BASEL II AND ITS POSSIBLE EFFECTS ON SMALL AND MEDIUM ENTERPRISES

MAVER BURCU AKTÜRK

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BASEL II AND ITS POSSIBLE EFFECTS ON SMALL AND MEDIUM ENTERPRISES

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MAVER BURCU AKTÜRK

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Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Business Administration

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This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Business Administration.

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To My Parents

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ABSTRACT

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Aktürk, Maver Burcu

MBA, Department of Business Administration

Supervisor: Prof. Dr. Oğuz Esen

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SMEs play the fundamental role in the economy of many countries. In fact, the percentage of SMEs out of the total number of firms in OECD countries is greater than 97 percent and this number reaches over 99 percent in Turkey. Basel II brings up a new approach in the definition of Credit Risk perception.

This thesis analyzes the Credit Risk framework of Basel and its effects on Turkish SMEs. It not only analyzes the general credit policies of Turkish Banks' to Turkish SMEs but it also relates SMEs position after Basel II. In fact, whether Basel II will bring out financial difficulties for SMEs' is a controversial issue. The importance of working capital, questionable transparency of their balance sheets, risk based rating, new collateral standards are some of the things that will inevitably cause difficulties for SME's. Clearly, sizable negative effect on SMEs would impact the economy considerably considering the importance of SMEs for an economy.

Keywords: Risk, Credit Risk, Basel II, SME, Rating

ÖZET

Basel II ve Küçük ve Orta Ölçekli Ölçekli İşletmelere Muhtemel Etkileri

İşletme Yüksel Lisans, İşletme Yönetimi Bölümü

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KOBİ' ler birçok ülke ekonomisinde temel role sahiptir. Gerçektende OECD ülkelerinde KOBİ'lerin tüm firmalara oranı yüzde 97 den fazladır ve bu oran Türkiye de yüzde 99 un üzerine çıkmaktadır. Basel II kredi riski kavramında yeni bir yöntem getirmektedir.

Bu tez çalışması Basel II nin Kredi riski çerçevesini Türk KOBİ'leri ile birlikte analiz etmektedir. Çalışma sadece Türk bankalarının KOBİ' lerle ilgili genel kredi politikalarını analiz etmekle kalmamış, Basel II den sonar KOBİ' lerin durumu incelenmiştir. Gerçektende Basel II nin KOBİ ler açısından finansal zorluklar yaratacağı günümüzde bir tartışma konusudur. Çalışma sermayesinin önemi, bilançolarındaki sorgulanabilir şeffaflık, risk odaklı derecelendirme, yeni teminat standartları KOBİ'ler açısından zorluklar yaratabilecek faktörlerdir. KOBİ'lerin ekonomi için önemi düşünüldüğünde, KOBİ'ler açısından önemli bir negatif etki ekonomiyi oldukça etkileyebilecektir.

Anahtar Kelimeler: Risk, Kredi Riski, Basel II, KOBİ, Derecelendirme

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ABBREVIATIONS

AMA: Advanced Measurement Approach

APRA: Australian Prudential Regulatory Authority

BCBS: Basel Committee and Banking Supervision

BCCI: Bank of Credit and Commerce International

BDDK: Bankacılık Düzenleme ve Denetleme Kurumu

BIS: Basel Committee and Banking Supervision

ECAI: External Credit Assessment Institution

EU: European Union

FDIC: Federal Deposit Insurance Corporation

FED: The Federal Reserve Board

FSA: Financial Services Authority

GDP: Gross Domestic Product

HKMA: Hong Kong Monetary Authority

IRB: Internal Rating Based

MAS: Monetary Authority of Singapore

OCC: Office of Comptroller of Currency

OECD: Organization for Economic Coorperation and Development

OSFI: Office of Superintendent of Finacial Institutions

P&G: Procter and Gamble

S&P: Standard and Poors

SFBC: Swiss Federal Banking Commision

SME: Small and Medium Sized Enterprise

I. INTRODUCTION

There are many definitions of risk depending on the situation and specific events. While it can be assessed quantitatively or qualitatively it is considered as an indicator of threats. Qualitatively, risk is taken into consideration as the proportion of the expected losses that can be caused by an event to the probability of this event. The overall risk increases when the event is more likely and the loss is immense. Measuring risk is often a difficult issue since the probability is assessed by the frequency of the past similar events and estimation for rare failures is hard. Corporations are exposed to certain types of risk, which are business, strategic and financial.

