panels and experts. It analysed the origin of the crisis and proposed series of reforms that should both help to prevent the future crises and create a coordinated crisis management on the EU level. Traditionally EU strictly distinguishes between the regulation (the set of rules and standards financial institutions must adhere to) and supervision (the process designed to oversee financial institutions). The Report adheres to this concept and formulates its recommendations separately for both areas.

Figure 5: Lamfalussy process



Source: Adapted from Communication from the Commission (2007)

Generally the De Larosière report has generated positive reception (Czech National Bank, 2009; Acharya V. 2009). Nevertheless there was some criticism, too. It has been noted it is often too general and it lacks more clearly defined priorities and one of the major problems of the current system, the extensive fragmentation and unnecessarily complicated Lamfalussy process, is not properly addressed. ČNB has criticized the report for not emphasizing the need for supervision over all sectors of the financial market. The existing regulatory and supervisory system is considered too complicated hindering the cooperation of the large number of national supervisors. Same applies to the harmonization and crisis management. As there currently is the network of institutions whose role is to promote harmonization and cooperation ČNB would prefer using the existing structure to creating new institutions (Czech National Bank, 2009).

4.1 Reforming key aspects of the regulatory framework

4.1.1 Basel II

Despite its shortcomings Basel II is not blamed for promoting the crisis as it had not come into full force when the crisis has broken up. It even contains features that could have mitigate the adverse effects of the crisis had they been implemented (e.g. dealing with the off-balance sheet operations). Nevertheless it contains some fundamental issues that have to be addressed. They are recognized by the EU and the proposals for the improvements have been presented. For example it was proposed that precise definition of Tier 1 capital should by formulated and implemented globally once it is approved by Basel committee. Inclusion of hybrid instruments into Tier 1 or agreement upon its composition only of equity and reserves must be achieved.

4.1.2 Credit rating agencies

Even before the publication of the De Larosière report The Commission also raised the proposal on regulation of the CRAs. Nevertheless the first formulation of the proposal has been considered inapplicable. The proposed division of supervision between home and host authority and licensing was not considered efficient and effective. The Group (authors of the De Larosière report) has propped that CRAs are to be granted the license and to be monitored by CESR.

The regulation regarding the CRAs was approved in April 2009. The Group's proposition to require all the CRAs operating in EU to be registered by CESR was adopted. Supervision itself is to be performed by the respective home Member State. If the rating agency is based outside of the EU acceptance of its rating will be judged on the case by case basis and the main criterion will be the strictness and compatibility of the home country regulator with the standard s of the EU. Additional rules that apply are based on IOSCO Code and often are more demanding than it (Katz, Salinas, Stephanou, 2009). Prohibition of advisory services, enhanced disclosure and transparency requirements, differentiation of the ratings of complex products, and stronger internal governance mechanisms were also introduced. Furthermore the establishment of the free publicly available central register where historical rating data will be available is to be established.

4.1.3 Sanctioning regimes

Quality and effectiveness of the supervision is closely linked with the sanctioning regimes. Supervisory authorities should be granted more power to act when financial institutions have inappropriate risk management and control mechanisms as well as inadequate solvency of liquidity positions. Additionally the system should be consistent in all the Member States. Currently the system is too heterogeneous and in some Member States the sanctions are not substantial enough to be effective. This must be addressed as the present state might lead to the race to the bottom. If it is necessary Member States are prepared to invest more resources into detecting and investigating financial crimes (de Larosière 2009).

4.1.4 Insurance regulation

The crisis has begun in the banking sector but the insurance sector was later affected too via the credit default swaps. Among other problems the issue was also magnified by the presence of one almost monopolist insurer in the US. Hence the EU is to learn from the US mistakes and make necessary changes to its insurance regulatory framework.

The first step would be the adoption of the Solvency 2. It is to improve insurance regulation and to develop the risk assessments in addition to rationalising the management of large firms. It should address the existing fragmented regulatory environment in the sector in the EU creating more comprehensive system where systemic risk would easier to estimate and identify. It is also to address the supervision of large cross-border insurance groups. The directive establishes colleges of supervisors for all cross-border groups to promote better supervisory cooperation and strengthen the cross-border supervision.

4.1.5 Parallel banking system

Furthermore De Larosière report suggested that regulation should be extended unto all subjects that are part of the parallel banking system and are of systemic importance. The suggestion was aimed primarily on the hedge funds that are not considered responsible for the crisis. Yet they played the significant role once the crisis had started through massive selling of the shares and short-selling transactions. In the EU, unlike in the US, the hedge funds are required to be registered and subject to information requirements. The regulation of the hedge funds is the strictest in the UK, where all hedge funds managers are subject to registration and regulation, and the largest 30 funds are subject to direct information requirements. The Group recommends that the similar regulation is introduced in all the Member States. Additionally banks that are involved in trading with the hedge funds, own or operate the hedge funds should be closely monitored and additional capital requirements should be introduced to account for risk emanating from proprietary trading and reporting obligations should be employed to allow better judgement of their degree of leverage. Furthermore, the wrong incentives that induced excessive risk taking (particularly the rules for bonuses and remuneration) must be corrected.

The ideas for hedge funds regulation presented in De Larosière report were further developed and presented in Directive on Alternative Investment Fund Managers presented in April 2009, adopted by European Parliament in November 2010 and came into force in spring 2011. The Directive focuses rather on managers of funds, their authorization and regulation, than on funds themselves. Every EU-based manager managing assets worth more than €100 million is subjected to the regulation regardless of whether the fund is established in EU or not. Mangers based outside of the EU can obtain authorization after fulfilling certain requirements. Naturally authorization by one Member State is automatically accepted by all the Member States. The directive requires the managers to publish provide more information about their activities and corporate governance to both regulators and investors. Further measures contained in the AIFM Directive include regulation of short-selling, obligations to appoint an independent valuator and a depositary, limits on use of leverage (Persson, 2009).

4.1.6 Securitised products and derivatives markets

Concerning the securitized products and derivatives the Group advised their simplification, standardization and bringing more transparency to the market. As for the EU specific solution the creation of at least one well-capitalized clearing house for OTC CDS has been suggested. It is supposed to be supervised by the CESR and European

Central Bank (ECB). All the steps should result in decreasing counter party risk and restoring the confidence.

4.1.7 Consistency

The lack of consistent set of rules in EU is identified as one of the major problems. If EU is to become the Single Market it necessary to introduce consistent rules for following main reasons (de Larosière, 2009):

- Single financial market cannot function if there are inconsistent rules in its various parts
- Inconsistency leads to the competition on the field of regulation, regulatory arbitrage and might result into the race to the bottom
- It decrees efficiency of the cross-border groups and complicate risk management and capital allocation
- Crisis management of the cross-border institution is more difficult

The fragmentation stems from the EU's policy that allows certain amount of discretion in adopting the common regulatory measures. It is a well-known issue since the beginning of the single market process but it so far it has not been properly solved.

Nevertheless harmonisation is not expected to lead to the unified set or rules in all the Member States. Certain diversity is expected to fit the specific needs of the Member States. Additionally it is to be allowed that individual Members can adopt rules that are stricter than the common framework as long as there is no contradiction and common rules are well enforced.

4.2 Crisis management

In the De Larosière report the EU claimed it perceives the private sector solution for any future crisis as the first choice and only after the private sector solution is insufficient the public intervention should be considered. The intervention itself should be based on the set of consistent and transparent rules and used only if the systemic crisis is a valid threat. However to avoid the problem of the moral hazard application of the public assistance should remain uncertain. It was recognized that the EU misses the adequate crisis management framework. Hence its creation, including the development of the appropriate tools and authority and legal framework, was proposed

Domestic national banks should be crisis managed on the national level in accordance with the subsidiarity principle. The jurisdiction in such case is clear. On the cross-border and EU level the matters is more complicated due to the various insolvency laws and different supervisory approaches. In 2009 when De Larosière report was published there were no EU-level mechanisms for financing cross-border crisis resolution. To temporally addressed issue it was recommended that Member States should negotiate more detailed principles than those defined in the existing Memorandum of Understanding (MoU).

The Memorandum of Understanding was formally introduced in June 2008. It calls for the creation of cross-border cooperation agreements and networks, and binds the participants to exchange information and coordinate actions. Furthermore is defines general framework dealing with readiness for crisis and crisis management, together with fundamental principles of assessing the systemic impacts of potential crisis. It suggests the countries should consider entering into legally non-binding "*Voluntary Specific Cooperation Agreements*" detailing the potential crisis management procedures if they share one or more financial groups. These agreements could function as basis for "Cross-Border Stability Groups" (CBSG) that would include relevant supervisors, central banks, and ministries of finance (Fonteyne et. al., 2010).

As they are important part of crisis management Deposit Guarantee Schemes (DGS) should be harmonised. Financing of the schemes should come primarily from the private sector and it should provide equal protection to all bank customers in the EU. The principle of equal protection for all the costumers should be introduced in the insurance and investment sectors, too. Current system for protection of the costumers of EU based banks' branches in the host countries was not sufficient. Hence it was proposed that the supervisory authority of the host countries' supervisors in respect of the branches is reassessed and adjusted.

