T.C
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SOSYAL BİLİMLER ENSTİTÜSÜ
İŞLETME ANABİLİM DALI
MUHASEBE-FİNANSMAN (İNG.) BİLİM DALI

IMPLICATIONS OF BASEL II AND RISK MANAGEMENT ON FINANCIAL REPORTING

Yüksek Lisans Tezi

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Marmara Üniversitesi
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ABSTRACT

IMPLICATIONS OF BASEL II AND RISK MANAGEMENT ON FINANCIAL REPORTING

Risk Management is significant for all levels of economy. It aims to maximize the value of the company and minimize the risk of bankruptcy. Banks hold capital for the unexpected losses. The New Capital Accord illustrates how much capital should be put aside for the current and future risks. It is adopted very beneficial for the banks since they will be able to manage their risks more efficiently which will increase financial stability of the world.

For higher-risk exposures, banks have to hold more capital. However, the financial crisis faced recently caused Basel Committee to review this issue once more. The crisis began in the U.S. subprime mortgage market in summer 2007 and quickly spread to Europe. This market turmoil has indicated the deficiencies in supervison and

regulation system of the world. The subprime crisis enhanced the importance of regulations and risk management.

The rise in risk sensitivity brought up the debate whether the rules of Basel II procyclical; that is, are they too loose on capital requirements during the "good times" and too tight during the "hard times" of the economy? Besides, globalization of financial markets and the expansion of investment and financial activities have increased the importance of international accounting. They enhance the need of a single financial reporting system. Moreover, with the implementation of Basel II, the importance of financial reporting standards will increase . The interrelation between Basel II & IFRS and possible effects of Basel II on Turkish Accounting System are analyzed.

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ÖZET

BASEL II VE RİSK YÖNETİMİNİN FİNANSAL RAPORLAMA ÜZERİNDEKİ ETKİLERİ

Risk Yönetimi ekonominin bütün seviyeleri için önemli bir kavramdır. Amaç işletmelerin değerini en yüksek seviyeye çıkarmak ve batma riskini minimize etmektir. Bankalar beklenmeyen kayıplar için sermaye tutarlar. Yeni Sermaye Uzlaşısı mevcut ve gelecekte beklenen riskler için ne kadar sermaye konulması gerektiğini göstermektedir. Bankaların sermayeyi daha etkin yönetmeleri için faydalı olacağı kabul edilmektedir. Bu durum dünyadaki finansal istikrara da katkı sağlayacaktır.

Daha yüksek risklere maruz kalındıkça bankaların tutması gereken sermaye miktarı artmaktadır. Yaşanmakta olan kriz Basel Komitesinin bu konuyu bir kere daha gözden geçirmesine sebep olmuştur. ABD'de konut kredisi piyasalarında 2007 yazında

başlayan kriz hızla bütün Avrupa'ya yayılmıştır. Yaşanmakta olan piyasa çalkantısı dünyadaki denetim ve düzenleme konularındaki eksiklikleri bir kere daha göstermiştir.

Risk hassasiyetindeki artış Basel II' nin kurallarının döngüselliği artırıcı yönde etkisi olduğu hususundaki tartışmaları artırmıştır. Şöyle ki; Basel II kurallarının ekonominin iyi gittiği dönemlerde gevşek olduğu, kötü gittiği dönemlerde ise çok sıkı olduğu yolunda görüşler bulunmaktadır. Finansal piyasaların globalleşmesi, finans ve yatırım faaliyetlerinin artması, uluslararası muhasebenin önemini artırmıştır. Bunun yanında uluslararası tek bir muhasebe standardının gerekliliğini işaret etmektedir. Basel II nin uygulamaya geçmesiyle birlikte , finansal raporlama standartlarının önemi dahada artacaktır. Basel II ile UFRS arasındaki ilişki ve Basel II'nin Türk Muhasebe Sistemi üzerine olacak muhtemel etkileri detaylı olarak incelenmiştir.

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ABBREVIATIONS

BCBS: Basel Committee on Banking Supervision
BIA: Basic Indicator Approach
BRSA: Banking Regulation and Supervision Agency
CAR: Capital Adequacy Ratio
CB: Central Bank
CCF: Credit Conversion Factor
CEBS: Committee of European Banking Supervisors
CL: Confidence Interval
CMB: Capital Market Board
CP: Consultative Paper
CR: Credit Risk
CRM: Credit Risk Mitigation
EAD: Exposure At Default
EC: Economic Capital
EU: European Union
FASB: Financial Accounting Standards Board
FDIC: Federal Deposit Insurance Corporation
GAAP: Generally Accepted Accounting Principles
IAS: International Accounting Standards (UMS)
IASB: International Accounting Standard Board
IASC: International Accounting Standard Committee
ICAAP: Internal Capital Adequacy Assessment Process
IFRS: International Financial Reporting Standards (UFRS)
IRB: Internal Ratings Based Approach
IRBA: Internal Ratings Based Advanced Approach
IRBF: Internal Ratings Based Foundation Approach
ISE: Istanbul Stock Exchange
LGD: Loss Given Default
LLP: Loan Loss Provisions
MR: Market Risk
MVA: Market Value Accounting
QIS: Quantitative Impact Studies
P: Asset Correlation
PD: Probability of Default
RWA: Risk Weigted Assets
SA: Standardized Approach
SEC: Securities Exchange Commissions
SRP: Supervisory Review Process
TAS: Turkish Accounting Standards (TMS)
TASB: Turkish Accounting Standards Board
UCCPAT: Union of Chambers of Certified Public Accountant in Turkey
VAR: Value At Risk

INTRODUCTION

Risk Management is significant for all levels of economy. It aims to maximize the value of the company and minimize the risk of bankruptcy. Banks hold capital for the unexpected losses. Basel II, Capital Adequacy Framework is accepted as an international standard to determine this capital level. The New Capital Accord illustrates how much capital should be put aside for the current and future risks. It is adopted very beneficial for the banks whereas by this way they will be able to manage their risks more efficiently which will increase financial stability of the world.

When compared to Basel I, Basel II has shown significant improvements. First of all, it includes more risk-sensitive capital requirements. Besides, risk management, supervisory framework and greater transparency in the financial reporting are the several other issues Basel II takes into account.

For higher-risk exposures, banks have to hold more capital. However, the financial crisis faced recently caused Basel Committee to review this issue once more. The crisis began in the U.S. subprime mortgage market in summer 2007 and quickly spread to Europe. This market turmoil has indicated the deficiencies in supervison and regulation system of the world. The subprime crisis enhanced the importance of Basel II implementation and risk management.

Due to the rise in the risk sensitivity, the concerns about procyclicality has increased. Procyclicality directly affects financial stability. Capital level and risk management are major indicators of procyclical behaviour. There are arguments that capital should be built up in good times or bad times of the economy. In good times of the economy, credit risk and capital requirements would be low. On the contrary , in bad times of the economy , banks would be in need of more capital. During downturns and recessions, it becomes very diffucult for banks to rise their capital. Because in these periods , their profits and ability to make reserves are less due to the uncertainty. This situation can cause banks to decrease loan amount given to firms and households. Moreover, it triggers the recession or prevents the recovery of the economy. It might

even have an undesirable effect on the overall economy when the need for credit is in the high levels.

Financial reporting plays a crucial role in reflecting the financial status of the companies. Accurate financial statements are important for the owners of the companies who make strategic plans for the future and also for investors to make comparisons between companies. Therefore, the convergence of international accounting standards to reach a uniform structure in reporting gained importance for the users of the financial statements. Turkey also makes effort for the harmonization of its accounting standards. The New Capital Accord and IFRS are strongly interrelated with each other.

The objective of my thesis is to shed light on the debate whether the rules of Basel II procyclical ; that is, are they too loose on capital requirements during the "good times" and too tight during the "hard times," of the economy? Besides, globalization of financial markets and the expansion of investment and financial activities have increased the importance of international accounting. They enhance the need of a single financial reporting system. Moreover, with the implementation of Basel II , the importance of financial reporting standards will increase .

The remainder of my thesis is organized as follows. The first part expresses the Risk Management and reviews the banking and financial crisis which have substantial impact on the need for regulations. Second part explains Basel I and the introduction of Basel II. The differences, strengths and weaknesses of the Accords are examined. Third Part indicates the Interrelation of Procyclicality and Basel II. The debate against and in favor of Procyclicality are evaluated and the effect of procyclicality on recent subprime mortgage crisis is analyzed. Fourth Part explains the international financial reporting standards, convergence project and Turkey efforts for harmonization. Moreover the interrelation between Basel II and IFRS are expressed. The similarities and differences between them are listed. In the last part, possible effects of Basel II on Turkish Accounting System are illustrated.

PART I

RISK MANAGEMENT AND FACTORS FOR REGULATORY NEEDS

1.RISK MANAGEMENT IN BANKS

Risk taking ability is a fundamental issue for banks. The terms risk and risk management should be defined to demonstrate why risk management is a significant topic.

1.1. Definition of Risk

Risk is defined as uncertainty, that is, as the deviation from an expected outcome[1]. Uncertainty can be classified as:

General uncertainty: It is defined as complete ignorance about any potential outcome which makes both rational decision making and any quantification impossible.

Specific uncertainty: It is defined as probabilities (objective or subjective) which can be assigned to the potential outcomes and because of this, it allows for quantification.

The term risk is usually used synonymously with specific uncertainty, because statistics allows quantifying this specific uncertainty. In a business context, risk usually expresses only the negative deviations from expected or "aimed at" values[2]. Therefore risk is associated with the potential for loss, whereas positive deviations are considered to represent opportunities.

[1] Gerhard Schroeck, Risk Management and Value Creation in Financial Institutions, Canada : Jon Wiley& Sons, Inc. , 2002 , p. 24.
[2] Ibid.

Other classifications of risk consist of:

- Specific versus market –wide risks (Unsystematic & Systematic Risks) :
  - Specific risks are risks that are specific to the firm or the industry in which a firm operates. It is also called unsystematic risk which include risks such as management risk, operational risk .These are controllable risk that are specific to the firm.
  - Market-wide (also often called systematic) risk is risk that can not be diversified away and expresses the deviations with the changes in the broad economic development. Only market risk is reflected in the expected returns as derived, for example, by the CAPM[3]*. Systematic risks occur as a result of unexpected events and affect each firm in several levels. It is also called uncontrollable risk.
- Continuous versus event risk:
  - Continuous risk is caused by a source or factor that can change continuously (e.g., interest and foreign exchange rates).
  - Event risk is created by a specific event (e.g., an earthquake, a fire, etc.).[4]

Risk in a banking context arises from any transaction or business decision that contains uncertainty concerning the result. Since each bank transaction is associated with some level of uncertainty, nearly every transaction contributes to the overall risk of a bank. Some examples of the risks faced by banks are:

i. Will all payments on a loan be made according to the expectations schedule?

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[3] M.B. Gordy, B. Howells, Journal of Financial Intermediation 15 (2006),p. 395.
In finance, the Capital Asset Pricing Model (CAPM) is used to determine a theoretically appropriate required rate of return of an asset, if that asset is to be added to an already well-diversified portfolio, given that asset's non-diversifiable risk. http://en.wikipedia.org/wiki/Capital_Asset_Pricing_Model (12.09.2008)

[4] Aswath Damodaran , Corporate Finance – Theory and Practice , New York: John Wiley & Sons , Inc.,1997 , p.777.

ii. Will interest rates fluctuate more than expected in the near future?

iii. Will demand for new mortgages fall short of the expectations in the next year?

All of these risks lead to possible fluctuations in the bank's income stream or profitability and as a result, in the value of the bank. In general, event risk has a much larger impact on a firm's cash flows and value than continuous risk.[5] Recently, the mortgage crisis faced in the US markets can be a good example to continuous risk.

1.2. Definition of Risk Management

Risk management is a significant issue for all levels of the economy. On the one hand, risk management is often associated with an organizational unit, which is ideally an independent staff function reporting directly to the board of directors, making risk management a board responsibility, function, and task.[6] However, the board cannot conduct risk management on its own. It has to set strategic targets and ensure that the delegated goals are actually achieved by strict controls. Running a risk-management function in a centralized manner has the following advantage: it allows for an independent, integrated view of all types of risk, so that only the net positions need to be managed and specialized staff can achieve better pricing in the capital markets.[7] However, firms rarely measure and manage their risk exposures. They can not manage single-risk exposures perfectly because of the high cost of running the risk management centrally or because of legal restrictions.

On the other hand, risk management is also defined as a distinct process, that is, as a set of activities. This process is divided into several steps:

1. Definition, identification, and classification of a firm's risk exposure and the source of risk (risk factors).

[5] Ibid.

[6] David Shimko and Brett Humphreys , 'Voting on Value' Risk Magazine , December 2002 , p.33

[7] Dr. Şenol Babuşçu, Basel II Düzenlemeleri Çerçevesinde Bankalarda Risk Yönetimi , 4C Basım Hizmetleri Ltd.Şti. , Eylül 2005,p.8

2. Analysis and quantification of the risk exposure, that is, the understanding of the relationship and the measurement of how the cash flows and the value of a firm are affected by a risk factor. So, many banks concentrate on this risk measurement step, which is only a requirement for being able to actively influence firm value.

3. Allocation of capital to the business units as a common currency of risk that is comparable across business units and risk types and that is adequate with the risk taken and the allocation of a charge reflecting the cost of capital[8].

4. Ex ante decision of whether a new transaction should be accepted from a portfolio perspective and consideration of whether the risk taking is rational from a risk-return perspective.

5. Limitation of risk taking to ensure a constant risk profile by "mitigating" risk. This step is the actual and active management of risk and, therefore, what people commonly refer to when they use the term risk management. In order to "mitigate" risk, various (hedge) instruments and policies can be applied, such as, (a) complete avoidance of risk, (b) reduction of risk, (c) transfer of risk to third parties, and (d) limitation of risk.

6. Risk controlling usually involve the documentation and controlling of risk-management actions to ensure the achievement of the goals that have been set. Deviations between targets and actual performance are analyzed to identify causes. This analysis leads to changes in either the planning or the implementation process. Additionally, risk control also covers controlling the involved people and business units by checking whether methods and instruments are applied properly in order to avoid abuse, manipulation, and other misconduct (process controlling).[9]

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[8] R.Mann Cantor, Moody's Investor Services' response to the consultative paper issued by the Basel Committee on bank supervision: A new capital adequacy framework. J. Banking Finance 25, 2001., p.171.

[9] Hasan Candan ve Dr. Alper Özün , Bankalarda Risk Yönetimi ve Basel II , 1. Edition , Türkiye İş Bankası Kültür Yayınları , 2006 , p.15

7. Ex post performance evaluation in order to link risk-management actions to the overall corporate goals. The goal of risk management is to ensure that any risk-management activity is consistent with value maximization. The goal, however, should not be to avoid or minimize all risk taking. Rather, it should be to find the optimal balance between risks and expected returns by concentrating on the competitive and comparative advantages of the firm, redefining the role of risk management from pure "hedging" to a more differentiated activity in light of the goal of value maximization.[10]

All of these steps are dependent on each other. For example, a goal-oriented active management of risks is not meaningful without accurate quantification, and so on. Risk management is an active, strategic, and integrated process that includes both the measurement and the "mitigation" of risk, with the ultimate goal of **maximizing the value of a bank**, while **minimizing the risk of bankruptcy**.

1.2.1. Role and Importance of Risk and Its Management in Banks

The traditional role of banks can be seen in the transformation of cash flows with respect to :

(1) scale, location, and liquidity

(2) term (maturity)

(3) risk

Banks try to reduce conflict from both asymmetric information as well as transaction costs in markets[11].

While basically taking deposits from savers and lending them to borrowers with risky businesses, banks can benefit the effects of the diversification. But banks are also able to transfer risks and distribute them across different market participants. It points

[10] Gerhard Schroeck , Risk Management and Value Creation in Financial Institutions , Canada : Jon Wiley& Sons, Inc. , 2002 , p. 27

[11] Ibid

out the key value-added feature of banks: the ability to **allocate risk efficiently at minimum cost** through the trading of and the bundling and unbundling of the risks of various financial contracts[12].

Since banks deal in financial assets, they are in the financial risk business. Because of the simple fact that they originate, trade, or service financial assets, banks transform, manage, and underwrite risk. [13] Asset trading and risk transfer activities of banks show the importance of risk management. Because of this, risk management plays a central role in intermediation. Therefore, it is accepted as an integral part of banking, and is viewed as one of the most important **corporate objectives**.

Risk management, also appears to be one of the most likely sources of value creation in banks and "value maximizing banks should have a well-founded concern with risk management"[14]. It is essential to know how risk management can contribute to this-overall goal. It also shows the firm's ability to create comparative advantages over their competitors.

However, so far, the most important rationale for risk management has typically been seen as the prevention of the bankruptcy of a bank[15]. On the one hand, to ensure a bank's long-term survival by avoiding lower outcomes (i.e., extreme losses) will not completely satisfy the shareholders of a bank. On the other hand, treating risk management as a sub objective to value maximization or optimizing value subject to risk-management constraints will neglect the questions of why, how, and when risk management can contribute to value creation[16]. Since many bank stakeholders are so concerned with-the survival of the bank, the framework of value maximization is very important.

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[12] Ibid

[13] Franklin Allen and Anthony M.Santomero , 'The Theory of Financial Intermediation' Journal of Banking and Finance, Volume 21 , p.1461-1485

[14] J.S. Demski, R. Dye, 1999. Risk Return and Moral Hazard. Journal of Accounting Research 37, 27.

[15] Ibid.

[16] Ibid, p. 32.

1.2.2. Ways to Conduct Risk Management in Banks

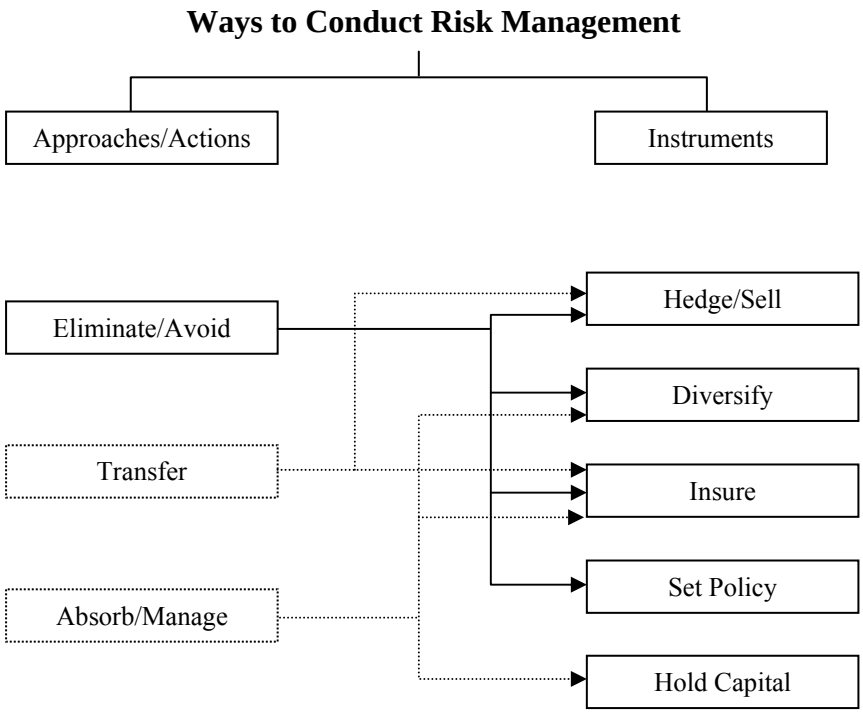
There are two categories in conducting risk management in banks:

a) The bank needs to determine which approach or set of actions it wants to apply when managing risks,

b) The bank then has to choose a set of instruments to actually manage these risks.

Approaches or sets of actions that are available to banks and how they can be applied are shown in the figure below.

Figure 1



Source: M.B. Gordy, A risk-factor model foundation for ratings-based bank capital rules. J. Finan. Intermediation, 12 (2003) , p.199.

a) Eliminate/Avoid

The bank can decide to eliminate certain risks that are not consistent with its desired financial characteristics. Any element of the systematic risk that is not required or desired can be either prevented by selling it in the spot market or hedged by using derivative instruments such as futures, forwards, or swaps[17]. Moreover, the bank can use portfolio diversification in order to eliminate specific risk. Additionally, it can decide to buy insurance in the form of options, for example, for event risks.

b) Transfer

The transfer of risks to other market participants is propoer if the bank doesn't have a competitive advantage The transfer of risk eliminates or substantially reduces risk by selling (or buying) financial claims. If the bank has no comparative advantage in managing a specific kind of risk, there is no reason to absorb and/or manage such a risk, because for these risks, no added value is possible. Therefore, the bank should transfer these risks.

c) Absorb/Manage

Some risks should be absorbed and managed at the bank level, because they have one or more of the following characteristics:[18]

- They cannot be traded or hedged easily.
- They have a complex or illiquid structure that is difficult, expensive, or impossible to reveal to others.
- They are subject to moral hazard.
- They are a business necessity. Some risks play a central role in the bank's business purpose and should therefore not be eliminated or transferred[19].

[17] Ibid.
[18] Franklin Allen and Anthony M.Santomero , 'The Theory of Financial Intermediation' Journal of Banking and Finance , Volume 21 , p.1461-1485.

In all four of these circumstances, the bank needs to actively manage these risks by using one of the following three instruments:

- **Diversification:** The bank makes diversification more efficiently at a lower cost than individual investors could do on their own. It is known that banks care about the internal diversification of their portfolios and especially the management of their credit portfolio, because the performance of a credit portfolio is determined not only by exogenous factors but also by endogenous factors[20].

- **Internal insurance:** It is cheaper for the bank to hold a pool of risks internally than to buy external insurance.

- **Holding capital:** For all other risks that cannot be diversified away or insured internally and which the bank decides to absorb, it has to make sure that it holds a sufficient amount of capital in order to ensure that its probability of default is kept at a low level.

However, the decision to absorb risks internally should be based on competitive advantages that compensate the bank more than the associated costs, that is, when value is created [21].