Business risks come from the corporations' desire to create a competitive advantage and add value for their shareholders. Business risk belongs to the product market in which the firm operates and covers technological innovations, product design and marketing. On the other hand, fundamental changes in the economy or political environment may bring out strategic risk. Nationalization or expropriation can be given as an example for strategic risk. These kinds of risks are difficult to be hedged and diversifying the business lines and countries operated are among hedging alternatives.

Financial risks are related to possible losses in financial markets. Movements in financial variables such as movements in interest rates and exchange rates create risk for most corporations. Financial risks can be managed and optimized so that firms can concentrate more on the other risks when they cope with their problem in financial risk. On the other hand, main function of financial institutions is to apply active financial risk management. In fact, controlling as well as pricing risks are among vital issues of financial institutions. Realizing adverse outcomes and preparing for these outcomes are also things that should be considered in pricing. Various risk exposures are identified, measured and controlled in active risk management. Financial risk management has become to be considered an important tool for the survival of business activities. Supervision and regulatory authorities, financial

institutions and corporations have realized the importance of financial risk management in recent decades as financial markets become more unrestricted.

Regulation is generally viewed necessary when free markets appear to be unable to allocate resources efficiently. Externalities and deposit insurance are two factors that support this general view. Externalities arise when default of an institution affect other firms. This is called systematic risk which arises when failure of one institution has a considerable effect on other firms. This situation is inevitably a threat for the whole financial system. Deposit insurance also provides a support issue for regulation. Depositors are guaranteed for their deposited amounts if government guarantees exist on deposits. These guarantees are to save small depositors. However, government guarantees may result in other problems under the subject of moral hazard. If these guarantees exist, this may cause a situation where depositors are less willing to monitor their banks and even willing to invest in banks offering higher rates. As long as the deposit insurance is not related to the risks of the institutions, this risk taking activities would still exist. Regulation is made to control additional risk taking activities. To achieve this, minimum capital requirements are enforced to banks. This is also a deterrent thing for the banks to take additional risk.

Bank for International Settlements (BIS), established in 1930, is an international organization formed by central banks of countries.[1] It is the world's oldest international financial institution and remains the principal centre for international central bank cooperation.

Although its scope is much wider, it was established to deal with the issue of the reparation payments imposed on Germany just after the First World War.[2] These issues would cover collection, administration and distribution of the annuities payable as reparations. The BIS

[1] "*About BIS"*. Bank for International Settlements Official Website. http://www.bis.org/about/index.htm

[2] "*BIS History-Overview"*. Bank for International Settlements Official Website. http://www.bis.org/about/history.htm

was also formed to create central bank cooperation in general and act as a trustee for the Dawes and Young Loans (international loans issued to finance reparations)

After the reparations issue, the Bank's activities started to focus mainly on cooperation among central banks in order to maintain monetary and financial stability. The policy was initially to focus on implementing and defending the Breton Woods System before the collapse of the Breton Woods System. Oil crises and the international debt crisis brought up the importance of managing cross-border capital flows. The formation of internationally active banks in this kind of an environment where capital is free to move requires regulatory supervision of internationally active banks to maintain financial stability. The need for the 1988 Basel Capital Accord and Basel II occurred not only by this issue but also global economic integration and globalization.

Basel II is the bank capital framework sponsored by the world's central banks, designed to promote uniformity, make regulatory capital more risk sensitive, and promote enhanced risk management among large, internationally active banking organizations. It is the second Basel Accord and represents recommendations by bank supervisors and central bankers from the 13 countries making up the Basel Committee on Banking Supervision (BCBS) to revise the international standards for measuring the adequacy of a bank's capital. These countries are Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Holland, Spain, Sweden, Switzerland, the UK and USA. [3]

During 1990's significant financial and banking crisis occurred. Since capital movements were much common than it used to be, deficiencies of Basel I started to appear. In fact, financial markets were more complex than before. Financial instruments were diversified, risk volume was much higher, much complex instruments were traded, markets were more global and technological developments were faster. The weights that Basel I offers did not match the absolute risks that banks faced. Banks' started to use this as their advantage. They invested

[3] "*About the Basel Committee".* Bank for International Settlements Official Website. http://www.bis.org/bcbs/index.htm

in the instruments where Basel I requires less capital and disposed their investments on high capital required assets.