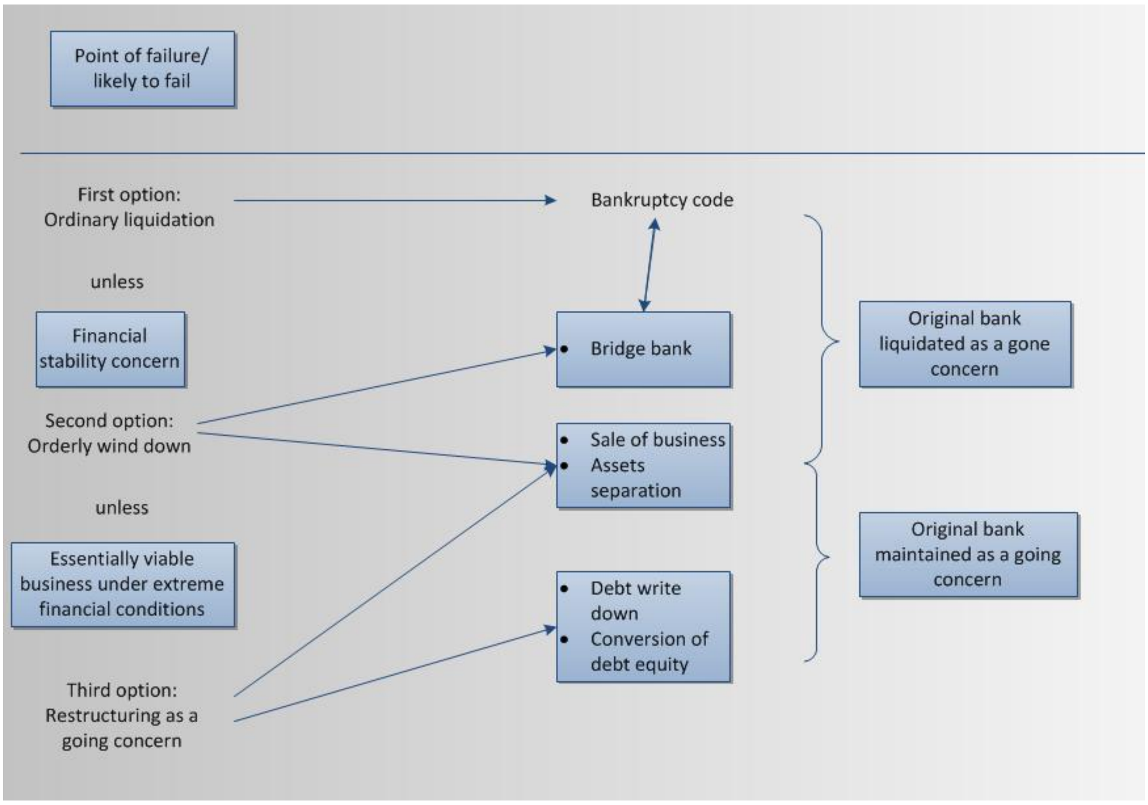
After the publication of the De Larosière report the work on the development of the EU crisis management framework continued and European Commission issued the multiple consultation papers that dealt with the issue. Its objective is to create framework under which financial institutions in distress could exit the market without risk of financial instability. Proposed system should consist of three steps (1) preparatory and preventative measures; (2) early supervisory intervention; (3) resolution tools and powers (Communication from the Commission, 2010).

First of all every Member State will be required to identify resolution authority to exercise resolution powers. Preferably the authority should rather be of administrative nature than judicial. Additionally in the first step of prevention and preparation the supervision should reinforced in terms of risk assessment; more efficient use of on-site supervisory examinations; stricter standards *"and more intrusive and forward-looking supervisory assessment"* and clear definition of the specific conditions under which the regulated institutions will be allowed to transfer the assets within the group. The goal is to create the intra-group liquidity management that should enhance financial stability. Further requirement would include the creation of the recovery and resolution plans for whole groups as well as individual institutions. The plans should account for variety of realistic scenarios and outline the procedures for addressing potential liquidity problems, raising additional capital or reducing risk. Naturally the triggers for proceeding to early intervention or resolution are also specified. Such steps would be taken once breach of Capital Requirements Directive (CRD) is likely or has taken place (c.

Once the problems are recognized the authorities should swiftly intervene to address them. Possible action would include prohibition to pay out dividends or coupons of hybrid instruments acceptable as regulatory capital; replacement of managers or directors; requirement for bank to cease the activities or business lines that pose an excessive risk to its financial soundness. Furthermore it is expected that in the situation it will be possible to act in accordance with the emergency plan that was already developed as part of prevention and preparation and proposed action should take place. Additionally the authorities will have a possibility to appoint the emergency manager for limited period up to one year whose primary duty would be to reinstate the soundness of the institution Communication from the Commission, 2010.

If the state of the bank keeps getting worse and worse the third step, resolution, should take place. As stated in the De Larosière report the first option should be the ordinary liquidation of the institution under the insolvency law. In order to achieve the goal respective adjustment to the legislation should be made. Only if the option of ordinary liquidation is not viable should other alternatives be considered. The second considered option should be the *orderly wind* down. The procedure should be used only if it is necessary and in the best public interest to *minimise contagion, ensure continuity of vital economic functions, maximise the value of remaining assets and facilitate their return to productive use in the private sector.* The last resort option would attempt to maintain *the entity as a going concern - such as the power to write down debt or convert it to equity.* The strict application of the aforementioned principles should strengthen the market discipline.

Figure 6: Resolution scheme



Source: Adapted form Communication from the Commission (2010)

Another important issue that is being addressed is the resolution of the cross-border banking groups. Currently European Commission (EC) does not see establishment of the EU level solution viable option because there is no harmonised insolvency regime and no single European supervisory authority for the groups (Communication from the Commission, 2010). Therefore in its communication EC plans to focus on creating the cooperation framework built on harmonised resolution tools and a requirement for authorities to consult and cooperate when dealing with cross borders entities. To achieve the goal EC proposed the establishment of resolution colleges built around the core of the existing supervisory colleges by including the resolution authorities for cross border entities into their structure. The colleges would be responsible for all the matters associated with the resolution authorities mentioned above and additionally it would function as a mean of exchanging information and coordinate actions. Additionally group level resolution authorities would have the authority to determine in cases of group failure whether a group resolution scheme is appropriate.

The resolution funds would be funded through the ex-ante to which the banks will contribute funds and additional ex-post funding when needed. Contribution to the funds to the funds should be based on responsibility for supervision and crisis management. Similarly to deposit guarantee schemes resolution funds would receive contributions *from institutions licensed in the same Member State, and the contribution would cover their branches established in other Member States.* The basis for contributions is yet to be defined (Communication from the Commission, 2010).

4.3 Reforming the key aspects of the supervisory framework

4.3.1 Lack of macro prudential supervision

In EU, as in many other countries, emphasis was given on supervision of individual firms rather than attempting to ensure system stability. De Larosierre states that for macro prudential supervision to be effective it should include the whole financial sector and should not be limited to the banks. It is also assumed that to successfully introducing the macro prudential supervision some decisions have to be taken on the EU level in the addition to the Member States level. Some EU institution should be given the task. ECB is recommended as a suitable candidate. The absence of macro prudential supervision was further worsened by the absence of early warning mechanism. Even if the risk on the macro level was identified there was no binding mechanism of translation of the risk into the valid countermeasures. It is believed that authority to create such a mechanism should be given to the ECB.

In addition De Larosière claimed the current procedure of assessing the national regulators decision, e. g. peer review arrangements, is ineffective. Hence the more reliance should be put on the opinion of the home supervisor until agreement about the EU level supervision is achieved. This point is more important in the cases of institution operating in the various countries. Example of Icelandic banks when host regulator did not have an opportunity to challenge the home supervisor can be used to illustrate.

An effective procedure of challenging the decisions of the home regulator must be created by making the current process of peer review, judging whether the home regulator has met required supervisory standards, more effective and faster. It was suggested that a binding mediation mechanism is required to deal with such cross-border supervisory problems. Without the effective and binding mechanism, pressure will build up and some Member States might in the future try to limit the branching activities of any firm supervised by a supervisor which has been judged to have failed to meet the standards. Such fragmentation would represent a major step backwards for the Single Market. Naturally the process would work both ways as home supervisors would be given a right to challenge the host supervisors' decisions.

4.3.4 Lack of cooperation

In awake of the crisis individual Member States supervisors were not ready to discuss the state of their countries' financial system states openly and effectively and flow of the information within EU members was less than optimal. In the future the supervisors should be prepared to discuss issues with their counterparts to allow for more cooperated actions.

The competence of the supervisory and mechanisms of enforcement differ substantially across Member States. The situation should be analysed and common minimum high level standards should be agreed upon.

Level 3 commissions were unable to take swift decision and contribute to the crisis management as they have no official legal power to make any decision and actions. As result they were unable to develop clear stand and respond adequately to the emerging crisis. The issue was emphasized by the lack of the resources and work on implementing the Financial Services Action Plan.

Therefore new structure to make European supervision more effective and to improve financial stability in all the Member States was proposed and an increase of resources for level 3 committees was demanded in 2009. The aim was to strengthen the quality of both national supervision and European supervision. The level 3 committees under their existing mandate as advisory committees to the Commission and with their present working methods were unable to fulfil their purpose. The result was creation of the ESA.

4.3.6 European Central Bank

It was suggested that ECB should play an important role in future EU supervision on both macro prudential and micro prudential level. As macro prudential supervision is concerned proposed responsibilities should include financial stability analysis, development of early warning system to notify of increasing risk, vulnerabilities in the financial system, macro-stress testing to determine resilience to the shocks based on both cross-border and cross-sector basis, and creating reporting standards on relevant information considering macro-prudential issues.

In the field of the micro-prudential supervision it was suggested that ECB should become responsible for the supervision of the cross-border banks in the EU or at least in the Eurozone. It is still to be decided whether all banks or only the systematically important ones would be included. Hence the required authority would be transferred on the ECB from the national supervisors and ECB would than carry out all the usual supervision tasks.

Another suggested option was to grant ECB an oversight coordination authority over the cross border banks operation in the EU, while the colleges of national supervisors would still be handling the direct cross border supervision the ECB would be expected to mediate any conflicts between the national supervisors, define supervisory practices and promote supervisory convergence.

Despite the existence of the notions to grant the ECB authority over the micro – prudential supervision the De Larosière report does not support this transfer of authority for the following reasons:

- *the ECB is primarily responsible for monetary stability. Adding micro-supervisory duties could impinge on its fundamental mandate;*
- *in case of a crisis, the supervisor will be heavily involved with the providers of financial support (typically Ministries of Finance) given the likelihood that tax payers money may be called upon. This could result in political pressure and interference, thereby jeopardising the ECB's independence;*
- *giving a micro-prudential role to the ECB would be extremely complex because in the case of a crisis the ECB would have to deal with a multiplicity of Member States Treasuries and supervisors;*
- *conferring micro-prudential duties to the ECB would be particularly difficult given the fact that a number of ECB members have no competence in terms of supervision;*
- *conferring responsibilities to the ECB which is not responsible for the monetary policy of a number of European countries, would not resolve the issue of the need for a comprehensive, integrated system of supervision;*
- *finally, the ECB is not entitled by the Treaty to deal with insurance companies. In a financial sector where transactions in banking and insurance activities can have very comparable economic effects, a system of micro-prudential supervision which was excluded from considering insurance activities would run severe risks of fragmented supervision.*[4]

Hence the recommendation is to let the ECB handle the macro prudential supervision but not to expand its authority into the micro prudential area.

4.3.7 Macro prudential supervision

Need to reform and strengthen the existing macro-prudential supervision framework is a key lesson drawn from the crisis. It is supposed that central banks should play crucial role in the process and to address the issue they should be given clear and explicit mandate to deal with the potential macro-financial and systemic threats.

It is believed that within the EU ECB has the best position to be able to identify the threats. Hence to should be able to obtain all the necessary information from the national

[4] Larosière, J. de et al. (2009)

supervisors. Additionally considering the current trend towards the strengthening the integration of the market and nature of the financial activities in the EU all EU central banks and only the ones in the Eurozone should participate on the process.