It is seen that there are many other ways for conducting risk management than just hedging. Therefore, the decision as to which approach is most appropriate and which instrument should be chosen should be decided by comparing the trade-off between costs and value created. In order to find out this, the bank needs to monitor both risks and returns.

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[19] Ibid.

[20] Mark Carey, 1998. Credit risk in private debt portfolios. Journal of Finance LIII (4), 1363.

[21] Andrew Winton 'Don't Put Your Eggs in One Basket? – Diversification and Specialization in Lending' Working Paper ,Financial Institutions Center , University of Pennsylvania, 2000, p.16.

1.3. Types of Risk

a) Market Risk

Risk which is common to an entire class of assets or liabilities[22]. The value of investments may decline over a given time period because of economic changes or other events that impact large portions of the market. Asset allocation and diversification can protect against market risk, because different portions of the market tend to underperform at different times. Market Risk is also called 'systematic risk'.

b) Interest Rate Risk

The possibility of a reduction in the value of a security, especially a bond, resulting from a rise in interest rates[23]. This risk can be reduced by diversifying the durations of the fixed-income investments that are held at a given time.

c) Operational Risk

The Basel Committee defines Operational Risk as :

'The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events."[24]

However, the Basel Committee recognizes that operational risk is a term that has a variety of meanings and therefore, for internal purposes, banks are permitted to adopt their own definitions of operational risk[25].

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[22] Gerhard Schroeck , Risk Management and Value Creation in Financial Institutions , Canada : Jon Wiley& Sons,Inc. , 2002 , p. 29.

[23] Ibid.

[24] http://www.bis.org, 26.07.2007.

[25] Edward I. Altman, Anthony Saunders, An analysis and critique of the BIS proposal on capital adequacy and ratings. Journal of Banking and Finance 25 (2001), p. 25.

d) Strategic Risk

Strategic risk is the current and prospective impact on earnings or capital arising from adverse business decisions, improper implementation of decisions, or lack of responsiveness to industry changes[26]. This risk is a function of the compatibility of an organization's strategic goals, the business strategies developed to achieve those goals, the resources used against these goals, and the quality of implementation

e) Liquidity Risk

Liquidity risk arises from situations in which a party interested in trading an asset cannot do it because nobody in the market wants to trade that asset. Liquidity risk becomes particularly important to parties who are about to hold or currently hold an asset, since it affects their ability to trade.[27]

f) Credit Risk

Credit risk is the risk of loss due to a debtor's non-payment of a loan or other line of credit (either the principal or interest (coupon) or both). Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms[28]. Banks need to manage the credit risk. Banks should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component in risk management and essential to the long-term success of any banking organization.

1.4. Risk Management and Legal Environment in Turkey

Risk management involves both the measurement and the "mitigation" of risk, with the objective of maximizing the value of a bank and minimizing the risk of bankruptcy. In Turkey, risk management has gained importance as in the global world

[26] Ibid.
[27] Duncan Wood , Govening Global Banking , The Basel Committee and The Politics of Financial Globalisation , Ashgate Publishing Ltd.,2005 , p.81.
[28] Ibid.

especially due to the crisis faced in the last twenty years in Turkey and in the world. The Banking Regulation and Supervision Agency (BRSA) became operational in August 2000 as an autonomous body so as to reinforce the prudential regulations and to ameliorate the quality of banking supervision.[29]

The Banking Regulation and Supervision Agency has made banks to have a Risk Management department as an obligation. Risk Management departments are controlled in several times. Moreover, BRSA in Turkey is responsible for the Basel II implications to be applied according to Basel road maps. The banks have intensive studies to adapt this accord to their systems which have great impact on starting from their credit strategies to their scoring structure.

[29] Ali Babacan, 2005 ; Ersin Özince, 2005, Münür Yayla and Yasemin Türker Kaya, 2005

2. OVERVIEW OF THE FINANCIAL SECTOR AND NEEDS FOR REGULATIONS

Banking crisis and financial crisis hold an important role in the development of the financial sector . They are the key factors to make the regulations.

2.1 Banking Crisis

More than one hundred countries which adopted different macroeconomic regimes in the 20th century have gone through banking crisis of various dimensions. Among the reasons for crises especially encountered in the last 20 to 25 years are increased loan availability rates and rises in asset prices taking place after implementation of liberalization policies. For example, in Norway, ratio of bank loans to nominal Gross Domestic Product (GDP) was 40% in 1984 and rose up to 68% in 1988, followed by extreme rises in asset prices. This situation has given birth to a rise in bad loans and has had negative impact on financial structure of banks. Norway economy has suffered 7% contraction as a consequence of this development[30]. Similarly, Sweden has seen an increase in loan availability throughout 1980s and such increase has given birth to significant increase in real estate prices. In 1991, various problems arose because of loan made available by banks based on overvalued assets and Sweden economy has suffered squeezes, as is the case in Norwegian economy. Similar crises took place in Japan and many other OECD countries, as well.[31]

Interest rates in financial markets, accompanied by fluctuations in exchange rates, have driven many financial institutions into bankruptcy. Banking crises encountered in various countries and costs of such crises on national economies are shown in the following table.[32]

[30] J.A. Bikker, International. Financial Markets, Interest and Money 15 ,2005, p.141.
[31] Ebru Tuncer , 'Basel II Gelişmekte Olan Ülkeler İçin bir Lüks mü ?' Active , Mayıs-Haziran,2006, p.1
[32] Ömer Faruk Çolak , Hakan N.Ardor , Mengü Tunçay, ' Finansal Kriz ve Bankalar : Türkiye'de 2000 ve 2001 Krizleri Örneği' Yeni Türkiye ,Ekonomik Kriz Özel Sayısı Cilt 1 , Sayı 41.2001 , p.704

Table 1: Banking Crisis and Costs on National Economies

Countries	Date of the Banking Crisis	Cost of the Crises on Country (*)	Ratio of Bad Loans(**)
USA	1984-1991	5-7	4
Argentine	1980-1982-1985	13-55	9-30
Brasil	1994-1996	4-10	9
Indonesia	1994	2	-
Phillippines	1981-1987	3-4	-
Finland	1991-1993	8-10	9
Spain	1977-1985	15-17	-
Sweeden	1991-1993	4-5	11
Japan	1990'lar	3	10
Malesia	1985-1988	5	633
Mexico	1994-1995	12-15	11
Norway	1988-1992	4	9
Sri Lanka	1989-1993	9	35
Chile	1981-1985	19-41	16
Tailand	1983-1987	1	15
Turkey	1982-1985-1994-1999 2000-2001	3-10-15-20	-
Uruguay	1981-1984	31	15
Venezuella	1980-1983-1994-1995	17	-

Source : Mehmet Başar , Basel II Düzenlemeleri ve KOBİ ler ,Eskişehir 2007 , p.9.

(*) The percentage ratio of financial losses caused by crisis to GNP

(**) the percentage ratio of bad loans to total loans

2.2. Financial Crisis

With banking crisis; such factors as innovations in markets, progresses in information and communication technologies, transferability of a financial shock faced in a country to other countries due to free movement of capital from one country to other, either short-term or long-term, thus triggering a regional and than a global shock, as is the case in Asian crisis, unveiled the necessity of strengthening an audit structure

in international financial systems and rendered risk management more important[33]. However, financial crisis encountered in Asian countries in 1997 paved the way for BASEL II regulations.[34]

In the 1990s, Asian countries have benefitted from international capital flows in significant levels. From 1994 up to crisis break-out, the share of international capital flows in GDP has increased significantly in much of the developing countries.

Together with this increase in debts, although derivative instruments were quite developed, uncovered exchange and interest rates played a significant part in break-out of Asian crisis. High interest rates in indicated countries drove non-financial companies to borrow in foreign currency in significant levels.

Companies ignored to cover themselves against exchange rate risks arising from foreign borrowing due to higher costs in derivatives markets and this ignorance has intensified the crisis further[35]. Asian crisis is of such character which has been felt initially by financial sector of crisis-hit countries and then by other sectors of the economy. Crisis encountered in financial markets have caused fluctuations both in exchange rates and stock exchanges of regional economies.

Monetary crisis breaking out in Thailand in 1997 has begun to spread over the neighboring countries in a short time. While Indonesia, Malesia and the Phillippines were directly hit by the crisis, Singapore, Taiwan and Hong Kong received smaller wounds. While economic and industrial structure of these countries had developed in different ways, the chaos in financial markets have found its way into said countries quickly. This spread can be attributed to market interaction between their national currencies. The crisis breaking out in Asian economies, as accompanied by the chaos suffered by them, has coincided with the collapse of some large Japanese financial institutions. These developments have given birth to recession in Japanese economy. Negative impact of the Asian crisis on Japanese economy is, according to OECD, 1,3%

[33] Banque de France, The financial cycle, factors of amplification and possible policy implications for financial and monetary authorities, 2001, Bulletin no. 95, Banque de France.

[34] Ibid

[35] J.A. Bikker, International. Financial Markets, Interest and Money 15 ,2005, p.145.

of Japanese Gross Domestic Product (GDP) and, according to the International Monetary Fund (IMF), 0.75% of GDP, in 1998 figures. [36]

In the aftermath of the crises encountered in the developing countries, an intensive debate took place on the role of the IMF in international financial system and on risks created by liberalization policies and on developments in information and communication Technologies and their effects and on pressures used by speculators, as well as on destabilizing effects of capital movements[37]. In this framework, debaters questioned the role of the IMF and offered to restructure international financial system. Such international organizations as the World Bank, IMF and BIS tried to provide proposals in this direction. Readdressing of BASEL regulations also in this framework took its place in the agenda.

2.3. Reasons For Regulating Bank Capital

It is tempting to argue: "Bank regulation is unnecessary. Even if there were no regulations, banks would manage their risks prudently and would strive to keep a level of capital that is consistent with the risks they are taking."[38] Unfortunately, history does not altogether support this view. There is little doubt that regulation has played an important role in increasing bank capital, making banks more aware of the risks they are taking.[39]

If markets operated totally without government intervention, banks that took risks by keeping low levels of equity capital would find it difficult to attract deposits and might experience a "run on deposits", where large numbers of depositors try to withdraw funds at the same time. Most governments provide some form of deposit insurance because they want depositors to have confidence that their money is safe. However, the existence of deposit insurance has the effect of encouraging banks to reduce equity capital (thereby increasing expected return on equity) because they no longer have to worry about depositors losing confidence. From the government's

[36] Laurent Balthazar , From Basel I to Basel 3 : The Integration of State-of-the-Art Risk Modelling in Banking Regulation ,First Edition,Palgrave Macmillan Ltd. ,2006 , p.13
[37] Mark Carey, Credit risk in private debt portfolios. Journal of Finance, 1998, III (4), p. 1367.
[38] Ibid.
[39] John C. Hull , Risk Management and Financial Institutions, Pearson Prentice Hall , 2007, p.167.

perspective there is therefore a risk that the existence of deposit insurance leads to more bank failures and an increase in the cost of deposit insurance programs[40]. As a result governments have found it necessary to combine deposit insurance with regulations on the capital banks must hold. In addition, governments are concerned about what is termed systematic risk.

2.3.1. Pre -1988

Prior to 1988, bank regulators in different countries tended to regulate bank capital by setting minimum levels for the ratio of capital to total assets. However, definitions of capital and the ratios considered acceptable varied from country to country. Banks were competing globally and a bank operating in a country where capital regulations were loose was considered to have a competitive edge over one operating in a country with tighter more strictly enforced capital regulations[41]. In addition the huge exposures of the major international banks to less developed countries such as Mexico, Brazil, and Argentina manage those exposures were starting to raise questions about the adequacy of capital levels[42].

Another problem was that the types of transactions entered by banks were becoming more complicated. The over-the-counter derivatives market for products such as interest rate swaps, currency swaps, and foreign exchange options was growing fast. These contracts increase the credit risks being taken by a bank because of the counter–party risk which indicate the probability of default. It became apparent to regulators that total assets was no longer a good indicator of the total risks being taken[43]. A more sophisticated approach than that of setting minimum levels for the ratio of capital to total balance sheet assets was needed.

These problems led supervisory authorities, for Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United

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[40] Ibid.

[41] A. McNeil, R., Embrechts Frey, Quantitative Risk Management: Concepts, Techniques and Tools,Princeton University Press, Princeton, 2005, p.23.

[42] Ibid.

[43] Ibid, p. 169.

Kingdom, and the United States to form the Basel Committee on Banking Supervision. They met regularly in Basel, Switzerland, under the name of the Bank for International Settlements. The first major result of these meetings was a document entitled International Convergence of Capital Measurement and Capital Standards". This was referred to as "The 1988 BIS Accord" or just "The Accord". More recently it has come to be known as Basel I.

PART II

BASEL I and BASEL II

Globalization of the financial world brought the need for regulations. The global world is affected from events in countries' economies. Especially the emerging markets show the most marked results.

3. BASEL I - THE BASEL 1988 CAPITAL ACCORD

The 1988 Basel Capital Accord is a commitment prepared by Basel Committee within the G-10 countries Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, Sweden, Switzerland, the UK, the US and Luxemburg to apply a minimum capital requirement to internationally active banks in the G-10. The committee released a proposal on the "International Convergence of Capital Measurement and Capital Standards". After a brief period of consultation the committee issued a final proposal, agreed upon by all its member countries, on July 15 1988. To achieve these goals, the committee set out a framework for measuring capital adequacy in relation to credit risk. [44]That framework can be divided into 4 parts:

(1) the definition of capital

(2) the determination of risk-weighted assets

(3) the required ratio of capital to risk-weighted assets

(4) the conversion of off-balance sheet instruments into risk-weighted assets.[45]

The two stated main objectives of the initiative were:

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[44] Laurent Balthazar , From Basel I to Basel 3 : The Integration of State-of-the-Art Risk Modelling in Banking Regulation , First Edition, Palgrave Macmillan Ltd. ,2006 , p.18

[45] L.Jacobo Rodriguez , International banking regulation Where's The Market discipline in Basel II ? Policy Analysis No : 455 , 2002 , p.8

i. To strengthen the soundness and stability of the international banking system.

ii. To diminish existing sources of competitive inequality among international banks.

3.1. Definition of Capital

Table 2: A Definition of Capital

Tier 1	- Paid-up capital
	- Disclosed reserves (retained profits, legal reserves ...)
Tier 2	- Undisclosed reserves
	- Asset revaluation reserves
	- General provisions
	- Hybrid instruments (must be unsecured, fully paid-up)
	- Subordinated debt (max. 50% Tier 1, min. 5 years - discount factor, for shorter maturities)
Deductions	- Goodwill (from Tier 1)
	- Investments in unconsolidated subsidiaries (from Tier 1 and Tier 2)

Source : PWC, Financial Services Bulletin ,http://www.pwcglobal.com,17.06.2007

The definition of capital is set broadly in two tiers, Tier 1 being shareholders' equity and retained earnings and Tier 2 being additional internal and external resources available to the bank. Tier 2 (or supplementary) capital comprises undisclosed reserves from post-tax earnings, revaluation reserves from assets that have been revalued to reflect more accurately their market value, general provisions/general loan-loss reserves, which are created against the possibility of losses not yet identified, and debt capital instruments that can support losses on an ongoing basis[46].

3.2. Determination of Risk-Weighted Assets

When the capital was determined, the Committee then defined a number of factors that would weigh the balance sheet amounts to reflect their assumed risk level[47]. There were four broad categories.

[46] David Gabriel and Sidler Christoph, The New Basel Capital Accord: Update and Impact, Whitepaper: Basel I, July 2003.
[47] Ibid.

Table 3: Risk-Weight of Assets

%	Item
0	- Cash
	- Claims on OECD central governments
	- Claims on other central governments if they are denominated and funded in the national currency (to avoid country transfer risk)
20	- Claims on OECD banks and multilateral development banks
	- Claims on banks outside OECD with residual maturity <1 year
	- Claims on public sector entities (PSE) of OECD countries
50	- Mortgage loans
100	- All other claims: claims on corporate, claims on banks outside

Source : PWC, Financial Services Bulletin ,http://www.pwcglobal.com,18.06.2007

The Basel Committee considered that "a weighted risk ratio in which capital is related to different categories of asset or off-balance sheet exposure, weighted according to broad categories of relative riskiness, is the preferred method for assessing the capital / adequacy of banks." [48]Although there are many different kinds of risk that banks have to manage, the accord initially addressed only credit risk -that is, the risk of counterparty failure. Other types of risk, such as investment risk, interest-rate risk, exchange-rate risk, concentration risk, and operational risk, were not made part of the accord. The Basel Accord classifies assets according to four risk-weight categories-zero percent, 20 percent, 50 percent, and 100 percent-which are measured at book value rather than market value.[49]

3.3. Required Ratio of Capital to Risk-Weighted Assets

It defines a measure of capital and a measure of risk, the latter measure known as 'risk-weighted assets'[50]. The rule is that a bank's capital must be no less than 8% of its risk-weighted assets. Its signatories do not legally bind their nations.

[48] Basel Committee on Banking Supervision (1988) ' International Convergence of Capital Measurement and Capital Standards' , www.bis.org. , 25.07.2007

[49] John C. Hull , Risk Management and Financial Institutions, Pearson Prentice Hall ,2007, p.172

[50] Donald R. Deventer, The New Capital Accord and Internal Bank Ratings, May 2002.

3.4. Off-Balance Sheet Exposures

Finally, the Committee also defined weighting schemes to be applied to off-balance sheet items. Off-balance sheet items can be divided in two broad categories:

- First, there are engagements that are similar to unfunded credits, which could transform assets should a certain event occur (for instance, the undrawn part of a credit line that will be transformed into an on-balance sheet exposure if the client uses it, or a guarantee line for a client that will appear in the balance sheet if the client defaults and the guarantee is called in)[51].

- Second, there are derivatives instruments whose value is a function of the evolution of the underlying market parameters (for instance, interest rate swaps, foreign exchange contracts ...)[52].

Table 4: Credit Conversion Factor

%	Item
0	- Undrawn commitments with an original maturity of max. 1 year
20	- Short-term self-liquidating trade-related contingencies (e.g. a documentary credit collateralized by the underlying goods)
50	- Transaction-related contingencies (e.g. performance bonds) - Undrawn commitments with an original maturity >1 year
100	- Direct credit substitutes (e.g. general guarantees of indebtedness ...) - Sale and repurchase agreements - Forward purchased assets

Source : PWC, Financial Services Bulletin ,http://www.pwcglobal.com,18.06.2007

The Basel Accord converts all categories of off-balance-sheet engagements to credit risk equivalents by multiplying the nominal principal amounts by a credit conversion factor, the resulting amounts then being weighted according to the nature of the counterparty. The conversion factors are; 100 percent for instruments that substitute for loans, such as standby letters of credit; 50 percent for transaction-related contingencies, such as standby letters of credit for a particular transaction; 20 percent

[51] Ibid.
[52] Ibid.

for short-term, self-liquidating trade-related contingent liabilities, such as commercial letters of credit.

3.5. The Regulation of Market Risk : The 1996 Amendment

Market risk is regulated with 1996 amendment.

3.5.1. Amendment to the Capital Accord to Incorporate Market Risk

In the Basel Committee document, market risk was defined as "the risk of losses in on- and off-balance sheet positions arising from movements in market prices." The risks concerned were:[53]

i. The interest rate risk and equities risk

ii. The foreign exchange risk and commodities risk throughout the bank.

iii. Making short-term profits due to the variation in prices.

iv. Making short-term profits from brokering and/or market-making activities (the bid-ask spread).

3.6. Measurement of Capital Adequacy

Basel I requires banks hold a minimum of 4% in Tier 1 and 8% in total capital against their risks. There are two kinds of risks under Basel I: credit risk and market risk. Credit risk is calculated as risk-weighted assets (RWAs). The market risk (MR) is introduced in 1996 and calculated using Value at Risk model. [54]The Basel I defines the capital adequacy ratio as (CAR) as

CAR=Capital/(CR+MR)=(Tier 1=4%, Total=8%); Where CR= Credit Risk, MR=Market Risk

[53] Basel Committee on Banking Supervision (1996) 'Amendment To the Capital Accord to Incorporate Market Risks' ,www.bis.org. , 09.08.2007

[54] John C. Hull , Risk Management and Financial Institutions, Pearson Prentice Hall ,2007, p.170

Example : The assets of a bank consist of $100 million of corporate loans , $ 10 million of OECD government bonds , and $ 50 million of residential mortgages . The total of risk – weighted assets is :

$$1.0 * 100 + 0.0 * 10 + 0.5 * 50 = 125 \text{ (or \$125 million)}$$[55]

3.7. Strengths and Weaknesses of Basel I

Here is a short overview of the strengths and the weaknesses of the 1988 Basel Capital Accord.

3.7.1. Strengths

Despite a lot of criticism, the Basel 1 Accord was successful in many ways. The first achievement of the initiative was that it created **a worldwide benchmark** for banking regulations. Designed originally for internationally active banks of the G10 countries, it is now the basis of the inspiration for banking regulations in more than 100 countries and is often imposed on national banks as well[56]. But, at least, international banks are now facing a uniform set of rules, which avoids them having to discuss with each national regulator what the correct capital level should be for conducting the same business in many different countries. Additionally, banks of different countries competing in the same markets have equivalent regulatory capital requirements. This is a certain improvement in comparison with the situation before 1988.

Although, the **introduction of different risk-weights for different asset classes**, does not completely reflect the true risks of banks' credit portfolios. It is an improvement of the previous regulatory ratios that were used in some countries - such as equity: assets or equity deposits ratios.

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[55] Ibid

[56] Stephany Griffith Jones 'Will the Proposed New Basel Capital Accord Have a Net Negative Effect On Developing countries' , Institute of Development Studies ,University of Sussex , 2003.

The capital ratios of most banks indeed increased at the beginning of the 1990s (the capital ratios of the large G10 banks went from an average of 9.3 percent in 1988 to 11.2 percent in 1996, and bank failures diminished (for instance, yearly failures of FDIC-insured banks in the US went from 280 in 1988 to fewer than 10 a year between 1995 and 2000)[57]. But to what extent this recovery of the situation is attributable to Basel 1 or to other factors (such as better economic conditions) is still an open question. But even without empirical evidence, one can reasonably think that the capital ratio has forced banks under the 8 percent value to get some fresh capital (or to decrease their risk exposures) and that the G10 has contributed to a greater focus and a better understanding of the risks associated with banking activities.

