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Basel II Criteria for Record Keeping of Financials in Banking Sector and Investigating them within the Framework of IAS

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Anahtar Kelimeler

1) Basel II
2) Risk Management
3) Capital Adequacy
4) Supervision
5) Market Discipline

BASEL II CRITERIA FOR RECORD KEEPING OF FINANCIALS IN BANKING SECTOR AND INVESTIGATING THEM WITHIN THE FRAMEWORK OF IAS

BANKACILIK SEKTÖRÜ MALİ DURUM MUHASEBE KAYITLARI İÇİN BASEL II KRİTERLERİ VE KAYITLARIN IAS ÇERÇEVESİNDE İNCELENMESİ

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Anahtar Kelimeler (Türkçe)

1) Basel II
2) Risk Yönetimi
3) Sermaye Yeterliliği
4) Denetleme
5) Piyasa Disiplini

Anahtar Kelimeler (İngilizce)

1) Basel II
2) Risk Management
3) Capital Adequacy
4) Supervision
5) Market Discipline

Abstract

This dissertation is prepared in order to examine main objectives of new Basel Accord ,and to analyse conditions which necessitate the amendments on the previous framework. The analysis is initiated with history of the Basel Committee and the financial markets ,and carried out with the expression of main structure and innovations provided by new Basel Accord. In order to explain the new framework, three basic pillars which Basel II Accord stands on are especially emphasized. In further sections the new framework is discussed within the context of risk management conception and relation between accounting system standarts and Basel II standarts as title of this dissertation composes. Finally, the study is concluded with general evaluations regarding positive and negative aspects of the new framework.

Özet

Bu tez yeni Bazel Uzlaşısı'nın temel amaçlarını ve önceki uzlaşının gerektirdiği değişiklikleri tespit etmek için hazırlanmıştır. Analize Bazel Komitesi'nin ve finans piyasasının tarihi geçmişi ile başlanmış, yeni yapının tanımlanması ve yeni çalışmalarla birlikte getirilen yeniliklerle devam ettirilmiştir. Yeni yapıyı tanımlayabilmek için özellikle Bazel II'nin üzerine kurulmuş olduğu üçlü sistem ele alınmalıdır. İleriki bölümlerde yeni yapı, risk yönetim algısı temelinde tartışılacak olup Bazel II standartları ve muhasebe sistemi standartları arasındaki benzerlik ve farklılıklar değerlendirilmiştir. Sonuç olarak da çalışma, yeni yapının pozitif ve negatif yanlarıyla ilgili genel değerlendirmelerle sonlandırılmıştır.

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Abbreviations

AIG	: Accord Implementation Group
ASV	: Asset Fair Value
BDDK	: Bankacılık Düzenleme ve Denetleme Kurulu
BIS	: Bank for International Settlements
CDO	: Collateralized Debt Obligations
EAD	: Exposure At Default
EL	: Expected Loss
EMF	: European Monetary System
FDIC	: Federal Deposit Insurance Corporation
IAS	: International Accounting Standarts
IASB	: International Accounting Standarts Board
IASC	: International Accounting Standards Committee
IFRIC	: International Financial Reporting Interpretations Committee
IFRS	: International Financial Reporting Standarts
ILSA	: International Lending and Supervision Act
IMF	: International Monetary Fund
IMA	: Internal Measurement Approach
IOSCO	: International Organisation of Securities Commissions
IRB	: Internal Ratings-Based
LFV	: Liability Fair Value
LGD	: Loss-Given-Default
OECD	: Organisation for Economic Co-Operation and Development
PD	: Probability of Default
ROE	: Return-On-Equity
SEC	: Securities and Exchange Commission
SIC	: Standing Interpretations Committee
UL	: Unexpected Loss
VaR	: Value at Risk

1. INTRODUCTION

Technological developments and liberalization furnish financial entitites around the world to perpetuate their activities globally and in this term many different financial instruments have been enhanced by these globally active financial institutions. These quick evalutions in financial markets forced regulators to revise their regulatory processes at the same time.

Regulatory institutions have to change their strategies in this field and transition process of regulatory institutions to the risk based capital adequacy arrangements (firstly Basel I then Basel II) have been initiated in the late 1980s.

Established in 1988, Basel I is the first risk based capital adequacy arrangements in the international stage. In the progressive term Basel I have composed internationally accepted standarts and it is still utilized by approximately 120 countries around the world. Basel I Capital Accord has predicted calculation of capital adequacy for loan to risk only. Then in 1996 beside this loan to risk assesment, capital necessity for market risk was inserted into the relevant accord.

In the following years results of new developments in financial markets and complications regarding the transactions made financial circles see that Basel I Capital Accord is inadequate for new circumstances. This ascertainment has initiated new studies regarding new accord. The studies

on new accord have started in 1998 and finalised in 2004. Between these years, financial circles' perspective regarding capital adequacy have mainly improved. Basel II Capital Accord, which was established as a result of all these studies between 1998 and 2004 handle banking sector risks more sensitive and comprehensive.

Basel I was formed only by capital adequcy arrangements as we mentioned in the previous paragraphs. Basel II differentiates from the former accord with three basic pillars which the accord has been founded on them.These pillars are:

- (1) Minimum capital requirements (addressing risk),
- (2) Supervisory review
- (3) Market discipline (promoting greater stability in the financial system.)

After Basel II Accord's establishment, regulatory institutions and the other financial entities have mainly changed their approach to the credit risk. Capital obligation for operational risk for the first time may be counted as one of the main important modification for the understanding of financial regulatory institutions.

New accord has more comprehensive targets and purposes like:

- Furnishing more reliable and stable financial sytem
- Supervising acceptable risk to capital ratio for the banking system

- Promoting enhancement of banks' risk management capability
- Strengthening competitive equality between international banks and the domestic banks

Calculating capital adequacy process couldn't be counted as the only role of Basel II. Beside this computation role, Basel II has to focus on risk management.

Basel II is the product of international approach regarding arrangements and supervisions of 2000s contemporary banking vision which differs from traditional banking in many ways.

Nonetheless, especially promotion of effective risk management, more risk susceptibility over legal capital requirement and judgements to furnish market discipline make us to assess Basel II accord one of the most important milestone in this area.

In the light of all above points regarding new Basel Accord and my relations with banking sector forced me to make an investigation about this accord. Turkey will be one of the implementing countries of Basel II. This issue has been announced by our regulatory institution BDDK and other authorized institutions. I hope the readers will be informed regarding the relevant issue when they read my dissertation.

This dissertation is mainly prepared for describing new Basel Accord's perspective on Banking Sector Financials and investigating them within the framework of International Accounting Standarts (IAS). In this context, familiarizing the readers with the regulatory association of Basel

Accords, Bank for International Settlements (BIS), will be useful for the later steps to be easily understood. Hence, the history of the BIS and its recent role in banking industry will be provided in the following sections. Also, the BIS' establisment of the Basel I accords in 1988 and the necessities for this accord will be summarized in the first section of this dissertation. Moreover, you will find some information regarding capital adequacy regulations which can be evaluated as milestone for the initiation process of the Basel Accords.

At the next steps we will introduce three basic pillars of the new framework in details. We will further examine the relationship between Basel II and Risk Management. As we know that the new framework looms largely with its more risk sensitive characteristics and this part will be useful for us to assess Basel II within the context of Risk Management. And at the last part of the dissertation there will be an inquiry which consists of two standarts as Basel II standarts and IFRS.

We will finish this study with general ascertainments regarding our main subject.

2. BASEL (I) CAPITAL ACCORD

2.1 The Brief History of the BIS

Although we know its recent banking system regulatory role, the BIS was originally established to enable money transfers arising from settling a clause of peace treaty. "After World War I, the need for the banking system

was suggested in 1929 by the Young Committee, as a means of transfer for German reparations payments. This plan was agreed in August 1929 at the Hague conference, and a charter for the bank was drafted at the International Bankers Conference in November. The charter was accepted at a second Hague Conference on January 20, 1930."[1] Established on 17 May 1930, the BIS is known as the world's oldest international financial organization by financial circles.

Before the United States and France had sold their shares to private investors, owner of the BIS was both the governments and private individuals. Then the shares traded on stock markets, which convert the bank a unique organization: an international organization.We can say that many central banks had similarly started as such private investing institutions. "In more recent years the BIS has forcibly bought all shares back which were held by private investors, and is now wholly owned by its member central banks." [2]

2.2 The Purpose of the BIS

Financial specialists from sovereign central banks, other agencies and central bank Governors performed regular meetings with the supports of -central bank cooperation- the BIS in Basel since 1930. The bank has built up its own study in financial and monetary economics and provides

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[1] Malcolm D. Knight and Andrew Crockett (2003), *Bank for International Settlements* Available : http://en.wikipedia.org/wiki/Bank_for_International_Settlements#History

[2] Malcolm D. Knight and Andrew Crockett (2003), *Bank for International Settlements* Available : http://en.wikipedia.org/wiki/Bank_for_International_Settlements#History

important assistance to the composition and distribution of economic parameters and financial statistics.

In the fiscal policy area, after Second World War and until the early 1970s Bretton Woods's system had been applied and defended by the relevant cooperation. The focus of the world economic experts drifted from Bretton Woods to cross-border capital flows and this is further followed by the oil crisis and the international debt crisis. The 1970s crisis led regulatory supervision of banking system to produce new expansions like the 1988 Basel Capital Accord and its renewed verison "Basel II ".[3]

Another role of the BIS is providing banking service to central banks or to international finance organizations. Within the context of its central banks conciliation role, the BIS try to make monetary policy more predictable and glare among its 55 member central banks all over the world. As monetary policy is determined by sovereign nation, it is subject to central banking potentially to speculation that affects some economic parameters like foreign exchange rates and global export economies. "Similarly, the BIS have acted as the agent for various European exchange rate arrangements, like European Monetary System (EMS, 1979-94) which preceded the move to a single currency." [4]

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[3] *BIS History – Overview* [online]. Available **:** http://www.bis.org/about/history.htm (01 September 2007)

[4] *BIS History – Overview* [online]. Available **:** http://www.bis.org/about/history.htm (01 September 2007)

Eventually the BIS has organized an emergency financing to support the international monetary system when it is needed. In this context during the 1931-33 financial crises, Austrain and German central banks have been supported by the BIS with credits. In the 1960s, the BIS has provided special support credits for the French franc (1968), and two so-called Group Arrangements (1966 and 1968) to support sterling. BIS' recent support action relates to IMF-led stabilisation programmes (eg for Mexico in 1982 and Brazil in 1998). [5]

Two crucial aspects of monetary policy have easily known to be especially sensitive. Hence, the BIS have two specific targets to satisfy this point: regulating capital adequacy and making reserve requirements more transparent. Both of these targets are so crucial but the priority between them can easily be mentioned as capital adequacy requirement. The capital adequacy requirement is the BIS' most important business.

From an international point of view, ensuring capital adequacy is the most important problem between central banks, as speculative lending based on inadequate underlying capital and widely varying liability rules causes economic crises as "bad money drives out good" (Gresham's Law). Another crucial issue especially for consumers and the domestic economies is the reserve policy.

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[5] *BIS History – Overview* [online]. Available **:** http://www.bis.org/about/history.htm (01 September 2007)

2.3 The Bank Capital Adequacy Regulations

Generally we can clearly say that a bank can finance itself by borrowing funds from the depositors and the funding of the bank by the owners. Borrowings contitute contractual liabilities, which, if not paid can cause the bank to fail. Furthermore, the owners' investments can gain or lose value without causing the bank to default on its obligations. Hence, other things being equal, the greater the proportion of owners' capital funds, the more likely the bank will be able to continue to pay its liabilities during terms of economic difficulty. This simple reasoning is the basis for the longstanding emphasis bank supervisors have placed on capital adequacy as a significant element of bank safety and maintainability.[6]

Although holding more capital has advantages like safety and stability for banks, it also has costs. If a bank needs to be financed with a greater percentage of capital in actual fact this restricts the amount of borrowing it can support with a given amount of capital, consequently ultimately restricting its lending capacity. "Capital adequacy obligations imposed on banks can consequently have broader macroeconomic results regarding the availability of loan. Reducing the bank's ability to borrow also restricts the opportunity for its shareholders to use financial leverage and the tax advantages of debt financing to increase return-on-equity (ROE). Nowadays in competitive marketplace, if bank ROEs are artificially

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[6] Susan Burhouse, John Feid, George French, and Keith Ligon, *Basel and the Evolution of Capital Regulation: Moving Forward, Looking Back,* http://www.fdic.gov/bank/analytical/fyi/2003/011403fyi.html , January 14, 2003

weakened, capital provided by the investors will change their way to other financial products or other sectors.[7]

All these costs and benefits of changes in bank capital are compelling but it is hard to quantify at the same time. And it is not surprising that regulatory and supervisory philosophies towards capital adequacy have built up over the years along with the general economic conditions and perceptions of banking industry health.