The first step to achieving the goal should be the replacement of Banking Supervision Committee of the ECB by the European Systemic Risk Council (established as European Systemic Risk Board (ESRB) and discussed later) that would function with the full support of the ECB. Its role would be to assess and give the recommendations on the macro-prudential policy, issue risk warnings, compare observations on macro-economic and prudential developments and give direction on these issues.

For a system to work two conditions are to be met (de Larosière, 2009):

- Appropriate channels to secure the proper exchange of information are to be established. Additionally such an exchange of information should be mandatory and confidential. To secure the goal ECB representatives could be invited to participate in the meetings between the supervisors and systematically important financial market participants. As a result ECB would have access to the first hand and relevant information about micro prudential supervision even though it would not be involved in the micro prudential supervision.
- The creation of the effective and efficient early warning system to be able to detect potential vulnerabilities in the financial sector and framework that would transform these warnings into appropriate actions is to be crated.

Depending on the nature of the identified risk ESRB could consult the issues with the national supervisor that would be expected to adhere to the recommendations off the ESRB and take the appropriate actions, or the issue would be dealt in the EU or global level. In case of fiscal related problems the issue would be related to the Economic and Financial Committee.

4.4 Establishing European System of Financial Supervision

The original proposition of Establishing European System of Financial Supervision (ESFS) dealt with existing inefficiencies in cooperation of Level 3 Committees. It should be an integrated system of European financial supervision and it should cooperate with enhanced Level 3 Committees. In its nature it is supposed to be decentralized system functioning in accordance with the subsidiarity principle.

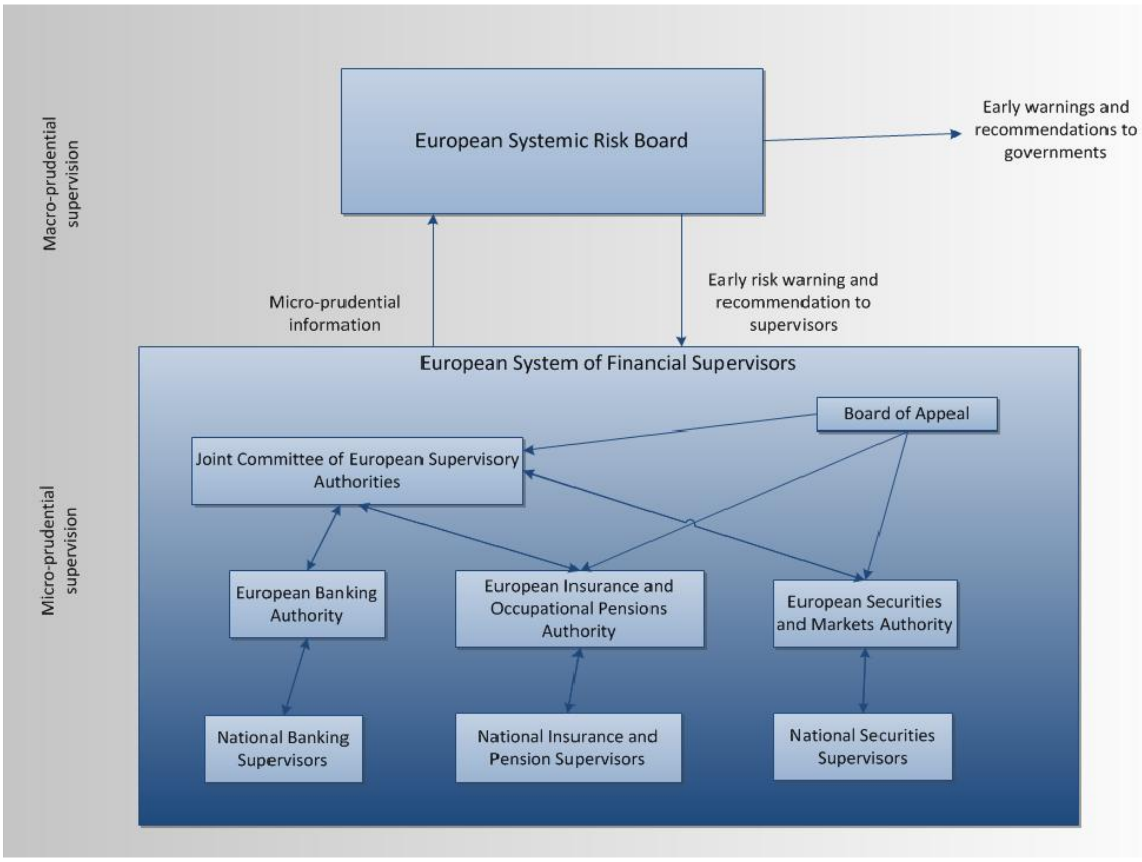
The national supervisors were to retain their competences at the micro supervision level and communicate with the individual firms while European centre is to ensure that the common high level supervisory standards are maintained. Additionally European centre is to ensure that the interests of host supervisors are properly secured.

In case of cross-border institutions the ESFS should continue to rely heavily on the colleges of supervisors to be introduced by the revised CRD and the Solvency 2 directives. If needed the colleges of supervisors could be supported by representatives of the secretariat of the level 3 committees or ECB observers.

Naturally the ESFS is to be independent from the political or industrial influence. Even though it should be accountable to the political authority of EU and national governments it is to have clearly defined mandate and it is to be granted adequate resources and powers to fulfil it. Basic idea is that the supervision must be independent from the political authorities, but fully accountable to them.

Its work is to be set on common set of harmonized rules and it is to have access to the first-rate and consistent information. It is also important to make it neutral with respect to the national supervisors as national supervisory structures reflect the specifics of national financial systems and it would not be productive to harmonize them.

Figure 7: New European supervisory scheme



Source: Adapted from Masera (2010)

4.4.1 Establishment of the ESFS

Two create the above mentioned supervisory system the Group proposed two staged process. It is two found the fragile balance between being as quick as possible and giving the stakeholders time to adjust. The process should involve improvements and enhancements of the existing supervisory structures as well the revision of the rules to be implemented and formulation of the clear crisis management policy in case the crisis will take the place.

4.4.1.1 Stage 1: (2009-2010): Preparing for the ESFS

Firstly the legislative framework for the transformation should be prepared by the Commission, the Council and the Parliament to transform the existing level 3 committees into three European Authorities: European Banking Authority, a European Insurance Authority and a European Securities Authority.

Secondly the Member States and the level 3 committees should swiftly find applicable method to strengthen the national supervisors. At national level, consideration should be given to the following issues: aligning supervisors' competences and powers on the most comprehensive system in the EU; increasing supervisors' remuneration; facilitating exchanges of personnel between the private sector and supervisory authorities; ensuring that all supervisory authorities implement a modern and attractive personnel policy. At European level, the level 3 committees should intensify their efforts in the areas of training and personnel exchanges to create a strong European supervisory culture.

Additionally European Commission, operating together with the level 3 committees, is to investigate the degree of independence of national supervisors. If any deficiencies are found the recommendations are to be given on possible improvements of the situation are to be given. The investigation should also include the funding of the national supervisors.

It is expected that the joint effort of the European institutions and level 3 committees that is to begin during stage 1 should result into consistent set of rules by the beginning of 2013. During the process the most core differences in the national legislatives are to be identified and subsequently removed.

It is not expected that this process will result indistinguishable regulatory frameworks in all the Member States. Yet the result should be the comprehensive and compatible set of basic regulatory rules. European Institutions are also expected to introduce more transparent and consistent sanctioning regimes in the Member States. The same harmonisation is also expected in the supervisory powers.

The Level 3 Committees would undergo the rapid transformation that would include following substantial changes:

i. Expanded budget that would give Committees more resources and allow for greater and higher-quality staff;
ii. Development and improvement of the peer review processes so that it could grow into binding mediation processes;
iii. Redefinition of their work and priorities to become more pro-active in identifying problems and proposing solutions;

iv. Simplification of the voting rules;
v. Intensification and deepening of the cooperating between the Committees

Additionally to secure more efficient and effective dealing with the possible future crisis changes into bankruptcy and insolvency law should be introduced .

On 17 November the Council adopted series of legal documents that are to become the cornerstone of the new supervision of the financial system. ESRB responsible for the macro-prudential oversight and three new agencies, EBA (European Banking Authority), EIOPA (European Insurance and Occupational Pensions Authority) and European Securities and Markets Authority (ESMA), responsible for the micro-level supervision were established as a replacement of level 3 committees. The new system has become operational on January 1, 2011.

4.4.1.2 The European Systemic Risk Board

The ESRB was a new consultative body that was to be established within the ECB. As such it was supposed to take advantage of ECB's administrative and analytical staff (de Larosière, 2009). The concept proposed by De Larosierre report was adopted by the EU and ESRB was established on 16 December 2010[5]. The Board is tasked with the macro-prudential oversight of the financial system of the EU, prevention and easing of systemic risks with regard to the macro-economic developments. To fulfil its goal it is supposed to collect and analyse relevant information. If the risk is identified it is to issue risk warnings and recommend the corrective actions and subsequently to monitor their implementation. The warnings can be addressed to the EU, Member States, or other supervisory agencies. If the ESRB judges the reaction to be inappropriate, it will confidentially inform the Council and, where relevant, the European Supervisory Authority (ESA) concerned. On a case-by-case basis, it could decide to make the recommendations public after informing the Council. The ECB is also expected to benefit from the access to the micro-prudential information aggregated by the ESRB. Even though the database is to be established and managed by the ESAs it is to be shared with ESRB (Lannoo, 2009).

[5] http://www.esrb.europa.eu/about/background/html/index.en.html

The highest decision making organ of the ESRB is General Board. It comprises of heads of ECB, all three ESAs, and advisory committees, governors of the central banks of the Members States and representative of European Commission. Additionally representatives of relevant Member States supervisors and president of EFC are also expected to attend the meeting, albeit without voting rights. Another organ that is supposed to assist the General Board and monitor the activities of the ESRB is Steering Committee. Similarly to General Committee is consists of the heads of all three ESAs, advisory committees, EFC and member of the European Committee. Additional members are Chair and Vice-Chair of ESRB and Vice-president of ECB. The secretariat responsible for day-to-day running of the ESRB is to be shared with ECB. Furthermore Advisory Scientific Committee and Advisory Technical Committee are established to relevant advice and assistance[6].

4.4.1.3 European Supervisory Authorities

Three European Supervisory Authorities (the European Securities and Markets Agency (ESMA), the European Banking Agency (EBA) and the European Insurance and Occupational Pensions Authority (EIOPA)) were created by transformation of the three Level 3 committees (Committee of European Banking Supervisors, Committee of European Insurance and Occupational Pensions Supervisors, Committee of European Securities Regulators). Their primary task is to serve as advisory bodies and to provide advice on technical issues to the European Commission on drafts of Level 2 measures.