In order to reflect actual risk and market improvements in the regulatory capital requirements Basel II was intended. The intention was to provide more risk sensitive minimum capital requirement, risk based and proactive auditing and create an active market discipline. The main goal of the Basel Committee is to focus on risk management and create efficient risk management culture among banks. Once this is achieved, banking system will be more productive, more efficient market formation will occur and any problems that banks may come across will be diagnosed by their risk management departments.

The utility that Basel II is expected to bring is outstanding. Market efficiency and more economically use of capital is intended with the consonance among risk, capital and return. Because a more flexible and risk sensitive approach is offered with a wider range of credit risk mitigation techniques, better competitive equality and better risk management is expected to occur.

If banks do not use the advanced methodologies that Basel II proposes, their capital needs will increase and this will bring out the situation that they convey this extra cost to their credit packages. The consequence has noticeable implications on small and medium sized enterprises (SMEs) especially in developing countries.

Basel II may cause problems for certain types of companies. Companies with poor credit standing and lack of collateral; younger retail companies or newly founded firms requiring loan capital; companies that are not willing to give information to public and those needing equity capital from banking sector are among these types.

Although their sizes and structures are different, SMEs have an important role in both developed and developing countries. The percentage of SMEs out of the total number of firms in OECD countries is greater than 97 percent, generating over half of private sector

employment.[4] These figures reach over 99 percent and over 60 percent respectively in Turkey.[5] Their contribution to employment, adoptability to new developments due to their flexible nature, creation of product differentiation, provision of intermediate goods are considerable attribution for an economy.

In order to provide efficient contribution to the economy, SMEs should properly finance themselves. However, their financing problems are stemmed from their weak capital structure. This creates extra risk on the banking side during their credit process. Today, banks' credit decision is based on risk rating scores. Risk evaluation techniques are more sensitive and active in Basel II. There are alternative ways of risk management techniques that may change in relation to banks' sizes and their structures. One of the reasons for new regulations is to save the depositors with a sound banking system where efficient credit decisions are made. Banks that can not evaluate their risk structure properly will come across enormous difficulties and it will be quite difficult for them to adopt the new system. For this reason they will need to set up sound evaluation standards and improve their risk management policy.

SMEs' financial problems come from both their working capital and capital market problems. Their credit costs, financial fluctuations and high interest rates are among their working capital problems. In addition to this, it is often difficult for them to conform to capital market quotation standards and this brings out high costs when it is applicable. Due to the fact that their financial management expertises are not often sophisticated and their ability to reach the required know-how is not always possible, SMEs are not enough equipped to cope with their financial problems. For instance, their financial management is managed by the owner or the partners of the firm. Financial planning tools are not usually known or applied. Their financial statements do not necessarily conform to major standards or they may not convey

[4] Altman, Edward and Gabriele Sabato. 2005. *Effects of the New Basel Capital Accord on Bank Capital Requirements for SMEs*. Journal of Financial Services Research, Vol. 28, No. 1-3, p. 15

[5] Türkiye Bankalar Birliği. 2004. *Risk Yönetimi ve Basel II'nin Kobilere Etkileri (*Risk Management and Basel II's effect on SMEs*)*,p. 1

real figures. SMEs' have the inner drive to grow with their equities so that it is not common for them to use leverage. Many SMEs do not have enough knowledge about related subventions. Credit evaluation processes are almost always problematic for SMEs.

Basel II defines SMEs as a company that has annual gross sales of 50 million Euros or less. If the company uses at least 1 million Euro credit from a bank, this SME is defined as a "Corporate SME" for that bank. If this amount is less than 1 million Euros, this bank's institutional customer is defined as "Retail SME".[6] According to type of firms and their credit risk, Basel II defines a risk ratio, which is between 20 % and 150 %. Turkish SMEs' rating notes can not be more than the Turkey's general rating note. The general rating note for Turkey is BB- which means that the rating note for a firm can not be more than BB-. On the banks' side, the capital it allocates will increase according to this rating score so that the credit decisions of the bank will mainly depend on the firm's rating score. The rating score is determined according to the firm's financial statements, financial ratios and qualitative specifications. The main reason for doing a risk rating is to measure the firm's risk objectively and the cost that the bank will undertake.