3.7.2. Regulatory Weaknesses and Capital Arbitrage

Aside from the positive impacts of Basel I, the Basel 1988 Accord has **a lot of deficiencies.** Since the 1990s, research on credit risk management-related topics have brought important innovations in the way that banks handle their risk. Quantification techniques have allowed sophisticated banks to make continuously more reliable and precise estimates of their internal economic capital needs.[58] Economic capital (EC), is the capital needed to support the bank's risk-taking activities as estimated by the bank itself. It is based on the bank's internal models and risk parameters. The result is that when a bank estimates that its economic capital is above the regulatory capital level, there is no problem. But if the regulatory capital level is higher than economic capital, it means that the bank has to maintain a capital level in excess of what it estimates as an adequate level, thereby destroying shareholder value[59]. The response of sophisticated banks is what is called "capital arbitrage." This means making an arbitrage between regulatory and economic capital to align them more closely - it can be done by engaging in new operations that consume more economic than regulatory capital[60]..

[57] Ibid.
[58] Marc Saidenberg and Til Schuermann, The New Basel Capital Accord and Questions for Research, Federal Reserve Bank of New York, 2003, p.5.
[59] Ibid
[60] Ibid.

Banks use various capital arbitrage techniques. The simpler one consists of investing, inside a risk-weight band, in riskier assets. For instance, if the bank wants to buy bonds on the capital markets, it can buy speculative-grade bonds that provide high interest rates while requiring the same regulatory capital as investment-grade bonds. The economic capital consumed by the deal should be higher than the regulatory capital, allowing the bank to use the excess economic capital it has to hold because of regulatory constraints. The banks show an innovative spirit in creating new financial instruments that allow them to lower their capital requirements even if they don't really lower their risk.

3.7.3. Other Weaknesses of the Accord – Need for Basel II

Other weaknesses of the Accord, besides the possibility to lower capital requirements while keeping the risk level almost unchanged are:

i. The lack of risk sensitivity. For instance, a corporate loan to a small company with high leverage consumes the same regulatory capital as a loan to a AAA-rated large corporate company (8 percent, because they are both risk-weighted at 100 percent).

ii. A limited recognition of collateral. The list of eligible collateral and guarantors is rather limited in comparison to those effectively used by the banks to mitigate their risks.

iii. An incomplete coverage of risk sources. Basel 1 focused only on credit risk. The 1996 Market Risk Amendment filled an important gap, but there are still other risk types not covered by the regulatory requirements: operational risk, reputation risk, strategic risk.

iv. A "one-size-fits all" approach. The requirements are virtually the same, whatever the risk level, sophistication and activity type of the bank is.

v. An arbitrary measure. The 8 percent ratio is arbitrary and not based on explicit solvency targets.

vi. No recognition of diversification. The credit-risk requirements are only additive and diversification through granting loans to various sectors and regions is not recognized. [61]

In conclusion, although Basel 1 has been beneficial to the industry, there was need for a more sophisticated regulatory framework. The Basel 2 proposal, despite the criticisms, was a major step in the right direction. It addresses a lot of Basel 1's criticisms and, in addition to recovering the way the 8 percent capital ratio is calculated, emphasizes the role of regulators and of banks' internal risk management systems. [62] Moreover, it forces many actors in the sector to increase their knowledge level.

[61] Marc Saidenberg and Til Schuermann, The New Basel Capital Accord and Questions for Research, Federal Reserve Bank of New York , 2003 , p.5

[62] İbid

4. ESTABLISHMENT OF BASEL II - PILLAR I

Financial crisis and rapid developments in international financial markets stimulated regulatory bodies to establish common supervisory standards for financial institutions, lending firms, and non-financial companies, operating in a highly competitive environment, in order to achieve the market discipline and effective global risk management in the world.

4.1. Basel II - Overview of the New Accord

The incidents such as the Asian and Russian monetary crises, the collapse of Barings, the near collapse of Long Term Capital Hedge Fund prompted a new look at the capital accord with a view to a preparing a comprehensive and detailed update that attempts to address some of the underlying factors that caused the incidents[63]. Moreover; collapse of major corporations such as WorldCom and Enron, and by their relationships to major global banks and other financial institutions, an extensive consultative process was needed.

CP1 (the first Consultative Paper) was issued in June 1999. It contained the first set of proposals to modify the 1988 Basel Capital Accord and was the result of a year of work. Eighteen months later, in January 2001, CP2 integrated the first set of comments from the sector and further work of the Committee. The last Consultative Paper (CP3) was issued by mid-2003 and in June 2004 the final proposal was published.

The "Basel 2 accord" that will replace the 1988 framework is the result of more than six years of regulators' work and active discussion with the sector. This elaboration process was punctuated by three Quantitative Impact Studies (QIS).[64] These consisted of collecting the main data inputs necessary to evaluate what could be the new capital requirements for various types of banks in the New Capital Accord.

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[63] Donald R. Deventer, The New Capital Accord and Internal Bank Ratings, May 2002.
[64] İbrahim Çanakcı, "Implications of Basel II", in Financial Stability & Implications of Basel II 16-18 May 2005, Conference Proceedings, Istanbul: Central Bank of the Turkish Republic of Turkey, 2005.

4.2. Goals Of The Accord

The three stated Committee objectives are[65]:

i. To increase the quality and the stability of the international banking system.

ii. To create and maintain a level playing field for internationally active banks.

iii. To promote the adoption of more difficult practices in the risk management field.

The first two goals are those that were at the heart of the 1988 Accord. The last is new, and is said by the Committee itself to be the most important. This is the sign of the beginning of a shift from ratio-based regulation, which only a part of the new framework, towards a regulation that will rely more and more on internal data, practices, and models[66].

The main objectives constituted by the Basel II standards can be summarized as follows;

1. to measure the risks that exposed by the banks in a more prudential manner and connect it to a minimum capital level,

2. to reinforce the national and international supervisory standards in the financial market,

3. to improve the market discipline through demanding the financial statements prepared in compliance with the internationally accepted accounting standards.

The New Basel Capital Accord has three mutually reinforcing pillars. The first pillar defining a new capital requirement ratio creates immediate incentives for banks to improve risk analysis of their assets. The second pillar increases the power of the supervisory authority in evaluating a bank's assessment of its risks and in enforcing

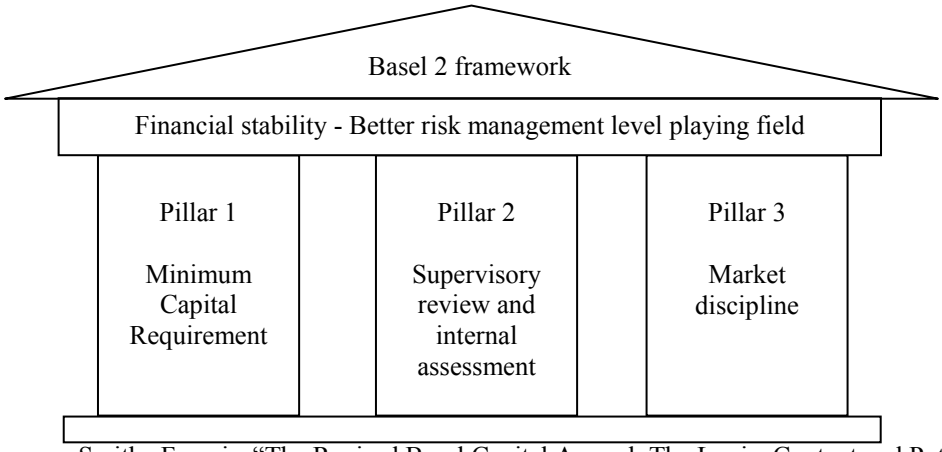
[65] Bank for International Settlements, International convergence of capital measurement and capital standards: A revised framework. Basel Committee on Banking Supervision, 2004.

[66] Ibid.

measures for poor risk management for inadequate capital allocation. Third pillar represents market discipline through improved disclosure, enhanced transparency and reinforced corporate governance.

4.3. Structure Of the Accord

The Basel 2 Accord is structured in three main pillars (pillars 1-3), they are designed to support the global objectives of financial stability and better risk management practices.



Source : Smitha Francis, "The Revised Basel Capital Acoord: The Logic, Content and Potential Impact for Developing Countries", 2006.

Figure 2: The Three Pillars

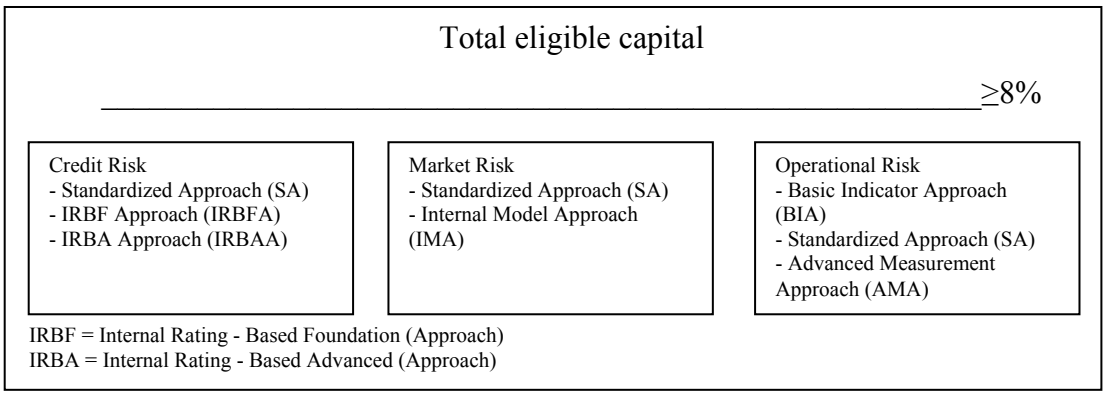
4.4. Pillar 1

This is the update of the 1988 solvency ratio. Capital: RWA is still viewed as the most relevant control ratio. Capital is hold against losses when profits become negative. The 8 percent requirement is still the reference value, but the way assets are weighted has been significantly defined. Capital requirements should now be more closely aligned to internal economic capital estimates (the adequate capital level estimated by

the bank itself, through its internal models).[67] There are three approaches, of increasing complexity, to compute the risk-weighted assets (RWA) for credit risk. This is an incentive for banks to increase their internal risk management practices. This is also significant improvement on the current Accord, where the scope of eligible collateral is rather limited.

Another important innovation in pillar 1 is a new requirement for operational risk. In the new Accord there is an explicit capital requirement for risks related to possible losses arising from errors in processes, internal frauds, information technology (IT) problems[68].

The eligible capital must cover at least 8 percent of the risk-weighted requirements related to three broad kinds of risks .



Source : L. Jacobo Rodriguez, International Banking Regulation , October 15, 2002

Figure 3: Solvency Ratio

[67] Basel Committee on Banking Supervision , International Convergence of Capital Measurment and Capital Standards , A Revised Frameork , 2004 ,www.bis.org.

[68] Smitha Francis, "The Revised Basel Capital Acoord: The Logic, Content and Potential Impact for Developing Countries", 2006. <http://ideawebsite.org/working/jan2007/wp18_09_2006.htm> (28 May 2007)

4.4.1. Credit Risk

Under the New Basel Accord, banks will have three different options to measure credit risk: A standardized approach, which is a revision of the 1988 accord's approach to credit risks and which still assigns risk weights to different assets; and an internal ratings based (IRB) approach, which allows banks to estimate the amount of capital necessary to confront their economic risks using their own internal risk-assessment models[69]. The IRB approach is further divided into two frameworks: (1) the foundation IRB framework, where banks provide just one input for their assessments of the creditworthiness of borrowers and supervisors provide the remaining inputs to complete those assessments, and (2) the advanced IRB framework, where banks provide all the inputs in the measurement process subject to regulatory approval.[70]

Table 5: Pillar 1 Options

- Capital consumption +	Credit Risk - unstructured exposures	Credit Risk - securitization	Operational risk	- Complexity +
	Standardized Approach	Standardized Approach	BIA (Basic Indicator Approach)	
	IRBF (Internal Rating - Based Foundation) Approach	- RBA (Rating-Based Approach) - IAA (Internal Assessment Approach) - SF (Supervisor Formula)	SA (Standardized Approach)	
	IRBA (Internal Rating Based-Advanced) Approach		AMA (Advanced Measurement Approach)	

Source : J. -P. Decamps, J. -C. Rochet, & B. Roger, (2004). The three pillars of Basel II: Optimizing the mix. Journal of Financial Intermediation, 13, 2004, p. 132.

The numerator of the equation in Basel I is unchanged and Market risk is the same as amended in 1996. There are two areas of change;

- credit risk changes substantially

[69] J. -P. Decamps, J. -C. Rochet, & B. Roger, (2004). The three pillars of Basel II: Optimizing the mix. Journal of Financial Intermediation, 13, 2004, p. 132.

[70] Ibid

- operational risk is added to equation

$$\text{Bank's Capital ratio (min. 8 \%)} = \frac{\text{Total Capital (unchanged)}}{\text{Credit Risk + Market Risk + Operational Risk}}$$

4.4.1.1. Standardized Approach

The main innovation in the Standardized Approach (SA) is that the risk-weights are no longer a function of the counterparties' types (banks, corporate...) but also integrate their estimated risk level through the use of external ratings. The regulators will then map those external ratings on the international rating scale of Standard & Poor's (S&P), S&P ratings are finally converted into risk-weights. [71]

(1) Past due loans: Loans past due for more than 90 days will be risk-weighted by function of their level of provisioning

Table 6: RWA of Past Due Loans

Past due loan RWA (%)	Residential mortgage (%)	Other (%)
Provision <20 outstanding	100	150
Provision >20 outstanding	50	100

Source : Laurent Balthazar , From Basel I to Basel 3 : The Integration of State-of-the-Art Risk Modelling in Banking Regulation ,First Edition,Palgrave Macmillan Ltd. ,2006 ,p52

Other assets: A 100 percent risk-weight will apply.

Off-balance sheet items: Off-balance sheet items are converted into credit equivalent exposures through the use of a Credit Conversion Factor (CCF), as in Basel 1988.

[71] BDDK , Basel Komitesi Yeni Sermaye Yeterliliği Düzenlemesi Özet Sunum , Ekim 2002

Table 7: Credit Conversion Factor for the Standardized Approach

%	Item
0	- Commitments unconditionally cancelable without prior notice
20	- Short term self-liquidating trade-related contingencies (e.g. documentary credit collateralized by the underlying goods). - Undrawn commitments with an original maturity of max. 1 year
50	- Transaction-related contingencies (e.g. performance bonds) - Undrawn commitments with an original maturity > than 1 year
100	- Direct credit substitutes (e.g. general guarantees of indebtedness...) - Sale and repurchase agreements - Forward purchased assets - Securities lending

Source :Andrew Cornford , "Basel II: The Revised Framework of June 2004", 2005. <http://www.unctad.org/en/docs/osgdp20052_en.pdf > (25 May 2007).

(2) Implementation Considerations

If there is more than one external rating, banks should retain the lower of the two highest.

If the bank invests in an issue that has a specific rating, it should retain it rather than the issuer rating.

If there is no issuer rating but a specific issue is rated, a claim can get the issue rating.

(3) Credit Risk Mitigation

Another important part of the Standardized Approach deals with Credit Risk Mitigation (CRM) techniques. Those are the tools that a bank can use to cover a part of its credit risk, and include requiring collateral (financial or other), guarantees, or using credit derivatives. [72]

Legal certainty: All the documentation used to set up the collateral, the guarantee, or the credit derivative must be legally binding on all parties.

The bank must have efficient procedures to manage the collateral. This means that they can be able to liquidate it in a timely manner and to manage secondary risks (operational risks, liquidity risks, concentration risk, market risk, legal risk ...).

[72] Bankacılıkta Yeni Sermaye Yeterliliği Düzenlemeleri : Basel II , Türkiye İş Bankası Eğitim Müdürlüğü, Yayın No : 78, 1. Baskı , Kasım 2004

(4) Maturity Mismatch

Where the residual maturity of the CRM is less than the underlying credit exposure, a maturity mismatch occurs. When there is a maturity mismatch and the CRM has an original maturity of less than one year, the CRM is not recognized for capital purposes. In other cases where there is a maturity mismatch, partial recognition is given to the CRM for regulatory capital purposes. Under the simple approach, for collateral maturity mismatches will not be allowed.[73]

4.4.1.2. Internal Ratings-Based (IRB) Approach

In the IRB approaches, capital requirements are no longer global risk-weights based on external ratings, but are computed using formulas derived from advanced credit risk models that use risk parameters estimated by the bank itself. [74]

Table 8 : Risk Parameters

Symbol	Name	Comments
PD	Probability of default	The probability that the counterparty will not meet its financial obligations
LGD	Loss given default	The expected amount of loss that will be incurred on the exposure if the counterparty defaults
EAD	Exposure at default	The expected amount of exposure at the time when a counterparty defaults (the expected drawn-down amount for revolving lines or the off-balance sheet exposure x its CCF)
M	Maturity	The average maturity of the exposure
p	Asset correlation	A measure of association between the evolution of assets' returns of the various counterparties
Cl	Confidence interval	The degree of confidence used to compute the economic capital

Source : Andrew Cornford , "Basel II: The Revised Framework of June 2004", 2005. <http://www.unctad.org/en/docs/osgdp20052_en.pdf > (25 May 2007).

[73] Liliano Rojas-Suarez, "From Basel I to Basel II: Implications and Challenges for Emerging Markets", 2002. <http://info.worldbank.org/etools/docs/library/154927/financeforum2002/pdf/rojassuarez.ppt >,(04 June 2007).

[74] Ibid

Over the last decade, many international banks have implemented internal credit rating systems and have begun to use quantitative approaches to measure credit risks. Since these methods reflect a bank's individual risk profile more accurately, the Committee has developed the Internal Rating-Based (IRB) approach. This approach has two approach inside; Foundation Approach and Advanced Approach. The Basel Committee gives banks' own internal control and management too much importance.

4.4.1.2.1. Source of Risk Estimations

The risk components of IRB approach include measures of the probability of default (PD), loss given default (LGD), the exposure at default (EAD), and effective maturity (M). Under the foundation approach, as a general rule, banks provide their own estimates of PD and rely on supervisory estimates for other risk components. Under the advanced approach, banks provide more of their own estimates of PD, LGD and EAD, and their own calculation of M, subject to meeting minimum standards.

Table 9: Source of Risk Estimations

	IRBF		IRBA	
Exposure type	Internal data	Regulators' data	Internal data	Regulators' dta
Corporate, sovereigns, banks, eligible purchased receivables corporate	PD	LGD, EAD, M	PD, LGD, EAD, M	
Retail, eligible purchased receivables retail	Internal PD, LGD, EAD, M mandatory			
Equity	PD/LGD Approach or Market-Based Approach			

Source : Liliano Rojas-Suarez, "From Basel I to Basel II: Implications and Challenges for Emerging Markets", 2002. <http://info.worldbank.org/etools/docs/library/154927/financeforum2002/pdf/rojassuarez.ppt >,(04 June 2007).

(a) Probability of Default

All banks must provide supervisors with an internal estimate of the PD associated with borrowers in each borrower grade. For each borrower grade, banks must provide an internal estimate of the PD over a one-year horizon. Those must reflect a

conservative view of a long-run average PD for the grade under consideration, and must be grounded in historical experience and empirical evidence. Banks may rely on their own default experience, mapping to external data (rating agencies or industry associations), or use statistical default models if they are considered relevant for the portfolio in question.[75]

Credit mitigation in the form of guarantees or credit derivatives can impact the PD. In the foundation approach, the PD of the guarantor (if rated A or higher) substitutes for the PD of the borrower. [76]This substitution is subject to a floor of 15% in the case of corporate guarantors (sovereigns & banks: no floor). In the advanced approach, banks use their internal assessment of the degree of risk transfer. There will be no limits on the range of eligible guarantors and no substitution floor.

(b) Loss Given Default

LGD, expressed as a percentage, is the magnitude of likely loss on the exposure. The starting point proposed by the Committee is use of a 45 percent LGD value for most unsecured transactions, with 75 percent applied to subordinate exposures.

In the foundation approach, banks will use or calculate LGD standards:

1. Unsecured exposures:

a. Senior claims: 45% LGD

b. Subordinated claims: 75% LGD

2. Exposures secured by financial collateral: Exactly the same comprehensive treatment of eligible collateral applies as in the standardized approach to credit risk. A specific formula then calculates the effective LGD depending on the degree of collateralization, and starting LGD (either 50% or 75%).[77]

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[75] Alper Önder and Kaan Aksel, "Şirket Derecelendirmesinde Basel II Perspektifi", 2006. <http://www.vergiportali.com/doc/21122006BASELII.pdf > (29 May 2007).

[76] Raphael Maurus von Reding , The New Basel Capital Accord , The Arab Bank Review ,2001 , http://www.hondalinks.com.

[77] Mustafa Özçam, "Basel II Uzlasisi", Sermaye Piyasası Kurulu Arastırma Raporu, 2004.<http://www.spk.gov.tr/yayinlar/ArastirmaRaporlari/2004_MustafaOzcam_4.pdf>(28 May 2004).

3. Exposure secured by real estate: specific LGD formula taking into account the loan to-value ratio. In any case, the LGD will be between 40% and 50%. Under the advanced approach, the banks estimate LGD based on internal loss experience. The banks can use their own LGD standards, collateral haircuts and are allowed to apply a wider range of collateral than under the foundation approach.

(c) Exposure at Default

EAD will equal the nominal amount of the facility. For balance sheet items, EAD represents the nominal outstanding.

(d) Maturity

Under the foundation approach, the Committee proposes for reasons of simplicity that all exposures are treated as having the same average maturity of 2.5 years. Under the advanced approach, the Committee wants banks to incorporate maturity effects on risk weights.