In addition to their advisory role, the Committees were tasked with formulating the consistent and effective implementation of European regulation by issuing standards and guidelines and by promoting effective cooperation between national supervisors. These also had an objective of promoting the convergence of regulatory and supervisory practice. However, The Committees have mainly focused on their advisory role dedicating less resource towards their other objectives.

The newly creates ESAs will comprise high-level representatives of all of the member states' supervisory authorities under permanent chairmanships. National authorities will remain responsible for the day-to-day supervision of individual firms, and a joint

[6] http://www.esrb.europa.eu/about/background/html/index.en.html

committee will be set up to ensure cooperation and to coordinate the sharing of information between the ESAs and the ESRB. Its role is to ensure that single set of harmonised rules and consistence supervisory practices are to be used by all the supervisors in the EU.

In addition to overtaking the responsibilities of their Level 3 Committees predecessors their further responsibilities should be:

- Legally binding mediation role to resolve any disputes between the national supervisors. If consensus between the national authorities is not to be achieved Authorities' decisions should be directly applicable.
- Responsible for the aggregation of the relevant information coming from the national supervisors that concerns the cross border institutions.
- Participation on the on-site inspections performed by the national authorities.
- Securing that all cross-border institutions monitor the systemic threats they pose.
- Ensuring the consistency of prudential supervision for all actors (particularly between cross-border and smaller institutions), avoiding the risk of unfair competition between supervised entities. To guarantee this, any financial institution (including purely domestic ones) should be able to submit complaints to the Authority when they consider that they suffer from any discrimination.
- Interpretation and development of level 1 and 2 measures and once their interpretation is published it would be legally binding.
- Responsibility for defining common supervisory practices and operation of colleges of supervisors and they would be responsible for evaluating and the national supervisors and their functioning. It would be their responsibility to ensure that national supervisors meet certain minimal common high standards. This would be achieved by remit to challenge the national supervisors and their practices. If flaws are to be found ruing correcting them would take place. If the ruling was not adhered to they would have authority to issue fines or launch the Commission's infringement procedures. In case of serious flaws the Authorities would be able to take over national supervisor's duties.
- They would be required to share information and cooperate with ESRC so that it could perform macro-prudential supervision. Similarly it would create and lead

groups of national supervisors to resolve the problems affecting more Member States.

In the case of crisis the Authorities would have crucial role of coordinating and allowing for fluent exchange of information between various authorities and institutions and help the relevant authorities to define and implement the right decisions. Furthermore, on the international field, they would represent EU in financial regulation related matters in respected with the third countries.

4.4.1.4 Stage 2: Establishing ESFS (2011-2012)

Important part of this stage is transformation of level 3 committees into European Authorities. After the transformation the Authorities are to retain their competences (*advising the Commission on regulatory and other issues, defining overall supervisory policies, and convergence of supervisory rules and practices, financial stability monitoring, oversight of colleges*). It is expected that national authorities would still supervise the domestic institutions. Cross-border institutions would still be supervised by home and host supervisors and if the argument between home and host supervisors arises the relevant Authority would intervene.

Additional new competences granted to the Authorities would in accordance with the subsidiarity principles. Hence the new tasks carried out by the Authorities would be the ones where more efficiency and effectively can be achieved if they are carried out on the European level. The newly formed Authorities should have a legally binding mediation role to resolve any disputes between the national supervisors. . If consensus between the national authorities is not to be achieved Authorities decision should be directly applicable on the concerned subject

Additionally in relation to the EU-wide institutions Authorities would license and supervise EU-wide institutions like CRA and post-trading infrastructures. They would interpret and develop level 1 and 2 measures and once their interpretation is published it would be legally binding.

They would be responsible for defining common supervisory practices and operation of colleges of supervisors and they would be responsible for evaluating and the national supervisors and their functioning. It would be their responsibility to ensure that national supervisors meet certain minimal common high standards. This would be achieved by remit to challenge the national supervisors and their practices. If flaws are to be found correcting them would take place. If the ruling was not adhered to they would have authority to issue fines or launch the Commission's infringement procedures. In case of serious flaws the Authorities would be able to take over national supervisor's duties.

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4.5 European Stability Mechanism

A newly created European Stability Mechanism (ESM) should be set up in mid-2013. Its aim is to act as additional safeguard of financial stability in the EU. It function will be to provide the assistance to Eurozone countries in financial distress. The assistance should always be accompanied with acceptance of strict economic and fiscal adjustment programme and should be used only to assist the countries with liquidity problems and not the ones that are insolvent.

Integral part of the ESM is private sector participation on the debt restructuring programmes of the restructuring of Eurozone sovereigns. As a result al the future government bond will have to contain collective action clauses that would affect the payment (e. g. extension of maturity, haircut, and interest rates cuts) if qualified majority vote is achieved between the creditors. Additionally ESM contains a clause, which states that ESM will be a preferred creditor and claims of the private banks will have junior status.

5. Reform in the U.S.A

In reaction to the recent financial crisis the proposal that aimed for substantial reform of the US regulatory system was introduced by Barack Obama. The proposal has gradually developed into the Dodd–Frank Wall Street Reform and Consumer Protection Act (the Act) and was signed into the law on July 21, 2010. It considered the most comprehensive financial market reform in US since 1930s (Deutsche Bank Research, 2010).

Its objectives are promoting financial stability, improving accountability and transparency in the financial system, restricting the existence “too big to fail’’ companies, protecting taxpayers, and protecting consumers from abusive financial services practices. To achieve its goal it focuses on the four components of the financial market regulation. It aims to reform the institutional framework of regulation, strengthen the prudential regulation of various financial institutions and introducing new rules for protection of the consumers and investors alike.

5.1 Macro-prudential oversight

The absence of macro-prudential supervision has been addressed by the creation of a Financial Stability Oversight Council (FSOC or the Council). The Council will consist of 15 members (10 voting and 5 non-voting) who are heads of various US supervisory agencies.[7] It should focus on identifying, monitoring and addressing potential systemic risks created by large, complex financial firms as well as products and activities that spread risk across firms, and promote market discipline by eliminating expectations that financial and non-financial institutions will be shielded from losses in the event of failure. To achieve the goal it is to identify systematically important nonbank financial institutions that will be subject to stricter prudential regulation the same way as *“large interconnected bank holdings”* are and business practices for special regulation by the federal financial and state insurance regulators (Skadden, Arps, Slate, Meagher & Flom LLP

[7] Voting members: Board of Governors, Office of the Comptroller of the Currency (“OCC”), FDIC, SEC, CFTC, Federal Housing Finance Agency, National Credit Union Administration, the newly formed Bureau of Consumer Financial Protection and an independent member with insurance expertise appointed by the President and confirmed by the Senate.
Non-voting members: Office of Financial Research, Federal Insurance Office, and state insurance, banking, and securities commissioners

& Affiliates, 2011). To enable such identification the council will gather and analyse relevant information. Hence it will be allowed to require reports from any financial company it will consider a threat to the U.S financial stability. Similarly it may also demand certified reports from nonbank financial companies and bank holding companies with assets of $50 billion or more (Davis Polk, 2010)

FSOC will have the authority to place the institution under the enhance surveillance with the 2/3 majority vote (involving the Secretary of the Treasury, the Council's Chairperson) if the Council will have reasons to believe that the institution represents the threat to the US financial stability. The council will try to prevent the institutions from becoming too big and complex by recommending Fed to place stricter rules for capital, leverage, liquidity, reflecting growth in size and complexity, with substantial requirements on institutions that pose systemic risks to the financial system. It might also require systematically important financial institutions (SIFI) to present additional reports and compose plans for their own orderly liquidation in case of serious distress. The plans should provide the regulator information about the structure and functioning of the institutions and give the general guidelines for liquidation of the company if it fails. To motivate the firms to create credible and usable plan fines for not producing the plan are introduced.

The enhanced prudential supervision is intended to forestall or diminish the potential threats to the financial stability. Even though the Council is eligible to make recommendations on the form of the enhanced supervision the final formulation of the standards is up to Board of Governors. The areas for the enhanced prudential standards are stated in the Act itself but no specific guidelines are given and Board of Governors is given discretion in their formulation. The areas of enhanced prudential standards are risk-based capital and leverage, liquidity, risk management, resolution plan; credit exposure and concentration limit requirements (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, 2011). The Board of Governors can also decide to introduce further requirements regarding contingent capital, enhanced public disclosure, short-term debt limits and such other subjects deemed appropriate. The Act also requires annual "stress tests" of firms subjected to the enhanced supervision and establishment of the risk committees for publicly traded non-bank companies and publicly traded bank holding companies with assets worth $10 billion or more (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, 2011).

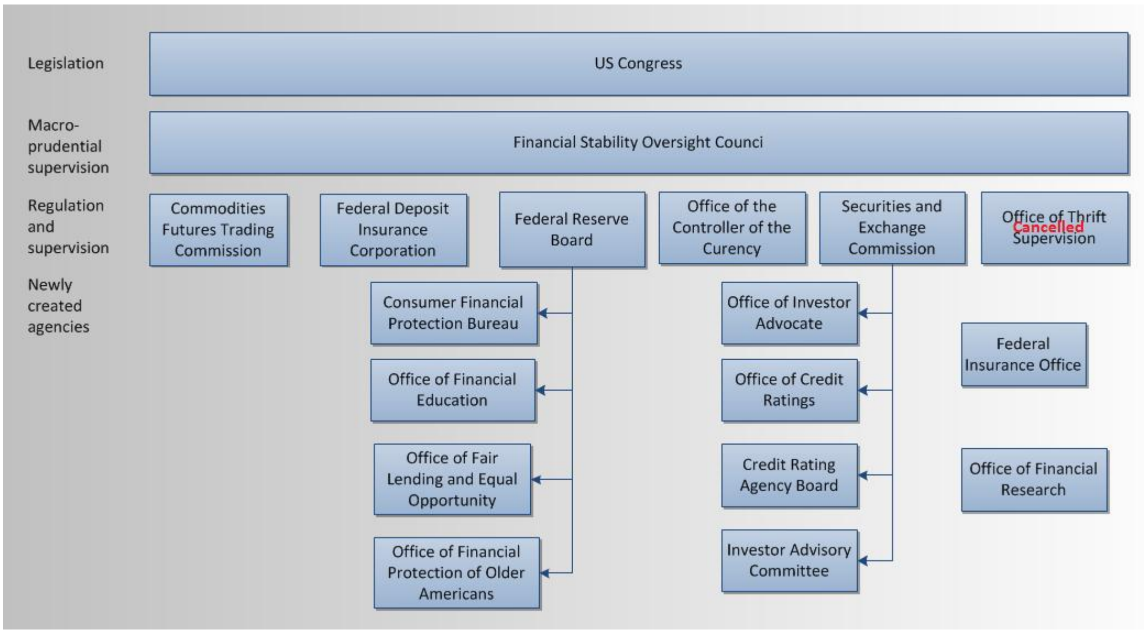
Additionally the council will serve as an advisory body to Congress giving recommendations regarding the functioning and regulation the financial markets; and FED regarding prudential standards and standards applicable to the systematically important companies. Currently the FSOC can only release recommendations but has no actual enforcement power.