Prior to the 1980s, bank supervisors in the United States and in European countries did not impose specific numerical capital adequacy standards. In those years subjective measures was performed to the circumstances of individual cases or institutions which were their way only instead of developing new standarts regarding above mentioned issue. They have evaluated managerial capability, quality of credit portfolio, and largely downplayed capital ratios of the relevant institutions. Then the state and federal regulators have started to look at the ratios like capital to total deposit and capital to total assets. But both were given up because of their ineffectiveness in evaluation of capital adequacy in the following term.

"Various studies of ways to adjust assets for risk and create capital-to-risk-assets ratios were undertaken in the 1950s, but none were universally accepted at that time. In the 1970s the U.S. economy performed poorly and the banking industry began to show signs of weakness. A new term,

[7] Susan Burhouse, John Feid, George French, and Keith Ligon, *Basel and the Evolution of Capital Regulation: Moving Forward, Looking Back,* http://www.fdic.gov/bank/analytical/fyi/2003/011403fyi.html , January 14, 2003

"stagflation," was coined to describe the combination of economic stagnation and high inflation that characterized much of that decade. "[8]

In this period, failures of some crucial and strong banks made financial circles and investors thought that even relatively large banks were not in safe. At the end of the decade important amount of investments and credits had badly affected from the extraordinarily high inflation and interest rates. On the economic front, booming interest rates and a jump in oil prices were the last hoods of a worldwide recession in 1981. There were many reasons for failures in banking sector but we can easily state that worsening economic conditions and an increase in bank risk profiles have mainly prepared that atmosphere. Chart 2.1 shows the subsequent increase in bank failures.

Against this base, the bank capital trend was cause for concern. As Chart 2.2 illustrates that years between 1977 and 1982 banking sector's dollar-weighted capital-to-assets ratio was persistently below 6 percent. The decline in capital ratios was most enounced at large banks: in 1982, the equity-capital-to-assets ratio at the largest bank holding companies reached a low of 4 percent.[9]

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[8] In 1952, different capital-to-risk assets ratios were proposed in separate studies by a committee of the New York State Bankers Association, the Illinois Bankers Association, and the Federal Reserve Bank of New York. The Board of Governors of the Federal Reserve developed a **"Form for Analyzing Bank Capital"** in 1956.

[9] Horvitz, Paul M. **"More is Better as Capital Requirements Go"** The American Banker, April 24, 1986: 4.

[(*)] FDIC : Federal Deposit Insurance Corporation

Annual Failures of FDIC(*) - Insured Commercial Banks Remain Well Below Crisis Levels

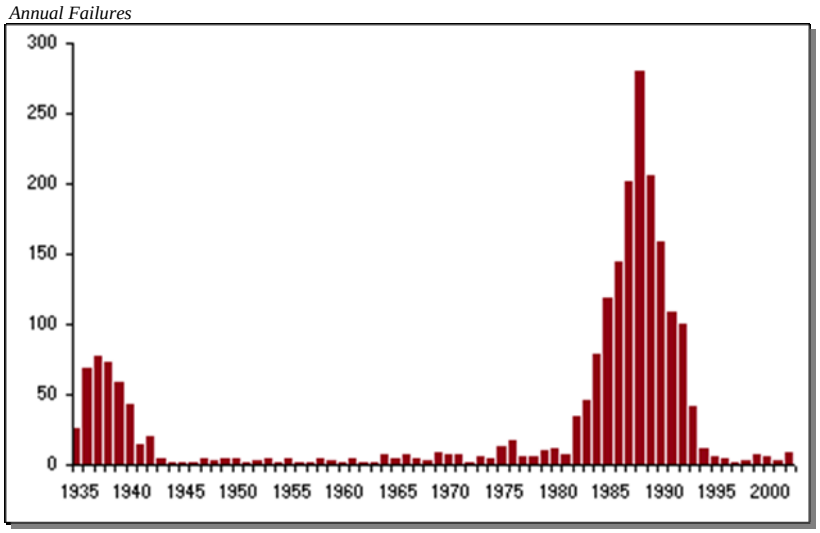

Chart 2.1

Source: FDIC Historical Statistics on Banking

The accordance of bank failures, macroeconomic problems and declining bank capital necessitated a regulatory response in 1981 when, for the first time, the federal banking agencies initiated definite numerical regulatory capital requirements. The standards employed a leverage ratio of primary capital to average total assets.

The Federal Reserve Board and the Office of the Controller of the Currency announced a minimum primary capital adequacy ratio of 6 percent for community banks and 5 percent for larger regional institutions. Then Federal Deposit Insurance Corporation established a threshold capital-to-assets ratio of 6 percent and a minimum ratio of 5 percent. Over the next decade, regulators worked to converge upon a uniform measure. Congress furthered the development of explicit and uniform regulatory capital standards when it passed the International Lending and Supervision Act of

1983 (ILSA), directing the federal banking agencies to issue regulations addressing capital adequacy. ILSA was a direct response to the international debt crisis and its impact on the U.S. banking system. Up to that point, large institutions had engaged in substantial international lending without the benefit of a comprehensive regulatory capital program.[10]

ILSA finalised the study regarding capital requirements for banking sector in 1985 and presented a unique definition in order to standardize regulations in financial circles. The importance of capital emphasized as the basic principles of the 1985 interagency regulations were presented as a cushion to curtail losses, provide and maintain public assurance, and build up provident growth. The importance of a comprehensive risk assessment, including off-balance-sheet risks was also highlighted in their study by ILSA. Two additional issues having been identified were whether an additional capital is needed to supplement the regulatory minimum capital ratios, and stressed the need for international convergence of capital standards in maintaining a base. These same principles are source of inspiration for recent efforts to present more effective capital adequacy framework.

By 1986, banking authorities mentioned that the primary capital ratio failed to cover risks in the banking industry and did not provide an exact measure of the risk exposures related with developing banking

[10] "Each appropriate Federal banking agency shall cause banking institutions to achieve and maintain adequate capital by establishing minimum levels of capital for such banking institutions and by using such other methods as the appropriate Federal banking agency deems appropriate." Capital Adequacy, 12 U.S.C.A. 3907(a).

Bank Capital Levels Fall Through the 1960s and 70s
But Basel Accord of 1988 Coincides With Reversal of Trend
(FDIC Insured Commercial Banks)

Equity capital as a Percent of
Total Assets at Year-End

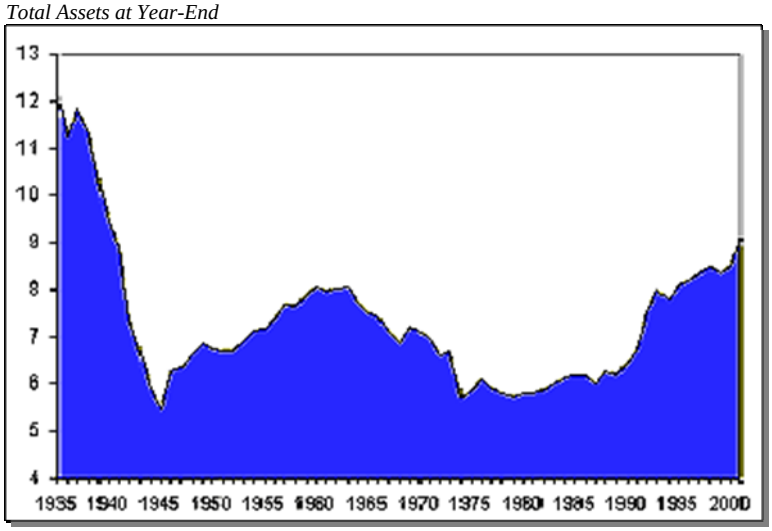

Chart 2.2

Source: FDIC Historical Statistics on Banking

activities , especially off-balance-sheet activities at larger institutions. Then the regulators initiated studies regarding the risk-based capital frameworks of other countries; France, the UK and West Germany had implemented risk-based capital standards in 1979, 1980 and 1985, respectively. They examined the former studies of risk-based capital ratios. Federal Reserve Bank of New York proposed to assign assets to one of six categories depending on credit risk, interest rate risk and liquidity risk factors.[11]

At these risk perception arguments have ended with the regulators agreement on the definition of capital adequacy which was well-designed to

[11] Susan Burhouse, John Feid, George French, and Keith Ligon, *"Basel and the Evolution of Capital Regulation: Moving Forward, Looking Back"* , http://www.fdic.gov/bank , January 14, 2003

bank risk-acception in order to set two important trends in the banking industry. At the first step, banks were moving away from safer, but lower yielding, liquid assets. At the same time, they were increasing their off-balance-sheet activities, whose risks were not accounted for by the then-extant capital ratios. The regulators requested a new "risk asset ratio" to serve as a supplemental adjusted capital ratio to be used in tandem with existing ratios of capital-to-total-assets, in the hopes that this would allow the capital framework to explicitly and systematically respond to individual banking organizations' risk profiles and account for a wider range of risky practices.

"Regulators from the U.S. and around the world continued to consider the most practical methods of capturing the various risks associated with banking, and in 1988, the central bank governors of the Group of Ten (G–10) countries adopted the Basel Capital Accord."[12]

This kind risk-based capital framework remains same and in effect today. It provides systematic procedures for acting both on and off-balance-sheet risks into the supervisory evaluation of capital adequacy, reducing disincentives to holding liquid, low risk assets, and maintaining coordination among supervisory authorities from major industrialized countries.

According to the 1988 Accord assets and off-balance-sheet items are "risk-weighted" based on their selected credit risk using four basic

[12] "International Convergence of Capital Measurement," issued in July 1988, describes the framework. The 1988 Accord was developed by the supervisory authorities on the Basel Supervisors Committee, comprising representatives from Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, the UK and the US.

categories. Most receivables are risk-weighted at 100 percent, residential mortgages are weighted at 50 percent, receivables on or guarantees provided by qualifying banks and other entities are weighted at 20 percent, and very low risk assets, such as those guaranteed by qualifying governments, are weighted at 0 percent. This makes banks to hold more capital if they choose riskier assets, and does not punish them for holding less risky credit portfolios. Institutions subject to the Accord are required to maintain a minimum ratio of regulatory capital-to-total risk-weighted assets of at least 8 percent. In addition to the risk-based capital requirements, all institutions must comply with minimum leverage ratio requirements of Tier 1 capital-to-average total consolidated on-balance-sheet assets. [13]

According to the regulatory mechanism in the US, the minimum leverage ratio for strong institutions is 3 percent, and is 4 percent for other banks. As directed by the Federal Deposit Insurance Corporation Improvement Act of 1991 which have been legislated at the height of the U.S. banking crisis, institutions with the highest capital ratios are categorized as "well capitalized," while institutions with lower capital ratios are assigned lower capital categories. Institutions, those are less than well capitalized having restrictions or conditions on certain banking activities and these institutions may need to take mandatory or optionally supervisory actions.

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[13] In general terms, Tier 1 capital includes common stockholder's equity, qualifying noncumulative perpetual stock (for bank holding companies it also includes limited amounts of cumulative perpetual preferred stock), and minority interests in the equity accounts of consolidated subsidiaries.

2.4 Purpose and Structure of the Basel (I) Capital Accord

The 1988 Accord, which is also known as Basel Capital Accord has been prepared to provide a credit risk measurement system and minimum capital standards for all G-10 countries' banks. BIS has aimed to improve banking supervision with the regulations covered by Basel Capital Accord in that term.

The Accord consists of two basic sections, with the first section relevant accord drafts the definition of capital and the second section elaborates a system of risk weights used to calculate the minimum capital applied to each asset type. The idea behind the accord is simply that the capital standing of the bank should be parallel with the riskiness of its business. Capital is divided into two categories according to Basel Capital Accord. Basically, Tier 1 capital consists of the amounts paid by shareholders, including retained earnings and Tier 2 capital includes certain classes of preferred shares and subaltern debts. According to the subjected accord the minimum level of bank capital must be at 8 percent of the risk-adjusted exposure of bank assets.

Tier 1 capital is the important measure of a bank's financial capability from a regulator's point of view. It consists of the different types of financial capital considered the most reliable and liquid, primarily Shareholders' equity. Common stock, irredeemable and non-cumulative preferred stock, and retained earnings are counted as the examples of Tier 1 capital.

Capital in this sense is related to, but different from, the accounting concept of shareholder's equity. Each country's banking regulator, however, has some discretion over how differing financial instruments may count in a capital calculation. This differentiation occurs as the legal framework varies in different legal systems. The theoretical reason for holding capital is that it should provide protection against unexpected losses. Note that this is not the same as expected losses—provisions, reserves, and current year profits are for expected losses.

More specifically, Tier 1 Capital is a measure of capital adequacy of a bank, and is the ratio of a bank's core equity capital to its total risk-weighted assets. Risk weighted assets is the total of all assets held by the bank which are weighted for credit risk according to a formula determined by the regulator of the sovereign country. Most Central Banks follow the BIS guidelines in setting asset risk weights. Assets like cash and coins usually have zero risk weight, while debentures might have a risk weight of 100%.