4.4.1.2.2. Classification of Exposures

The classes of assets are (a) corporate, (b) sovereign, (c) bank, (d) retail, and (e) equity. In detail, these exposures are characterized by the fact that the source of repayment is based primarily on the ongoing operations of the borrower rather than on the cash flow from a project or property. [78]

4.4.1.2.3. Transition Arrangements

Banks adopting the foundation or advanced approaches are required to calculate their capital requirement using these approaches, as well as the 1988 Accord for the time period specified in the standard. Parallel calculation for banks adopting the foundation IRB approach to credit risk will start for the year beginning year-end 2005.

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[78] Gabriel David and Christoph Sidler , The New Basel Capital Accord : Update and Impact,Whitepaper , Basel I , July 2003 , http://itpapers.zdnet.com.

Banks moving directly from the 1988 Accord to the advanced approaches to credit and/or operational risk will be subject to parallel calculations or impact studies for the year beginning year-end 2005 and to parallel calculations for the year beginning year-end 2006.

4.4.1.2.4. Internal Rating System

Rating systems are at the heart of the Basel 2 Accord. Efficient rating systems are the key requirements in reaching the IRB approaches (both IRBA and IRBF). But even without considering the regulatory capital reform, such ratings are at the center of the current risk management framework of most banks. The prediction of default risk is a field that has stimulated a lot of practitioners' and academics' research, mainly since the 1970s. As validated internal rating systems should allow a lot of banks to decrease their regulatory capital requirements, a strong incentive for investing in their development has been created.[79]

Local banking regulators will do the final validation process, they will have an important role but also heavy responsibilities. If a bank runs into trouble because of deficiencies in its internal rating systems that were validated by its regulators, it will not carry the responsibility for the crisis alone. Banks have to keep their rating models clear, transparent, and understandable. Moreover, they have to update the documentation with regular controls.

Rating systems must have two dimensions: one for estimating the PDs of counterparties and one to estimate the LGD related to specific transactions.There must be clear policies to describe the risk in each internal grade and to classify the different grades.

Banks must have processes and criteria that allow a consistent rating process. Borrowers that have the same risk profile must be assigned the same rating across the

[79] Price Waterhouse Coopers Türkiye V. Çözüm Ortaklığı Platformu , Şirket Derecelendirilmesinde Basel II Perspektifi , Aralık 2006

various departments, businesses, and geographical locations of the banking group.The rating process must be transparent enough to allow third parties (auditors, regulators ...) to assess the appropriateness of the rating.

The bank must integrate all the available information. An external rating (given by a rating agency such as Moody's or S&P) can be the basis of the internal rating, but not the only factor.Although the PD used for regulatory capital computation is the average one-year PD, the rating must be given considering a longer horizon.The rating must integrate the solvency of the counterparty.

A scoring model should ensure that all the available information is correctly featured in the final rating. The bank has to prove that its scoring model has a good discriminatory power, and the way models and analysts interact to arrive at the final rating must be documented.

The banks must have a regular cycle of model validation, including ongoing monitoring of its performance and stability.If a statistical model is part of the rating system, the bank must document the mathematical hypotheses that are used, establish a validation process and be precise as to the circumstances under which the model may under-perform.

Overrides (cases where credit analysts give another rating than the one issued by a scoring model) must be documented, justified, and followed up individually.Banks must record all the data used to give a rating to allow back-testing. Internal default experience must also be recorded. The rating process must be understood and accepted by senior management.

The bank must have an independent unit responsible for construction, implementation, and monitoring of the rating system. It must make regular analyses of its quality and performances. At least annually, the rating system should be reviewed by the audit department.

The objectivity and comprehensiveness are fundamental in rating models. These issues should be taken into account during the analysis.

(a) Use of Models

One of the consequences of Basel 2 is that banks are now tending to develop integrated data management strategies instead of small local current databases. According to Oliver Wyman research project ("Reality check on Basel 2," The Banker, 2004), 70 percent of banks have chosen centralized data management systems. There are four main benefits:

i. More powerful data analysis capabilities.

ii. Increased accessibility for other users.

iii. Potential synergies with other projects (e.g. IFRS).

iv. Potential to reduce costs.

It is thought that when evaluating the cost-benefit trade-off between various alternatives, one should always keep in mind the fact that investments must be seen not only as a compliance cost but as an opportunity to gain more effective advanced risk management systems, which are the first step in any effective shareholder value management framework.[80]

Credit scoring models generally use only a subset of available information. Sufficient human judgment and human oversight is necessary to ensure that all relevant and material information, including that which is outside the scope of the model, is also taken into consideration, and that the model is used appropriately.[81]

(b) Documentation of rating system design

If the bank employs statistical models in the rating process, the bank must document their methodologies. This material must:

i. Provide a detailed outline of the theory, assumptions and mathematical models;

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[80] Andrew Cornford, "Basel II: The Revised Framework of June 2004", 2005. <http://www.unctad.org/en/docs/osgdp20052_en.pdf > (25 May 2007).

[81] FED 2003 ' Internal Rating Based Systems for Corporate Credit and Operational Risk Advanced Measurement Approaches for Regulatory Capital' 2003 , www.federalreserve.gov

ii. Establish a statistical process (including out-of-time and out-of-sample performance tests) for validating the model; and

iii. Indicate any circumstances under which the model does not work effectively.

Rating assignments and periodic rating reviews must be completed or approved by a party that does not directly benefit from the extension of credit. Independence of the rating assignment process is crucial. Credit policies and underwriting procedures must reinforce and foster the independence of the rating process.[82]

Borrowers must have their ratings refreshed at least on an annual basis. Certain credits, especially higher risk borrowers or problem exposures, must be reviewed more frequently. In addition, banks must update a new rating if there is recovery in the performance of the borrower.

(c) Data availability

A bank must collect and store data on borrowers to provide effective support to its internal credit risk measurement and management process.Banks must maintain rating histories of borrowers If there is default or problems in the payment of credits, this information should be kept.

Banks using the advanced IRB approach must also collect and store a complete history of data on the LGD and EAD estimates associated with each facility and the key data used to derive the estimate and the person/model responsible. Information about the components of loss or recovery for each defaulted exposure must be retained, such as amounts recovered, source of recovery (e.g. collateral, liquidation proceeds and guarantees), time period required for recovery, and administrative costs.[83]

[82] Arturo Estrella , 'Credit Ratings and Complementary sources of Credit Quality Information' BCBS Working Paper No.3, 2000 , www.bis.org

[83] İbid

(d) Stress tests used in assessment of capital adequacy

An IRB bank must have in place sound stress testing processes for use in the assessment of capital adequacy. Stress testing must involve identifying possible events or future changes in economic conditions that could have unfavorable effects on a bank's credit exposures and assessment of the bank's ability to withstand such changes. Examples of scenarios that could be used are (i) economic or industry downturns; (ii) market-risk events; and (iii) liquidity conditions.

In addition to the more general tests described above, the bank must perform a credit risk stress test to assess the effect of certain specific conditions on its IRB regulatory capital requirements. The test must be meaningful and conservative.

Whatever method is used, the bank must include a consideration of the following sources of information. First, a bank's own data should allow making estimation. Second, banks should consider information about the impact of smaller deterioration in the credit environment on a bank's ratings, giving some information on the likely effect of bigger, stress circumstances.

(e) Requirements for IT Systems and Data Collection

A bank must collect and store data to provide effective support to its internal credit risk measurement and management process. Banks using the IRB approach must collect and store data on rating decisions, the rating histories of borrowers, and the probabilities of default associated with rating .

4.4.2. Market Risk

In January 1996, the Basel Committee on Banking Supervision issued the "Amendment to the Capital Accord to Incorporate Market Risks." This document provides a detailed account of the methodology laid down by the Committee to set capital requirements for market risk. Since January 1, 1998, banks in the G-10 countries have peen required to maintain regulatory capital to cover market risk. Market risk is usually measured as Value At Risk (VAR). VAR takes the form of a single number that estimates the maximum likely loss an institution is exposed to over a given time interval

and at a given confidence level, based on the distribution of price changes over a given historical time horizon.[84]

4.4.2.1. Approaches to the Measurement of Market Risk

The Market Risk Amendment sets out two approaches to the measurement of market risk: the Standardized Approach and the Internal Models Approach.

The Standardized Approach was first proposed in 1993. The capital requirements for specific risk aims to provide a protection against adverse price movements in a security because of factors related to the issuer of a security. The capital charges for general market risk aim to provide a protection against the risk of loss arising from adverse changes in market prices.

The Basel Committee requires that banks calculate their VAR on a daily basis with a one-tailed confidence interval of 99 percent, a minimum holding period of 10 days and minimum observation period of one year. Furthermore, banks' internal models are required to accurately capture the unique risks associated with options and option-like instruments.

Banks that do not meet the qualitative and quantitative criteria set by the Basel Committee are not permitted to use their models and must use the standardized approach instead.

4.4.3. Operational Risk

"Operational risk" is defined as the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events. This definition includes legal risk, but excludes strategic and reputation risk. Capital requirements can be defined using three approaches:

[84] Ibid.

4.4.3.1. Basic Indicator Approach (BIA)

It is the simplest method which considers only that the amount of operational risk is proportional to the size of the bank's activities. There are no specific requirements for banks to be allowed to use the BIA.

4.4.3.2. Standardized Approach (SA)

This is close to the BIA, except that banks' activities are divided into eight business lines and each one has its own capital requirement as a function of its specific gross income.

4.4.3.3. Advanced Measurement Approach (AMA)

As with VAR models for market risk and internal rating systems, the regulators offer the banks the opportunity with the AMA Approach to develop internal models for a self-assessment of the level of operational risk. There is no specific model recommended by the regulators. In addition to the qualitative requirements, that are close to those of the SA Approach, the models have to respect some quantitative requirements:

Operational risk is an innovation, as currently no capital is required to cover this type of risk, and it has been very controversial. For market risk, a lot of historical data are available to feed and back-test the models; for credit risk, data are already scarce; and for operational risk there are very few banks that have any efficient internal databases showing operational loss events[85]. This is the more "qualitative" type of risk, as it is closely linked to procedures and control systems and depends significantly on experts' opinions.

4.5. The Major Implications For Banks

In many countries, starting in 2004, the board of directors will be legally liable for all operations risk management and will be held directly responsible.Independent audit

[85] P. Embrechts, H. Furrer, R. Kaufmann, Quantifying regulatory capital for operational risk. Derivatives Use, Trading & Regulation 9 (3), 2003, p. 217.

of the risk management will become part of the annual reviews and may happen even more frequently.

Independent analysis and feedback on the effectiveness of the operations risk framework, processes and procedures will need to be an integral part of the feedback and change process.The operational risk framework must be embedded in all of a bank's activities and operations[86].All bank employees need to be regularly trained and involved in this endeavor.

Banks' management / executives and boards of directors will also need to be involved at an operational level in some manner. Banks will need to implement comprehensive and business continuity plans and provide the necessary related resources, facilities, processes and operating procedures as a requirement of the business.The business continuity plans will need to be regularly tested and validated for completeness and operating functionality.

Banks will have more regulatory oversight and tighter standards of supervision. It is linked with Pillar 2 framework for supervision - the minimum standards that the Basel Committee has developed.

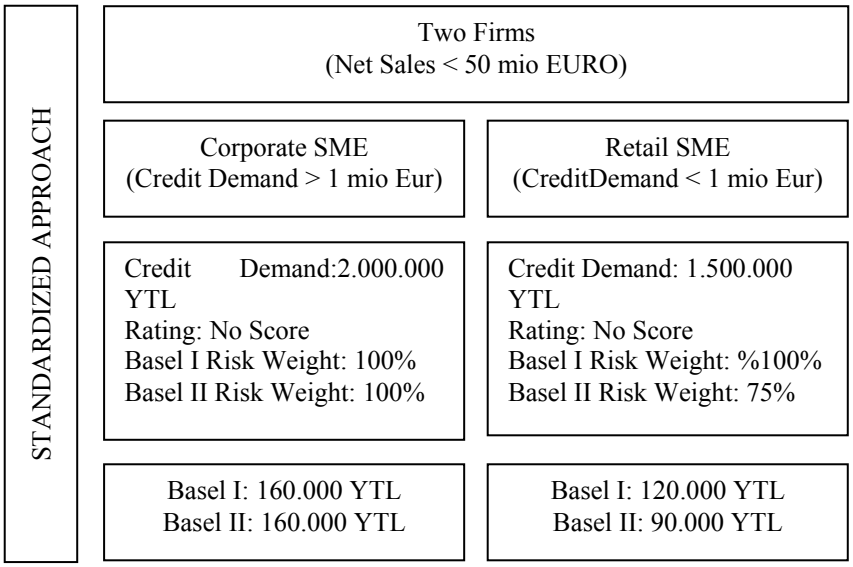
Table 10: Classification of the Firms and Risk Weights Assigned in Basel II

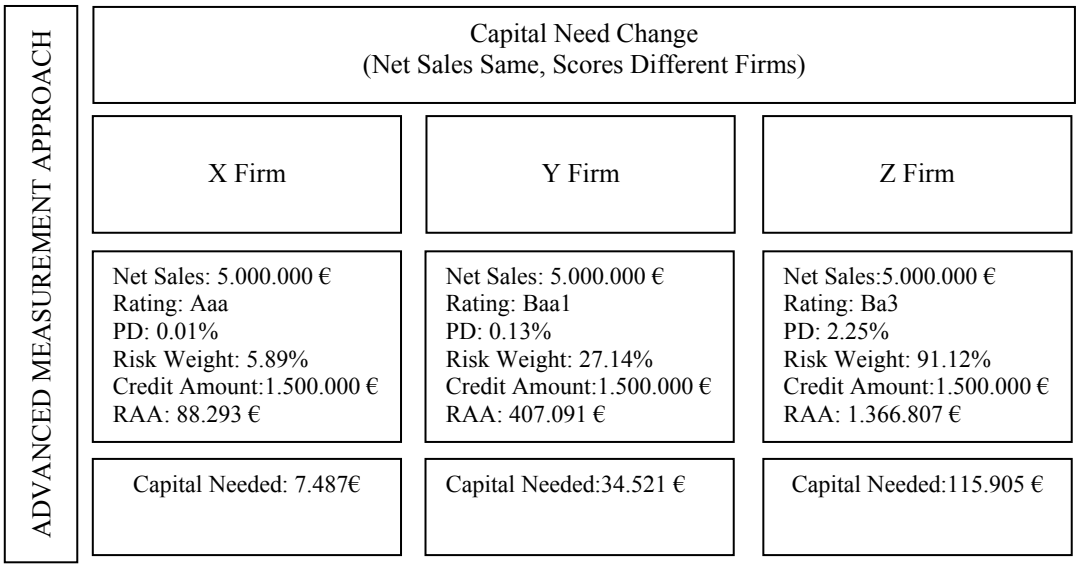
Credit Amount	Yearly Net Sales	Classification	Risk Weight
Credit>1.000.000 Euro	Sales>50.000.000 Euro	Corporate	100 %
Credit>1.000.000 Euro	Sales<50.000.000 Euro	Corporate SME	According to rating, if Not rated, 100%
Credit <1.000.000 Euro	Sales>50.000.000 Euro	Corporate	100%
Credit< 1.000.000 Euro	Sales<50.000.000 Euro	Retail SME	Standard (75%)

Source: BIS

[86] İsmail Ufuk Mısırlıoğlu,İstanbul Bilgi Üniversitesi , The Effects of IFRS and Basel II on The Business Operations, Mali Çözüm , İSMMMO Yaın Organı , Sayı 76, 2006 .

4.5.1. Examples for Capital Adequacy Measurement [87]





$$\text{Bank's Capital ratio (min. 8 \%)} = \frac{\text{Total Capital (unchanged)}}{\text{Credit Risk + Market Risk + Operational Risk.}}$$

[87] Haluk Yalçın,Alper Önder,Kan aksel ,Nazlı Özyürek ,PWC Türkiye V.Çözüm Ortaklığı Platformu, Şirket Derecelendirmesinde Basel II Perspektifi , Aralık 2006, p21,27

Capital Allocated for Credit, Market and Operational Risks:

The denominator is measured as follows:

Credit Risk + 12.5*(Σ Capital adequacy for Market Risk and Operational Risk)

Credit Risk = Σ of all risk weighted assets for credit risk

For example:

Risk weighted assets $1000

Capital adequacy for market risk $20.00

Capital adequacy for operational risk $20.00

5. PILLAR 2 and PILLAR 3

Supervisory Review Process and Market Discipline are the other pillars of the New Accord.

5.1. Pillar 2: Supervisory Review Process

- The **goal of the SRP** is to ensure that the bank has enough capital to cover its risks and to promote better risk management practices. The management of the bank is required to develop an Internal Capital Adequacy Assessment Process (ICAAP), and to fix a target capital level that is a function of the bank's risk profile. If the supervisors are not satisfied with the capital level, they can require the bank to increase its capital level or decrease some of its risks.

Under pillar 2, supervisors must also ensure that banks using the IRB and AMA Approaches meet their minimum qualitative and quantitative requirements.[88]

The SRP is built upon four key principles[89]:

Firstly , banks should have a process for assessing their overall capital adequacy in relation to their risk profile, and a strategy for maintaining their capital levels.

Banks have to demonstrate that their capital targets are consistent with their risk profile.

Secondly, supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate action if they are not satisfied with the result of this process [90].

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[88] Ibid

[89] Bank for International Settlements. (2004). International convergence of capital measurement and capital standards: A revised framework. Basel: Basel Committee on Banking Supervision.

[90] Bank for International Settlements. (2004). International convergence of capital measurement and capital standards: A revised framework. Basel: Basel Committee on Banking Supervision.

Thirdly, supervisors should expect that banks will operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum[91].

Pillar 1 does not cover all risks, the regulators also state explicitly that they expect banks to have capital ratios on RWA above the usual 8 percent requirement. Capital above the minimum level can be justified by:

i. The desire of some banks to reach higher standards of creditworthiness (for instance, to maintain a high rating level).

ii. The need to be protected against any future unexpected shift in the business cycle.

iii. The fact that it can be costly to get some fresh capital; operating with more capital can be cheaper.

Finally, supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum level required to support the risk characteristics of a particular bank, and should require rapid remedial action if capital is not maintained or restored.[92]

The range of actions that can be required by the regulators is wide: intensifying the monitoring of the bank; restricting the payment of dividends; requiring the bank to prepare and implement a satisfactory capital adequacy restoration plan; and requiring the bank immediately to raise additional capital. Supervisors can use any of the tools suitable to the circumstances of the bank and its operating environment.

[91] Bank for International Settlements. (2004). International convergence of capital measurement and capital standards: A revised framework. Basel: Basel Committee on Banking Supervision.

[92] Ibid.

Pillar 2 offers an important independence to supervisors. The Committee of European Banking Supervisors (CEBS) proposed a range of eleven "high-level principles" that are designed to bring convergence in the regulators' implementation of pillar 2 (CEBS, 2005). Table 12 shows it.

Table 11: CEBS high-level principles for pillar 2

I	Every institution must have a process for assessing its capital adequacy in relation to its risk profile (an ICAAP)
II	The ICAAP is the responsibility of the institution itself
III	The ICAAP should be proportionate to the nature, size, risk profile, and complexity of the institution
IV	The ICAAP should be formal, the capital policy fully documented, and the management body's responsibility
V	The ICAAP should form an integral part of the management process and decision- making culture of the institution
VI	The ICAAP should be reviewed regularly
VII	The ICAAP should be risk-based
VIII	The ICAAP should be comprehensive
IX	The ICAAP should be forward-looking
X	The ICAAP should be based on adequate measurement and assessment processes
XI	The ICAAP should produce a reasonable outcome

Source : Cornford, Andrew, "Basel II: The Revised Framework of June 2004", 2005. <http://www.unctad.org/en/docs/osgdp20052_en.pdf > (25 May 2007).

5.2. Pillar 3 : Market Discipline

Pillar 1 focused on the banks' own risk-control systems, pillar 2 described how the regulators were supposed to control the banks' risk frameworks, and finally pillar 3 relies on market participants to actively monitor the banks. That is, pillar 3 is a set of requirements regarding appropriate disclosures that will allow market participants to

assess key information on the scope of application, capital, risk exposures, and risk assessment processes, and so the capital adequacy of the institution.[93]

Investors such as equity or debt holders will then be able to react more efficiently when banks' financial health deteriorates, forcing banks' management to react to improve the situation.

5.2.1. Pillar 3 - Disclosures

The regulators will have to decide which part of the disclosures will be addressed only to themselves and which part will be made public. The powers of the regulators concerning mandatory disclosures change greatly between various national contexts. However, some disclosures are directly linked to the pillar 1 options and their absence could consequently mean that the bank would not be authorized to use them.

The scope of required disclosures is very wide. The disclosures set out in pillar 3 should be made on a semi-annual basis, subject to the following exceptions[94]:

i. Qualitative disclosures that provide a general summary of a bank's risk management objectives and policies, reporting system, and definitions may be published on an annual basis.

ii. In recognition of the increased risk sensitivity of the framework and the general trend towards more frequent reporting in capital markets, large internationally active banks and other significant banks (and their significant bank subsidiaries) must disclose their Tier 1 and total capital adequacy ratios, and their components, on a quarterly basis.

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[93] Cornford, Andrew, "Basel II: The Revised Framework of June 2004", 2005. <http://www.unctad.org/en/docs/osgdp20052_en.pdf > (25 May 2007).

[94] Francis, Smitha , "The Revised Basel Capital Accord: The Logic, Content and Potential Impact for Developing Countries", 2006. <http://ideawebsite.org/working/jan2007/wp18_09_2006.htm>, (28 May 2007).