Another newly created institution is the Office of Financial Research (OFR). The OFR is meant to collect information from the financial markets participants. The data are then to be processed standardized and provided to the FSOC and other regulatory bodies. Additional duties require OFR to develop appropriate tools for risk monitoring and assisting FSOC with creating standards for the date to be collected and required. Ordinary operation of the OFR is yet to be defined through rulemaking and practice as many of its provisions overlap or even contradict.

5.2 Fed Reform

US system of supervision over the financial market has been criticized for being overly complicated, opaque and containing many overlapping competencies (Deutsche Bank Research, 2010). The Act attempts to make Fed and central piece of the financial supervision and making the system more transparent. Tighter cooperation of Fed and newly established FSOC is also expected to set stricter disclosure, capital and liquidity requirements for banks and other financial subjects. Additionally greater transparency is expected from Fed when dealing with counter parties and providing emergency lending. In the future the emergency lending is to be sanctioned by Treasury and appropriate collateral is to be provided to protect tax payers from losses.

Figure 8: New US supervisory scheme



Source: Adapted from Deutsche Bank Research (2010)

5.3 Changes to the Regulatory Framework

The act introduces changes to the various elements of the regulatory framework, notably capital rules, accounting standards, credit rating agencies, OTC derivatives, securitization processes. Furthermore the Act attempts to simplify the regulation and supervision in US by abolishing Office of Thrift Supervision (OTS) and addressing overlaps between agencies competencies. In the same time it creates the new supervisory bodies and new departments within existing agencies.

The Federal Deposit Insurance Corporation (FDIC) supervises and regulates state banks and thrifts with assets are worth less than $50 billion. It is responsible for the liquidation of most of the financial institutions unless they are labelled as systematically important. The Office of the Comptroller of the Currency (OCC) supervises and regulates national banks and thrifts with assets are worth less than $50 billion. The National Credit Union Administration (NCUA) regulates and supervises federal credit unions. The Securities Investor Protection Corporation (SIPC) remains a non-profit membership corporation, which deals primarily with liquidation of broker-dealer companies. The Office of Thrift Supervision (OTS) is abolished. The Federal Insurance Office (FIO) is established and it will be responsible for the insurance industry (except health insurance).

Figure 9: US Supervising Agencies

Supervised Institution or service	Supervising Agency
State banks and thrift with assets under $50 billion	FDIC
National banks and thrifts with assets under $50 billion	OCC
All other banks, thrifts and financial holdings	Fed
Credit unions	NCUA and State supervisors
Insurance companies	FIO and State supervisors
SIFIs	Fed
Asset backed securities	SEC and Federal Banking Agency
Derivatives	SEC and CFTC
Broker-dealer companies	SIPC

Source: Adapted from Masera (2010)

5.3.1 Prudential regulation

The Act establishes several new prudential rules aimed at preventing the banks from having too high leverage ratios that are considered the one of the important factors that increases the risk of the financial system. One of them is a new "Volcker rule". Its aim is to prohibit or restrict activities that are considered too dangerous for the stability of the financial system. The rule applies to any banking entity. It prohibits any kind of proprietary trading, hedge funds and private equity sponsorship and management although there are certain exceptions. It terms of securitisation the banks are prohibited from underwriting asset-backed securities that can lead to conflict of interests. Additionally to prevent the concentration of the financial market the mergers and acquisitions that would result in entity with liabilities greater than 10% of total US financial companies' liabilities are prohibited. Furthermore the Volcker rule introduces enhanced capital requirements, risk and leverage standards for the SIFIs. There exists the phase in period for the rule that should guarantee its gradual and smooth implementation. The rule is effective after 2 year enactment period when 2 year phase-in period begins and there exist possibility of additional 3 year extension (Masera, 2010).

The changes to the capital rules are introduced mainly through the so-called Collins Amendment. It demands that strict the risk-based and leverage capital requirements previously applicable only to US insured depository institutions are to be gradually applied to US bank holding companies, thrift holding companies and systemically important non-bank financial companies and eliminates trust preferred securities as acceptable part of the Tier 1 capital. It also attempts to implement some of the changes proposed by Basel III. The Amendment does not allow US regulators to automatically update capital adequacy standards in accordance with the internationally agreed upon standards as Basel III. The regulators are only allowed to introduce Basel III standards that are consistent with the Collins Amendment. For the standards that are not consistent the additional legislative will be required (Masera, 2010). Similarly to the other parts of the Act there are substantial phase in periods for the companies to fully adopt the newly introduced norms.

Furthermore the Collins Amendment demands that responsible federal banking agencies impose additional capital requirements on insured depository institutions, depository institution holding companies and systemically important non-bank financial companies that would take into account the risk created by their activities, which affects *"other public and private stakeholders."* The additional capital requirements should consider risk arising from:

1. *significant volumes of activity in derivatives, securitized products financial guarantees, securities borrowing and lending, and repos;*
2. *concentrations in assets for which reported values are model-based;*
3. *concentration in market share for any activity that would substantially disrupt financial markets if unexpectedly discontinued by the institution*[8].

In addition the *insured depository institutions, depository institution holding companies and systemically important non-bank financial companies* have to fulfil minimum leverage and risk-based capital requirements that must not be relatively and quantitatively lower generally applicable requirements or requirements applicable on the date of enactment of the Act (Masera, 2010).

5.4 Crisis Management and Resolution

The new task that has arisen during the crisis is the resolution of failing financial institutes, specifically the ones that are generally referred to as too big to fail. To establish a controlled process for liquidation the Act establishes the orderly liquidation

[8] Masera, (2010)

authority (OLA) that will supersede currently applicable bankruptcy law regarding liquidation of the financial companies. OLA's objective is to create a framework for dealing with systematically important institutions, protecting depositors and costumers and in the same time discouraging the incentives for bailouts.

Under the OLA once the SIFI is agreed to be in default or near default and there is no viable private sector solution that would prevent the default the FDIC is appointed receiver of financial company afar the complex process that involves Fed, Treasury, President of the U.S.A. and Court. Consequently the FDIC gains almost total control over the institution (taking over all rights, titles, powers and privileges of the company and its assets, and of any stockholder, member, officer or director of the company (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, 2011) and liquidation process. As a receiver FDIC might decide to sell assets to one or more private buyers, negotiate merger or acquisition, or create a temporary bridge financial company that will manage the selected assets and liabilities until the completion of the transaction with the private acquirer. All of these can be done without approval of court, shareholders or creditors of the cover company.

The FDIC's primary goal during the process is to minimize the negative effects on the financial stability of the US. While achieving its primary goal the FDIC is required to maximize the returns from the sales and minimize the costs. The Act also specifies the priority of the claims against t the covered company. The costs of receivership are to be satisfied the first, followed by claims of the United States. Only after that other claims against the covered company are to be considered any claims of the shareholders are to be paid as the last.

The Act states that no taxpayers' money should be used to pay for the liquidation process. All costs related to the liquidation are to be beard by the shareholders and creditors of the covered company and resources spend in the process should be reclaimed from sale of the assets. But to finance the process FDIC is allowed to issue debt obligations up to the 90% of fair value of the consolidated assets of the covered institutions to the Secretary. The obligations are to be repaid after the liquidation. If he proceeds from the liquidation do not cover the obligation the difference is to be assessed form the claimants to whom the payment were made. Alternatively if more funds are needed The FDIC is authorized to assess suitable financial institutions (consolidated worth assets over $50 billion or institutions supervised by Fed). The assessments should take into account relative size of the company and risk profile. The funds from Secretary and assessments of the financial sector are to be deposited in Treasury as Ordinary Liquidation Fund and are to be used by FDIC to fulfil its duties.

The Act considers the management of the company as directly responsible for the situation of the covered financial company and might face the repercussions. Firstly the managers deemed responsible for the condition of the company would be dismissed from the employment. Furthermore managers could bear economic costs appropriate to the level of their responsibility. Finally if the mangers are found guilty from violating a law, regulatory measures or breaching the fiduciary duty they could be forbidden from working in the financial industry for at least two years and will have to face legal charges.

5.4.1 Fed emergency credit

The emergency lending has undergone major overhaul in the Act. First of it requires the Board of Governors to establish policies and standards addressing the emergency lending and authorization of the Treasury Secretary before the emergency lending procedure begins. The new procedures should ensure that the emergency lending is used only to provide the liquidity to the financial system. It should never be used to support single failing company Furthermore within seven days of the authorization the Board of Directors is required to report the lending to the Committee on Banking, Housing, and Urban Affairs of the Senate and the Committee on Financial Services of the House and providing justification and details for the emergency credit. The form of the emergency lending as adjusted in the Act is significantly restricted when compared to the mandate The Board of Governors exercised in autumn 2008 (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, 2011).

5.5 Derivative market

As the derivative market and its imperfections are considered one of the sources of the crisis the Act introduces the new regulatory rules for derivatives especially on swaps and CDSs (DBR) aimed at bringing more transparency and accountability into the derivative market. Among other changes obligation of clearing the derivatives transactions through regulated central clearing organisations and obligatory trading through regulated exchanges or swap execution facilities are introduced. Additionally the Act introduces the new rules for swap dealers and major swap market participants. The rules include series of capital requirements, initial and variation margins, use of collateral, post-trade reporting, fraud, diligent supervision, position limits, eligibility standards, disclosure of material risks, and to their businesses with special entities, incl. pension funds, endowments or government agencies (Davis Polk, 2010). Additional capital charges will apply for the OTC derivatives. In addition the banks will be required to transfer specific swap operations onto the separate, individually capitalised entities not affiliated to them. The only exception are the hedging own risk, or interest rate, foreign exchange or commodities-based swaps. Oversight over the OTCs is divided between two agencies. The swaps fall under the jurisdiction of the Commodity Futures Trading Commission (CTFC) and security –based swaps under the jurisdiction of Securities and Exchange Commission (SEC). The Act defines Security-based swap as a swap based mainly on security index or a single security or loan and swap as defined by the Act are almost all the other OTC derivatives.

Similarly to other sections of the Act the new rules are not specified into too many details. It is expected that the details will be determined through rulemaking of the secondary regulators within the year after the enactment of the Act.