The effect of Basel II on SMEs was examined by a sample case. This case incurs a real firm demanding loan from a real bank. Based on the customer's financial figures as well as other appraisals, the customer was analyzed. This case study tried to identify probable effects of Basel II on the firm. The examination of the firm's balance sheet and income statement were not only made but also ratio analysis methodology was used. This analysis was both assessed the firm's and the bank's position after the incoming situation. A generally accepted risk rating methodology was applied and the effect on the SME was interpreted. The consequences show that the SMEs may experience financial problems with the application of Basel II unless they continue their non-transparent position in their financial statements. The result was comprehensively examined in the case study. Low rating noted firms mean higher

[6]Yalçın, Haluk and et al. 2006. "*Şirket Derecelendirmesinde Basel II Perspektifi"* (Basel II Perspective in Company Rating). İstanbul: Pricewaterhousecoopers. Presentation Notes, p. 18-20

risk for a bank thus higher capital allocation. Banks, as far as possible, is expected to give credits to more creditable firms that have more trustable financial statements, are able to grow consistently with saving their profitability, have sound management systems and work on their specialized area.

In order to cope with the financial difficulties that the new system brings, SMEs should need to have acceptable rating notes. Therefore, they need to have satisfactory knowledge about the rating system and provide any proper information that can facilitate the system. Firms need to have sound financial statements for obtaining a good rating. It is known that most Turkish SMEs have equity problems, thus operates with inadequate equities. It should be expected that only certain SMEs can conform capital structure criteria. In the short term, it may be plausible to expect them to find new investors or seek merger possibilities. Other ways for financing themselves are commercial credits, short term bank credits, financial bonds, factoring and other short term liabilities. However, it may not be an easy situation to realize these offerings.

With the application of Basel II, Basel I's collateral definition will be changed. This modification shows its impact in the credit evaluation process. In fact, after Basel II, some collateral applications will be changed. These changes will also have a negative effect on SMEs. As it is known, mostly partner warranties, subsidiary warranties and customer acceptances are currently taken in credit process. However, with Basel II, these collaterals will not be taken into account any more. Cash, gold, mutual funds, government bonds, shares traded on the stock exchanges will have an important role in banks' analysis of firms' credit demand. If the firm that demands loan wants to get a higher credit limit, it may be need to have its own cash in order to place this cash to the bank as collateral. Most Turkish firms use customer acceptances in their buying and selling process. This is one of the most disadvantage points for SMEs in Turkey.

Since customer acceptances will not be used as collateral, banks will not accept these items so that considerable number of the SMEs will have to bring these acceptances to factoring companies rather than banks. This situation will affect factoring companies structure as their business size will increase their funding demand will increase. Banks in Turkey are currently unwilling to fund these companies due to their current collateral situation and this will not seem to be changed after Basel II. So that factoring companies may restructure their business operations. It may be sensible to accept an increase in the factoring companies' profits after the year 2009.

The organization of the remainder of this paper is as follows. First, the characterization of BIS is related. The proceeding two parts outline Basel I and Basel II and the aims in both. The next section summarizes SMEs structure both in Turkey and other countries and identifies how SME loans will be treated under the new Basel Accord. The remaining two sections include the sample case and outline the probable situation after the new Accord as well as concluding this thesis.