2.5 The Necessity of a New Accord

The 1988 Accord was very successful in many ways. Originally 1988 Accord was developed for globally active institutions; but the other organizations in financial circles have also supported this compatible risk-based capital standards and its application across all banking organizations regardless of size, structure, complexity or risk profile. The four basic credit

risk categories have been viewed as an important improvement over the former capital framework.

As the Accord's provisions on the banking sector balance sheets took effect, the banking sector average equity capital to asset ratio has risen. Chart 2.2 shows us the banking sector average equity capital to asset ratio trend from 1935 to 2000. After its decleration in 1988 and the process of the implementation all over the world the Accord's provisions took effect in 1992 and in 1993 average equity capital to asset ratio reached 8 percent. This was the highest value since 1963.

International banking system has supported this risk-based capital regulation especially for its stabilizing force and during the implementation process of the Accord, banks have easily been a witness of increases not only in equity capital, but also in reserves and income. And this was further followed by strengthening banks' total level of protection from credit deficits. Chart 2.3 shows us the trend on the relevant three parameters of income, reserves and equity capital.

"The upward trend in capital ratios since the early 1990s is probably not entirely attributable to the effects of capital regulation. Many bankers doubtless remember the crisis years of the 1980s and early 1990s and, by holding capital well in excess of regulatory requirements, wish to avoid the sanctions that can be imposed during times of adversity not only by the regulators, but by creditors, ratings agencies, and shareholders. "[14]

[14] Susan Burhouse, John Feid, George French, and Keith Ligon, *"Basel and the Evolution of Capital Regulation: Moving Forward, Looking Back"* , http://www.fdic.gov/bank , January 14, 2003

Total Level of Protection Against Credit Losses Has Grown Steadily Over Time (All FDIC- Insured Institutions)

Equity capital as a Percent of Total Assets at Year-End

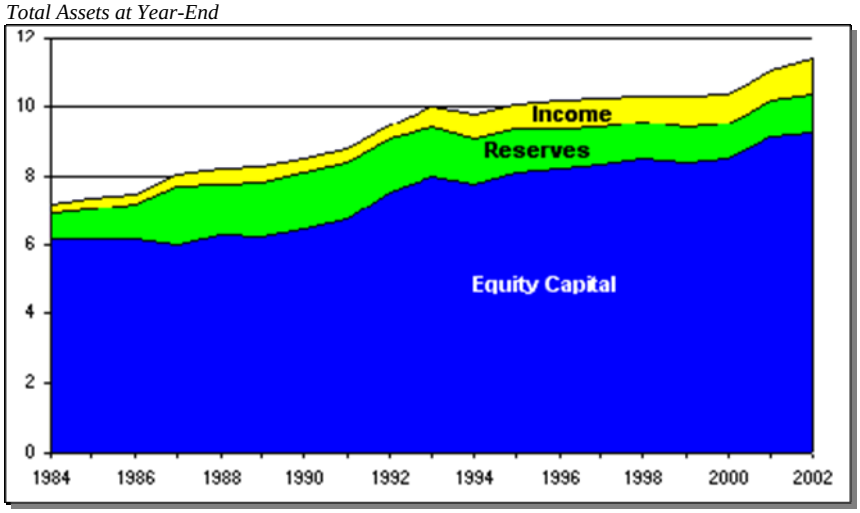

Chart 2.3

Source: FDIC Historical Statistics on Banking

Beside the other effects it is so clear that the capital regulation has had an important impact on bank capital levels. "Well Capitalized" test is one of the important proofs for this claim. Although there was an economic recession and weak banking conditions in US, between 1990 and 1992 well capitalized bank percentage increased from 86 percent to 96 percent.

As shown in Chart 2.1 the strengthening of banks' capital positions was a crucial decrease in bank failure terms. In 1988 annual bank failures hit a top of 280, but had decreased to only 3 in 1998.

It is obvious that safety and stability of a bank is influenced by many of parameters of which capital regulation is only one, how can we evaluate the impact of the present capital regime on financial soundness? It can be easily said that insufficiency of bank failures despite a severe U.S. corporate recession in 2001 and the following stationary redemption has to be partially

loaded to banks' strong capital levels, and at least some credit should go to the capital regime that has been in place in the U.S. during the 1990s, namely the 1988 Basel accord working related with Prompt Corrective Action.[15]

The Basel Capital Accord's another impact on international banking system is its competitive equality enhancing role. Implementation of this international agreement all over the world made all countries imposing all these crucial standarts effective for the future of their system. We can claim that the most important factor for the Accord to be easily imposed by all countries including G 10 was its coverage area. Neither of these countries can impose these rules to the actors in banking industry stand-alone basis. Participation on this agreement furnishes them to force other parties to effect the necessities of the agreement. In addition, as regulators ignored the potentially harmful results of unilateral action, banks and bank customers around the world were able to benefit from uniform capital standards.

Although we have presented all positive evaluations regarding 1988 Accord until now, it was seen that certain limitations of this Accord have become more important over years. Evidently the 1988 Accord is a mile stone for risk-sensitive capital guidelines, but notwithstanding it is not a biting instrument with respect to credit-risk differentiation and it allows securitizing banks crucial scope for "capital arbitrage".

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[15] Susan Burhouse, John Feid, George French, and Keith Ligon, *"Basel and the Evolution of Capital Regulation: Moving Forward, Looking Back"* , http://www.fdic.gov/bank , January 14, 2003

"Moreover, the increasing size and complexity of the largest banks has made it more important for bank supervisors to enhance their ability to enforce capital adequacy by harnessing two key tools, market discipline and the risk metrics employed by banks themselves."[16]

Importance of measuring and managing risks at these large and complex financial institutions has furnished bank supervisors to find new ways to insert traditional grading techniques. The supervisors have adopted -greater importance in principle regarding market discipline and greater use of banks' internal risk measurements-are not principles of the Basel I Accord but are principals of the relevant Basel II Accord.

Market actors like creditors, shareholders and investigators in the sector--can be key allies of the regulators by punishing entities with poor performance or take overflowing risks. For market discipline to be effective, however, market participants should be well informed about the risks these banks are taking, and hence the important role played by financial transparency in Basel II.

Another crucial tool that plays a critical role in assisting the supervisors' perception regarding the risks in the largest banks is the risk-based information mostly generated by the banks themselves. The larger the bank, the less practical a consistent supervisory investigation on the loan portfolio may become. Integration of banks' internal risk rating mechanisms for calculating risk exposure is one of the most important issues, which especially large banks focus on. They are investigating integration success

[16] Susan Burhouse, John Feid, George French, and Keith Ligon, *"Basel and the Evolution of Capital Regulation: Moving Forward, Looking Back"* , http://www.fdic.gov/bank , January 14, 2003

of these mechanisms by reviewing their loan portfolio and testing different types of transactions. The use of banks' internal risk measures to set capital requirements is not a new issue: under the Market Risk Amendment to the 1988 Basel Accord, qualifying banks already use internal mechanisms to assist setting their capital requirements for market risk. But Basel II's proposed use of internal risk measures to set capital requirements for credit risk is something different. While this understanding would be an important separation from former regulatory application, it is nonetheless an evolutionary difference that flows from developments in the measurement of risk at large financial institutions.

Thus far in the second section of my dissertation, this dissertation presented the conditions and the term before and after the establishment of Basel I, its demonstration and the effects on the financial institutions. With the following sections we will be informed about Basel II and the other issues we have promised to conclude until the end of this publication.

3. NEW BASEL CAPITAL ACCORD: BASEL II

The main target of the Basel Committee’s study was revising the 1988 Accord which was developed as a framework and in the following years it was seen that maintainability and stability characters of the international banking system need to be strengthened. Besides, furnishing sufficient coherence that capital adequacy regulation will not be a basic source of competitive disparity through internationally active banks. The

Committee believes that the new accord will promote the adoption of stronger risk management practices regarding the banking industry. The Committee also claims that, with their comments on the nominations, banks and other relevant parties have supported the design and justification of the three basic pillars (minimum capital requirements, supervisory review, and market discipline) understanding on which the new capital adequacy framework is based.

THREE PILLARS OF BASEL II CAPITAL ACCORD

Table 3.1

Generally speaking, the Committee has indicated their support for enhancing capital regulation to allow amendments in banking and risk management strategies while at the same time maintaining the advantages of a framework which have to be applied as uniformly as possible for each sovereign member.

In enhancing the amended Framework, the Committee has decided that in new condition most important detail should be developing more risk-sensitive capital requirements that are conceptually significant and parallel with the main features of the current supervisory regulatory and accounting systems in member countries. According to the authorities and users, this

has been successfully handled. The Committee is also maintaining key parameters of the Basel I framework, including the general requirement for banks to hold total capital equivalent to at least 8 % of their risk-weighted assets; the basic structure of the 1996 Market Risk Amendment regarding the treatment of market risk; and the definition of eligible capital.

During the new period banks' internal system inputs regarding assessment of risk will be effectively utilized by the relevant departments of a bank in capital calculations. This will be counted as one of the most important discrepancy when we compare with the previous framework. The internal risk assessment process will be directed by the Committee by putting forward a detailed set of minimum requirements. Besides, it is not intended by the Committee to dictate the formate or operational details of banks' risk management guideliness and applications. Each supervisor will need to enhance a business plan in overviewing procedures for furnishing that the relevant banks' systems and administrations regarding this process are adequate to serve as the basis for the capital calculations. Supervisors will also need to administer significant judgements since arranging a bank's state of willingness, especially during the implementation process. The Committee anticipates that national supervisors will focus on accordance with the minimum capital requirements as a means of furnishing the general integrity of a bank's capability to provide provident entries to the capital calculations and not as an end in itself.

The revised Framework furnishes a range of alternatives for deciding the capital requirements for credit risk and operational risk to

permit banks and regulators to select approaches that are most suitable for their operations and their financial market infrastructure. In addition, the Framework also allows for a limited degree of national discretion in the way in which each of these options may be applied, to customize the standards to different conditions of national markets.[17] These characteristics will force the national regulatories to furnish adequate adherence to the application process. The Committee proposed to inspect and overview the application of the Framework in the period ahead with a view to approaching greater consistency. Especially, Accord Implementation Group (AIG) was established to induce consistency in the Framework's application by promoting supervisors to exchange data regarding integration results.

The Committee has also mentioned that supervisors in each country have an effective task in leading the developed collaboration between home and host country supervisors that will be necessitated for efficient integration. The AIG is enhancing practical applications for collaboration and coordination that lessen integration imposition on banks and maintain supervisory resources. According to the studies of AIG, feedbacks from supervisors and the banking industry, the Committee has issued general principles for the global integration of the new Framework and more focused principles for the approval of operational risk capital responsibility under improved measurement results for both supervisor party.

[17] The BIS Resources, *Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework* , June 2004 , http://www.bis.org/publ/bcbs107.htm

The new Framework is designed to domicile minimum capital levels for globally active banks. Since according to the 1988 Accord, national regulatory entities was free to accept regulations that necessitate higher levels of minimum capital.They were also free to set additional measures of capital adequacy for their domestic banking organizations.

Domestic regulators may use a complementary capital measure as a way to address, for example, the possible uncertainties in the certainty of the measure of risk exposures inherent in any capital rule or to limit the extent to which an institution may fund itself with debt. Where a jurisdiction employs a supplementary capital measure (such as a leverage ratio or a large exposure limit) relative to the measure set forth in this Framework, in some cases the capital required under the complementary measure may be more binding. Especially under the second pillar, supervisors should anticipate banks to operate above minimum regulatory capital levels.[18]

As we have mentioned above the new Framework is more risk sensitive than the 1988 Accord, but countries where risks in the domestic banking sector are higher nevertheless we need to take into account that banks should need to hold more or less capital than the Basel minimum. Besides, when we examine the internal ratings-based (IRB) approach, the risk of main loss events may be higher than allowed for in this Framework.

The Committee also intends to underline the need for both parties of banks and supervisors to afford adequate care to the relevant supervisory review and market discipline pillars of the new Framework. This is of great

[18] The BIS Resources, *Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework* , June 2004 , http://www.bis.org/publ/bcbs107.htm

consideration that the minimum capital requirements of the first pillar in conjunction with the implementation of the second which require review of such capital adequacy assessments regarding first pillar I. Additionally the disclosures provided under the third pillar of this Framework will be mandatory in furnishing the market discipline could be counted as a significant complementary.

Interactions between regulatory and accounting understandings at both the domestic and international level can have crucial effects on the comparability of the capital adequacy measures and the costs related with the integration of the approaches. The understanding of regulatory and accounting regarding unexpected and expected losses represent a significant step forward in this context. The Committee and its members willing to take the initiative in the dialogue between accounting and regulatory authorities to decrease discrepancy between regulatory and accounting standards.