5.2.1.1. Links With Accounting Disclosures

Accounting rules differ between countries. So there is a direct effect on the comparability of the RWA of different banks. Additionally, the International Financial Reporting Standards (IFRS) reform is bringing important changes in the way financial information is reported to the market. IFRS is based on the principles of Market Value Accounting (MVA), which means that all assets and liabilities should be valued at their market price (the price at which they could be exchanged on an efficient market). In Europe, local GAAP are mainly "historical cost"-oriented, rather than "market value"-based. The national regulators will have to decide on which set of figures the RWA will be based. IFRS rules generate much more volatility as they are linked to current market conditions. MVA creates volatility in assets and liabilities valuation, which results in leveraged volatility of equity. As it is related with solvency ratio, it could increase the risks of procyclicality that are already inherent in the Basel 2 framework. (Procyclicality is the risk that all risk parameters will be stressed in an economic downturn, leading to a sharp decrease in the solvency ratio, which could cause the banks to turn off the credit tap, leading to a credit crunch.)[95]

The regulators' decision is not yet clear; however, they seem to prefer keeping the current accounting practices instead of encouraging MVA. This issue has been widely debated in the industry. Europeans tend to be more in favor of the historical cost method because European companies, especially banks, do not have the habit of communicating volatile results, as investors prefer predictable cash flows. In the US, the local GAAP accounting system is already more market-oriented, as large corporate companies represent a wider share of the global economy (there are fewer SME) and as the financial markets are more developed.[96] Even if it brings more volatility in financial accounts, there are arguments in favor of MVA, even from a banking regulation point of view. A BIS Working Paper ("Bank failures in mature economies," Basel Committee on Banking Supervision, 2004) pointed out that in 90 percent of recent banking failures,

[95] PWC , IFRS and Basel II, Similarities and Differences , 2006
[96] Deloitte , IAS Plus New Standard on Disclosures for Financial Instruments , October 2005

the reported solvency ratio was above the minimum. This shows that without a correct valuation of assets and an adequate provisioning policy, the solvency ratio is an inefficient tool to identify banks that are likely to run into trouble.

Proponents of the MVA argue that banks have interest in selling assets whose value has increased to show a profit, while maintaining assets whose value has decreased in their balance sheet at historical cost. Banks' balance sheets would then tend to be undervalued. They also argue that MVA would allow a quicker detection of problems and would then lead to a more efficient regulatory framework. Opponents consider that, in addition to the problems caused by volatility and procyclicality, there are still too many assets and liabilities that do not have observable market prices, leading to too much subjectivity in valuing them with in-house models, opening the door to asset manipulation.[97]

That is to say; Pillar 3 is an integral part of the Basel 2 Capital Accord. It establishes a list of required disclosures that should help investors to get a better picture of the banks' true risk profile. They should then be able to make more informed investment decisions and consequently create an additional pressure on banks' management teams to monitor their risks closely.

The choice of the accounting practices on which disclosures will be based (the basis for computing the solvency ratio) is still an open issue. Each approach -historical cost or MVA - has its advantages and drawbacks. It is believed that, even under a historical cost accounting system, the new Basel 2 framework will lead to a more efficient solvency ratio if rating systems are sufficiently. MVA is more appropriate for investment banks that have a significant portion of their assets in liquid instruments. The large commercial banks, despite the development of securitization markets, are still heavily dependent on short-term funding resources and have large illiquid loan portfolios. Reflecting any theoretical change in the value of these loans that will be, in principle, held to maturity, could result in more drawbacks than advantages.

[97] Ibid

However, over time there will be an increased amount of historical data on default, recoveries, and correlations of various banking assets. This will help the industry to build more efficient and standardized pricing models and will make secondary credit markets more liquid. At this stage, the MVA would make more sense as a reference for the whole industry. [98]

[98] Sean Callaghan and Marie Treacy , Towards Convergence, IFRS to US GAAP Differences, Accountancy Ireland , December 2007,Vol. 39, No.6, p. 12.

PART III
INTERRELATION OF PROCYCLICALITY AND BASEL II

6. PROCYCLICALITY

Factors explaining fluctuations in bank lending has been searched recently. Central banks, as well as banking regulators, are concerned since such factors could sharpen the business cycle, cause financial instability and misallocate lending resources.

6.1. Procyclicality In Basel II

Supervisory and monetary authorities argue that detailed analysis should be done in integrating macroeconomic considerations into risk measurement, particularly during the increase of business cycles. These periods are characterised by rapid increases in credit and asset prices. They also argue that a system of risk-based capital requirements may deliver large changes in minimum requirements over the business cycle, if risk measurement is based on market prices. This has the potential to increase the financial widening of business cycles. However, other aspects of risk-based capital requirements are likely to work in the other direction. More work on evaluating the net effects is important for both supervisory and monetary authorities.

At a practical level, the difficulty facing banks and their supervisors is determining exactly how the level of credit risk changes with the evolving state of the macroeconomy, and by implication how the level of required capital should change through time[99]. On the one hand, there are strong arguments that capital should be built up in good times. So that when the bad times come, a sufficient buffer exists. By this way, losses can be absorbed without the solvency of the bank, or without the stability of the financial system being threatened. On the other hand, credit risk models and the

[99] Michael B. Gordy and Bradley Howells, Procyclicality in Basel II: Can we treat the disease without killing the patient? , Journal of Financial Intermediation 15 ,2006, p. 396.

proposed regulatory approach to measuring risk for purposes of minimum capital requirements may deliver measures of credit risk that fall in good times and increase in bad times.

6.2. Literature of Bank Lending Behaviour

The literature which analyses fluctuations in bank lending behavior provides some empirical evidence of cyclicality. Asea and Blomberg (1998) show that banks change their lending standards, from tightness to looseness, systematically over the cycle[100]. Loose lending standards occur during expansion periods and affect entire economic activity. In addition, Peek et al. (2003) and Lown and Morgan (2006) clearly identify the effects of loan supply shocks on fluctuations in credit and GDP.

Misevaluation of credit risk over the business cycle may explain fluctuations in bank lending. In phases of economic boom, banks are inclined to take on greater risks, due to their basically positive expectations about the course of the economy and future trends. By contrast, banks are excessively pessimistic during cyclical downturns if they exaggerate credit risk. Disaster myopia (Guttentag and Herring, 1984), herd behavior (Rajan, 1994) and the institutional memory hypothesis (Berger and Udell, 2003) account for misevaluation of credit risk[101]. Disaster myopia emphasizes that banks tend over time to underestimate the probability of low-frequency shocks while herd behavior focuses on the idea that banks' management is related with short-term concerns and perception of reputation. As for the institutional memory hypothesis, it stresses that current loan officers make the credit standards easier over time. The literature which analyses fluctuations in bank lending also focuses on the impact of monetary policy shocks. A better understanding of the economy's response to a monetary policy shock requires to consider a bank lending channel (Bernanke and Gertler, 1995) which

[100] C. Borio, C.H. Furfine, P. Lowe, Procyclicality of the financial system and financial stability: Issues and policy options. Working paper No. 1. BIS, 2001.
[101] J.A. Bikker, P.A.J. Metzemakers, Bank provisioning behaviour and procyclicality, Int. Fin. Markets, Inst. and Money 15 , 2005 , p.143.

emphasizes the role of deficiency in the market for bank debt[102]. This hypothesis is empirically supported by Kashyap and Stein (1995, 2000) for American banks and by Ehrmann et al. (2003) for European banks. Imperfections in the market for bank capital can also be stressed to explain fluctuations in bank lending. Van den Heuvel (2002) focuses on capital requirements and defines a bank capital channel by which monetary policy can change the supply of bank loans through its impact on bank equity. The effects of capital requirements on bank lending do not only operate through changes in monetary policy. Capital requirements are also relevant in explaining the impact of macroeconomic conditions and changes in banking regulation on bank lending (Furfine, 2001; Zicchino, 2005).

6.3. Credit Risk and the Macroeconomy

The ideas that risk is low in good times but that capital should be built up in good times raises some interrelated questions.

- First, how is credit risk related to the state of the macroeconomy?
- Second, are risk-based capital arrangements likely to increase financial procyclicality or, in other words, are they likely to unnecessarily increase the financial widening of economic cycles?

The issue of how credit risk develops with the macroeconomy is linked to how one views the basic forces driving the business cycle. On this important issue there is little consensus within the economics profession.

Typically, both internal and external credit ratings improve during economic expansions and deteriorate during contractions, so that measured risk falls in good times and increases in bad times.

A key element in credit risk measurement is a credit ratings system. Although these systems change considerably in detail, they are generally recognised as being

[102] Ibid.

reasonably successful at distinguishing the *relative* riskiness of different borrowers at a given point in time[103]. In contrast, their performance in assessing how risk changes *through time* is subject to less agreement.

One of the views is, in the economy, the evolution of economic activity is described as a wave. That is to say, a boom will almost surely be followed by a recession, and a recession by a recovery. In this economy, a forward-looking ratings system would be likely to show an increase in average credit risk around the peak of the business cycle, given the near recession, and perhaps a reduction in credit risk around the trough of the cycle, given the near recovery[104].

An alternative view is that the forces that drive economic expansions by generating imbalances in either in the financial system or the real economy. This means that while the economy does not follow a wave, a strong economic expansion, particularly if it is associated with the development of imbalances in the financial system, can increase the likelihood of an economic downturn. Such financial imbalances can result from rapid and sustained growth in credit and asset prices and excessive capital accumulation, and when they are solved they can result in considerable costs to the macroeconomy[105]. According to this view, while these imbalances cannot be measured perfectly, they can be measured at least to some degree. Accordingly, periods of strong economic growth might, under some circumstances, be characterised by an above average level of credit risk[106]. This view is consistent with the suggestion that risk is built up in the boom but materialises in the downturn.

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[103] J.A. Bikker, H. Hu, Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements. Banca Nazionale del Lavaro Quarterly Review 55, 2002, 146, (www.dnb.nl).

[104] Ibid.

[105] M. Cavallo, G. Majnoni, Do banks provision for bad loans in good times? Kluwer Academic Publishers, Boston, Dordrecht, London, 2002, p.23.

[106] Vincent Bouvatier, Laetitia Lepetit, Banks' procyclical behavior:Does provisioning matter?, Int. Fin. Markets, Inst. and Money , 2007, p.19.

The banking industry is inherently procyclical. Economic expansions are supported by an increased willingness of banks to take on risks, by increased competition in credit markets, by lower credit spreads, and by easier access to credit as collateral values rise[107]. In downturns the process can work in reverse, because the banking industry operate for recovery. There are some ideas that a decline in capital requirements in a boom will fuel the boom, and that an increase in capital requirements in a downturn will lead to credit supply constraints as banks suffer capital shortages .Moreover , it is thought that banks may even fail as a consequence of having earlier run down the level of capital. On the other hand, others have argued that a system of risk based capital will contribute to a more stable financial system while it may not decrease normal waves in the business cycle. It will help avoid the type of financial crises that often have very large macroeconomic results.

The existing literature is sometimes thought to have relatively little help in resolving the issue. While it is suggestive of the fact that binding capital requirements can have macroeconomic effects, the evidence is largely inconclusive. In surveying this evidence, Jackson et al (1999) conclude that reductions in bank lending in some countries following financial stresses do not seem to have been fully balanced by increases in lending from other intermediaries or markets. The impact on the macroeconomy is, more difficult to identify. In particular, the existing research suggests that binding capital requirements have adversely affected output in some sectors such as real estate and small business . However , there is not a certain link between binding capital requirements and macroeconomic outcomes. Under the current Basel Accord, minimum capital requirements on a given portfolio, are fixed through time. Therefore capital requirements typically become binding through a fall in a bank's capital . After this , credit losses appear.

In contrast, under a system of risk-based capital, requirements could become binding due to a decline in capital because of credit losses or also an increase in

[107] Ibid

minimum requirements as loans pass to higher risk classes[108]. Indeed, this discussion suggests that just at the time that banks are most likely to be recording losses, the minimum capital requirements could themselves perhaps be increasing. Indeed, the increase in the minimum requirements may be more difficult than the reduction in capital.This line of argument, suggests that risk-based capital requirements may lead to greater financial amplification of the business cycle[109].

6.4. Movements in Capital Requirements

Academics, practitioners and policy makers have commented on the potential procyclicality of the New Basel Capital Accord (Basel II). Because of bank rating systems are responsive to changes in borrower default risk, capital requirements under the Internal Ratings Based (IRB) approach will tend to increase as an economy falls into recession and will tend to fall as an economy enters an expansion[110]. Banks decrease (expand) lending in response to recessions (expansions). Therefore, many have argued that the New Accord will make it more difficult for policy makers to maintain macroeconomic stability.

One of the main objectives underlying the new Basel Accord is to substantially increase the risk sensitivity of the minimum capital requirements for banks (BCBS, 2004). This has raised a debate in both policy circles and the economic literature about the potential procyclical effect such as risk sensitive requirements might have on the economy (e.g. Segaviano and Lowe, 2002; Borio et al., 2001; Dan´ıelsson et al., 2001; Turner, 2000).

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[108] BIS Working Papers, Credit risk measurement and procyclicality, September 2002,p. 14

[109] C Borio, C Furfine and P Lowe: "Procyclicality of the financial system and financial stability: issues and policy options", in Marrying the macro- and micro-prudential dimensions of financial stability, BIS Papers, no 1,2001, p. 23.

[110] Ibid.

During a cyclical downturn, the quality of banks' assets is likely to deteriorate, which would increase risk exposure and as a result, capital requirements. During this time new capital becomes more expensive and for weaker institutions , it may even become unobtainable (Jackson, 1999).

As a consequence, banks might be forced to cut back their lending. Particularly in countries where corporate lending is provided mainly by banks, this would further weaken cyclical conditions into a credit distress, which would in turn make quicker the downturn.

According to some policy makers , new proposals by the Basel Committee have substantially reduced the possible procyclical effects of the new accord and thereby reduced the risks of financial instability[111]. Yet the new capital requirements continue to be more risk-sensitive than before, because they should provide the financial soundness of banks. Hence, the idea that 'the issue of possible procyclicality continues to exist' goes on.

"Three Pillar" structure of the New Accord explain this manner.

Pillar 1 is a regulatory standard for minimum capital requirements. The primary objective under Pillar 1 is better arranging of regulatory capital requirements with "economic capital" demanded by investors and counterparties.

Pillar 2 is the supervisory review process. The New Accord explain broad principles and some specific guidelines for review of capital adequacy that are intended to push both banks and supervisors under Pillar 1 standards. Banks are expected to establish and document internal processes for assessing capital adequacy relative to portfolio risk.

[111] Catatintu-Rabell, P. Jackson and D. Tsomocos. "Procyclicality and the New Basel Accord-Banks' Choice of Loan Rating System", Economic Theory, 26, 2005, pp. 547.

Pillar 3 is market discipline. In order to improve the transparency of banks to counterparties and investors, banks will be required to disclose detailed information on their risk profile and capital adequacy. Specific reporting requirements include IRB capital for each of the major portfolio components (e.g., corporate, retail mortgages) as well as for the bank as a whole.The view that the ultimate success of Pillar 1 standards depend on how well the resulting disclosures serve Pillar 3 goals is accepted[112]. A well-functioning bank will hold capital well in excess of the minimum requirement, so the regulatory capital ratio will not be binding under Pillar 1. If, for such institutions, the disclosed capital ratio provides a reliable measure of *economic* capital adequacy, then it will allow market participants to better assess relative creditworthiness. The earlier market participants are able to identify and punish a not well going institution, as a reult there will be less need for supervisory intervention.

The Basel Committee has recognized the possible procyclical effects of the Accord[113]:

i. First, banks are allowed to treat some types of loans to small- and medium-sized enterprises as retail loans, which have lower capital requirements and are less risk sensitive because the dispersion of small loans over many counterparties in the retail portfolio reduces the risk for the bank.

ii. Second, more types of collateral are recognized for capital reduction, what is typically used by banks when the business cycle deteriorates.

iii. Third, banks need to show with *stress testing* that their capital is adequate to handle a recession without a reduction of lending.

An alternative view is that of Borio et al. (2001) and Lowe (2003), who state that credit risks are built up during a boom, particularly when loan growth is relatively high.

[112] Ibid.
[113] BIS Working Papers, Credit risk measurement and procyclicality, September 2002,p. 16

Second, provisioning may also depend on earnings. Sound provisioning when lending grows and flattening of earnings reduce the procyclical behaviour of provisioning.
A number of recent studies in the economic literature investigate provisioning behaviour and procyclicality.

6.5. Provisioning in Theory and Practice

An important aspect of provisioning is its timing with respect to the business cycle and the related issue of procyclicality[114]. The common view is that an economic increase and rising incomes show improving conditions for firms and reduce the likelihood of loan defaults, whereas a recession will have the opposite effect. Banks are expected to reflect this feature in their decisions by lowering provisions during an economic boom and increasing them during a downturn. This cyclical bank behaviour is reported by e.g. C&M, L&M and Bikker and Hu (2002). According to this common view, the banks' provisioning behaviour may be procyclical. It means that it may support the current development of the business cycle.

However, an alternative, countercyclical view states that credit risk is build up in a boom and materialises in a downturn (Borio et al., 2001; Lowe, 2003). The favourable conditions of an economic expansion could lead to an excessive increase in credit lending and a less critical assessment of creditworthiness. The countercyclical view associates this with higher risks and the build-up of financial imbalances that increase the likelihood of economic contraction. According to this view, provisions should be positively correlated with the lending cycle; also banks should recognise the underlying risk and build up loan loss reserves in good times to be drawn on in bad times.This countercyclical behaviour assumes forward-looking risk assessment by banks.

[114] Philip Turner (Bank for International Settlements) , Procyclicality of Regulatory Ratios? , CEPA Working Paper Series III , Working Paper No. 13, January 2000 , p .9.

However, in practice, business cycle developments are hard to foresee. In addition, accounting rules and tax constraints also contribute to increases provisions during downturns, as they tend to allow only provisions based on past events, not on expectations (Borio and Lowe, 2001).

Provisioning appears to depend significantly on the business cycle, as evidenced by the direct negative relation between GDP growth and provisioning. This strong cyclical effect implies that banks' provisioning behaviour might be procyclical: as their buffers need to grow (fast) during downturns, less profits are available to supplement the (rising required) capital, possibly forcing banks to reduce lending.[115] The procyclical effect is mitigated by the impact of the banks' earnings on provisions.

Finally, procyclicality is also mitigated somewhat by the positive effect of loan growth on provisioning, supporting Borio et al. (2001) and Lowe (2003),who state that credit risks are built up during a boom. This outcome challenges the result of Cavallo and Majnoni (2002) and Laeven and Majnoni (2003), who found a significant negative effect of loan growth. It suggests that the provisioning behaviour of banks is potentially procyclical. There is also a view which suggest banks provision more when their capital ratio is low[116].

Loan loss reserves are determined by the same variables as are provisions, but the effects are less strong[117]. This is in line with expectations, as annual additions are more susceptible to outside influences than large stocks. However, no clear evidence is found either of increased provisioning during successive years of economic boom, resulting in substantially higher loan loss reserves levels, or of persisting erosion of reserves after consecutive years of recession[118]. Apparently, the cyclical effects, which

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[115] Ibid
[116] Ibid
[117] Monfort, B and C Mulder , "Using credit ratings for capital requirements on lending to emerging market economies – possible impact of a new Basel accord" IMF working paper 00/69 ,2000, March (www.imf.org)

[118] J. Repullo, and J. Suarez , Procyclicality of Bank Capital Regulation, Mimeo, 2006, p. 17.

could contribute to procyclicality, are weaker than is suggested by the provisioning results. Because they do not cumulate systematically over time. Remarkably, as a clear link between the recorded impaired loans and provisioning appears to be lacking, banks' loan loss risks are not consistently assessed as being higher during cyclical troughs than during cyclical highs.

Under Basel II, because procyclical risks may increase, there is more need for a strict and adequate Supervisory Review. On the other hand, the tools currently developed by banks in order to meet the requirements for the new IRB framework of Basel II are good instruments to predict future losses on loans. The estimates of 'Probability of Default' and 'Loss Given Default' are examples to these instruments. Finally, more transparency on provisioning might also help market discipline to increase proper provisioning and to counter procyclicality.

6.6. Banks' Procyclical Behavior

A panel of 186 European banks is used for the period 1992–2004 to determine if banking behaviors, induced by the capital adequacy constraint and the provisioning system, amplify credit fluctuations. Vincent Bouvatier and Laetitia Lepetit made an application . They found that poorly capitalized banks are constrained to expand credit. They also found that loan loss provisions (LLP) made in order to cover expected future loan losses (non-discretionary LLP) increase credit fluctuations.

By contrast, LLP used for management objectives (discretionary LLP) do not affect credit fluctuations. The results show that the non-discretionary component of LLP amplifies the credit cycle. During an upswing, banks tend to underestimate expected credit risk and then reduce non-discretionary LLP.

Banks' incentives to grant new loans are therefore supported since lending costs are understated. Conversely, sudden identification of problem loans during a downturn restricts banks to make non-discretionary provisions, which reduces their incentive to supply new credits. In addition, this effect is stronger for poorly capitalized banks since

these banks cannot use a capital buffer to face a wave in loan losses. On the contrary, the discretionary component of LLP does not seem relevant to explain credit fluctuations. The adoption of a dynamic provisioning system at the European level may imply the need to harmonize accounting and taxes rules which are very different across countries. The bank regulatory capital which incorporates general provisions up to a ceiling would also need to be changed in order to solely cover unexpected losses[119].

Bank regulators may also have cause for concerns about the issue of banks' loan-loss accounting. If a bank's loan-loss allowance is less than expected losses, then it will ultimately reduce the bank's equity capital[120]. Such a deficit in the loan-loss allowance implies that a bank's capital ratio overstates its ability to absorb unexpected losses.

Massive increases in bank lending accelerate rapid and unsuitable growth and, when the recession comes, it turns into reverse. In almost every recent crisis in the emerging markets, sharp contractions in bank lending appear to have made bad recessions worse. This issue brings the question of : how far the bank regulatory system contributes to this procyclicality.

The question of the procyclicality has several aspects. One concerns the timing of any tightening of capital rules – usually after a crisis when bank lending is being decreased. A second possible element is a tendency in favour of short-term lending, rather than long-term, which means that emerging markets are more vulnerable in a downturn. Another concerns the inherent cyclicality of any invariant minimum capital ratio. A final aspect is that capital ratios themselves could move in a procyclical way because the proposed use of credit rating agencies could lead to this.