II. BASEL II AND ITS EVALUTION

1. BIS, BASEL COMMITTEE AND BASEL I

Bank for International Settlements (BIS) is an organization formed by central banks of the member states. It was founded in 17 May 1930 in order to operate as the Central Bank of Europe and organize international payments system. Initially, it was established to deal with the reparation payments imposed on Germany after the I. World War.[7]

In the beginning of the 1970s fixed Bretton Woods System was left and exchange rates started to freely fluctuate among each other. In addition to this, oil crisis was another problem to cause enormous volatility in international foreign currency and banking markets. To seek for a solution to this problem, Basel Committee on Banking Supervision was formed. Member countries' central banks constitute this committee.[8]

This Committee aims to constitute a forum which is expected to provide coordination in the auditing issues among the member countries. Improvement of the international auditing system and increasing the quality of banking supervision were aimed. One of the main goals of the Basel Committee is to facilitate banks' auditing issues while one of the other is to provide effective supervision. Studies in the recent years focus on the capital adequacy, market discipline and efficiency of the auditing system. It can clearly be inferred that the committee has been trying to impose a risk management culture among banks. When this culture is formed, banks' risk management departments will be efficiently diagnose the problems, take necessary precautions and actions in order to defeat these problems.

[7] "*BIS History-Overview"*. Bank for International Settlements Official Website. http://www.bis.org/about/history.htm

[8] These are the following 13 countries: Belgium, Canada, France, Germany, Italy, Luxembourg, Holland, Spain, Sweden, Japan, the United Kingdom, Switzerland and the United States.

The committee does not enforce its standards to banks. However member countries' official supervision agencies are expected to adopt these standards to their local standards as appropriate.

After the economic problems in the mid 1970s, several countries changed their economic policies and adopt liberal economic system. This inevitably brought more volatile financial markets and increased the importance of banks' capital. In fact, banks' should posses enough capital in order to use it as a "pillow" against deep fluctuations such as financial crisis. Basel Committee on Banking Supervision decided on 1988 Basel Accord (Basel I) to impose standards to strengthen banks' capital.[9] The Accord aimed to set up a relationship between banks' assets and capital. Basel I focused on the banks minimum economic capital. This capital was for minimizing costs of the depositors when banks go to bankruptcy. Basel I was made by the committee member G10 countries and currently used in more than 100 countries including international banks.[10]

Basel I, Capital Adequacy Accord, aim to set up a relation between internationally operating banks' capital and assets. Although it was intended for internationally active banks only, the accord has been applied to most banks worldwide. Basel I establish a framework for measuring capital adequacy and a minimum standard to be achieved by international banks in the countries applied. Banks were required to have available as a "Regulatory Capital" at least 8% of its risk weighted assets and asset equivalent off balance sheet exposures. According to the standards, banks' determine their risk weighted assets in relation to respective risk weights (0%, 20%, 50%, and 100%) by multiplying their asset and off-balance sheet figures. Thus, capital adequacy ratio is computed by using the following formula.[11]

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[9] Şenol, Tayfun. 2007. *"Basel II Uygulaması Başladı".* (Basel II Application has started). İstanbul: Alternatif YMMM. www.alternatifymm.com . p1

[10] Atiker, Mustafa. 2005. "*Basel I ve Basel II"*, (Basel I and Basel II). Konya: Konya Ticaret Odası Etüd – Araştırma Servisi, p.1

[11] Glantz, Morton. 2003. "Managing Bank Risk-An Introduction to Broad-Base Credit Engineering", Academic Press, p.400

$$CapitalAde\,quacy = \frac{Capital}{RiskWeight\,edAssets\ \&\ OffBalance\,SheetItems} \geq 8\%$$

This formula shows that minimum capital requirement can be calculated as multiplying total risk weighted assets and off balance sheet items by 8%. The capital that is defined in the formula, "Regulatory Capital", differs from the capital in banks' accounts. It can be computed as follows:

1. Main Capital (paid up capital + unpaid dividends)
2. Supplemental Capital (provisions, reserves, funds)
3. Tier 3 Capital (loans that are short term and can be used for market risk only)
4. Deductible Items (financial subsidiaries and capitalized expenses)

Capital is calculated by deducting deductible items from the sum of the other three.[12]

Different type of banks' assets are weighted according to the level of risk that each asset type represents and each off balance sheet item is converted to relative assets and weighted as the related asset weight. For instance, commercial loans are weighted as 100% and mortgage type loans are weighted as 50%.[13] Capital Adequacy Ratio of a bank and whether this ratio exceeds 8% or not indicates the financial institutions' strength.