The revised Framework mentioned here implies several important amendments relative to the Committee's most recent consultative proposal in April 2003. A number of these amendments have already been shown in the Committee's press statements of October 2003, January 2004 and May 2004. These consist the amendments in the convergence to the improvement of expected losses (EL) and unexpected losses (UL) and to the improvement of securitisation exposures. Together with these, amendments in the treatments of credit risk mitigation and qualifying revolving retail exposures, among others, are also being incorporated. The Committee also has sought to clarify its expectations regarding the necessity for banks using

the advanced IRB approach to confine the effects arising from economic downfalls into their loss-given-default (LGD) parameters.[19]

According to the Committee reiterating objectives of the overall level of minimum capital requirements is a crucial fact. Besides, ensuring the total level of these requirements and providing incentives to the regulators the Committe try to make the more advanced risk-sensitive approaches of the revised Framework adopted. If the targets on overall capital adequacy standarts would not be approached, the Committee is ready to take some actions necessary to state precisely the consequence situation.

Committee has revised the previous Framework to realize a more forward-looking targets regarding capital adequacy supervision, which will be developed with time. This evolution is necessary to furnish that the Framework keeps pace with market growth and improvements in risk management studies, and the Committee desires to supervise these developments and to make inventions if necessary. Therefore, the Committee has taken advantage greatly from its frequent interactions with relevant parties and looks forward to deepen dialogue opportunities. The Committee also wants to keep all the relevant parties became aware of its future work agenda.

One effect where such kind of interaction will be especially significant could be mentioned as “double default”. Although it is essential to take into account all of the implications especially related to measurement, the presentation of double default effects is necessary before

[19] The BIS Resources, *Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework* , June 2004 , http://www.bis.org/publ/bcbs107.htm

a solution is determined. It will continue work with the determination of finding a providently meaningful solution as fast as possible prior to the integration process of the revised Framework. Besides, the Committee has also initiated joint work with the International Organization of Securities Commissions (IOSCO) on different issues regarding trading activities.

One area where the Committee claims to assume additional study of a longerterm character is in relation to the definition of eligible capital. One reason for this claim is the fact that the modification in the improvement of expected and unexpected losses and related modifications in the improvement of provisions in the Framework shown here generally tend to decrease Tier 1 capital requirements relative to total capital requirements. Beside, approaching on a uniform international capital standard under this Framework will ultimately necessiate the identification of an agreed set of capital instruments that are available to reduce unexpected losses on a going-concern basis.[20] The Committee mentioned its desire to examine the definition of capital as a chase to the revised understanding of Tier 1 eligibility as announced in its October 1998 press release, "Instruments eligible for inclusion in Tier 1 capital". It will investigate relevant issues regarding the definition of regulatory capital, but does not desire to offer amendments as a result of above mentioned longer-term review before the implementation of the revised Framework. By the way, the Committee keeps its energy to maintain the compatible application of its 1998 decisions regarding the compilation of regulatory capital across jurisdictions.

[20] The BIS Resources, *Basel II: International Convergence of Capital Measurement and Ca pital Standards: a Revised Framework* , June 2004 , http://www.bis.org/publ/bcbs107.htm

The Committee also needs to keep relating with the banking industry in a consultation of existing risk management applications, including the practices which target to generate quantified measures regarding risk and adequate capital level. During the last decade, a number of banking entities have invested their funds in modelling the credit risk arising from their crucial business operations. All these models are developed to assist banks in quantifying, bunching and managing credit risk. Since the Framework aborts such inadequate credit risk models to be used for regulatory capital purposes, the Committee notes that the severity of ongoing active state regarding both the performance of such models and their comparability for banks.

According to the Committee a successful execution of the amended infrastructure will provide banks and regulators with critical experience necessary to mention necessary challenges. The Committee believes that the IRB approach predicate a point on the between purely regulatory evaluation of credit risk and an approach that builds more fully on internal credit risk models. " In principle, further movements along that continuum are foreseeable, subject to an ability to address adequately concerns about reliability, comparability, validation, and competitive equity. In the meantime, the Committee believes that additional attention to the results of internal credit risk models in the supervisory review process and in banks'

disclosures will be highly beneficial for the accumulation of information on the relevant issues."[21]

Until now we have summarized the conditions before the new framework and the necessity to perform amendments on the initial accord. The next step should include the details of the new framework. In this context, we will initiate dealing with the revised framework by firstly presenting the definitions of three basic pillars which the revised framework stands on.

3.1 The First Pillar - Minimum Capital Requirements

The new accord sets out three key areas for compliance, referred to as three Pillars. All these three pillars have been introduced briefly in the former section of this disseration and with this section you will be informed all about these three pillars severally.

The Pillar I establishes minimum capital requirements and sets out very detailed regulatory rules and guidance for the calculation of minimum adeqate capital for credit, operational and market risks. We can see these three risks on the denominator of the below capital ratio formula. Besides, the new framework prepetuates both the former definition of capital and the minimum requirement of 8 percent of capital to risk-weighted assets. To maintain that risks within the entire banking groups are evaluated, the revised framework will be protracted on a consolidated basis to holding

[21] The BIS Resources, *Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework* , June 2004 , http://www.bis.org/publ/bcbs107.htm

companies of banking groups. The new Accord also contains a discussion of the treatment of all relevant financial entities.

The goal of the committee remains the same as written in the June 1999 paper: namely, to neither raise nor lower the regulatory capital, consist of operational risk, for internationally active banks utilizing the standardized approach. The committee's most significant goal regarding the IRB approach is to ensure that the regulatory capital requirement is sufficient to point out relevant risks and includes promotions for banks to migrate from the standardized approach to the IRB approach.[22] The committee will need assistance of the parties in the banking sector regarding applications of the further testing and dialogue to achieve the goals aimed in this process.

There are three options for calculating credit risk for corporate, bank and sovereign exposures:

- The Standardised Approach, a more tactful and risk sensitive version of the previous 1988 Accord. More "broad brush" in nature than the new Basel Accord approaches;
- The Foundation IRB Approach (FIRBA), under which banks estimate customer risk using internal ratings and transactional risk using parameters set by the rule book;

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[22] Gallati, Reto. *Risk Management and Capital Adequacy.* Blacklick, OH, USA McGraw-Hill Companies, The, 2003. p 352. http://site.ebrary.com/lib/bilgi/Doc?id=10153061&ppg=374

- The Advanced IRB Approach (AIRBA), under which banks estimate both customer and transactional risk using internal ratings.

All these three approaches with the additional alternatives are shown in the table as "***Menu of Alternative Approaches for the Different Risk Categories"*** below.

Table 3.1 shows the menu to choose from regarding the different approaches within the different risk levels. The development within the new framework focuses on advancement in the measurement of risks, i.e., the calculation of the denominator of the capital ratio formula. The credit risk measurement methods are prepared more diligently than those in the former framework. The new framework presents for the first time a measure for operational risk, while the market risk measure remains the same.

Menu of Alternative Approaches for the Different Risk Categories

Market Risk	Credit Risk	Operational Risk
Choice of approaches to measure market risk (unchanged) : **-Standardized approach** **-Internal models approach**	**Choice of approaches to measure credit risk :** **-Standardized approach (a modified version of existing approach)** **-Foundation IRB approach** **-Advanced IRB approach**	**Choice of approaches to measure operational risk :** **-Basic Indicator approach** **-Standardized approach** **-Internal measurement approach**

Table 3.2

3.1.1 Internal Models

3.1.1.1 Introduction to Internal Model Approach

Basel II presents the standardized approach and the internal ratings based approach as the foundation and the advanced approaches which of these briefly defined above. The standardized approach offers parrallel deficiencies like in Basel I Accord. According to the IRB approach the regulatory capital should be compared with the economic capital distribution from the real economy credit portfolio models. Although the capital distrubution for investment class facilities from the IRB approach much lower than for the standardized approach, it is still too high when we compared with the allocation from internal models. Besides, for subinvestment class portfolios, the opposite conception is true where the IRB approach allocates more capital than the standardized approach, but still much less than the internal models. Since the different credit portfolio models are adjusted with coherent varables they gather capital attributions closer to one another. It is easily realised that regulatory arbitrage will promote banks as under Basel I. Management authority in the banks try to shed away their high-quality assets through loan sales and securitization, and keep on their balance sheet the more risky loans for which regulatory capital underestimates the actual economic risk.

3.1.1.2 New Internal Model Framework

The rules of the 1988 Accord are mostly adopted as inadequate in many points. First, the Accord does not deal with siginificant issues such as portfolio effects, nothwithstanding credit risk in any major portfolio is forced to be partially cleared by diversifying risk among issuers, sectors,

and locations. For example releasing the same amount of regulatory capital for a single USD 100 million corporate loan is riskier than releasing for a portfolio of 100 different and unrelated $1 million corporate loans.

Second, according to the rules in the pervious framework allocating a loan to a corporate company generates five times the amount of risk as does a loan to a bank in an OECD market, regardless of the relevant bank's credit worthiness. For example, a loan to The Coca Cola Company, which is an AAA-rated entity, has to be supported by five times as much regulatory capital as a similar loan to Turkish bank, an B rated country. The Coca Cola Company is also considered to be more risky than the sovereign debt of Turkey. Clearly, this is the opposite of what one might think appropriate.

Third, regulatory rules consider that all corporate borrowers carry an equal credit risk. For example, a loan to an A-rated corporation requires the same amount of capital as a loan to a BB-rated credit. This is clearly impractical.

Fourth, short term revolving credit agreements with a term of less than one year do not require any regulatory capital,[23] while a short-term facility with 366 days necessiate the same capital as any long-term facility. The bank is at risk from allocating short-term loans, as the term is less than one year no regulatory capital is required. This promotes the banks to the constitution of the 364 day loans, in which banks lends for 364 days only, but the loan is rolled over at maturity. Such a structure don't necessiate any capital, unless the commitment is not canceled.

[23] A revolver is a facility that allows one to borrow and repay the loan at will within a certain period of time.

Lastly, the Accord does not allow netting and does not supply any abetment for credit risk mitigation techniques like taking advantage of credit derivatives. All these disadvantages have caused a defective assessment of exact risks and have induced to the misallocation of capital. In some cases, they have led banks to carry too much risk.

"The problem is that as the definition of regulatory capital drifts further away from the bank's understanding of the economic capital needed to support a position, the bank faces a strong incentive to play the game of "regulatory arbitrage."[24] Banks are promoted to be exposed to the lower capital charges while still carrying the same amount of risk by utilizing different structures such as, securitization through different types of "collateralized debt obligations (CDOs)" and the use of credit derivatives. In this process, high-grade exposures are transfered from their banking book to their trading book, and the quality of the assets remaining in the books declines. The refining of this kind of regulatory benefit can be effectuated only by more advisable arrangement of regulatory capital.

These difficulties have forced the banking sector to establish their own internal credit portfolio models to determine value at risk (VaR) for credit instead of the standards execute by Basel I. "Credit VaR models would be approved by regulators and used by the industry to calculate the

[24] Scott, Hal S. *Capital Adequacy Beyond Basel : Banking, Securities, and Insurance.* Cary, NC, USA: Oxford University Press, Incorporated, 2005. p 199. http://site.ebrary.com/lib/bilgi/Doc?id=10103706&ppg=214

minimum required regulatory credit risk capital to be associated with the traditional loan products in the banking book."[25]

3.1.1.3 Definition of Capital

The new framework furnishes both the current definition of capital and the minimum capital requirement of 8% of the risk-weighted assets as shown below:

$$\frac{\text{Total capital (unchanged)}}{\text{Market + Credit + Operational risk}} = \text{capital ratio (minimum 8\%)}$$

where risk weighted assets are the sum of the assets subject to market, credit, and operational risks.

"The new Basel Accord incorporates both expected and unexpected losses into the calculation of capital requirements, in contrast to the BIS 98, which is concerned only with unexpected loss for market risk in the trading book. "[26]

The necessity for including expected losses in the capital requirement is that loan loss reserves are already specified as Tier 2 capital and are enforced to furnish the bank's capital security against credit losses.

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[25] Scott, Hal S. *Capital Adequacy Beyond Basel : Banking, Securities, and Insurance.* Cary, NC, USA: Oxford University Press, Incorporated, 2005. p 200. http://site.ebrary.com/lib/bilgi/Doc?id=10103706&ppg=215

[26] In April 1995, the Basel Committee issued a consultative proposal to amend the 1988 Accord, which became known as BIS 98 after it was implemented in January 1998. BIS 98 requires financial institutions with significant trading activities to measure and hold capital to cover their exposure to the market risk associated with debt and equity positions in their trading books, and foreign exchange and commodity positions in both the trading and banking books (see BCBS 1996).

In the current regulatory accord, loan loss reserves are still convenient for Tier 2 capital only up to a maximum of 1.25% of risk weighted assets, and Tier 2 capital cannot exceed more than 50% of total regulatory capital,which is the sum of Tier 1 and Tier 2 capital.

3.1.1.4 The Standardized Approach

The standardized approach is the same as the former Accord in many ways, but is more risk-sensitive. The bank sets a risk weight to each of its assets and off-balance-sheet positions and composes a sum of riskweighted asset values. Risk weight of 20% means that an exposure is included in the calculation of risk-weighted assets at 20%, which then converts into a capital charge equal to 8% of relevant value, or, equivalently, to 2% of the exposure.

The Basel Committee offers to benefit from the published credit scores of credit agencies, which are considered more accurate than the creditworthiness evaluations ensured by the rating agencies.