6.6.1. Timing of Tightening Capital Rules

The timing of measures to tighten capital or loan classification rules is controversial. It has been argued that regulatory rules should not be tightened when

[119] Ibid.
[120] Ibid.

macroeconomic conditions are adverse . Because sharp changes in reported bad loans undermine for instance, several Asian countries have established timetables for meeting specified capital standards or for adopting realistic rules for loan-loss provisioning[121]. In Thailand, for example, tighter requirements for loan-loss provisioning are being phased in over a two-to-three years transitional period. As each deadline during this period is reached, additional capital can be required.

6.6.2. Procyclicality Arising From Minimum Capital Ratios

Loan losses tend to rise in a recession. To the extent that they are not covered by loan provisions (and in practice these are usually inadequate), such losses will lead to capital write-offs. If capital ratios then fall near or even below the required minimum, banks will have to raise new capital or reduce assets with high risk weights, especially loans. Because raising capital is difficult in a recession, banks are likely to choose the second option and cut lending. The ideal response to procyclicality is for provisions made for possible loan losses (i.e. subtracted from equity capital in the books of the bank) to cover normal cyclical risks. If done correctly, provisions built up in good times can be used in bad times without necessarily(See Jackson et al (1999). It might, however, be noted that capital requirements do incorporate one significant aspect that makes capital ratios less procyclical: the fact that loans to the private sector carry a 100% risk weight while government bonds have a 0% risk weight[122]. In a recession, banks tend to replace some loans with government bonds which lowers the measure of risk-weighted assets and so reduces the capital required.

Japan's problems in the 1990s dramatically illustrate this point. The weakening of growth in early 1992 was at the time regarded as a cyclical downturn in an economy

[121] Eva Catarineu-Rabell Patricia Jackson and Dimitrios P Tsomocos , Procyclicality and The New Basel Accord– Banks' Choice of Loan Rating System Working Paper no. 181, 2002, p. 14

[122] Ibid.

with an underlying growth rate of around 4%. With the benefit of hindsight it was the early stage of a decade when growth would only average 1½% a year[123].

Yet the complexity of addressing procyclicality should not be underestimated. There is no reason to think that the public sector is any more able to forecast the cycle than is the private sector. At the same time, the market has many shortcomings. Market prices are themselves procyclical. Market participants often tend to copy each other ("herding"). Academics and some central banks have shown concerns regarding the impact that Basel II might have on the aggregate behaviour of banks along the cycle, especially in financial stability terms.

6.7. An Assesment Of Basel II Procyclicality in Mortgage Portfolios

Jesús Saurina and Carlos Trucharte evaluate the potential cyclical behaviour of Basel II capital requirements in mortgage portfolios They use a prototype of rating system in the same way as those that banks employ to classify their mortgage obligors when granting a loan. Mortgage markets have been widely studied.

Capital requirements under Basel II for mortgages significantly change depending on the method used by banks for calculating their credit risk parameters, in other words, their PDs. Supervisors must be sure of the accuracy, reliability and application of the inputs that banks may use to determine IRB capital requirements. Mortgages are one of the most researched areas of Basel II . Moreover for many banks, mortgages have the largest share in their credit portfolios. Jesús Saurina and Carlos Trucharte estimate a probability of default model for mortgages, using information of roughly 3 million borrowers. This model includes several risk profile variables (liquidity constraints and default and delinquency past history of each borrower) and a macro variable (GDP growth rate) and allows s to assign to each individual a single probability of default[124].

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[123] Ibid.
[124] D W Ervin, and T Wilde, 'Procyclicality in the new Basel Accord', Risk, October , 2001,p.23

Based on these probabilities and on different approaches, depending on the nature of the measure to be calculated, they obtain distinct averages that allow them to study their properties and adequacy for regulatory capital.

All in all, they show that Basel II procyclicality is an open issue that deserves careful research for mortgage portfolios and, by extension, for corporate and retail ones. In any case, the Basel II framework has within itself the mechanism to deal with this issue (i.e. rating system properties and supervisory implementation).

There are articles examining the implications of risk-based regime for procyclicality of minimum capital requirements. Particularly whether the choice of loan rating system by the banks would significantly increase the likelihood of sharp increases in capital requirements in recessions, creating the potential for classic credit crunches[125]. This makes the question of which rating schemes banks will use very important. It should be explored whether banks would choose to use a countercyclical, procyclical or neutral rating scheme. The results indicate that banks would not choose a stable rating approach, which has important policy implications for the design of the Accord. It makes it important that banks are given incentives to adopt more stable rating schemes. Under Basel II , capital requirements for many banks will be based on their own assessments of the probability of default of individual borrowers. It is examined that the implications of this risk-based regime for the cyclicality of capital requirements – in particular whether the choice of particular loan rating systems by the banks would make sharp increases in capital requirements in recessions more likely[126]. This is an important policy question because substantial changes in capital requirements would increase the likelihood of 'credit crunches'.

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[125] Ibid

[126] D. Hancock, A. Lehnert, W. Passmore , An Analysis Of The Potential Competitive Impacts Of Basel II Capital Standards On U.S. Mortgage Rates and Mortgage Securitization , April 2005 , p.7.

All regimes with minimum capital requirements have the potential to generate procyclical effects, because capital available to meet the requirements becomes more scarce in recessions as banks make provisions and write off defaulted loans. The new element under the proposed revised Basel Accord is the potential for capital requirements on non-defaulted assets to rise in recessions if banks downgrade loans. The paper finds that the extent of this additional procyclicality depends on the nature of the rating systems used by the banks.

A number of banks have carried out careful mapping exercises to ensure that their rating approaches are very close to those of the main rating agencies which are designed to be relatively stable over the cycle. Many other banks have adopted an approach based on a Merton-type model which uses information on the current share price and liabilities. Because this approach uses current liabilities, it is in some respects similar to a rating that is conditioned on the point in the cycle. Jesús Saurina and Carlos Trucharte estimate the likely increase in capital requirements in a recession, depending on whether a bank is using one or other of these two rating approaches. Portfolios of corporate exposures are constructed using information on the actual quality distribution of corporate loans made by some large banks. The extent to which banks would downgrade loans in their rating bands in a recession is estimated using transition matrices (for 1990-92) calculated from Moody's ratings and from ratings produced by a Merton-type model[127]. It is found that ratings based on Moody's approach lead to little, if any, increase in capital requirements for non-defaulted assets, whereas ratings based on a Merton-type model lead to a 40% to 50% increase.

The results indicate that banks would not choose a stable rating approach. Bank profits would be higher if they adopted a system that produced ratings that varied over the economic cycle, because such a system would enable them to transfer the cost of recessions to the rest of the economy. Procyclical ratings could have macroeconomic consequences by encouraging overlending relative to risk in booms and reduction in lending in recessions. This underlines the need for banks to be given incentives to adopt more stable rating regimes to support their capital requirements.

[127] Ibid

Strongly procyclical capital requirements could cause severe macro economic effects by creating credit crunches in recessions, thereby quicken the economic downturn. They could also encourage excessive lending in booms. An important policy issue is therefore whether banks would choose to adopt more stable ratings across the cycle, which would moderate the procyclical effects, or whether they would adopt ratings conditioned on the point in the cycle even though this could lead to an inability to meet demands for credit in a downturn[128].

To conclude that it seems unlikely that Basel II implementation will have significant effects on residential mortgage market competition between adopters and nonadopters. The market has already effectively adjusted to a lower regulatory capital charge by using guarantees, by using other forms of securitizations, and by blending higher- and lower-risk mortgage portfolios to arbitrage the current one-size-fits-all capital regulations[129]. If there were any effect on mortgage rates, such adjustments have already occurred. Moreover, depository institutions will still be subject to leverage requirements and leadt corrective actions, suggesting that depositories will continue to be conservative in their capital management. Therefore they would likely continue to mix mortgages and other assets.

Finally, to the extent that adopters seek a better credit agency rating then assumed. Risk-based pricing in mortgage markets is more common assumed, competitive impacts from the implementation of the Basel II capital standards would be smaller than predicted. Indeed, potential income gains from capital cost savings could flow in the long-run not to adopters, but to homeowners through lower mortgage rates. Nevertheless, it is thought that nonadopters would be largely unaffected by the implementation of Basel II capital standards.

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[128] M Shubik, The theory of Money and Financial Institutions, Cambridge, Massachusetts: The MIT Press, 1999, p.37

[129] D. Hancock, A. Lehnert, W. Passmore , An Analysis Of The Potential Competitive Impacts Of Basel II Capital Standards On U.S. Mortgage Rates and Mortgage Securitization , April 2005 , p.7.

PART IV
FINANCIAL REPORTING AND BASEL II

Financial Reporting has gained importance much more for the owners of the companies and the investors. To make comparisons easily, the investors want to have confidence on financial statements. Moreover, for the senior executives of the companies it is so significant to make strategic plans and expectations for the future. Regulations are developed continuously for a transparent financial reporting system.

7. FINANCIAL REPORTING

Financial statements present the status of a firm's assets, revenues, expenses and liabilities. The financial health of a company can be identified from the quantitative analysis of financial statements. A financial statement shows the inflow and outflow of money and indicates changes in financial status of the company over time. Financial statements are very important for both short-term and long term planning. Companies use them for business forecasting and also for raising capital.

7.1. Types of Financial Statements

There are four main types of financial statements to document the financial status of a company. They are[130]:

1. Balance sheets show what a company owns and what it owes at a fixed point in time.
2. Income statements show how much money a company made and spent over a period of time.
3. Cash Flow statements show the exchange of money between a company and the outside world over a period of time.

[130] Carolyn Sprague, Financial Statemnets , EBSCO , 2008 , p.1.

4. Statements of shareholder equity show changes in the interests of the company's shareholders over time.

7.2. Users of Financial Statements

There are different users of the information on the financial statements. It depends on the size of a company.

Internal users of financial information may be [131]:

1. Owners or managers who use financials to determine future planning.
2. Individual employees who may be negotiating compensation or groups of employees (Unions) who are involved in collective bargaining.
3. Stockholders who review annual report figures.

External users of financial statements include[132]:

1. Investors who may want to invest personal money.
2. Banks or financial institutions that may lend capital (money).
3. Government bodies to insure compliance and accurate reporting.

The size and complexity of an organization affect who use those financial statements. For instance, in small companies, financial statements are used primarily for the benefit of the business owner. He uses them to determine the cash flow, that is the revenue and the expenses of the company. The information on the financial statement provides owners or managers to make short term and long term plans according to the progress of the financial status. For large organizations or corporations, the situation is different. Whereas, financial statements can be very complex because of this, they

[131] S. Johnson, What If IFRS Replaced GAAP? CFO.com August 16, 2008, from http://www.cfo.com/article, 2008

[132] Ibid

include footnotes. They give additional information about each item on the balance sheet, income statement and cash flow statement. Larger organizations usually have more external users accessing their financial information .

7.3. Trends in Financial Reporting

Two trends within the past decade have profoundly shaped the way in which companies are required to compile and report on their financial status[133].

1. The rise of global organizations and markets has increased the need for the adoption of worldwide accounting standards - currently the US uses GAAP and most of the rest of the world uses or is adopting IFRS.

2. Corporate scandals involving financial mismanagement and accounting fraud led to the adoption of the Sarbanes-Oxley Act of 2002[134]*.

The role of the CFOs (Chief Financial Officer) in organizations have changed markedly in accordance with these issues. Finance departments of the companies have more responsibility anyway. Accounting standards changed and strict compliance rules took place in paralel to these develepments. The affects of compliance and reporting are also discussed in terms of the implications for investors who have become increasingly prudential of risky capital investments[135]. Organizations try to balance compliance and auditing standards for potential investors to have confidence in the organizations. Because they try to decide on where to invest.

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[133] A.D., US Moves to Accept IFRS Accounting. August 16, 2008, from EBSCO Online DatabaseBusiness Source Premier.

[134] The Sarbanes-Oxley Act of 2002, also known as the Public Company Accounting Reform and Investor Protection Act of 2002 and commonly called Sarbanes-Oxley, Sarbox or SOX, is a United States federal law enacted on July 30, 2002 in response to a number of major corporate and accounting scandals including those affecting Enron,Worldcom.

[135] P. Joos and M. Lang.; The Effects of Accounting Diversity: Evidence from the European Union. Journal of Accounting Research 32 , 2002, p.146.

7.4. Effects of Globalization on Financial Standards

The rise of globalization of markets around the world has increased the interaction between companies in many markets . Many companies maintain offices outside of their countries' borders or many companies are acquired by other companies of other countries. The rise of cross-border and multinational organizations has only highlighted the differences in practices kept by different divisions of multi-nationals[136]. In the area of financial reporting and accounting, this is shown by the different accounting standards . However, there is a general agreement that US-GAAP and IFRS standards should be reconciled to move toward a global standard.

IFRS are accounting rules ("standards") issued by the International Accounting Standards Board (IASB). It is an independent organization based in London, UK. They documented a set of rules that would apply equally to financial reporting by public companies worldwide. Between 1973 and 2000, international standards were issued by the IASB's predecessor organization, the International Accounting Standards Committee (IASC), a body established in 1973 by the professional accountancy bodies in Australia, Canada, France, Germany, Japan, Mexico, Netherlands, United Kingdom and Ireland, and the United States[137]. During that period, the IASC's rules were described as "International Accounting Standards" (IAS). Since April 2001, this rule-making function has been taken over by IASB. The IASB describes its rules under the new label "International Financial Reporting Standards" (IFRS). However, it continues to recognize (accept as legitimate) the prior rules (IAS) issued by the IASC. IFRS have uniform, clear accounting standards which are required for all public companies.

Globalization of capital markets increases the need for a single global accounting, reporting and disclosure set of standards. Due to the increasing volume of cross border capital flows and the growing number of foreign direct investments via mergers and acquisitons in the globalization era, the need for the harmonization of

[136] Ibid
[137] Ray Ball, IFRS: Pros and Cons for Investors, University of Chicago, 2005, p. 8.

different practices in accounting and the acceptance of worldwide standarts has arisen[138].

7.4.1. Norwalk Agreement

Globalisation induces not only integration of capital markets, foreign capital flows, FDI's and international mergers but also global economic crises and possible losses of investors which forces practitioners to question the reliability of financial statements[139]. Different entries of similar business activities in different countries' financial statements causes various results. To solve this problem, a need for unity in financial reporting has arisen.

This lead to the increase of studies on eliminating different practices in national accounting standarts. It aims the convergence of them. Although IFRS and US GAAP are widely used by accountants, the differences between them arises the need for a globally accepted accounting language. Serving this purpose, **Norwalk Agreement** which was signed on September 18th 2002 by FASB and IASB was a milestone. The amendment numbered 1606/2002 by European Parliament on July 19th 2002 ensured that international accounting standarts are applied by member countries of EU[140]. At their joint meeting in Norwalk, Connecticut, USA on September 18, 2002, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) each acknowledged their commitment to the development of high-quality, compatible accounting standards that could be used for both domestic and cross-border financial reporting. At that meeting, both the FASB and IASB pledged to use their best efforts to (a) make their existing financial reporting standards fully compatible as soon as is practicable and (b) to coordinate their future work programs to ensure that once achieved, compatibility is maintained[141].

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[138] Deniz Umut Erhan, Adoption of IFRS in the Globalisation Era and the Turkish Experience, Başkent University, 2005, p.2.
[139] Ibid
[140] www.fasb.org/news/memorandum.pdf *; 14.10.2008*
[141] Ibid

7.5. Current Situation In Turkey

Turkish Accounting Standart Board has been founded in our country to finish different applications in accounting and financial reporting. It aimed to form consistent accounting standarts. The Board wants to integrate with the global world and it will be also very useful for the adoptation to the EU regulations. Public companies and banks in Turkey has been preparing their financial statements consistent with IFRS since 2005.

Different governmental bodies in Turkey issued their own standarts used only by the institutions related to themselves until 2004 .Certainly, this situation had caused lots of confusion. To end this confusion, Turkish Council of Accounting Standarts was put in charge. The Council agreed to apply IFRS exactly and publicly disclosured the translation of IFRS as Turkish Accounting Standarts (TAS) with respect to the copyright agreement with IASB[142]. Public companies, banks and insurance companies had to begin using these standarts in their financial statements dated December 31th 2006. Most of them started using these standards a year early. The new commercial law which is expected to come into effect in a near time will oblige all companies to apply IFRS harmonised TAS. However SME's will use a simplified version of the standarts.

Current situation of adoption in Turkey can be summarized as follows:

1. Simplified standarts are being prepared for SME's.
2. Many ISE quoted companies have begun using IFRS based consolidated financial statements since 2004.
3. Banking Regulating and Supervision Agency declared that they would comply with IFRS based TAS[143].
4. There is duality in practice because ISE quoted firms apply TAS but non quoted ones do not apply TAS.

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[142] Deniz Umut Erhan, Adoption of IFRS in the Globalisation Era and the Turkish Experience, Başkent University, 2005, p.8.

[143] *www.bddk.org.tr/turkce/Raporlar; 23.11.2008*

7.5.1. The Effects of TAS on Financial Statements

The effects of TAS on financial statements can be listed as follows:

1. Classification and content
2. Measurement and valuation
3. Details on footnotes and explanatory information

7.5.1.1. Effects On Classification And Content

Some classifications in financial statements change with the adoption of TAS. According to TAS, former entries in balance sheet related to national standarts and regulations are dropped. The entries which were out of statements because of same reason are added. The same situation is binding in income statement also[144].
In income statement, income and expenditure classification and profits are remade.
In cash flow statements, direct and indirect methods classify cash flows differently. Cash flows are to be reported in three main parts as operating activities, investment activities and financial activities.

7.5.1.2. Effects On Measurement and Valuation

TAS has brought important changes in measuring balance sheet and income statement entries. Many entries in financial statements are measured by fair value.

7.5.1.3. The Content of Footnotes and Explanatory Information

TAS requires more detailed information . It increases the need for footnotes and explanatory information. Firm's measurement and valuation principles are explained in footnotes.

[144] N.Akdoğan , 'Applying the Turkish Accounting Satnadards' , İSSMMO, Mali Çözüm , March 2007.

ISE-30 quoted companies generally take the transition process seriously and prepare their reports including data like vision of company, social responsibility, product photos and graphs in the name of visuality, CEO's message, corporate management rapport like foreign companies[145]. An important progress has been observed in most companies. However , some of ISE companies dont't seem to take the transition process seriously. They make a few arrangements. Neverthless, if a standart procedure is accepted by publicly held companies in ISE, this will lead to better comparability. If the standards are correctly adopted , it is thought that both companies and users of financial statements will benefit from the transition process very much.

7.6. Concepts of Harmonization and Convergence

Harmonization in accounting means the application of several methods for the accounting practices, for integration purposes among the accounting practices. In other words, harmonization means the identical accounting policies adopted by the enterprises all through the country[146]. Harmonization can be examined in two parts; one is the legal harmonization and the other one is the material harmonization . If accounting practices are affected by the regulations, it is called legal harmonization. If they are not affected, the material harmonization occurs.

The concept of harmonization relates directly to the accounting policies. The accounting policies is dependent on the legal regulations and/or standards. Therefore, the regulations that affect the applications in a country have great importance. The material harmonization is related to the adoption of the accounting policies determined by the legal regulations and/or standards. Nowadays the concept of harmonization is defined from a different point of view. According to this, there should be a leader or a follower standard setting bodies (country or organization) to mention about "harmonization."[147]

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[145] www.imkb.gov.tr ; 21.10.2008

[146] Aydın Karapınar, Zaif Ayıkoğlu and Rıdvan Bayırlı ; Convergence and Harmonization With IFRS : A Perspective of Turkey, p.3.

[147] Herman Don and W. Thomas "Harmonization of Accounting Measurement Practice in the European Committee," Accounting and Business Research, 1995, p. 254.

The harmonization processes depend on harmonization of the national accounting standards with the standards of the leader standard setting body. The follower standard setting body tries to harmonize its accounting standards to the standards of the leader standard setting body.

On the other hand, there is no leader standard setting body for the concept of convergence. Convergence means the formation of high quality and the best accounting standards by the two standards setting bodies[148]. After the highest quality standards are determined; standard setting bodies change the standards accordingly. If there is no high quality standard among the existing, a new standard is formed.

7.6.1. Applications in Turkey

In Turkey, governmental bodies have made studies on the regulations on accounting procedures. Capital Market Board is one of them. However the professional bodies also made surveys in this issue. The Union of Chambers of Certified Public Accountants in Turkey has issued Turkish Accounting Standards. On the other hand, The Banking Regulation and Supervision Agency has prepared accounting standards for the banks and issued the same in the year 2002.

When it is analyzed from the perspective of harmonization, Turkey has published the standards in the first stage . There are many things to be done to apply the standards. The penalties should be clearly defined at the earliest time when there is incompatibility to the standards.

The standards should be supported by the other institutions and organizations. For instance, tax legislation can be regulated in parallel to these developments. Moreover, the Ministry of Finance should not hesitate in the adoption of the standards. It is because about 70% of the tax revenues of Turkey are made up of indirect taxes.

[148] F. Hansen , Convergence Come Together, Business Finance , EBSCO , 2007 , p.17

The level of corporation tax is only 9%. Even under the worst conditions, the effects of standards on the taxes should be about 9%[149].

The standards made for the small and medium seized companies have great importance in the application of the standards. Here , the most significant step is to determine the numerical size for the small and medium seized enterprises regarding the country conditions. Most of the accountants in Turkey are specialized in taxes. The increase in the number of accountants enhance competition . The other step that should be fulfilled is training. The responsibility for training is on the Board, UCCPAT and the academicians. The training courses for the accounting standards should be included in universities. To provide all of these steps, the most significant responsibility is on the government agencies such as Finance Ministry, Capital Market Board and Banking Regulation and Supervision Agency .

7.7. Accounting Standards

International Financial Reporting Standards (IFRS) are a set of common accounting standards that have been adopted by over 100 countries in the world- including the European Union and many emerging markets[150]. Moreover, the US is the only major economy in the world which operates outside of the IFRS standards.