5.6 Credit Rating Agencies

The first changes to the regulation of the credit rating came in 2009 when the U.S. Securities and Exchange Commission (SEC) amended its rules for rating agencies and demanded enhanced disclosure of performance statistics and rating methodologies, disclosure of a sample of ratings for each class of credit ratings, enhanced record keeping and annual reporting, and restrictions on activities that could result in conflicts of interest (for example, prohibiting rating agencies from advising issuers on ratings and prohibiting ratings personnel from participating in any fee discussions or negotiations) (Katz, Salinas, Stephanou, 2009).

The Act expands on the concept of the immediate reaction of the SEC and it presents the reforms that are to increase internal controls, bring greater transparency of rating procedures and methodologies, provide investors with a private right of action, and grant the SEC greater supervisory and enforcement authority, but it prohibits SEC from directly interfering with the rating procedures . In addition it introduces changes that should simplify starting civil lawsuits against the CRAs. Furthermore the reform seeks to lessen the dependence on the ratings it promotes adoption of more extensive criteria (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, 2011). As with other parts of the Act it is expected that detailed rules will be establishes through the rulemaking of the secondary regulators within one year.

5.7 Investor Protection

Many provisions of the Dodd-Frank Act are aimed at enhancing investor protection through expanding the SEC's authority. Several more complex issues are not addressed but the additional studies and analyses are proposed suggesting they will be addressed later (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, 2011). The most immediate impact might come from the introduction of higher rewards for the whistle-blowers who decide to report violation to the SEC. The SEC will be obligated to pay 10-30% from pecuniary fines over million assessed by Commission or other regulatory agency. The bounty should motivate the insiders to give the valuable tips to the SEC and will likely result into more investigations. The SEC itself is given more remits; its budget is to be increased substantially in the next years and court decision that have previously limited the SEC's authority are practically reversed. Furthermore proof standards for pursuing secondary actors are relaxed and the Commission is granted powers to impose uniform fiduciary standards on brokers, dealers and investment advisers. Regulation of short selling, restriction on customer arbitration agreements, extension of rulemaking authority are other important illustrations of increased powers of SEC.

5.8 Consumer protection

In response to the sub-prime disclosure and securities portfolio losses the issue of consumer protection was raised. The Act reacts by establishing new institution Bureau of Consumer Financial Protection (BCFP) that should unify responsibilities and authority of several institutions. BCFP is a new agency established with aim of securing the uniform standards for "plain vanilla" products. Its goal will be to guarantee that the consumers will get comprehensive and complete information on financial products and services and are protected from hidden fees, abusive terms and deceptive practices. The Bureau is technically established as part of Fed but The Fed is not allowed to infringe its activities and functioning. It is meant to overtake responsibilities of most of the currently existing consumer protection agencies (the Office of the Comptroller of the Currency, Office of Thrift Supervision, Federal Deposit Insurance Corporation, Federal Reserve, National Credit Union Administration, and Federal Trade Commission) (Davis Polk, 2010). Additional layer of the consumer protection introduce by the Act should result from the greater transparency and accountability of the financial system (Masera, 2010) Although the precise competencies are still to be defined it is clear now that the Bureau will have extensive authority supervisory and rule making powers over institutions offering financial products and services to the costumers.

To protect consumers from the excessive payment cards fees The Act also introduces rules that deal with them. Fees for debit transactions are to be proportional to the cost they impose on the issuer of the card and Board of Governors is expected to set standards that would be used to judge the proportionality and reasonability of the fees. The capacity of the issuer of the card to set up minimal and maximal boundary for the acceptances of the credit cards is also restricted. The minimal value of the transaction (must be lower than $10) is to be set by trader and maximum value is to be set by the appropriate federal agencies.

Additionally rules should be implemented into the mortgage sector as lenders in future will be required to assess more diligently whether borrowers can repay their loans. Incentives to steer borrowers into more costly loans are prohibited, pre-payment penalties are outlawed, protections for high-cost mortgages are extended, penalties for irresponsible lending are extended, and additional information requirements on banks in dealing with borrowers are defined.

5.9 Executive Compensation and Corporate Governance

The Act also introduces the provisions related to compensations financial institutions' and public companies' executives. First of all it authorizes SEC to require disclosure of the executives' compensation and relation between the compensation and their performance. Furthermore shareholders will have to vote on the compensation schemes and compensations that could create an incentive to take inappropriate risk or cause material of financial harm to the company are prohibited.

Under the Act the corporate governance will likely shift form the board-oriented towards more shareholder oriented system (Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates. 2011) as it allows SEC to introduce proxy access. Under the proxy access system shareholders will be allowed to present their own candidates to the board of directors. In addition the establishment of the risk committees in specific financial and non-financial institutions and additional disclosure on organizational structure will be required.

5.10 Implementation

The writers of the Act did not choose one time timetable for implementation of all the provisions of the Act. Instead, the Act specifies various transition periods with wide range of that enable market participants to prepare for the new rules and adjust their operations. Hence the rules regarding the CFPB are subject to a phase in period of up to 18 months, the interchange fee provisions take effect one year after enactment, and the Volcker Rule contains a combination of transition periods that could postpone the its effect for as many as 12 years (Deutsche Bank Research, 2010) Transfer periods of between half a year and two years also apply to leverage, liquidity and capital requirements, securities lending, the new CRA regime, corporate governance securitisation and derivatives.

It is worth noting that the Act does not offer a final set of rules for the relevant market activities, the Act is only a framework law that is expected to be brought into practice through the rulemaking of the relevant regulatory agencies after its enactment. Without such process the Act will be inapplicable. The total number of rules to be introduced is currently unknown but Deutsche Bank Research (2010) estimates it might be necessary to craft more than 350 of them, plus between 60 and more than 170 studies and reports will have to be composed. The number of required rulemakings mentioned by Davis Polk (2010) in its analyses of the Act is significantly lower as it counts only rulemakings explicitly mentioned in the Act. It estimates total 243 pieces of rulemakings and 67 reports with additional 22 new reports that are to be produced periodically.

As mentioned above the Dodd-Frank Act serves as a framework law and its implantation relies heavily on the further rulemaking s of the regulatory agencies. Hence it is not possible to precisely estimate the impact on the regulatory framework because its final form, strictness and scope are yet to be determined. The regulatory work, market reaction and studies initiated by the Act may very well result into further regulatory activity or the failure of the agencies to act in certain matters can render some parts of the Act void.

6. Comparison of EU and US reform

Both USA and EU have decided to reform their regulatory frameworks to address the flaws that were revealed by the recent crisis. In the both cases it was necessary to adopt reforms based on the internationally accepted standards formulated in G-20 agenda and address the issues that were specific to the jurisdiction. Despite following the same goals the proposals and adopted reforms often differ.

The first difference is between the forms that were chosen for implementing the reform. The USA has decided to assemble all the reforms under one law. In 2010, Dodd-Frank Act that will serve as the basis of the financial reform and will be further developed by the rulemaking of the corresponding regulators was adopted. EU on the other hand has decided to have the reform adopted in the series of separate acts during few years despite having the basis of the reform outlined in the single document (De Larosière report).

Figure 10: Implementation of G-20 agenda – US and EU comparison

G20 commitment	EU legislation Measure (Adoption)	US legislation (Dodd-Frank Act provision)
Macro-prudential risks and financial oversight	European Systemic Risk Board (2010) European Bank Authority (2010) European Insurance and Occupational Pensions Authority (2010) European Securities and Markets Authority (2010) Omnibus Directive (2010)	Title I Title III
Basel capital framework	Liquidity buffers (CRD II) (2009) Trading book and securitisation (CRD III) (2010) Bank capital, leverage ratio, liquidity buffers, counter-cyclicality (CRD IV) (2010)	Title VI
Accounting standards	Adoption of International Accounting Standards (2008) Endorsement of IASB Standards (in progress)	Title VI
Compensation	Recommendations on remuneration of Directors and financial services (2009) CRD III (2009) AIFM (2010) Solvency II, Level 2 (2011) Un-specified measures on non-banking financial services (2011)	Title VI
Bank risk management and internal controls	liquidity risk, large exposures (CRD II) (2009) securitisation, due diligence, retention (CRD III) (2010) counterparty risk (CRD IV) (2010)	Title VI
Insurance	Level 2 – governance, internal control, risk management (2011)	Title V
Corporate governance	Green paper(2010)	2010
OTC derivatives	EMIR – mandatory clearing (2011) CRD IV – capital requirements from non-CCP transactions(2010) MiFID review (2010)	Title VIII
Bank resolution	Unspecified measure based on forthcoming FSB recommendations (2011)	Title II
Deposit insurance	Immediate changes to Deposit Guarantee Directive (2009) Overhaul of Deposit Guarantee Directive (2011 - 2012)	Title VI Title VII

	Overhaul of Investor Compensation Scheme Directive (2011 - 2012) White Paper on Insurance Guarantee Schemes (2011 - 2012)	Title IX Title XII Title XIV
Hedge and pension funds	AIFM (2011)	Title IV
Credit rating agencies	CRA Regulation 1060/2009 (2009) Amendment of CRA Regulation (2011)	Title IX

Source: Adapted from Deutsche Bank Research (2010)

6.1 Institutional reform

The difference is also seen in the stance adopted when reforming the institutional regulatory framework. US focused on the reforms of the existing institutional arrangement, tweaking the existing system, reducing the overlaps in the competencies, strengthening many existing authorities (SEC, FDIC) and establishing new agencies (FSOC, BCFP) focused on the areas that were not properly covered by the previous regulatory framework. The EU on the other hand has undergone much more substantial overhaul of its regulatory framework creating ESRB and ESFS, the EU level regulatory structure to supplement existing national regulators. The most important building blocks of ESFS are the three supervisory authorities (EBA, EIOPA and ESMA). Through their transformation from the Level 3 committees they were changed from consultative bodies into separate legal entities with extensive regulatory and supervisory responsibilities. Additionally reform in the EU focuses heavily on further harmonization of the national regulatory systems, the problem that was not an issue in the US.

6.2 Supervision

Both the EU and the US has established institutions that will be tasked with monitoring the financial system and identifying the systemic risk. In the EU the role is given to the ESRB that is established within the ECB. Despite its importance the ESRB has almost no power and is to function mainly as a consultative body. The US equivalent of ESBB, FSOC, is formally part of the Secretary of Treasury. It has similar role of identifying the systemic risk and serving as serving as a consultative body but it also has an additional authority. It can label the financial institution as systematically relevant placing it under the direct supervision of Fed and subject to the enhanced prudential supervision.