For receivables from the customers, the new Accord suggests to retain a risk weight of 100% except for highly rated companies rated between AAA and A- and noninvestment grade customers rated below BB-. Highly rated companies would benefit from a lower risk weight of 20%-50%. Non-investment-grade companies rated below BB- are carrying a risk weight of 150%. Short-term revolving loans, with a term less than a year, would be subject to a capital charge of 20%, instead of zero under the current 1988 Accord. According to the new proposal highly rated corporate

claims will attribute the same risk weight as the credits of bank and government sponsored enterprises.

Risk Weights Under the Basel II Accord - Standardized Approach

	AAA to AA-	A+ to AA-	BBB to BBB-	BB+ to BB-	B+ to B-	Below B-	Unrated	Past due
Sovereigns[a]	0%	20%	50%	100%		150%	100%	100% -150%[c]
Banks (Option 1)	20%	50%	100%			150%	100%	
Banks (Option 2)[b]	20%	50%		100%		150%	50%	
Corporates	20%	50%	100%		150%		100%	
Retails	75%							
Claims secured by residental property	35%							100%
Claims secured by commercial real estate	100%[d]							100%-150%[c]

Table 3.3

[a] Non central government public sector entities can be treated as, at national discretion, under one of the two options available for banks.

[b] The choice between option 1 and 2 is left to national supervisors .Under option 2 , lower weights can be applied to exposures with an original maturity of three months or less.

[c] The risk weight depends on the level of specific provisions relative to the outstanding amount of the loan ; e.g. for nonresidential mortgage loans, the risk weight may be 100% if specific provisions are no less than 20%of the outstanding amount , and –subject to regulatory discretion- may be further reduced to 50% when provisions are at least 50% of the outstanding amount.

[d] A part of the claim may be given a 50% weight under certain conditions

Source : BIS resources

The standardized approach is criticised regarding some deficiencies like in the 1988 Accord. Six credit categories are still inadequate.The unrated class receives a risk weight of 100%, which is less than that attributed to noninvestment grade facilities rated below BB- . This is not a reasonable state. The standing deficiency promotes the highest risk weight firms elect to remain unrated.

As a result the standardized approach necessitate much capital for investment-grade facilities and inadequate capital for noninvestment-grade.

Clearly, there is a significant paradox between these two cases and as we mentioned above this not a rational fact.

One another important drawback of the standardized approach is the degree to which capital ratios may be influenced by the devilish procyclicality of capital that can lead up from the internally lagging nature of agency ratings. This procyclicality could cause capital ratios to move too slowly during a recessionary period and to reach their maximum after the peak of the recession, when loan defaults are already on the decline. [27]

3.1.1.5 The New Internal Ratings Based Approach

Banks should classify their banking-book exposures into at least six main classes of assets with different credit risk features under IRB approach. Corporates, sovereigns, banks, project finance, retail, and equity. Different analytical structures are ensured for different types of loan exposures, like corporate and retail loans.

Banks that adopt the IRB approach will use their own internal ratings process to assess credit risk, needless to say that the approval by the regulator of the bank's internal rating system will be needed and the validation of key risk variants like the probability of default (PD) for each rating class, the loss given default (LGD), and exposure at default (EAD) for committed loans.

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[27] Scott, Hal S. *Capital Adequacy Beyond Basel : Banking, Securities, and Insurance.* Cary, NC, USA: Oxford University Press, Incorporated, 2005. p 204. http://site.ebrary.com/lib/bilgi/Doc?id=10103706&ppg=219

Under the IRB, the calculation of the potential future loss amount, which forms the basis of the minimum capital requirement, encompasses both expected and unexpected losses. It is derived from a formula whose key inputs are the PD, LGD, EAD, and maturity, M, of the facility.

In the foundation approach, banks will find the PD relates to each customer, and the supervisors provide the other parameters as:

- LGD = 50% for senior unsecured facilities and 75% for subordinated claims; reduced by the existence of collateral
- EAD = 75% for irrevocable undrawn commitments
- M = 3 year s[28]

According to the IRB advanced approach, banks that correspond more drastic capital standards should have a healthy capital allocation process and a well established internal ratings system. Under both the foundation and the advanced IRB approaches, the range of risk weights is far more diverse than that in the standardized approach, and this leads greater risk sensitivity. The IRB approach allocates capital facility by facility and does not allow explicitly the capture of portfolio effects.

3.2 PILLAR II: Supervisory Review Process

Pillar II sets out the requirements to maintain capital to cover overall risk in the business and focuses on the supervisory process to be integrated on a national basis. It also provides a framework for dealing with

[28] Scott, Hal S. *Capital Adequacy Beyond Basel : Banking, Securities, and Insurance.* Cary, NC, USA: Oxford University Press, Incorporated, 2005. p 204. http://site.ebrary.com/lib/bilgi/Doc?id=10103706&ppg=219

all the other risks a bank may face, such as systemic risk, pension risk, concentration risk, strategic risk, reputation risk, liquidity risk and legal risk, which the accord combines under the title of residual risk.

The supervisory review process requires supervisors to furnish that each bank has prudential internal supervising processes to rate the adequacy of its capital based on a through evaluation of its different types of risks as mentioned above. Banks must have a process for assessing overall capital adequacy based on:

- Board and senior management oversight
- Sound capital assessment
- Comprehensive assessment of risks
- Monitoring and reporting
- Internal control review

According to the New Accord local regulators have to review and develop bank's own assessments and strategies, that the bank operate above minimum regulatory capital ratios, and that regulators interfere at an early stage of the improper condition. As it is told in HSBC's "The Senior Management Understanding and Governance Guide" each banking entity is required to evaluate its own scenarios with local or regional scenarios that are enterprise-wide, tailored and fit for purpose.

3.2.1 Board and Senior Management Oversight

Developing a consistent risk management process is highly crucial for the banking entities to assess the capital adequcy of banks' capital

position. Bank management has to understand the condition and level of risk taken by its own bank and maintain formality and accuracy of the risk management processes according to their risk profile and business plan.

The bank management has to decide bank's risk tolerance and develop a framework for evaluating different types of risk. This further necessitates establishing a system to relate risk with the bank's capital level and developing a method for monitoring sytem compliance with internal policies of the bank. Moreover, they should accept and support significant internal control systems with written policies and procedures.

3.2.2 Sound Capital Assessment

Basic elements of sound capital assessment should include:

- Policies and procedures designed to make sure that the relevant bank measures and reports all material risks;
- A process regarding capital to the level of risk;
- A process that states capital adequacy targets with respect to risk as part of the bank strategy and business plan; and
- A process of internal controls and regulates to maintain the integrity of the overall management process.

3.2.3 Comprehensive Assessment of Risks

All possible risks faced by a bank should be directed to the capital evaluation process. As the Committee note that not all risks can be measured precisely, process should be enchanced to figure risks. Hence, the

following risk exposures, which cannot constitute all risks to be faced, should be regarded.

- **Credit risk:** Banks should have techniques that enable them to evaluate the credit risk embraced in exposures to individual borrowers or third parties as well as at the portfolio level. For more experienced banks, the credit review assessment of capital adequacy should include four important issues: risk rating systems, portfolio analysis/aggregation, securitisation/complex credit derivatives, and large exposures and risk concentrations.[29]

The credit risk analysis should accurately describe any deficiencies at the portfolio level, including any concentrations of risk. It should also consider the results regarding the risks which are a part of managing credit concentrations and other significant portfolio issues. "Moreover, the analysis of counterparty credit risk should include consideration of public evaluation of the supervisor's compliance with the Core Principles for Effective Banking Supervision."[30]

- **Operational risk:** According to the Committee management of operational risk is an important issue which necessitates similar rigour, as is done for the management of other significant risks in banking industry. The failure in operational risk management can result in a misstatement of an

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[29] *Guidance Related to the Supervisory Review Process,(April 2003).* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

[30] *Guidance Related to the Supervisory Review Process,(April 2003).* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

institution's risk/return profile and expose the institution to significant losses.

One of the most important tools in inspecting credit risk is developing an internal risk ratings system. Internal risk ratings should be satisfactory to support the determination and measurement of risk from all credit exposures. Besides, the system should be integrated into an institution's overall analysis of credit risk and capital adequacy.

The analysis of credit risk should adequately clamp any problem at the portfolio level, covering any risk concentration. It should also consider the risks required in managing loan concentrations and other portfolio problems through such mechanisms as securitisation programmes and complex credit derivatives.[31]

- **Market risk:** Banks should have their own processes to assess and supervise all material market risks. For more experienced banks, assessment of internal capital adequacy-including an assessment of concentration risk-for market risk should be based on both Value at Risk modelling and stress testing.

VaR is widely applied in finance for quantitative risk management for many types of risk. It is an important tool when inspecting aggregate market risk exposures and provides a common unit for comparing the risk in different industries. A bank's VaR model should determine and measure risks arising from all its trading activities and should be integrated into the

[31] *Guidance Related to the Supervisory Review Process,(April 2003).* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

bank's overall internal capital assessment. A VaR model estimates should be sensitive to changes in the trading book risk profile.

Banks must build up their own VaR model appropriately with stress tests and other valid risk management techniques. "In the bank's internal capital assessment it must demonstrate that it has enough capital to not only meet the minimum capital requirements but also to withstand a range of severe but plausible market shocks. In particular, it must factor in, where appropriate:

- Illiquidity/gapping of prices;
- Concentrated positions (in relation to market turnover);
- One-way markets;
- Non-linear products/deep out-of-the money positions;
- Events and jumps-to-defaults;
- Significant shifts in correlations;
- Other risks that may not be captured appropriately in VaR"[32]

- **Interest Rate Risk In The Banking Book:** All possible interest rate positions of the bank should be covered by the measurement process and all relevant repricing and maturity data needed to be considered by the same process. "Such information will generally include: current balance and contractual rate of interest associated with the instruments and portfolios, principal payments, interest reset dates, maturities, and the rate index used for repricing and contractual interest rate ceilings or floors for adjustable-

[32] *Guidance Related to the Supervisory Review Process,(April 2003).* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

rate items. The system should also have well-documented assumptions and techniques."[33]

Irrespective of the sophistication of the measurement system utilized, adequacy and completeness of the system should be the most important characteristics according to the bank management. Because the quality and reliability of the measurement system is largely related with these characteristics.

- **Liquidity Risk:** Liquidity is especially important feature for any banking organization in forcasting its current viability. Especially in crisis terms, banks' capital positions can have a crucial effect on their ability to obtain its liquidity. Each bank must have adequate systems for measuring, monitoring and supervising this liquidity risk.

3.2.4 Internal Control Review

Internal control review is one of the other crucial tools for the capital assessment process of the bank's internal control sytem. An independent inspection and the participation of internal or external audits increase efficiency of the control of the capital assessment process. The bank's administration is responsible for ensuring a system to evaluate the different risks, develops a system to associate risk to the bank's capital level, and build a method for supervising compliance with internal methodologies. The

[33] *Guidance Related to the Supervisory Review Process,(April 2003).* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

board should regularly inspect whether its internal control system is adequate to guarantee well-ordered and provident act of business.[34]

3.2.5 Adequacy of Risk Assessment

All possible material risks faced in banking industry should be covered by internal aims and processes. This should be internally assessed by the supervisors. Supervisors should also inspect the adequacy of risk measures utilized in assessing internal capital adequacy and the extent to which these risk measures are also utilized operationally in fixing limits, appraising business performance and regulating risks.

3.2.6 Supervisory Review of Compliance with Minimum Standards

Supervisory review should undertake compliance with specific conditions and necessities for standardised approaches. In the light of this condition we can mentioned that it is needed to ensure the use of different tools that can reduce Pillar 1 capital requirements are utilised and understood within the framework of a reliable and properly prepared risk management process .

Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum. Pillar 1 which relates to these capital requirements will need a buffer for uncertainties regarding the Pillar 1

[34] *Guidance Related to the Supervisory Review Process,(April 2003).* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

regime and the banking population will be affected from this condition as a whole. Bank-specific darknesses will be presented under Pillar 2. It is easily predicted that such buffers will be set to provide rational conviction that banks with reliable internal supervising systems and controls, a well-diversified risk profile and a business strategy well covered by the Pillar 1. who operate with capital equal to Pillar 1 requirements will meet the minimum goals for soundness embodied in Pillar 1. Supervisors will also need to determine whether the particular characteristics of the markets under their responsibility are covered adequately. Supervisors will typically promotes banks to work with a buffer, over and above the Pillar 1 standard.

Pillar 1 minimums are set to accomplish a level of bank creditworthiness in market. Globally active banks intends to be highly rated by internationally recognised rating agencies. Hence, banks have to operate above Pillar 1 minimums for competitive reasons.

There are may be several reasons for supervisors to maintain that individual banks are operating with adequate capital levels. By the way the supervisors should set and aim capital ratios or fix categories above minimum ratios to state the capitalisation level of the bank.