Turkey accepted and signed Basel I standards in 1988. However, adaptation to the standards took a certain period. Turkey enforced capital adequacy ratio as 5% in 1989; 6%, in 1990, 7% in 1991. %8 was started to be enforced in and after the year of 1992.[14]

[12] Loc.cit
[13] Natter, Raymond and Sivon Barnett. "Basel I-A: A Capital Framework for the Rest of the Industry". Washington, www.barnett-sivon.com , p.1
[14] Teker, Suat, Bolgün Evren K., and Akçay Barış M.,2005. "*Banka Sermaye Yeterliliği: Basel II Standartlarının Bir Türk Bankasına Uygulanması*". (Bank Capital Adequacy: An Application of Basel II Standards on a Turkish Bank). 2005: Elektronik Sosyal Bilimler Dergisi, Bahar, 42/54, p.4

It can be argued that Basel I achieved its main objectives of promoting financial stability and fair competition among international banks. In fact, it was a major step in regulating capital. However, it may not be adequate to address the activities of the most complex banking organizations. It specifies only four levels of risk, which are 0%, 20%, 50% and 100%. Although commercial loans have a risk weight of 100%, they can vary greatly in quality. Since risk weights are not widely diversified, computed capital adequacy ratio can be uninformative and may not reflect the real exposure of the bank. In fact, the default risk measurement precision that supervisors called for were not always provided by applying the banks' risk weightings as they were set by the Basel Accord.

Another had to do with the problem banks had is arbitraging their regulatory capital requirements to exploit divergences between true economic risk and risk delineated by the Basel Accord.[15] The limited differentiation among risk weights creates incentives for banks to apply regulatory arbitrage by selling or avoiding exposures where the regulatory capital requirement is higher than the market requires and investing where the requirement is lower than the market would apply to the asset. Mortgage type loans and credit card loans are items that are widely securitized by banks since banks' believe that regulatory capital requirement is higher than the market or economic capital.[16] Since banks hold assets that posses low capital requirement than the market would apply, large banks that apply capital arbitrage may hold very little capital for the assets that they own although they meet the Basel Capital Standards.

In short, Basel I capital ratios did not achieve to reflect risk adequately and was unsatisfactory in determining banks' strength adequately. Measurement process and management of risk have been improved significantly after Basel I rules were established. In order to be more effective player to be more competitive in the market and minimize their losses, banks formed new risk management techniques in the last fifteen years. Market has

[15] Glantz, op.cit, p. 402-403
[16] Economic Capital is a bank's internal assesment of the necessary capital in relation to its exposed risk.

become more concentrated as it were before. In fact, significant number of large banks operating with a wide range of diversified products has evolved. These banks have very sophisticated and complex structure and may trade marketly mixed products. Bankruptcies of any of these banks may create important effects in the markets. On the other hand, these banks have created authorities that are open to moral hazard. Thus, new regulatory frame work has become a desired thing to encourage banks to adopt an environment where best possible risk measurement and management can be done while allowing them to have considerable differences in their business strategies.

2. BASEL II

Considering the evolution in financial markets and the insufficiency of BaseI's Capital Measurement Standards, The Basel Committee issued the first advisory paper in June 1999.[17] These papers were followed by 2001 and April 2003 issues. These papers were revised according to supervisory agencies of countries and other entities' comments and final framework was issued in June 2004. Finally, this framework's effective date was determined as 2005 whereas postponed until 2007.[18]

Basel II's main aims can be ordered as follows:

- Basel II framework has alternative methods that ends up sole methodology and provides banks to choose the best method that fits their structure.
- Risk sensitivity and flexibility are not deteriorated in Basel II since it's simple and easy to perform.
- Capital adequacy measurement improvement and more sensitive measurement are aimed in Basel II.

[17] One of the main reasons for the insufficiency is that Basel I brings up a system where banks' capital can only measured in relation to credit risk only. Another reason is that while determining and measuring credit risk and determining risk weights, OECD member country criteria plays an important role which diminishes the risk sensitivity.

[18] "*Basel II'nin Kapsamı: Reel Sektöre Etkileri".(*Basel II's Coverage: Its Effects on Real Sector) İstanbul: Garanti Bankası, p.11

- Publicized information in relation to capital adequacy was improved.
- Banks were encouraged in establishing and augmenting effective risk management departments.
- It was provided that Banks capital adequacy level is evaluated by banks and the supervisory agency.
- Financial and macroeconomic stability was aimed by publicizing the information about the capital adequacy.