With the adoption of the Dodd-Frank act the competencies of Fed were expended to contain even the elements of the micro-supervision as it was tasked with the direct supervision of the SIFIs. The expansion was accompanied with the changes in governance structure and oversight changes to prevent the possible conflict of interest while Fed fulfils its new role. On the contrary, granting the ECB task of supervising large cross-border institutions is not consider a viable option in the EU. De Larosière report gives extensive list of reasons why the ECB should not be tasked with any micro-prudential supervision. Even the inclusion of ESRB within the ECB is sometimes identified as a potential source of the conflict of interest as the primary role of fighting the systemic risk might clash with the ECB's primary goal of maintaining the price stability and further detachment between the two might seem necessary (Lannoo2010).

6.3 Crisis management

At the beginning of the reforms the EU got into the lead by publishing the De Larosière report and endorsing it as a guideline for the future reform. However many of the concepts mentioned it the report were only the frameworks that would need further development and even though some areas were addressed and developed into full-fledged reforms (e. g. ESFS or ESA) others were postponed and are still in development. A good example of such neglected area would be dealing with failing SIFIs. EU's framework for dealing with the matter is still only a series of guidelines when compared to the US system, which is more developed and detailed. Yet the work still has to be done on both sides for dealing with the companies that are truly global and affect both EU and USA and their liquidation or saving would require cooperation of both sides. The absence of the detailed procedures for dealing with the failing financial institutions becomes increasingly important as EU faces sovereign risk in Greece and Ireland and large exposure of mainly German banks.

6.4 Bank Regulation

Lannoo (2011) argues that the biggest difference between the EU and USA in terms bank structure is introduction of the Volcker rule. It restricts proprietary trading by banking groups, prohibits federal assistance to any swap dealer or major swap participant and puts limits on mergers and acquisitions .So far there is no similar initiative in the EU.

Despite the previous attempts to harmonise the capital requirements thorough the Basel II the USA and EU were at the different starting position. EU standards were practically compliant with the Basel II. Original Basel was implemented in1988 with the Capital Requirements Directive and was update in 2005 to correspond to the Basel II. On the other hand the US has adopted different approach and Basel II was to be fully implemented in 2011 but it would be obligatory only for big national banks. Other smaller and state banks were allowed to use combination of Basel I and maximum leverage ratios (Lannoo, 2010) to determine capital adequacy.

Additional difference stems from the accounting standards used. The EU has adopted IFRS and US still uses USGAAP. Those two standards differ substantially on some crucial elements of the banks' balance sheets (Lannoo, 2010). The issue is currently being addressed as US SEC has drafted a plan to adopt IFRS by 2014. The implementation of Basel III follows a pattern similar to the adoption of Basel II. The EU has already adopted some of its propositions in its modification of Capital Requirements Directive in 2009 and 2010 (Lannoo, 2009). Some of these rules, such as the one on the 5% retention for securitization, are also contained in the Dodd-Frank bill. However, despite the expressed intention, it is still not clear whether the US will fully implement Basel III or it will follow similar approach as it did with its predecessor.

6.5 Remuneration

The Dodd-Frank act has introduced some limits on the remuneration of the executives and implements procedures that should get shareholders more involved in the creation of the compensation schemes. The rules in the matter adopted By EU in July 2010, are much stricter. The banks are required to present a sustainable compensation schemes, the rules on composition of the salary and variable components are introduced and bonus might be deferred over several years (Lanno, 2010; Deutsche Bank Research, 2010).

6.6 Credit Rating Agencies

CRAs are generally considered one of the sources of the crisis and the general consensus existed that the reform must be done. Both US and EU reforms seek to achieve similar results, specifically greater transparency on both ratings and governance and elimination of potential conflicts of interests. However their approach differs dramatically.

The EU has introduced strict surveillance of ratings, methodologies, governance and registration requirements effectively creating barrier of entry for potential newcomers. US on the other hand forbid SEC form interloping into the rating procedures. Instead the Act seeks to reduce the investors' and regulatory reliance on ratings and simplify legal actions against the CRAs. The US reforms is trying to reach its goal through creating more competitive and transparent environment where investors will be able to choose the CRA with best reputation that fits their need. EU on the other hands wants to make the CRA more accountable through the stricter supervision and regulation. Additionally US attempt to downplay the role of ratings by removing it from all the regulatory and requirements specified in the Act. In the EU the ratings are still in use as they play essential part in stipulating the capital requirements based on Basel II, risk weights and in credit operations of the ECB (Lannoo, 2011)

7. Criticism of the reforms

The recent financial reforms have provoked both consent and criticism. This part of the thesis is focused on some of the criticism and shortcoming of the adopted changes of the financial regulatory market.

7.1 European Union

7.1.1 National interests

The process of creating new legislative in EU or harmonization is often very complicated as governments traditionally try to defend their national interest firs and EU level interests are secondary. Hence the resulting legislation is often built on compromises. Naturally, such preoccupations have also influenced the creation of the new regulatory framework. Concerns about the effect of the new regulation on the domestic financial industry have influenced the discussion over several areas of new financial regulation framework. To illustrate a case Katsikas (2011) gives an example of hedge funds regulation. The London resisted transferring the authority over the hedge funds to Brussels as it was concerned over losing control over the area because 80% of hedge funds and 60% of private equity funds active in EU are based in UK. The discussion got especially heated over the issue of non-EU funds operating in EU that reside in UK. Finally it was resolved by introducing a "European password" for third countries. The passport is to be granted after two years transition period after the third countries supervisor cooperation that is ambiguously defined.

7.1.2 European Supervisory Authorities

In EU there exists an on-going debate on how much authority should be transferred from the national level to the European level. The issue that had traditionally influenced the speed of integration manifested during the development of the new regulatory framework as the financial reform would require the transfer of certain amount authority form the national institutions to the EU institutions. Furthermore the transfer of authority is often connected with transfer of fiscal responsibility. The thing Member states are reluctant to do (Katsikas, 2011).

The final form of the ESA is a consequence of compromises that accompanied their establishment and have restricted their power when compared to the original proposal. The day-to-day supervision is left to the national supervisors and ESAs are tasked only with supervision of the implementation of the EU standards by national authorities. The fiscal concerns have also played role in the establishment of the ESAs as it was decided that their decision can have neither material nor fiscal consequences on the Member States (Katsikas, 2011). The decision might adversely affect the ability of the authorities to act in future crisis or financial turbulences.

The structure of the institutions draws some criticism, too. The three European authorities have strictly defined competencies and each one of them resides in a different place (London, Frankfurt and Paris). Dullien and Hansjorg (2011) argue that such strict division of the competencies and their strict focus only on their relevant part of the market might lead to the divergent application of the regulatory standards. The example of AIG illustrates the case. The problems of the AIG did not arise from involvement in its core business, insurance. They were the result of its involvement in the credit derivative market. The fragmented supervision in the EU might fail to notice risk that could develop along the same lines. The problem of fragmentation is even more emphasized by the geographical distance between the three Authorities. Hence there exists a risk that despite the regular meetings of the heads of the Authorities their day to day agendas will be too isolated to capture the build-up of hazard in time.

Furthermore ČNB has criticized the very establishment of the ESAs. The ČNB sees the fragmentation of the EU supervision as the main issue that should be addressed through further harmonization and cooperation and ESAs are deemed redundant in achieving them. Furthermore the criticism was raised against the insufficiently defined authority, competencies and lack of financial backing.

7.1.3 European Systemic Risk Board

In some cases, transfer of certain supervisory competences to the European level is a good concept. Among other positives it might help to fight the regulatory arbitrage and race to the bottom in the EU. Specifically the creation of one authority that deals with the systemic risk and macro-prudential supervision at the European level is preferable to the multiple institutions dealing with the issue on the national level. Establishment of the

ESRB is founded on need to expand systemic and macro-prudential supervision. The establishment is considered to be positive. However its close connection to the ECB and composition has drawn some criticism. The ESRB board is composed mostly of the spectral bankers, people with similar supervisory background and their cooperation throughout the history of EU and Eurozone even strengthen the convergence in their views and qualification (Dullien, Hansjorg, 2011). The criticism is supported by the example of the recent crisis when central bankers and especially Fed failed to identify the built-up of the risk in the system. The actual warnings came from the academics, which are present in the structure of the ESRB in advisory committees, but is not known yet how much authority their opinion will have especially in cases when their recommendation will require unpopular steps. Sibert (2009) has also criticized the ESRB for the size of its board. It contains up to 61 people and is deemed to be too big to allow for the effective communication and swift decision making needed on the time of crisis.

7.1.4 Bank regulation

The reform has undergone series of transformations since it was conceived. The aim of the reform was creating more stable and transparent environment. But there exists a trade-of between stability and efficiency as stability requires limitations on the activities of financial institutions and efficiency requires withdrawal of at least some regulatory confinements to increase competition (Katsikas, 2011). Furthermore the additional regulatory requirements raise the costs of doing business for the financial institutions. Naturally, after the proposal of regulatory reform (e.g. original proposals in De Larosière report) the financial industry resisted the reforms and exempted effort to soften them and it has often succeeded.

Dullien and Hansjorg (2011) expressed the disappointment over the rules regarding the bank capital rules. Higher capitalisation of the bank is required if they are involved in proprietary trading or resecuritisation but it is not considered sufficient and American solution when proprietary trading is abolished is deemed more appropriate. Additionally the longer-term planned investments, such as receivables from loans or securities and thus the banks' core business, is not even discussed with regard to capital adequacy. Furthermore many enhancements of the capital requirements like countercyclical measures, capital against the banking books, relationships with non-bank financial institutions are addressed in a way that is less consistent than the original measures contained in the De Larosière Report.

7.1.5 Credit rating agencies

With regard to the CRAs one important issue was not addressed. Despite much stricter rules and registration requirements the CRAs the CRA are still financed by the companies that issues securities and require their rating the issue is an obvious source of potential future moral hazard and conflict of interests.