3.2.7 Supervisory Transparency and Accountability

"The supervision of banks is not an exact science, and therefore, discretionary elements within the supervisory review process are

inevitable."[35] Supervisors must exercise their assignments in a highly reliable and amenable way. Supervisors should declear their strategy will be utilized in the inspection of banks' internal capital assessment porocesses. Whenever a supervisor chooses to set aim or trigger ratios or to set classifications of capital in excess of the minimum capital value, reasons to do so should be declared, too. If only the capital requirements are set above the minimum, the supervisor should come out specific risk characteristic of the bank which resulted in the requirement, why these risks are not adequately evauated under Pillar 1.

3.3 The Third Pillar – Market Discipline

Market discipline is one of the main parts at the core of Basel II. Banks accept to disclose more about their credit and operational risks and how they administer them, but they are not satisfied with the level of detail placed in the regulators' proposals. The main reason behind the disclosure proposals is that, when the subject is innovation then banks are always ahead of the regulators. "Hence, the best way to regulate a bank's capital adequacy is to leave it to the market itself. " [36] But this shouldn't make sense of taking free market approach to regulation, but allowing entities, customers in this industry and other market participants to be informed whether or not to trade with a relevant bank based on its known exposures

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[35] *Guidance Related to the Supervisory Review Process,(April 2003* [online] Available : http://www.bis.org/bcbs/cp3part3.pdf

[36] Scott, Hal S. *Capital Adequacy Beyond Basel : Banking, Securities, and Insurance.* Cary, NC, USA: Oxford University Press, Incorporated, 2005. p 199. http://site.ebrary.com/lib/bilgi/Doc?id=10103706&ppg=214

and the level of capital it holds to cover them. Disclosing information according to the New Accord is interpreted as disclosing private and confidential information to the market participants, overloading the shareholders with information. It is expected that the regulators will modify the concept fundamentally without removing the innovative third pillar of the proposal.

Pillar 3 acknowledge that market discipline is formed to support minimum capital standards (Pillar 1) and the supervisory review process (Pillar 2), and so raise confidence and maintainability in banks and financial systems. Market discipline promotes banks to maintain their business in a safe, regular and productive manner. In this context it also ensures strong capital base as a cushion against potential losses arising from risk exposures.

Banks provide financial statements and disclosures in accordance with necessities of securities regulators, accounting standards setters, and/or other parties, and Pillar 3 is not intended to repeat all of these disclosures. [37] Over recent years many disclosure recommendations have been published regarding credit risk, trading and derivative activity in banking industry by the Committee. This third pillar approach counts as a significant complement to the current requirements and with this approach banks are encouraged to put in these recommendations in developing their disclosures. Besides, business progresses on the Pillar 1 framework for the New Basel Capital Accord, including, for example, the improvement of equity

[37] Basel Committee on Banking Supervision Transparency Group,(November 2001), Basel, *Working Paper on Pillar 3– Market Discipline*

investments kept in the banking book, different views of the internal rating based (IRB) approach to credit risk (including, retail, project finance and specialised lending portfolios), credit risk mitigation, securitisation (including synthetics) and operational risk.[38]

It is predicted from the New Basel Capital Accord 's role for specific measures. Disclosure requirement is a restrictive canon for Pillar 1 in order to achieve lower risk weightings and to apply fixed techniques. Internal ratings methodologies is a good example in this manner. Institutions will have to correspond the relevant the disclosure requirements to use the internal ratings based approach for credit risk. A significant part of Pillar 2 will be formed a supervisory review of on-going compliance with requirements to utilize specific capital treatments, including a general compliance with the Pillar 3 requirements.

Generally it is expected that a bank will disclose all of the information stated in Pillar 3. But in some cases bank management may need to limit contents of disclosure. The disclosures are made under accounting requirements or are made to ensure relevant requirements enounced by regulators. In these cases significant differences between the accounting or other disclosure and the supervisory basis of disclosure should be explained.

The admission of accounting or other compulsory disclosure is expected to assist clarifying the necessity for validation of disclosures. For instance,information in the annual financial statements would generally be

[38] Basel Committee on Banking Supervision Transparency Group,(November 2001), Basel, *Working Paper on Pillar 3– Market Discipline*

audited and additional subjects disclosed with those statements must be compatible with the audited statements. Moreover, additional material (such as Management's Standing and Analysis) that is published to assure other disclosure regimes (e.g. listing requirements promulgated by securities regulators) is generally subject to sufficient inspection (e.g. internal control attestations, etc.) to satisfy the legality issue. If material is not disclosed under a validation regime, for example in an independent report or as a section on a website, then management should furnish that acceptable verification of the data takes place, comformably with the overarching rules mentioned below. This means that Pillar 3 disclosures will not be required to be audited by an external auditor, unless otherwise required by accounting standards setters, securities regulators or other authorities.[39]

A significant dimension to the relationship between Pillar 3 disclosures and accounting requirements is the on-going revision to the IASB disclosure standard for banks, IAS 30.[40] It is desired to maintain a continuous relationship with the accounting authorities like the IAS 30 Advisory Group, to ensure cherence between disclosure frameworks and so raise assurance on accounting disclosure.

[39] Basel Committee on Banking Supervision Transparency Group,(November 2001), Basel, *Working Paper on Pillar 3– Market Discipline*

[40] *Disclosures in the Financial Statements of Banks and Similar Financial Institutions*, International Accounting Standards Committee, 1990 (reformatted 1994).

3.3.1 Materiality of the Disclosures

Firstly a bank should determine which kind of disclosure relates to its materiality comprehension. According to regulatory agency of International Accounting Standards and many domestic accounting frameworks, information which its misstatement could change the assessment or decision of a user relying on that information for the purpose of making economic decisions is defined as material. The Committee notes the necessity for a qualitative opinion of whether, in light of the specific cases, a user of financial information would count the item to be tangible (user test).[41] The Committee doesn't fix the threshold levels for disclosure as these can be open to manipulation and it believes that the user test is a useful benchmark for approaching adequate disclosure.

3.3.2 Frequancy of the Disclosures

The disclosures that are emphasized in Pillar 3 should be made semi-annually. Qualitative disclosures that ensure a general summary of a bank's risk management goals and strategies, reporting system and definitions may be disclosed annually. In recognition of the increased risk sensitivity of the infrastructure and the general trend towards more frequent reporting in capital markets, large global banks and other important institutions (and their significant bank subsidiaries) must publish their Tier 1 and total capital

[41] Basel Committee on Banking Supervision Transparency Group,(November 2001), Basel, *Working Paper on Pillar 3– Market Discipline*

adequacy ratios, and their components, on a quarterly basis.[42] Besides, if only information regarding risk exposure or other tools is having tendency to the volatility, then banks should disclose on a quarterly basis. In all conditions, banks should ensure material information as soon as applicable and not later than deadlines set by national laws.

3.3.3 The Features of Ideal Disclosure

Disclosure regarding the amount, characteristics and components of capital ensures significant information about a bank's capability of absorbing financial casualities. Informative terms and conditions of innovative, complex or hybrid capital instruments ensures additional base regarding the loss absorbing ability of capital instruments and composes a framework for the analysis of the capital adequacy of the relevant institution.

Under Pillar 2, the Committee advises that all banks have an internal process for evaluating their capital adequacy and for holding appropriate levels of capital. This process should be goaled and inspected by management and all banks should be able to prove the results of their internal processes are secure and reliable. One method used by some banks is economic capital allocation.[43] Bank's capital allocation process helps

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[42] Basel Committee on Banking Supervision Transparency Group,(November 2001), Basel, *Working Paper on Pillar 3– Market Discipline*

[43] Basel Committee on Banking Supervision Transparency Group,(November 2001), Basel, *Working Paper on Pillar 3– Market Discipline*

market participants in gaining a better approach of the risks and provides favour internally regarding the bank's activities.

The risks to which banks are exposed and the techniques that banks use to identify, measure, monitor and control those risks are important factors market participants consider in their assessment of an institution. In this section, several key banking risks are considered: credit risk, market risk, interest rate risk and equities in the banking book and operational risk. Where applicable, separate disclosures are set out for banks using different approaches to the assessment of regulatory capital.

4. RISK MANAGEMENT & BASEL II

4.1 History of Risk Management

Risk management can be defined as an evolving concept and has been used date from the birth of human society. Risk management mainly relates to the corporate insurance industry. Since capital investment in different kind of industries grew, insurance contracts became an important parameter in the budgets of firms in those industries, as well.

"It would be mistaken to say that risk management evolved from the purchase of insurance by corporations. The emergence of risk management as an independent approach signaled a dramatic, revolutionary shift in philosophy and methodology, occurring when attitudes toward various insurance approaches shifted. One of the earliest references to the risk management concept in literature appeared in 1956 in the Harvard Business

Review. "[44] In this article, Russell Gallagher proposed a revolutionary idea, for the time, that someone within the organization should be responsible for managing the organization's pure risk:

> The aim of this article is to outline the most important principles of a workable program for "risk management" so far so it must be conceived, even to the extent of putting it under one executive, who in a large company might be a full-time "risk manager."

The diversification in approach and understanding in the risk management philosophy coincide with management science, with its stress on expected value, cost-benefit analysis, and a scientific approach under uncertain conditions. In other words the development happened simultaneously in the industry and in the academic media. During the development process the academic studies produced substantial results and models to support the development of risk management in the industry.

"Markowitz was the first financial theorist to explicitly include risk in the portfolio and diversification discussion."[45] He developed relation between the concept of risk and terms like return and utility. Associating approaches from operation researches and mathematics with his new portfolio theory, he established a base for further improvements in financial industry. Then Markowitz's this approach became the modern portfolio theory and the other developments like Fischer Black's option-pricing theory followed this approach, which Fischer Black's theory is counted as

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[44] Russell B. Gallagher, *"Risk Management: A New Phase of Cost Control,"* Harvard Business Review (September - October 1956).

[45] Harry M. Markowitz, *"Portfolio Selection (1)," Journal of Finance 7* (March 1952), p 77- 91.

the foundation of the derivatives industry. Black and Scholes has familiarized an important boom for financial area by deriving a differential equation which must be assured by the price of any derivative instrument dependent on a nondividend stock.[46] This approach has been developed further and is one of the driving factors for the actual financial engineering of structured products.

After talking briefly about the history of the risk management, it will be useful to inspect the new state as part of the new accord. We can say many aspects of Basel II is still unclear. But no one suspects that the risk management issues raised, as well as the rules themselves, will enhance significantly effective throughout the risk management industry until now. Basel II has also promoted non-bank financial institution regulators to change the understanding of the risk management. As a significant example; Securities and Exchange Commission (SEC) in the United States has accepted Basel II, which will promote securities firms to involve into the new regulatory capital regime. Nowadays the insurance industry is looking to apply more experienced capital standards.

4.2 Bank Regulation and Risk Management

Banking industry regulators attentively inspect banks' activities, controls their risk management standards step by step, and impose a unique set of minimum capital adequacy rules on the relevant entities. They are

[46] Fischer Black and Myron Scholes, *"The Pricing of Options and Corporate Liabilities,"* Journal of Political Economy 81 (May-June 1973),p 637-654.

doing so because of two key reasons: deposits collecting from individual savers in the industry, and they play a significant role in the payment and credit system.

While bank deposits are often insured by expert institutions in such countries that domestic governments act as a guarantor for commercial banks; some also act as a lender of last point. Such governments therefore have a very direct interest in maintaining that banks remain capable of meeting their obligations: they request to limit the cost of the government "safety net" in the event of a bank failure.[47] This condition is one of the reason for regulators to ensure banks to retain fixed amount of capital. Being a buffer against unexpected losses, regulatory capital assists to prevent a burden to attain national governments.

Regulators need to ensure that banks abide capital adequacy standarts to avoid a systemic "domino effect" whereby the failure of an individual bank may circulate this mire to the rest of the financial system. The relevant domino effects can cause other banks and financial entities to fail, damaging the world economy and causing crucial social costs. Previous experinces like in the United States to intervene to help Continental Illinois the largest bank ever rescued by the FDIC, in 1984 and more recently, a series of bank runs in Russia in 2004 summer led to significant result of a domino effect in the Russian banking system. Luckilly this was further cancelled. "The underlying threat is that banks can act as a kind of

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47 Crouhy, Michel. *Essentials of Risk Management*. Blacklick, OH, USA: McGraw-Hill Companies, The, 2005. p 56. http://site.ebrary.com/lib/bilgi/Doc?id=10131962&ppg=72

transmission belt by which setbacks in the financial sector are rapidly pushed through to the wider economy."[48]

Regulators have become more effective over the past decades and have presented several abetments regarding credit, market, and operational risks. They have forced financial entities to execute their infrastructure, processes, and count on their knowledge bases. The common target for management authority and the regulators is to establish and ensure an integrated risk management framework. Anyway the target point might be same, but the strategy is entirely different according to the regulatory and management viewpoints. Management requests to protect the customers' assets at the lowest possible cost by preventing losses and by raising the value of the shareholders' investment through business decisions that optimize the risk premium. Regulators request to protect the customers' assets without thinking the cost issue, ensuring stability of the market and protecting the financial market by excluding systemic risk.