7.7.1. GAAP

Accounting standards or principals have been put into place as guidelines for helping companies to prepare, present and report of financial statements[151]. The United States uses GAAP standards for this objective. US-GAAP standards are applied to financial reporting for all publicly traded companies in the US. Moreover, many privately held companies use this standards in their financial reporting. The SEC (Securities and Exchange Board) set the obligation for publicly traded companies to use

[149] C. Mugan Simga and N.Akman Hosal ' Convergence to IFRS : The Case of Turkey', International Journal of Accounting,Auditing and Performance Evaluation,Volume 2, p.129.
[150] Christopher Nobes, The Survival of International Differences Under IFRS: Towards a Research Agenda, Accounting and Business Research, Vol.36., No:3, p.234
[151] Carolyn Sprague, Financial Statemnets , EBSCO , 2008 , p.4.

US-GAAP principals. The GAAP standards are set by FASB (Financial Accounting Standards Board). The FASB is a non-profit organization that has been designated by the SEC. Its assignment is to set accounting principals in the public interest.

7.7.2. IFRS

International Financial Reporting Standards (IFRS) are a set of common accounting standards that have been adopted by over 100 countries in the world. EU countries and emerging markets are the ones adopting these standards. To date, the US is the only major economy in the world to operate outside of the IFRS standards, but there is a general agreement that US-GAAP and IFRS standards should be reconciled to move toward a global standard.[152]

The increase of globalization in the world has increased the interaction between companies in many markets. Many companies maintain offices outside of country borders or companies acquire the other companies in different countries. In the area of financial reporting and accounting, it is shown by the different accounting standards such as GAAP and IFRS.

7.7.3. GAAP versus IFRS

Emerging markets (such as China) have been moving more quickly to adopt IFRS. Therefore, many US- based CFOs are likely to feel some intense pressure.
There are thoughts such as CFOs at U.S. based companies should be taking specific steps to ensure that they are prepared to the convergence of financial reporting. According to most of the people in this sector the impact will be significant. They think that the changes could dramatically affect U.S. companies' financial statements. For

[152] Ibid

global U.S. companies, foreign statutory reports may be prepared in IFRS whereas overseas controllers may have a better understanding of IFRS than U.S. GAAP.

7.8. Integration of International Standards

Japan, China and Canada has been actively working on converging individual country accounting standards with international standards. The main objective of creating a single high quality global accounting standard is a part of the process. Some are already seeing inconsistencies with the way the standards are applied - there will likely be many divergent views about how to apply the new standards[153].

The IASB (International Accounting Standards Board) aims to provide consistency in the application. All European Union countries along with US subsidiaries of EU owned companies converted to IFRS in 2005. Ernst and Young declared the EU conversion to IFRS to be a very successful undertaking and have increasing hopes that the US conversion will go smoothly[154]. US GAAP rules are considered to be much more detailed than IFRS rules Because it is thought that the chance of litigation is much higher in the US.

7.8.1. Reconciliation of IFRS & GAAP

The United States supports the significance to remove obstacles to non-US companies and the free flow of capital. One important point about reconciliation is that both GAAP and IFRS standards need significant improvement. Moreover, there are ideas in favor of the resources being used to eliminate the difference could be beter applied to developing a new common set of standards. Although the transition to global accounting and audit standards creates difficulties for CFOs who must still work with multiple standards, IFRS/US GAAP convergence will streamline the capital raising process for U.S.-based companies, reduce costs and risks in the market, and bring

[153] Christopher S.Armstrong, Mary E. Barth , Market Reaction to the Adoption of IFRS in Europe , September, 2008, p.14.
[154] Ibid

greater transparency and comparability to all companies engaged in international business[155].

7.8.1.1. Auditing- Sarbanes Oxley

Internal auditing of company financials has changed radically since 2002 when Sarbanes-Oxley (also referred to as SOA or SarbOx) became law. The corporate accounting scandals including WorldCom and Enron lead to changes in the accounting and reporting of financials. The decline in public trust because of these accounting scandals caused the legislation.

Sarbanes –Oxley aimed to improve quality and transparency in financial reporting, to increase the independence of firms, corporate responsibility and the usefulness of corporate financial disclosure. Section 302 and 404 of SarbOx cover the establishment of internal controls and the auditing of the same.

7.8.1.2. Company Issues with SarbOx & Remediation

With the passage of SarbOx legislation in 2002, many companies were acknowledged to have "over-reacted" by putting excessive processes in place to avert any potential accounting issues or any semblance of impropriety on the part of the organization in its financial disclosure.[156] Remediation of these issues provided significant feedback and self-accountability for companies. Remediation allows companies to identify internal deficiencies in the internal controls. Many organizations have had deficiencies in distinguishing between operational and design weaknesses. Neverthless, the identification of issues is very significant. Some of the processes accepted as deficiency are: Inadequate staffing, problems in the financial closing process and application of accounting principals. SOA is very important for investor confidence. Some companies were operating with less satisfactory internal controls but

[155] M.E: Barth, G.Clinch and T.Shibano , International Accounting Harmonization and Global equity Markets, Journal of Accounting and Economics, 1999, p.211.
[156] en.wikipedia.org/wiki/Sarbanes-Oxley_Act; 07.11.2008

these are eliminated. Implementing SOA sections 302 and 404 lead to improved corporate governance.

There are also some reactions to SarbOx legislation such as:

1. Compliance costs are too high.
2. Audit requirements for small companies should be decreased.
3. Decrease the yearly requirement for some tests that are not high risk.
4. Terminology and rules can be more clear which would be assessed regularly.

Recent surveys indicate that the cost of compliance is falling for companies, but it is stil a significant cost. Whereas, changes in auditing standards will require a change in law and it won't decrease compliance costs very much at all.

The responsibility of CFOs have increased after the scandal of Enron and similars and certainly after SOA. They have to be more careful in financial reporting and accounting. They have a more strategic role within organizations afterwards. There is almost zero tolerance in the accounting world for mismanagement of financials and the disclosure of them.Financial statements of a company are significant especially for investors. They want transparency in reporting.

7.9. Convergence of International Accounting Standards

There are several differences between the accounting applications of countries. Such differences result from the different economic, political and social conditions. The differences between the countries are grouped under four headlines[157]:

[157] Aydın Karapınar, Zaif Ayıkoğlu and Rıdvan Bayırlı ; Convergence and Harmonization With IFRS : A Perspective of Turkey, p.3.

1. Determination of the accounting applications by the professional bodies or legal regulations.

2. Flexibility and uniform accounting practices

3. Prudence and optimism in evaluation

4. Confidentiality and transparency in the disclosure of the information

Many organizations have tried to harmonize the accounting standards. These organizations may be listed as follows:

- International Accounting Standards Board (IASB),

- European Union Commission (EUC),

- International Organization of Securities Exchange Commissioners (IOSCO),

- International Federation of Accountants (IFAC),

- United Nations Economic & Social Council (ECOSOC),

- Organization for Economic Cooperation and Development (OECD).

These organizations common goal is international harmonization and certainly, IASB is the one of the most important organization. IASB is the institution which has been issuing standards for the harmonization of the accounting policies between countries since 1973 .

In other words, the main objective of the IASB is to decrease the cost in the preparation of the financial statements and increase the degree of comparison of the financial statements . Because it will help investors in the decision making process.

IASB aims to provide international harmonization in accounting applications. The other important function of IASB is to constitute a model also for the developing countries who are not able to establish accounting standards.

There are two significant steps taken by the IASB for international harmonization.

7.9.1. Efforts Made in Co-operation with IOSCO

Because of the agreement signed between the IASB and the International Organization of Securities Commissions (IOSCO), one of the organizations arranging the international capital markets, in 1995, the harmonization activities started[158].

In this context, the number of alternative applications stated in the accounting standards decreased. As a result of these activities conducted by IOSCO, Committee of Chairmen has approved the 30 IFRS that be used by the listed companies in the preparation of the financial statements for issuing the international stocks and bonds.

This need has enhanced the international acceptance of the standards and played an important role in decreasing the differences in application among the countries.

7.9.2. Convergence Studies With FASB

The collaboration between IASB and FASB starts from 1987. With the agreement called Norwalk Agreement, the Organizations reached a settlement on developing high quality and compatible accounting standards to be used both by the national and international markets[159]. It is the most important step taken in the field of convergence of the standards.

After this settlement, both IASB and FASB revised many of the standards. They eliminated some of them and also rewrote some of the others. This progres stil goes on.

The following amendments are included in years 2007 and 2008 agenda of IASB. The convergence projects take an important place.

The short term convergence plan between the FASB and the IASB is as follows:

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[158] http://www.iasplus.com/restruct/whatis.htm ; 27.10.2008

[159] Lee H. Radebaugh and S.J. Gray , International Accounting and Multinational Enterprises, New York, John&Sons Inc., p.166

To be examined by the FASB	To be examined by the IASB
Fair value option*	Borrowing costs
Impairment (jointly with the IASB)	Impairment (jointly with the FASB)
Income tax (jointly with the IASB)	Income tax (jointly with the FASB)
Investment properties**	Government grants
Research and development	Joint ventures
Subsequent events	Segment reporting
FASB Note: *On the active agenda at 1 July 2005 ** To be considered by the FASB as part of the fair value option project	*IASB Note:* Topics are part of or to be added to the IASB's short-term convergence project, which is already on the agenda.

Table 12: Short-term convergence plan between FASB and IASB
(Source:http://www.iasb.org)

Major accounting firms also support for convergence. On November 9, 2006, the six biggest international audit networks have issued a report. In this report , they set out the steps that must be taken to strengthen financial reporting and the audit function.

To benefit the global financial markets and their stakeholders, the report urges completion in the near term of current convergence processes, notably 'the effort by the International Accounting Standards Board (IASB) and the U.S. Financial Accounting Standards Board (FASB) to harmonize differences between international and U.S. reporting standards[160].

EU Works hard for the harmonization of the accounting standards. As a result of the efforts done by EU, the listed companies in the EU capital markets have been preparing the financial statements according to the IAS/IFRS since 2005.

Convergence refers to the process of narrowing differences between IFRS and the accounting standards of countries. Depending on local political and economic factors, these countries could need financial reporting to be in compliance with their own standards without formally recognizing IFRS or permit only listed foreign companies to comply with either.However, convergence can offer advantages despite the domestic standards. It is a modified version of adoption.

[160] http://www.iasb.org

Several countries that have not adopted IFRS at this point have established convergence projects that most likely will lead to their acceptance of IFRS in the near future. Since October 2002, the IASB and the FASB have been working systematically toward convergence of IFRS and U.S. GAAP. The IASB recently started a similar, less urgent and ambitious convergence project with Japan.

7.9.3. A Survey About Convergence

Recently, a single set of high quality global accounting standards is required by the companies and investors. Convergence efforts have been going on. However, in practice it is seen that companies report significant differences in many areas of accounting between IFRS and US GAAP.

Ernst& Young conducted a survey in 2006 . This survey was made on 130 companies which has a share of % 42 in the 2006 Financial Times Global 500. IASB and FASB work much for the convergence. Despite this, the survey obtained that there are 200 unique IFRS to US GAAP differences when compared. The first difference is **business combinations**. It may result from the date at which the fair value of consideration is measured. % 22 was related with purchase price measurement[161]. Second one is about the measurement of **financial instruments**. **Derivatives and Hedge** accounting take an important share . Other major differences can be listed as pensions acounting , provisions and taxation. The survey explained that the convergence efforts aim to reduce these differences arising between IFRS and US GAAP in the future. Neverthless, it is observed that several important and potentially significant differences will remain and continue to cause complexity for preparers and readers of the financial statements.

[161] Sean Callaghan and Marie Treacy , Towards Convergence, IFRS to US GAAP Differences, Accountancy Ireland , December 2007,Vol. 39, No.6, p. 10.

7.10. Fair Value Accounting

A major feature of IFRS standards is illustration with fair value accounting ["mark to market" accounting]. These can be as follows[162] :

1. IAS 16 provides a fair value option for property, plant and equipment;
2. IAS 36 requires asset impairments (and impairment reversals) to fair value;
3. IAS 38 requires intangible asset impairments to fair value;
4. IAS 38 provides for intangibles to be revalued to market price, if available;
5. IAS 39 requires fair value for financial instruments other than loans and receivables that are not held for trading, securities held to maturity; and qualifying hedges (which must be near-perfect to qualify);
6. IAS 40 provides a fair value option for investment property;
7. IFRS 2 requires share-based payments (stock, options, etc.) to be accounted at fair value; and
8. IFRS 3 provides for minority interest to be recorded at fair value.

Both IASB and FASB intend to expand this list over time. The view in favor of fair value accounting is fair value gives more information into the financial statements. Fair values contain more information than historical costs because[163]:

1. Observable market prices that managers cannot materially influence due to less than perfect market liquidity; or
2. Independently observable, accurate estimates of liquid market prices.

Incorporating more information in the financial statements by definition makes them more informative, with potential advantages to investors, and other things equal it

[162] Ray Ball , IFRS : Pros and Cons for Investors , University of Chicago, p.19.
[163] Ibid

makes them more useful for purposes of contracting with lenders, managers and other parties[164].

Over recent decades, the markets for many commodities and financial instruments, have become more deeper and more liquid. Some of these markets, such as derivatives did not even exist thirty years ago. There has been great growth in electronic databases containing transactions prices for commodities and securities. Because of these developments, fair values gained more importance in comparison to historical cost.

7.10.1. Debate on Fair Value Accounting

There is a debate whether IASB has pushed fair value accounting too far. There are many potential problems with fair value in practice. Firstly, market liquidity is a potentially important issue in practice. Spreads can be large enough to cause substantial uncertainty about fair value and hence introduce noise in the financial statements[165]. However, in illiquid markets allow them to manipulate fair value estimates. For instance, companies tend to have positively correlated positions in commodities and financial instruments. Moreover they can not convert them into cash simultaneously at the bid price. When liquid market prices are not available, firms report estimates of market prices, not actual market prices. If liquid market prices are available, fair value accounting reduces opportunities for self-interested managers to influence the financial statements by exercising their discretion over realizing gains and losses through the timing of asset sales[166].

Volatility is accepted as an advantage in financial reporting most of the time, whereas it reflects new information into earnings, and similarly directly into the balance sheets. However, volatility becomes a disadvantage to investors and other users

[164] Ronald A. Dye and Shyam Sunder, 'Why Not Allow the FASB and IASB Standards to Compete in the US' Accounting Horizons, p.259.
[165] Ibid
[166] Robin Ashok and Gil Sadka , Are Timeliness and Conservatism Due to Debt or Equity Markets? Theories of Accounting' , 2006 , University of Chicago , p.11.

whenever it reflects managerial manipulation. Neverthless , IASB and FASB seem determined to use fair value .

FASB staff member L. Todd Johnson says (2005):

"The Board has required greater use of fair value measurements in financial statements because it perceives that information as more relevant to investors and creditors than historical cost information. Such measures better reflect the present financial state of reporting entities and better facilitate assessing their past performance and future prospects."

After **the sub-prime crisis in the US** which carried the world into a global crisis, the fair value accounting became an open question. Thomas Jones, vice chairman of the International Accounting Standards Board, says 'Fair value accounting may be imperfect, but it is better than the alternatives'[167]. He defends the idea of mark-to-market accounting.

William Isaac, FDIC chairman from 1978 to 1985 and now the chairman of a consulting firm that advises banks told the Securities and Exchange Commission that mark-to-market accounting rules caused the current financial meltdown. He asserts the accounting system is destroying too much capital, and therefore diminishing bank lending capacity by some $5 trillion. In spite of these debates, G-20, the world's top finance ministers issued a verdict whih explains fair value is innocent in the occurance of this crisis. They advocate mark-to-market financial reporting was nowhere cited as a major cause of the collapse of financial institutions. They say that excessive risk-taking and sloppy judgments caused the crisis. That is to say, there are opponents and advocates of the fair value ccounting after the crisis which affect the whole world.

[167] http://www.cfo.com/index.cfm/l_emailauthor/12498804/c_2984368/2985076 ; 05.12.2008

7.11. Implications for Investors

The use of financial information in decision making of investments is becoming more important. Because the globalization of financial markets have increased.Linda Chatman Thomsen, director of the SEC's division of enforcement (Taylor, 2007) says , "Information regarding a company's earnings is one of the most important factors that many investors consider in making an investment decision, and it is essential that the information companies provide be clear and accurate,"

After corporate accounting scandals, investors confidence decreased. They give so much importance to auditing and compliance in financial reporting. They want transperancy in reporting. Investors find companies responsible for the accuracy of their financial reporting.

CFOs and other executives assignment have grown to provide investor confidence. Most investor rating firms include this element in their assessments.
The trends in accounting and auditing standards heve been influenced by globalization. The borders are moved after globalization. Compliance, financial disclosure and transparency gained more significance to attract money for investment.The Chief Financial Officers have strategic roles to apply these issues.

7.11.1. IFRS Advantages for Investors

There are ideas in favor of international adoption of IFRS will offer several advantages. These include:

1. IFRS promise more accurate, comprehensive and timely financial statement information, relative to the national standards they replace for public financial reporting in most of the countries adopting them, Continental Europe included[168].

[168] H. Ashbaugh and M. Pincus , domestic Accounting Standards , IFRS and the Predictability of earnings, Journal of AccountingResearch, p.428.

2. Improving financial reporting quality allows small investors to compete better with professionals

3. International adoption of IFRS will make financials comparisons easier.

4. It wil increase market efficiency.

5. Reducing international differences in accounting standards assists to some degree in removing barriers to cross-border acquisitions and divestitures, which in theory will reward investors with increased takeover premiums[169].

Therefore, IFRS increase the ability to compare and decrease information costs and information risk to investors .

Indirect advantages to investors arise from improving the usefulness of financial statement information in contracting between firms and a variety of parties, notably lenders and managers (Watts, 1977; Watts and Zimmerman, 1986). Increased transparency causes managers to act more in the interests of shareholders. Particularly, loss recognition in the financial statements increases the incentives of managers to attend to existing loss-making investments and strategies more quickly (Bradley, Desai and Kim (1988)).

Fair value accounting rules aim to incorporate more-timely information about economic gains and losses on securities, derivatives and other transactions into the financial statements, and to incorporate more-timely information about contemporary economic losses ("impairments") on long term tangible and intangible assets[170]. IFRS promise to make earnings more informative and therefore, more volatile and difficult to forecast.

7.11.2. Effect on Investors of Uneven Implementation

Substantial international differences in financial reporting are inevitable. It is argued that there are political and economic influences on financial reporting which

[169] Ibid

[170] www.cfo.com\US ; 04.12.2008

remain local. Uneven implementation decreases the ability of uniform standards to reduce information costs and information risk, which were described as advantage to investors of IFRS.

The fundamental reason for being skeptical about uniformity of implementation in practice is that the incentives of preparers (managers) and enforcers (auditors, courts, regulators, boards, block shareholders, politicians, analysts, rating agencies, the press) remain primarily local[171].

Sir David Tweedie, IASB Chairman, says: "As the world's capital markets integrate, the logic of a single set of accounting standards is evident. A single set of international standards will enhance comparability of financial information and should make the allocation of capital across borders more efficient. The development and acceptance of international standards should also reduce compliance costs for corporations and improve consistency in audit quality."

Accounting accruals require at least some element of subjective judgment. Therefore they can be influenced by the incentives of managers and auditors.

In sum, uneven implementation of IFRS seems inevitable. Fair value accounting involves judgments about future cash flows. It could increase information processing more costly. Other evidence supports this conclusion. Leuz (2003) reports that the financial reporting quality of German firms listed on the New Market does not depend on their choice of U.S. GAAP or IFRS (presumably it is determined by preparers' incentives, not by accounting standards). Ball and Shivakumar (2005) report substantial differences in reporting quality between U.K. public and private firms, despite them using identical accounting standards. Burgstahler, Hail and Leuz (2006) and Peek, Cuijpers and Buijink (2006) report similar evidence for wider samples of EU public and private firms. The focus tends to be on what the rules say, not on how they are implemented in practice. There are overwhelming political and economic reasons to

[171] Ibid

expect IFRS enforcement to be uneven around the world, including within Europe. Convergence of standards is very important in a globalized world. Some degree of uniformity in accounting rules at every level is optimal. IFRS adoption is an economic and political experiment it is thought that time will tell what the pros and cons of IFRS to investors certainly.

8.INTERRELATION OF IFRS AND BASEL II

Banking regulations and financial reporting are interrelated strongly. They both affect each other. Pillar 3 of Basel II particularly gives importance to reporting and risk management.

8.1. IFRS : A Step Towards Basel II Implementation

There is increasing convergence between International Financial Reporting Standards (IFRS) and Basel II . Effective risk and capital management have great importance Therefore, institutions have to present transparent disclosures. By IFRS, comparison of the companies in different countries has advanced due to uniform disclosures. Financial and regulatory reporting could reduce implementation costs. Moreover, it can provide a more consistent and sustainable basis for risk and capital management disclosures. Greater risk and capital disclosure provides an opportunity to indicate the entity's strength, efficiency and stability.

On the other hand, there can be several challenges such as, to meet the market's expectations regarding meaningful risk and capital disclosure, the management presents this disclosure.Also, consistency between the different disclosures is obligatory. [172]

[172] PWC , IFRS : A Step Towards Basel II Implementation, Global Reporting Revolution , November 2005

Requirements set out in International Financial Reporting Standards will bring IFRS disclosures in accordance with Basel II and enhance careful analysis on risk and capital management in the financial services sector.

Financial services companies need to present a consistency between IFRS and Pillar 3 disclosures. Particularly, benefiting the increasing synergies between the financial reporting and regulatory reforms could:

1. reduce implementation costs;
2. improve governance;
3. strengthen confidence.

The preparation of risk management information in readiness for IFRS financial statements could be a first step towards implementation of Basel II.[173]

8.1.1. Foundation for IFRS and Basel II

IFRS and Basel II look like each other in some ways , but also they have differences.

8.1.1.1. Similarities

To a certain extent, IFRS and Basel II share the same goals. The objective of both of them is to make the operations of financial institutions more transparent. Hence, they create a better basis for the market participants and supervisory authorities to acquire information and make decisions more accurately. They provide the comparability of data in globalised financial markets.