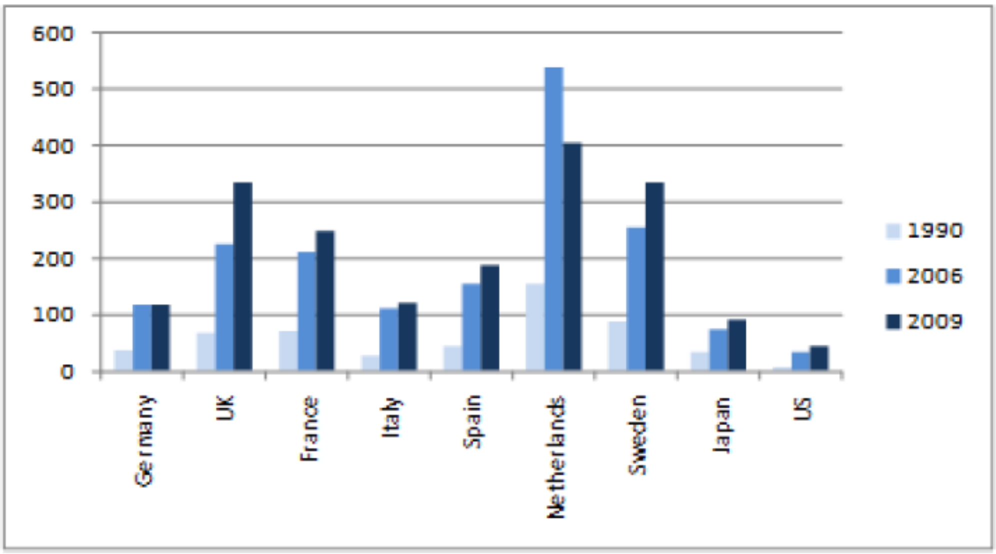
7.1.6 Too big to fail

So far, the EU did not address a problem of institutions that are too big to fail. Generally the supervisory requirements for the financial institutions are same irrespective of the size and systematic importance of the institution of the institutions. Véron and Golstein (2011) even state that EU representatives have argued against adoption of special treatment of SIFIs in international bodies such as the Basel Committee on Banking Supervision and the Financial Stability Board.

Omission of the issue is hard to understand as the characteristics of the banking sector make it much more grave matter in the EU han in the US where the problem has been already addressed in the Dodd-Frank Act. In many countries of the EU the banking sector is more concentrated than in US, banks have significant foreign assets and have adopted business model that retains more assets on their balance sheets. The result is much higher assets-to-GDP ratio in many European countries.

The difference would disappear if the size of banks and their systemic importance was compared against the whole EU but the comparison would not be appropriate (Véron, Golstein, 2011) as long as no EU-wide policy framework exists for bank crisis management and resolution. Given the propensity of European governments to support failing banks the potential failing of such big important bank could have dire consequences for the home country and subsequently for the whole EU. Hence the problem should be dealt with as soon as possible.

Figure 11: Aggregate assets to GDP of top three banks (%)



Source: Véron, Golstein (2011)

7.1.7 Lack of cross-border bank resolution regime

The issue of "too big to fail" banks is closely linked to the absence of cross-border bank resolution regime in EU. Kudrna (2011) mentions roughly forty European systemically important banks that cannot fail as they are basis of the EU financial infrastructure. The field of activity of these institutions spreads across EU borders and so in case of financial distress the resolution should be cross-border too. On the example of FORTIS Kudrna (2011) illustrates that even if the cross-border resolution is available involved country might opt for the solution that minimize their own costs shifting them to other involved countries.

The Commission attempted to address the issue with the proposal of integrated resolution regime but was unable to gain the support from the Member States. Hence the more progressive proposal was scrapped on favour of incremental improvements of existing regime. The resolution of failing financial institutions is tightly connected to the creation of the framework of sharing the fiscal costs of the resolution and the willingness of countries to participate on EU level resolution fund is missing as the governments do not want to risk paying for the institution operating outside their jurisdiction (Katsikas, 2011).

7.2 United States

7.2.1 Insufficient institutional overhaul

Even prior to the crisis there existed criticism of the fragmentation of the US supervisory system and its pointless separation between the various parts of financial industry. According to Omarova (2011) the Dodd-Frank Act was seen as on opportunity to deal with the existing problems. However the result was disappointment in terms of institutional overhaul. The Act focuses on smaller tweaks and redistribution of the competencies rather than reconstructing the regulatory framework. The majority of criticism is focused on placing the institutions into mutually exclusive categories and then regulating them accordingly. Such a structure allows for regulatory arbitrage and it allows the large banking companies to structure themselves in way that allows for taking advantages of different regulatory regimes for various subsidiaries (Omarova, 2011). As result risk might be hidden from the regulators being.

7.2.2 Ex-ante funds

Under the Dodd-Frank Act systemically important firms will be made to bear their own losses but not the costs they impose on others in the system. The FDIC might assess eligible financial institutions to cover the cost of liquidation of SIFI if the proceed form OLA are not sufficient. Hence the Act is imposing the additional financial burden on the institution in times when they might face the crisis and potential contagion form the failing institutions.

The criticism by Acharya et. al. (2011) focuses on the fact that instead of making the SIFIs pay beforehand to create a fund that would be used in the financial distress it punishes the surviving firms by raising discretionary charge making them pay after the crisis. It is argued that firms might react by correlating their activities to avoid paying for failings of other firms. Hence the result might be strengthening of the systemic risk instead of its prevention.

7.2.3 Financial Stability Oversight Council

The institution that is tasked with monitoring the systemic risk faces two important problems: the measurement of the risk and its addressing. Sibert (2009) argues that measuring the systemic risk might prove to be too difficult to perform. The institution faces the problem of correctly choosing the dataset to be analysed and then its interpretation. Additionally factors that that are relatively harmless on their own might be source of the systemic risk when combined. Recent financial crisis is a good example of such effect when combination of factors (real estate prices, low interest rates, availability of mortgagees, securitization) triggered major crisis. Furthermore the observance of the systemic risk itself might not lead to proper identification of its causes.

The second problem arises when the systemic risk identified. The assumption behind the Act is the FSOC will find the proper way to address the risk. But it the same time it limits the Council's options (Sibert, 2009). If the systemic risk is manifested through one SIFI the Fed's ability to provide to emergency liquidity to non-depository institution is limited under the Act and ex-ante creation of funds for similar situations is not arranged in the Act. Hence the only options left for the FSOC might be to recommend the institution for OLA. The process that might very well result in systemic crisis it was trying to avoid (Sibert, 2009) unless some kind of discretionary action is devised.

7.2.4 Bureau of Consumer Financial Protection

Calomiris (2010) criticizes the creation of the separate agency for the consumer protection as an unnecessary act. The functions of the agencies could have been fulfilled by expending a mandate of appropriate regulatory body without creating a new one. The placement of the BCFP under the Fed is seen as needles complication of functioning and budgetary process of the Fed. In addition the competencies and structure or the BCFP are not properly defined and might result in inefficiencies because it has *no budgetary accountability, and is not required to base its decisions on any cost-benefit analysis.*

7.2.5 Regulating by form instead of function

The Act clearly states that even the non-bank financial institutions might be labelled as systematically important and be liable to certain aspects of the enhanced supervision. Nevertheless certain types of the federal help, like emergency liquidity lending form Fed, are restricted to the bank holdings. Acharya et. al. (2011) gives an example of central clearinghouse of swaps. Such an institution would be definitely considered systematically important but it if it got into liquidity problems it would not be eligible for the Fed emergency liquidity assistance that would allow it to overcome it temporary problems. The only solution of such salutation under the Act would be OLA that would very likely result in spread of contagion. The focus on form of the institution instead of its function and importance might result in failure to properly regulate the new organisational forms that might originate in the financial sector.

7.2.6 Subsidized mortgages

The Act does not address in any way the policy that triggered the recent crisis, government subsidized mortgages. Even the proposal to raise the minimum required down payment on government-guaranteed mortgages from 3% to 5% was rejected by Congress (Calomiris, 2010).

8. Conclusion

In the Chapter 2 of the thesis we argued that the crisis began as a combination of macroeconomic imbalances, unsustainable credit boom and asset price inflation, monetary policy and government program. These economic factors were combined with the characteristics of the financial system and regulatory failures then helped the crisis to reach its magnitude. So far the reforms focused predominantly on failures that took place in private sector and addressing the flaws and shortcomings of regulatory and supervisory framework. The macroeconomic and government policy causes, despite receiving academic and theoretical attention, were not addressed by appropriate response and action. Even the subsidized mortgages policy that triggered the crisis remains in place relatively unchanged. Not addressing the issues might backfire in the future as unaddressed issues may become seeds of the future crisis.

It is impossible to fully analyse the reforms and assess their impacts as many of them are not finished yet and are still in development or being implemented. Nevertheless, we can already say that even though the reforms of the regulatory of supervisory framework addressed its failures and introduction of macro-prudential supervision is definitely a positive development the reforms fell short of their promise. Final version of the reforms were often a result of extensive compromises and were less radical and substantial when compared to the original propositions that emerged shortly after the outbreak of the crisis.

We think it is important to address the flaws and shortcomings that were revealed during the last crisis in both private sector and supervisory framework. However it is important not to forget that nature and occurrence of the crisis is unpredictable. Focusing on the reforms that would make the financial sector more resilient specifically to the type of crisis it has faced recently and ignoring the imperfection of the new reforms might lead to introduction of new vulnerabilities. We have seen it before with introduction of mark-to- market accounting that reacted to the problem behind the S&L crisis but in the same time it introduced procyclical tendencies that manifested themselves recently. To avoid repeating the mistake the emphasis should be given on creating robust and resilient financial sector that would be prepared to withstand variety of economic and financial disturbances.

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Master Thesis Proposal

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Proposed Topic:

Banking supervision and regulation: possible changes as a consequence of the global financial crisis

Topic Characteristics:

Recent financial crisis is considered to be the most severe in decades. To face it the governments were forced to take extraordinary measures to stabilize financial system and protect it from the potential collapse. It is impossible to identify one single cause of the crisis as there many of them. However it can be argued that regulatory and supervisory authorities have failed in identifying and addressing the risks before they have grown out of control and began to threaten the stability of the financial system itself. Authorities' inability to keep up the regulatory framework with the pace of financial innovations has probably significantly contributed to the outburst of the crisis. As a result the debate about the reform of the regulatory frameworks has started and reforms intended to address the known causes of the financial crisis are being introduced and implemented.

Hypotheses:

1. Inappropriate regulatory framework has contributed to the formation of the recent financial crisis.
2. Proper reform of the regulatory framework could prevent emergence of similar crisis in the future.
3. Macro-prudential supervision and liquidity requirements will assume an important role in promoting financial stability.

Methodology:

The thesis will contain both theoretical and empirical part. In the theoretical part methodology will be based on a review, comparison and synthesis of the existing literature concerning the topic and currently existing regulatory frameworks. As there are certain principal differences between regulatory framework used in U.S.A. and Europe, they will be examined separately. Additionally, recently proposed improvements and ongoing reforms of the regulatory framework will be discussed. In the empirical part simple econometrical methods will be used to test the effectiveness of the proposed reforms and to assess their impact on the performance and behavior of the selected banks.

Outline:

1. Introduction
2. Theory of financial regulation and supervision
3. Comparison of the existing regulatory frameworks
4. Proposed reforms of the regulatory framework
5. Impact of the implementation of the reforms
6. Conclusion

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