Risk management has to be established and managed in such a way that it can answer all these different necessities and expectations at the same time. The models and approaches utilized for the different risk categories should give decision about the risk exposures and allow collection of risk information through different risk levels.

Nowadays, many financial organizations have developed complex risk management frameworks and policies which support management

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48 Crouhy, Michel. *Essentials of Risk Management.* Blacklick, OH, USA: McGraw-Hill Companies, The, 2005. p 57. http://site.ebrary.com/lib/bilgi/Doc?id=10131962&ppg=73

authority in supervising and administrating risk appetite and risk capability of the relevant entity. Besides, regulators have established principles and policies to measure the risks of the relevant institutions and to force them to support these risks with capital. "Many quantitative models and processes have been evaluated from modern portfolio theory. The models have been refined for different instruments and asset types, for short and long investment horizons, etc. But the mapping of regulatory-oriented policies onto academic models and practical everyday applications is not without problems."[49]

Until now I have introduced risk management in details and it is time to talk about different risk types as market risk, credit risk and operational risk in the context of risk management. As we mentioned before these risk types are important for Basel II, too and we have tried to summarize the same risks when we talked about three basic pillars of the new accord.

4.3 Market Risk as Part of Risk Management

The Bank for International Settlement (BIS) defines market risk as "the risk of losses in on- and off-balance-sheet positions arising from movements in market prices."[50]

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[49] Gallati, Reto. *Risk Management and Capital Adequacy*. Blacklick, OH, USA: McGraw-Hill Companies, The, 2003. p 33. http://site.ebrary.com/lib/bilgi/Doc?id=10153061&ppg=55

[50] Bank for International Settlement (BIS), Basel Committee on Banking Supervision, *Amendment to the Capital Accord to Incorporate Market Risks*, Basel, (January 1996) sec. I.1. p. 3.

The main parameters assisting to market risk are equity, interest rate, foreign exchange, and commodity risk. The total market risk might be defined as collection of all relevant risk factors. Additionally the price of financial instruments may be effected by these residual risks: spread risk, basis risk, specific risk, and volatility risk:

- ***Spread risk*** is the possible loss due to alterations in spreads of two different instruments.
- ***Basis risk*** is the possible loss due to pricing discrepancies between equivalent option instruments like futures, bonds, and swaps.
- ***Specific risk*** is the risk of holding a corporate bond versus a treasury futures contract. Best way to manage specific risk has been widely ascertained and it is still not clear.
- ***Volatility risk*** is defined as the possible loss due to volatilities.

Business and market risk are two significant risk resource that can directly influence a company in achieving revenue or cash-flow goals. Parameters like investment decisions and strategy, product development processes, marketing decisions, sales issues, and uncertain client attitude compose business risk. In general these are decisions count as structural risks that companies faced in order to generate profits. Companies assess and take business risks in their experienced zone with significant promotion over possible revenues. Market risk is effected by the uncertainty of future financial results arises from market-rate volatilities.

Market risk effects business decision of a company in many different

ways. Variations in the market may finally urge companies to amend the prices of their products or services, as a result changing sales or power of competition, depending on the behaviours competitoin the market.

4.4 Credit Risk as Part of Risk Management

When we look past terms credit risk was established as an accounting foundation and then it evolved into a discipline. The conception of balance-sheet-based liabilities has changed basically over the past termswith effects of significant structural changes in the financial markets. Brady bond crisis and the Russian default of September 1998 can be counted as the most important crisis which cause major impacts in the market and raising questions about the way credit risks are measured and managed. Credit derivatives are supportive example in following how credit risk has evolved from an adopted loss area into a business line which produces both profits and credit tools.

At the last term the largest banks of the world have evaluated significant systems to develop a model that the credit risk arising from crucial state of their business. The standardized model and the IRB model which we have defined both above, are good examples for credit risk models. Such models will support financial institutions when collecting, quantifying, and administrating risk across geographical and product lines. The outputs of these models also play significant roles in banks' risk management and performance measurement processes, including performance-based compensation, customer profitability analysis, risk-

based pricing and, to a lesser degree, active portfolio management and capital structure decisions. Credit risk modeling has led up more effective internal risk management, and will be utilized in the supervisory oversight of banking organizations. Furthermore, regulators want to be certain not only that models are being used to manage risk but also that they are conceptually meaningful and produce capital requirements that are comparable across institutions.[51]

At this time, important difficulties generally regarding the sufficiency of relevant data and model validation, should be handled before an organization is decide to use a credit model for calculating the capital requirements for credit risk. Since we have told this point many times in this dissertation that the new capital accord includes a new approach for looking at credit risk from a risk-sensitive perspective. With the effect of this circumstances banks are a bit free to choose from alternative approaches, depending on the sophistication of their portfolios, the credit instruments, and the capability of credit risk management.

Models have already been inserted into the decision of capital requirements for market risk. But credit risk models are not a only an additional factor for market risk and count as complementary factor for two important reasons:

- **Data limitations :** Banks note that data limitations are a crucial difficulty faced by the researchers during the development and application

[51] Gallati, Reto. *Risk Management and Capital Adequacy*. Blacklick, OH, USA: McGraw-Hill Companies, The, 2003. p 266.
http://site.ebrary.com/lib/bilgi/Doc?id=10153061&ppg=288

process of credit risk models. Most credit instruments are not introduced to the market, and the forecasting feature of a credit risk model does not reproduce from a statistical projection of future prices based on a comprehensive record of historical prices. Therefore in determining model parameters, credit risk models necessitate the use of simplifying assumptions.

- **Model validation.** The validation of credit risk models is basically more difficult than the background of market risk models. However, market risk models generally expended in a a few days. This period banishes a time frame of one year or more in credit risk models.

The longer holding period bring out some problems to model makers in evaluating the accuracy of their models especially when they are coupled with the higher confidence intervals used in credit risk models. By the same reason, a quantitative validation standard similar to that in the Market Risk Amendment would necessitate multiple credit cycles and an impractical number of years of data.[52]

4.5 Operational Risk as Part of Risk Management

Since the discussions regarding operational risk has just initiated, the view of definite capital charges for operational risk should be mandatory. The scale and sophistication of the relevant industry risks, and the subjected losses up to date, are too large to ignore. Besides, in the absence of an

[52] Gallati, Reto. *Risk Management and Capital Adequacy.* Blacklick, OH, USA: McGraw-Hill Companies, The, 2003. p 266.
http://site.ebrary.com/lib/bilgi/Doc?id=10153061&ppg=288

operational risk factor, market and credit risk capital guidelines would be inadequate.

However, we don't have any tangible approach regarding operational risk capital allocation which was accepted and integrated by a critical mass of institutions. This makes the supervisory devising such a method challenging only. The challenges are also involve the quality and consistency of operational risk data in individual institutions and across the industry.

Techniques picked out by regulators promote operational risk mitigation on both institutional and industrywide levels. This is an important point which should be seriously considered. If it is requested to encourage the financial instititutions in utilizing an effective risk mitigation and management functions regarding operational risk, then a well established set of capital regulations will be needed.

In current financial markets administrating operational risk is becoming a crucial property of a substantial risk management application. The most important types of operational risk involve breakdowns in internal controls and corporate governance. Nowadays in financial markets relevant breakdowns may cause financial losses through fraud or failure to act at right time or can induce the interests of the bank to be endangered. Efficiency of a significant information technology systems or reporting system is another aspects needs to be considered seriously. Investors, regulators, and the customer should be satisfied with the supports provided by IT and reporting systems.

The regulatory promotion turn into the form of capital allocation regarding operational risk. However, the supervisory authority desires converting incorporating operational risk measurement into the performance assessment process to provide operational loss in details and to carry resultant amendatory approach directly to the bank's highest management level. Since, different structures are being utilized for administrating operational risk by some financial instititutions in financial market, many banks note that they have just initiated the development process of an operational risk measurement and inspecting structure. Few banks currently measure and report the results regularly, although many operational performance indicators, analyze loss experiences, and inspector audit and supervisory ratings. But it is still hard to agree on a set of standard models, which are available for market and credit risk measurement. Many banks have evaluated or are still evaluating models relying on a similar set of risk parameters. Those parameters include internal audit ratings or internal control self-assessments; operational indicators such as volume, turnover, or rate of errors; loss experience; and income volatility.

4.5.1 Operational Risk Standarts

The standardized approach necessitate the following operational risk standards:

- Independent risk control and audit functions
- Effective use of risk reporting systems
- Appropriate documentation of risk management systems

- Independent operational risk management and control processes covering design, implementation, and review of operational risk measurement methodology
- Periodic reviews by internal auditors
- Development of specific, documented criteria for mapping current business lines and activities into the standardized framework

The internal measurement approach (IMA) requires accuracy of loss data, and confidence in the results of calculations using that data which should be developed through user tests:

- Banks not fully integrating IMA methodology into their day-today activities and major business decisions will not qualify for this approach.
- Appropriate historical loss experiences must be identified that are representative of current and future business activities.
- Periodic verification processes for estimating parameter inputs to regulatory capital charge must be performed and validated.
- Supervisory review and validation must be performed.

We can assume that the important majority of regulated financial entities will be interested in the standardized approach. The standardized approach can be counted as a natural pioneer for the internal measurement approach, so even banks with aggressive targets will initiate studies to work through the requirements of the relevant approach.

Assuming that an acceptable form of the standardized approach is lastly integrated. It is likely that many of the institutions will start in first tier

and subjects to the highest capital charges. It is also possible that many moderately experienced banks will be able to shift into the second tier. In order to be chosen for this stage, the banks will have to prove that the establishment of an operational risk management and control structure, and a strategy for mapping an individual bank's business line into the standardized formula is free of any problems. The committee suggests the acception of many qualitative items in a bank's inquiry to manage its operational risks. These items can be summarized as:

- The establishment of a risk reporting system
- The establishment of an independent operational risk management and control process (which usually involves either a risk management, internal audit, or financial operations function)
- The identification of historical loss events which are appropriate for an individual institution and its business units

The debate about the potential role of bank supervisors reflects the relatively early steps of the evaluation of operational risk measurement and inspection processes. Majority of the banks agree that the process is not sufficiently established to enable bank supervisors to demand guidelines emphasizing specific measurement methodologies or quantitative limits on risk. Preferential terms should be expressed at this step for supervisors to focus on qualitative improvement in operational risk management. At this step, bank supervisors should aware of the presence and importance of relevant risk. As standards do not exist, financial institutions will be

suspicious about best-practices standards, given the perceived institution-specific nature of operational risk.

5. IFRS & BASEL II

Up to this point we have tried to present all about Basel II in details. At this stage we will look at the relations between International Financial Reporting Standards (IFRS) and Basel II. In this context first of all we need to introduce IFRS in brief and after this we will go ahead via talking about the common targets.

5.1 Foundation for IFRS

IFRS are standards and explanations accepted by the International Accounting Standards Board (IASB). Many of the standards composing IFRS are known by the older name of International Accounting Standards (IAS). IAS were established between 1973 and 2001 by the board of the International Accounting Standards Committee (IASC). In April 2001 the IASB adopted all IAS and continued their development, calling the new standards IFRS.

IFRS are known as a "principles-based" set of standards in that they establish wide-ranging rules and enforcing fixed treatments.

International Financial Reporting Standards enclose:

- International Financial Reporting Standards (IFRS) - standards issued after 2001

- International Accounting Standards (IAS) - standards issued before 2001
- Interpretations originated from the International Financial Reporting Interpretations Committee (IFRIC)-issued after 2001
- Standing Interpretations Committee (SIC) - issued before 2001

5.1.1 Common Points

When we look at the foundation basis of these two frameworks, we can easily conclude that IFRS and Basel II focus on the same targets. The main goal of both frameworks is to handle the operations of financial institutions more transparent and thus create a better base for the participants in market and supervisory authorities to gather information and make decisions. Any development will be accorded on an international level, creating the same conditions and enabling the comparability of data in international financial markets.

One of the main goals is to differentiate the current risks. Especially the following development of financial markets will be reflected in a clearer projection of derivatives and securitisation positions. Eventually mathematical models will be provided to calculate fair values through IFRS and Basel II internal ratings.

5.1.2 Differentiations between Two Frameworks

The basic purpose of IFRS accounting rules is to provide information which is relevant from the administrating perspective based on

a company's financial standing and expected profits. Facilities and potential risks should be provided fairly and uniformly.

The main target of banking supervision and regulation authority in applying Basel II is to maintain reliability and stability of the financial system. One way to furnish this condition is to require sufficient level of own resources which are not restricted with the amount of equity in the balance sheet only.

A significant difference which has a direct impact on the ability to utilize common data illusions in the fact that whereas accounting standards evaluate the current position at a defined point in time, supervisory regulations predict risks for the future periods.

5.2 Capital Adequacy According to IFRS

Banking sector supervisors inspect IFRS-related valuation methods in particular areas with serious scepticism since they come to the conclusion with much higher volatility in the value of equity. According to these authorities, identifying unrealised profits in equity has significant effects on capital's loss compensation mission. Consequently the possibility of developing prudential filters have been discussed by the authorities. These filters should decribe positions to be eliminated from IFRS-compliant balance-sheets in order to define own resources under banking supervisory requirements. Besides, banking supervisors notice the responsibility of the additional managerial work related with the relevant adjustments.