One of the goals is to differentiate the existing risks. In particular, the further development of capital markets will be reflected in a more transparent presentation of

[173] J.P.Chateau and J. Wu , Basel II Capital Adequacy : Computing the 'fair' capital charge for loan commitment 'true' credit risk, Science Direct , International Review of Financial Analysis, 2005 , p.6.

derivatives and securitisation positions[174]. It is also significant to take into account advances in risk management techniques.

8.1.1.2. Differences

The purpose of IFRS accounting rules is to provide information which affects the decision-making perspective for a company by analyzing the financial statements. Opportunities and threats should be presented fairly. Equity is defined as the difference between assets and liabilities.

The goal of banking supervision in applying Basel II is to ensure reliability and stability of the financial system. One way of ensuring this is to require an adequate level of own funds which are not limited to the amount of equity in the balance sheet only. An important difference which has a direct effect on the ability to use common data lies in the fact that whereas accounting standards evaluate the status quo at a defined point in time, supervisory regulations anticipate risks in future periods.[175]

(a) Disclosure / Reporting

Both IFRS and Basel II intend to increase market discipline by the disclosure of certain information. Since there are some common goals, it is generally advised to adopt a common view on both sets of requirements. Additionally, special emphasis should be placed on Pillar 2, which gives high importance to risk reporting. Internal reporting and external disclosures are based on the same source data. Many values must be calculated both for IFRS and Basel II.

(b) Convergence of regulatory and IFRS developments and the end of the 'one-size-fits-all' era

Although IFRS and regulatory reporting serve fundamentally different purposes, the two are becoming increasingly aligned as supervisors and the International

[174] Ibid
[175] John McDonnell, 'IFRS : A Step for the Basel II Implementation', Science Direct ,Vol.38 , p.17.

Accounting Standards Board (IASB) look to enhance the synergies. This is both a challenge and an opportunity for financial institutions.

At the same time, the IASB has come to recognise risk as an integral element of IFRS financial statements, both in extending the scope of disclosure and in seeking to ensure that what is presented reflects the information used by management[176].

By motivating banks to upgrade and improve their risk management systems, business models, capital strategies and disclosure standards, the Basel II framework should improve their overall efficiency .

The SEC also acknowledges that its current disclosure framework around credit risk needs to be enhanced. The extensive credit risk disclosures contained in Pillar 3 may give the SEC an opportunity to mandate credit risk disclosures that are more representative of the way management views and manages this type of risk.[177]

Conceptually, one of the common threads between IFRS and Basel II is the insistence that disclosure be presented 'through the eyes of management'[178]. The introduction of IFRS 7 specifies that 'disclosures provide information about the extent to which the entity is exposed to risk, based on information provided internally to the entity's key management personnel.

It would appear that the IASB recognizes that each business is different and is no longer advocating a 'one-size-fits-all' approach to financial reporting. Companies need to decide how best to present themselves within the discretion allowed by both IFRS and regulatory frameworks. For example, insurers offering mainly savings and investment products will need to concentrate on the investment risks (market, credit and asset-liability management (ALM) risks). For an insurer mainly selling pure protection risks, the primary focus will need to be the insurance risks (underwriting, concentration and reinsurance risks, including counterparty risks).

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[176] Ibid

[177] Daniel Porath, Thilo Liebig and Micheal Wedow, Basel II and Bank Lending to Emerging Markets: Evidence from the German Banking Sector

[178] Ibid

Basel II acknowledges that 'in a situation where the disclosures are made under accounting requirements or are made to satisfy listing requirements promulgated by securities regulators, banks may rely on them to fulfill the applicable Pillar 3 expectations' (Basel II Final Accord).

In summary, the different accounting and regulatory standards are approaching risk issues in a similar fashion. In order to present a compatible environment to the financial markets, there will need to be consistency between the IFRS risk and capital management disclosures and the corresponding Basel II presentations. While this may be viewed as a challenge, institutions have an opportunity to benefit synergies that could help to reduce the cost of implementing both sets of requirements.

This guidance is consistent with the disclosure requirements for banks developed by the Basel Committee (known as Pillar 3), so that banks can prepare, and users receive, a single coordinated set of disclosures about financial risk.

While a more transparent approach to risk and capital disclosure would open companies up to the spotlight of scrutiny, it could help close the credibility gap and provide a valuable opportunity to demonstrate the strengths and future prospects of the company.[179]

Certain considerations are likely to be common to IFRS and Basel II in ensuring consistency, reliability and accessibility of presentation. Companies will need to identify and realize the potential disclosure synergies within their businesses. This will require skilled people with a good understanding of the entity's risk profile and all the relevant regulatory frameworks.

It is experienced that accounting and risk management teams do not always communicate effectively. Financial services business is complex. Thus , any assessment of the risks may require detailed explanation and supporting analysis. The analysis will need to be clear with a good balance of quantitative and qualitative information. Investor relations teams can play an important role in appliying this. Companies will

[179] N.Fargher and A.Grambling, Toward Improved Internal Controls , CPA Journal, EBSCO , 2005, p.75.

need to look closely at their risk management, reporting and governance structures as required by Pillar 2. As a result, effective risk and capital management disclosures are emerging as a competitive, as well as a compliance imperative with important implications for share prices and the cost of capital.[180]

IFRS and Basel II both broaden the scope of disclosure of risk and capital management. Moreover, they likely to open companies to greater market analysis. In particular, the ability to see how risk and capital are managed through the eyes of senior executives will increase quality of risk management and decision-making.[181]

8.2. Will the Next Move Be Basel 3?

The future of banking regulation is an open question and is argued between the top managers of the finance sector. With the progressive integration of risk-modeling best practices into the regulation framework, banks that have the best-performing risk management policies, and that can convince regulators that their internal models satisfy basic regulatory criteria, will be those that will be able to fully leverage their risk management capabilities as the double burden of economic and regulatory capital management progressively becomes a unified task.[182]

Financial markets and products are very complex recently.To manage them, highly skilled specialists are needed. Secondly, regulators work for risk management and credibility. The Basel 1 framework was very basic. There are significant developments in Basel 2. Future regulations will adapt to the developments and needs in financial sector. "One-size-fits-all" models are not accepted any more. Pillar 2 is a strong incentive for both academics and the industry to work on integrated risk measurement and risk management processes.

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[180] Ibid

[181] Tamer Aksoy , An Analitical Glance at the Effects of Basel II Principles on The SMEs and Steps To Be Taken bey SMEs in The Light of Rating Process.

[182] Laurent Balthazar , From Basel I to Basel 3 : The Integration of State-of-the-Art Risk Modelling in Banking Regulation ,First Edition,Palgrave Macmillan Ltd. ,2006 ,p.213.

In December 2003, the newly-elected head of the BCBS, Jaime Caruana, emphasised the flexibility of the Basel process and the potential for modifications rather than a move to Basel III. In response to a reporter's question 'Is Basel II a lost cause and Basel III around the corner?', he answered (Robinson, 2003),

'Basel II must be seen as evolutionary. Basel I was static. Not necessarily Basel III, but there could have modifications of Basel II. It is expressed as 'not set in stone' in the academic world.'

That is to say, in the future it is possible to have modifications in Basel II to comply with the quickly changing and developing world.

PART V

POSSIBLE EFFECTS OF BASEL II ON TURKISH BANKING SYSTEM

9. BASEL II & TURKISH BANKING SYSTEM

Before examining the general effects of Basel II on Turkish banking sector, it is better to have a closer look to the problems experienced in the last 20 years. Turkey as a developing country has been experiencing the new liberal economic policies since 1980, which aimed at integration with the world markets by establishing a free market economy, but during that process Turkey also experienced some serious financial crises (in 1994 and in 2001).

Poor economic fundamentals and fully liberalized capital movements brought about the vulnerability of the economy to the external shocks and Turkish economy experienced severe financial crises during the 90s. Such an environment had also significant reflections on the financial system. Having experienced from the reckless and unstable macroeconomic management accompanied by inefficient supervision, the system deteriorated severely and faced a serious moral hazard problem.[183]

A closer look at the financial system of Turkey would be helpful to characterize its weakness and structural problems during that period. Firstly, because of high public sector borrowing requirement, fiscal dominance increased considerably in the financial markets and led to public sector to crowd out the private sector. Therefore, the relationship between the banking sector and real sector could not develop, as it should have done. Instead, the relationship between the banking sector and public sector fortified year after year.[184]

The failure of the banking sector as a whole to make good risk management in its credit allocation could be presented as a second reason. As financing the public sector budget deficits with high real interest rates was an easy way to make profits, banks did

[183] Ali Babacan, "Implications of Basel II", in Financial Stability & Implications of Basel II 16-18 May 2005, Conference Proceedings, Istanbul: Central Bank of the Turkish Republic of Turkey, 2005.
[184] Ibid

not pay much attention to the basic principles of risk management, such as currency and maturity mismatches. On the public banks side, which had a high share in the overall sector, banks were heavily used to support government policies and credits were allocated inefficiently, which resulted in big losses and undermined their capital structure.[185] In the 90s, regulatory and supervisory measures and changes in the structure of the financial system in Turkey were not designed for reinforcing the system in the long term, by incorporating elements such as prudent supervision, institutionalization of regulation etc. which represents the third important point. On the contrary, the measures mostly tried to find daily solutions to the problems. Therefore, restructuring process for the financial sector was launched as a component of the exchange rate based inflation program in 2000. The Banking Regulation and Supervision Agency (BRSA) became operational in August 2000 as an autonomous body so as to reinforce the prudential regulations and to ameliorate the quality of banking supervision.[186]

The crisis in 2001 happened as a result of accumulated structural distortions in the economy. These distortions in the economy made pressure on the pegged exchange rate regime and, along with the credibility problem due to bad track record of policies, resulted in first banking crisis and currency crisis. In other words, the 2001 crisis started as banking, then it turned into both banking and currency crises. The primary objective of the Cantral Bank is to achieve and maintain price stability. In fact, it was a turning

[185] The banking sector problem in Turkey was basically a result of the mechanism chosen to finance very high public sector borrowing requirement (borrowing in short-term maturity and lend to government in relatively longer terms). Firstly, this led to an increase in government debt instruments especially in balance sheets of private banks. Secondly, it caused significant deterioration in state owned banks by accumulating duty losses. Risk accumulation in bank balance sheets in order to carry the domestic debt stock is an important element to understand crisis dynamics. When due to excessive risks accumulated in the balance sheets, credit lines to some banks that were acting as market makers in the government debt instruments were cut off, the banking sector problem turned into a debt rollover problem increasing interest rates. The rise in interest rates turned the problem into a debt sustainability issue directly making rollover impossible. (Fatih Özatay and Güven Sak, "The 2000-2001 Financial Crisis in Turkey", 2002. <http://www.econ.brown.edu/fac/Herschel_Grossman/courses/122readings/Ozatay&Sak.pdf> (19 August 2007)

[186] Ali Babacan, 2005 ; Ersin Özince, 2005, Münür Yayla and Yasemin Türker Kaya, 2005

point in the economy in terms of contribution to the changing dynamics in the Turkish financial system. [187]

The stability of banking sector has been further reinforced by the ongoing reforms and increased both mergers and acquisitions and foreign bank participation to the sector. The volume of banking sectors' credits to non-financial sector rose by more than 70 percent in real terms and the sectors' profits increased by a substantial amount since 2002; capital adequacy and loan quality of the sector also improved.[188]

Not only recent developments in macroeconomic fundamentals in Turkish economy but also the commitments to prudent policies in the medium-term economic program, prospects of EU membership helped to Turkish economy to operate in equilibrium of good expectations. It is clear that tight regulatory requirements bring more transparency and strict supervision.

During the financial liberalization process, Turkey exposed to some financial crises, as mentioned above, and these crises, by nature, had devastating effects on real sector. In this regard, such regulations deriving from European Union and BIS have critical importance in order to have healthier financial environment and integration with international finance market.

In parallel to global financial developments that based on increased concerns towards risk awareness, significant efforts have been put forward to establish a sound and healthy banking system in Turkey in recent years. As a focus point for the Turkish Banking System, significant changes concerning the Central Bank of Turkey have also been introduced, including enhancement of its independence and clear definition of "price stability" as its main goal accompanied by maintaining financial stability.

Basel II, the new capital adequacy framework, is a very important outcome of the action taken in international area. Although the main aim of the original Basel Accord which was applying institutionalized and international standards to the global financial system has not changed in the Basel II Accord, risk management constituted the key

[187] Ibid
[188] Ibid

aspect that dealt with in Basel II as an important element of the financial intermediation process. It is expected that a sound and flexible risk management in the banking sector would also lead to more efficient risk management in the real sector. Since the stability of financial system can provide more sources available for the real sector. On the other hand, the Basel II is very important due to its effects on the increase in transparency of the banking sector. Such an effect will enable the whole economy more powerful and more efficient.[189]

Basel II promotes principle of corporate governance, contributes to the development of risk management systems and urges banks to align their capital with the risks they take. All these important requirements present an opportunity in order to constitute a more sound and more efficient banking system in Turkey. On the other hand, due to the fact that Basel II will be applied in the EU countries by the implementation of Capital Adequacy Directive, it will be also an important item of the agenda of Turkish Banks during EU membership negotiations. The Capital Adequacy Directive describes the risk management framework for EU and it is based on Basel II proposals with slight differences, like in the formulas used to calculate the risk weights. Therefore, from another point of view, Basel II regulations represent an inevitable process for Turkey.

It is clear that obligations deriving from Basel II establish a new challenge for Turkish Banking sector and such regulations will provide to have sound financial structure in terms of risk management, corporate governance and healthy financial infrastructure.

As a result of risk management culture that Basel II emphasizes, the banks will have to employ modern risk management techniques in the medium and long term. It should be underlined that if the financial system is based on sounder infrastructure, this will have good reflections on real sector in terms of efficiency. In the near future, the structure of the banks, risk management, credit extension processes will transform which also has been experiencing recently in Turkey. Basel II Regulations are expected to be a powerful instrument to strengthen banks in Emerging Markets. It is also

[189] Ibid

important and essential adapting appropriately these regulations in emerging markets in order to benefit from the international capital standards.

The increasing amount of acquisitions of foreign banks in the Turkish banking sector and the process of privatization of state-owned banks in the near future will probably make shorten the compliance with Basel II and other international regulations. The preparation for the new regulations that is being done by the banks is not enough by itself, therefore, the efforts of real sector gain importance. Basel II implications are expected to create a healthier, sounder and more efficient financial environment, in this regard, the process can be overcome with a mutual and efficient cooperation between banking sector and real sector whose great amount is accounted for the SMEs.

9.1. Changing Credit Strategies Deriving from Basel II

Basel II represents an inevitable process for Turkish Banking Sector, as known all the banks in Europe are obliged to apply Basel II regulations by European Commission. For Turkey, as a candidate country of EU, compliance and adoption of these rules have another importance concerning future membership of Turkey to EU.

In this point, it is meaningful to have a look to the questionnaire work done by Banking Regulation and Supervision Agency in order to observe the developments in Turkish Banking Sector for Basel II. Such a work applied to 50 banks including 90 questions in 2005 represents the preliminary operations done by the banks in the banking industry in order to establish a healthy functioning system before Basel II. It is thought to be useful to examine the results of this work in order to have an idea concerning the views and preparations of the banks about Basel II.

According to general assessment done by BRSA at the end of this questionnaire[190], it is observed that almost all the banks have initiated operations and almost half of them handled in the form of a comprehensive project concerning Basel II applications. This application process shows that more than half of the banks have determined their policies and strategies for application of Basel II. The most important

[190] Türk Bankacılık Sistemi Basel II 2. Anket Calısması Sonuçları, Arastırma Dairesi, BDDK, Ankara:2005

problems in the process of application have been observed in the data deficiency for PD, LGD and EAD. Also BRSA observed that the banks have increased their operations and investments on credit risk. Most of the banks plan to start with Standardized or Simplified Standardized Approach in the measurement of credit risk. Many of them have dictated to use Advanced Approaches in the near future. Almost all of the banks have been observed to have been equipped with technical knowledge to measure credit risk with Standardized Approach. This work shows that they have enough knowledge and infrastructure to be able to measure operational risk. It has been observed that Turkish Banking Sector is more prepared for market risk measurement comparing to other risk parameters.

It is well known that the aim of the banks operating in the sector is to provide profit maximization. New Basel Accord enables banks to adopt risk management techniques eligible for their own internal structure. In other words, the banks have to determine their power of risk taking and strategies of risk management according to their level of complexity, their scope and behaviors of other competitor banks in the sector. The banks in the sector are considered to have ability in order to apply Standardized Approach and it is known that they have constraint data in order to apply Advanced Approaches. The existence of informal economy, and "scoring" systems based on accounting standards are not compatible with international standards. On the other hand, it is possible that the banks with foreign shareholder and foreign banks operating in Turkish banking sector can assess this transition process as an opportunity to decrease their cost of credit and especially it is probable that the foreign banks or the banks with foreign shareholder whose headquarters use advanced approach could be more advantageous comparing to national banks in this area.[191]

According to the study of BRSA, there are some important points that must be considered in the transition process of Basel II in Turkey[192]:

[191] Münür Yayla and Yasemin Türker Kaya, 2005 ; Ayhan Yüksel, 2005 ; Mustafa Kemal Yılmaz and Ali Küçükçolak, 2006 ; Akın Murat ,2005 ; Hatice Yılmaz, 2006 ; TBB, 2004 ; TBB, 2006 ; Mehmet Hançerli and S.Ebru Gökgönül, 2005 ; Ankara Ticaret Odası, 2007, Ali Faruk Açıkgöz,, 2006 ; Güler Aras, 2005, Ramazan Aktaş, 2006 ; Serkan İmişeker, 2005.

[192] Münür Yayla, Yasemin Türker Kaya, 2005, p.44.

i. Basel II can be evaluated as both an opportunity and an area that entails putting new efforts for healthy financial system of the developing countries like Turkey.

ii. In spite of including some difficulties and having a costly transition, New Basel Capital Accord is the new regulation standard of new global finance sector and it is probably going to be more costly than not to have compliance with this Accord.

iii. The complexity of calculations in the first pillar and especially the data standards required by advanced approaches could create problems in terms of adoption of some banks in the short run. However, despite all difficulties, embracing a determined manner in applying Basel II regulations is expected to have positive reflections on financial sector in the long run.

iv. The second and third pillars need to be highly focused on because these pillars have been inducing the risk management and market discipline. Also, their emphasis on qualitative criteria is foreseen to contribute considerably to the financial stability of the developing countries like Turkey.

v. The regulations must be understood very well because early and unprepared transition to Basel II will have negative implications not only for the banking sector but also for the whole economy.

vi. Because the national discretions and other matters are determined via discussion with banking sector and authorities, the transition process will be positively affected.

vii. Turkish Banking Sector should benefit from the advanced credit risk measurements. However, macro-economic risks, liquidity risk, business risk, geopolitical risks seem still critical for the Turkish Banking Sector.

viii. The timing of transition process should be eligible according to demands, capacity of banking sector and preparation process of BRSA. Early adoption of internal approaches is considered to be probably forcing for national banks and BRSA. It is probable that especially foreign banks will be willing to adapt advanced level approaches. Such a process entails planning and making investments on human capital and information technologies by the sector and the BRSA. Especially, the approval of Internal Rating-based Approaches involves putting serious efforts especially by the BRSA.

ix. New directive of European Union has brought the concept of "consolidating supervisor". A bank of a EU member country could receive an approval for advanced level approaches from its own country and this can be binding for Turkey. In other words, the relations between home country and host country should be focused on.

x. Taking into consideration the closeness of Turkish Financial Sector to Europe, the participation in the Committee of European Banking Supervisors is considered beneficial in medium and long term so as to provide more close relations with Europe and follow the developments in EU member countries.

The other important possible effects of Basel II on Turkish Financial Sector are expected as follows:

1. The increasing need for capital.
2. More efficient risk management.
3. Adoption of risk culture at organizational level.
4. Risk-based pricing and new product policies.
5. Settlement of market discipline.
6. Decrease in problematic credits.
7. Measurement of capital requirement with more complex methods.

CONCLUSION

The financial world has progressed significantly in the last twenty years which are full of banking and financial crisis for our country and for the world. Basel I was an important endeavour to bring a Standard for the global financial markets. However, it had shortcomings and was not a good indicator for capital adequacy. When compared to Basel I, Basel II aimed to complete the deficiencies of Basel I and it was really a good improvement involving more risk sensitive structure.

Presently, we talk about a global finance world, as a result; happenings in banking sector simultaneously affect the other finance markets. The emphasis on Basel II became apparent in these times much more. Recent subprime mortgage crisis faced in the US markets spread quickly to other countries. Leading banks of the world put down losses because of subprime mortgage loans and it seems to continue in the near future.

Due to these developments, Risk Management and Basel II Implications have been examined once more which brought up the question of whether banks have procyclical effect. There are views in favor of and against Basel II aggravates procyclicality. Particularly, in a crisis period, banks'capital positions affect liquidity levels of banks. But it is widely accepted that more work needs to be done to develop this issue. It is not clear that Basel II will exacerbate lending booms and busts. Neverthless, a certain degree of procyclicality is inevitable.

Loan losses tend to rise in a recession. Therefore, they should be covered by loan provisions. If the provisions are not sufficient, such losses will lead to capital reduction. Hence, the timing and the determination of the level of provisioning are fundamental.

Financial Reporting has gained importance for the overall economy. The convergence of international accounting standards is a serious step for the world. Accounting and regulatory standards are approaching risk issues in a similar way. In

order to present a compatible environment to the financial markets, there is a need for consistency between the IFRS risk and capital management disclosures and Basel II. By this way, institutions will have an opportunity to reduce the cost of implementing both sets of requirements.

Accurate implementation of Basel II will strengthen the financial systems in the global world as a whole. After mortgage crisis, the consistency between accounting, risk management and regulations have become more important. It is expected that a sound and flexible risk management in the banking sector would also lead to more efficient risk management in the real sector. Supervisory authorities may work together for achieving risk management and implementation of Basel II work compatibly. The probability of Basel 3 has been discussed in the financial world. But it is certain that, to comply with the changing world, at least there will be modifications in Basel II in the future.

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