"At present it has been agreed that adjustments regarding adequate capital for regulatory purposes should be expected in the following areas:

- Revaluation reserves in connection with fair value valuation of tangible and intangible fixed assets
- Profits and losses resulting from fair value valuations of investment property
- Revaluation reserves for unrealised profits and losses resulting from the available for sale (AFS) category
- Revaluation reserves for cash flow hedges, meaning the part of profit or loss from the hedging instrument which is considered to be an effective protection
- Profits or losses resulting from fair value valuation of own obligations "[53]

5.2.1 IAS 39

The present IAS 39 structure covers so-called fair value option, according to which financial assets and liabilities can be categorized as "financial assets/liabilities at fair value against profit or loss" (AFV or LFV) and be computed on this manner at fair value through profit and loss values.[54] Any failure in a financial institution's solvency ratio cause a

[53] PricewaterhouseCoopers Basel Team, (2005), *IFRS and Basel II– Similarities and Differences,* [online].
Available : http://www.pwc.com/pl/eng/inssol/publ/2005/fs_ifrs_basel2.pdf

[54] PricewaterhouseCoopers Basel Team, (2005), *IFRS and Basel II– Similarities and Differences,* [online].
Available : http://www.pwc.com/pl/eng/inssol/publ/2005/fs_ifrs_basel2.pdf

shortfall in the fair value of its liabilities and leads an additional profit. Consequently, this increases the equity on the balance sheet. The results should be published under IAS 32/IFRS 7 standarts. Banking supervisors are against generating profit method , because it does not satisfy the requirements according to the quality of capital.

According to IAS 39, assets in the "available for sale" (AFS) category should be valuated through the revaluation reserve in equity, using the fair value method, if they aren't detracted.[55] Banking supervisors agree that the resulting unrealised profits and losses shouldn't be included in regulatory capital (Tier 1). Because there is no capital flow and it is not constantly existent.

The Basel Committee presented the following view on some of these issues on 20 December 2004:

- Unrealised profits and losses on loans classified to the AFS category cannot be recognised either in the core capital or in the supplementary capital
- Unrealised profits from AFS shares should be recognised in the supplementary capital, taking into account a 55 percent deduction. In such case unrealised losses should also be deducted from the core capital

[55] PricewaterhouseCoopers Basel Team, (2005), *IFRS and Basel II– Similarities and Differences,* [online].
Available : http://www.pwc.com/pl/eng/inssol/publ/2005/fs_ifrs_basel2.pdf

- Unrealised profits or losses from AFS debt securities should be treated either in accordance with the rules stipulated for loans or for shares

In June 2004 the Basel Committee issued a guideline for national banking supervisors with regard to IAS 39 and the results of cash flow hedges. According to the guideline, accrued profits and losses from cash flow hedge transactions resulting in changes in equity have to be eliminated for regulatory purposes and should not be recognised in core capital or in supplementary capital.

5.2.2 Asset Impairment

Correlation between IFRS and Basel II can be found mainly in the following areas:

- Value impairment definition
- Determining provisions at the level of individual receivables
- Determining provisions at the level of a portfolio of receivables

When we examine the differentiations between IFRS and Basel II, we can state the following therotical differences :

- IAS 39 utilize incurred loss model
- Basel II utilize expected loss model

IAS 39 only deals with losses incurred. The amount of charge-off is calculated based on individual receivables, comparing the difference between the book value and the probable amount to be recovered.

Loss given default (LGD) calculated based on the rules of Basel II for the Advanced IRB approach constitutes economic loss. This also includes substantial discount impacts; the discount period will be deterimined based on historic data.

According to the Basel definition, expected loss (EL) is expressed by the following equation :

EL = PD x EAD x LGD

If any of the events indicating default occur, the borrower's probability of default (PD) per definition equals 100 %. Exposure at default (EAD) is already determined and equals current exposure. Consequntly, calvulating EL at the time of default the percentage of the LGD will provide us an exact result.

As we can easily see that incurred losses under IFRS are not the same as expected losses under the Basel framework. But there are serious similarities between these two approaches, it will be effective if we can use common data.

While calculating particular provisions in accordance with IAS 39, a best estimate should be utilized resembles with calculating "best estimate LGDs" in accordance with Basel II. In both cases future cash flows and their present value will be calculated. While calculating future cash flows, collateral need to be sufficiently considered.

Additionally, there are differences in calculating the amount of exposure: according to IAS 39 it is generally only the drawn amount

including accrued interest; according to Basel II the exposures committed but not yet drawn are also included in calculating EAD.

5.2.3 Consolidated Entities

According to bank supervision standing consolidation comprises subsidiaries, joint ventures and voluntarily consolidated minority owner institutions that maintain banking and other financial transactions. This covers credit institutions, securities firms, financial enterprises etc, but no other companies. Despite through the instruction on financial holdings the enforceability of regulatory consolidation has been extended, this is still only a differentiation of the institutions covered in consolidation according to the accounting standarts. This will remain same under Basel II.

According to both IFRS and Basel II the criteria approved to mention institutions to be included in the consolidation and the institutions included in the consolidation have to be published.

5.2.4 Securitisation

Institutions selling receivables are often trying to ensure a sensible sale both for accounting and regulatory targets. For traditional securitisations receivables are derecognised when all the rewards and risks of a given receivable are passed on to the new owner.

Even the passing of control is not too frequent case. As a result of continuing control, the originator has to disclose the receivable on the balance sheet as a “continuing involvement”. The above-mentioned de-

recognition test will be conducted in accordance with IAS 39 at group level after consolidating all subsidiaries.In synthetic securitisations case there will be no de-recognition of assets.

Basel II show some difference when we examine traditional and synthetic securitisations. If only listed operational requirements are met, traditional securitisations can be excluded from the calculation of risk-weighted assets. Ref. 555 defines operational requirements for synthetic securitisations, which allow risk-mitigation techniques to be applied in order to protect the underlying pool of receivables. The main goal of both regulations is maintaining that the setter can obtain capital relief only if significant credit risk has been transferred. Basel II requirements must always be met in a cumulative manner as does in IFRS.[56]

5.2.5 Reporting

Both IFRS and Basel II intend to contribute market discipline by publishing certain information. As there are some common targets, usually identical or partially identical information has to be disclosed – accordingly, it might be advisable to approve a common view.

Besides, risk-relevant data not only have to be disclosed externally, but it also a significant element of internal reporting. Special stress should be made in Pillar 2 of Basel II, which constitute high importance to risk reporting.

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[56] PricewaterhouseCoopers Basel Team, (2005), *IFRS and Basel II– Similarities and Differences,* [online].
Available : http://www.pwc.com/pl/eng/inssol/publ/2005/fs_ifrs_basel2.pdf

Internal reporting and external disclosures are realized with the same resources. Many values must be computed both for IFRS and Basel II. The following elements are essential for both internal and external reporting:

- The internal reporting system for risk management and for data disclosure in accordance with IFRS and Basel II should have a common base
- The same resource data is used, so it needs to be generated onceonly. There are certain discrepancies with respect to the degree of detail and also partially with respect to data estimation (IFRS and Basel II).
- There will be differences in the parameter estimations resulting from partially differing regulations (i.e. in consolidation and in respect of the expected loss and provisions). These differences must be explained to the recipients of the data. [57]

6. CONCLUSION

After discussing all material respects regarding the new framework, I believe the time has come to present our point of view on the relevant issue. Firstly, it can be easily stated that It seems that there is a long way to go, but the commitment of the significant this framework will modernize bank supervision and give regulatory practice into line with industry applications. Significant benefits will achieve, and a safer banking system

[57] PricewaterhouseCoopers Basel Team, (2005), *IFRS and Basel II– Similarities and Differences,* [online].
Available : http://www.pwc.com/pl/eng/inssol/publ/2005/fs_ifrs_basel2.pdf

will be established but some uncertainties will remain. These uncertainties will necessitate close cooperation among bank regulators, the industry, and other key market participants .financial institutions brace the preparatories up.

The main principles of Basel II have become increasingly apparent over years of discussion and consultation. The design of the framework is inherently dynamic. Hence, it has capability to adapt continuous innovations in financial market. As the policymakers precede the implementation of this framework, policymakers should be open-minded against feedbacks and critisims coming from the market and ready to make necessary amendments.

Many views and potential results of Basel II have been discussed like its possible effects on banks' costs. As a core target Basel II build to promote the stability of the financial system by ensuring the safety and soundness of banking industry. Its ability to promote that objective is the first criterion on which the proposed Basel II framework should be judged. Of course, the scope of globalization of both financial and real economy is even more extensive today, and systemic financial problems will not strict in national borders. Thus, it remains very much in the interest of all powerful countries to continue to encourage international cooperation and consistency in regulating and supervising those banks that pose the greatest potential systemic risk.

Basel II is a comprehensive framework for improving bank safety and soundness by more closely linking regulatory capital requirements with bank risk, by improving the ability of supervisors and financial markets to

assess capital adequacy, and by giving banking organizations stronger incentives to improve risk measurement and management as we mentioned above.

Basel II has the potential to provide significant benefits, but any policy change as fundamental as Basel II inevitably creates uncertainties and raises difficult and complex tradeoffs. Successfully dealing with these challenges requires that the banking agencies, the industry, and other participants ensure an exceptance and continuous alternations of views and remain flexible and open-minded since tackling difficult issues.

Beside its potential positive impacts on financial markets, important critisim oriented to the complexity and potential cost of the framework. The length and complexity of that document (approximately 450 pages) with additional paper need to be examined regarding the accord have led to fear about the costs of implementing Basel II.

This complexity have been supported by the rational reason that modern risk measurement and risk management are also complex activities. The system must be enforceable and it must allow for reasonable comparability of regulatory capital ratios across large and complex institutions. Hence, some standardization is necessitated.

The variety of exercises among banking industry, the absence of any decisive "best practice," and the necessity of providing significant promotions to improve risk measurement and management require that the system be flexible enough to allow the exercise of decision taken by supervisors and bankers. This necessity for flexibility and the use of

decision is the main reason which have been stressed that the supervisory reviews in Pillar 2 are a necessary complement to the explicit minimum regulatory capital requirements defined in Pillar 1.

Naturally, all parties try to make the framework implemented as cost-effectively as possible. The request to avoid unnecessary regulatory costs can be counted as an another reason. A key mechanism in Basel II for balancing the inevitable tensions that arise when attempting to achieve competing objectives is the so-called use test. Basel II also seeks to accommodate a range of risk- measurement and risk-management practices, a range that can change over time.

Another critism that has been noted regarding Basel II is that it will unfairly tilt the competitive playing field. This concern has two aspects. First, some have argued that the complex application of Basel II within any country could allow domestic banks that adopt the framework both lower capital charges on particular activities and lower regulatory capital requirements compared with other domestic banks. Lower regulatory capital charges would, it has been argued, translate into a cost advantage for adopters that would place non-adopters at a competitive disadvantage. In addition, some fear that adopters would use any newly created excess regulatory capital to acquire smaller banks.

The second competitive equity concern relates to the international consistency with which Basel II will be implemented. Inconsistency in international standards of implementation and enforcement.

All bank regulators recognize that achieving international consistency will be a challenge. However, this problem is not really new. Companies operating across national borders, and their supervisors, are familiar with the challenges of complying with sometimes conflicting legal and regulatory requirements. Still, we recognize that some international implementation issues will be more complex than those we currently face.

The final concern I will discuss is the worry that Basel II could lead to a substantial decline in minimum regulatory capital requirements at adopting banks. I emphasized earlier that, for supervisors, an overarching lesson from the banking and thrift crises of the late-1980s and early-1990s is the importance of prudent minimum regulatory capital standards. All the banking agencies are committed to this principle.

At present, we cannot quantify precisely how much Basel II, once fully implemented, will affect banks' risk-based capital requirements relative to Basel I levels. Although quantitative impact studies have been useful, they have been conducted using bank systems and measurements that generally would not be expected to meet the Basel II standards. We will see more as the process go ahead, the standards and guidance come into focus, and banks upgrade their risk-management systems.

Because of the irreducible uncertainty in this process, the implementation plan set forth in the Notice of Proposed Rulemaking incorporates broad safeguards to limit the possible for unrequested results, including any possibility of a large decline in required capital levels. These safeguards include a minimum one-year parallel run for each bank, during

which the bank will calculate what its risk-based capital requirement would be under Basel II, even though its actual requirement will be determined using the Basel I rules.

Finally, I should note that, when Basel II is fully implemented, all banking industry will continue to be subject to the current minimum leverage-ratio requirement and prompt-corrective-action rules. This step-by-step implementation plan should maintain that banking industry ensure strong capital positions throughout the transition years and after. Moreover, safety and soundness depends not only on the absolute level of capital in the banking system but on how well that capital is deployed.

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