Although these aims that were related by the committee relates to Basel II's positive ways, some procedures in the Basel II's application were critized by banks and supervisory agencies. These critics were related to the analytic base of the methodology, its theory and hypothesis. In addition to this, possible outcomes of Basel II have been criticized. The critics can be grouped into two. Critics about internal scoring parameters can be related in the first group while critics on Basel II's macroeconomic effects can be specified in the second group. The second group outlines the fact that Basel II's risk sensitive methodology would increase conjectural volatility and differentiation in the application of Basel II among the supervisory agencies would cause an uncompetitive environment.

Comparing to Basel I, capital adequacy calculation has been changed and base structure consists of three structural blocks. These are the calculation of minimum required capital, evaluation of capital adequacy by the bank and the supervisory agency, and market discipline and publicity of the required information.

One of the main peculiarity of Basel II comparing to Basel I is the established relationship between banks' capital and the exposed risks. Only the relationship between credit risk and banks' capital was recognized in Basel I while market risk and operational risk were included in Basel II. According to the new accord, banks minimum required capital is determined by its 8% of exposed credit, operational and market risk.[19]

[19] Garanti Bankası, op.cit, p.6

In order to apply the structural blocks, some basic systems are present. Some of these are; corporate based integrated risk systems, active internal control systems, risk based accounting and management information systems, risk data bases management systems, corporate wise equity evaluation systems, risk position separation and collateral evaluation systems, strategic planning systems, publicizing systems (accountability), corporate management application evaluation systems, and risk based auditing systems (independent external auditing and corporate supervision of the authority).[20]

2.1. STRUCTURAL PILLARS

2.1.1. PILLAR I (MINIMUM CAPITAL ADEQUACY) AND RELATED RISKS

Minimum capital adequacy is emphasized in the first pillar. This pillar describes the calculation for regulatory capital for credit, operational and market risk. Other risks are not considered fully quantifiable at this stage. Minimum capital adequacy ratio is determined as 8% as in the Basel I. Credit risk regulatory capital requirements are more risk based than the 1988 Accord. In addition, an explicit operational risk regulatory capital charge is introduced for the first time. Market Risk Calculation Approach (Standard Approach and Value at Risk Approach) remains the same while credit risk computation is handled in more detail. The credit risk component can be calculated in three different ways. These are Standardized Approach, Foundation IRB and Advanced IRB. IRB stands for "Internal Rating Based Approach". For operational risk, there are three different approaches –Basic Approach, Standardized Approach, and Advanced Measurement Approach or AMA. The preferred approach is VAR (Value at Risk) in market risk computations.

[20] Bolgün, Evren and Barış Akçay. 2003. *Risk Yönetimi.* (Risk Management). İstanbul: Scala Yayıncılık. P.102

Total risk weighted assets are determined by multiplying the capital requirements for market risk and operational risk by 12.5 and the resulting figures to the sum of risk weighted assets for credit risk are added. The constituents of capital are defined as follows:[21]

Core Capital (Basic Equity or Tier 1)

Supplementary Capital (Tier 2)

Undisclosed Reserves

Revaluation Reserves

General Provisions/General Loan Loss Reserves

Hybrid Debt Capital Instruments

Subordinated Term Debt

Short term Subordinated Debt Covering Market Risk (Tier 3)

Some items are mentioned to be deducted. These consist of: Goodwill, increase in equity capital resulting from a securitization exposure, investments in subsidiaries engaged in banking and financial activities which are not consolidated in national systems.

CREDIT RISK

Credit Risk is the situation that lender come across when its borrowing customer does not comply the credit documentation and unable or unwilling to fulfill part of full of its liability in the appropriate time.[22] Most lenders use their own models (Credit Score cards) to evaluate potential and existing customers according to their risk, and then apply appropriate strategies. Banks charge a higher price for higher risk customers and vice versa for unsecured personal loans or mortgages. There are also revolving products such as credit cards and overdrafts. For these products, risk is controlled through credit limits settings.

[21] *International Conversions of Capital Measurement and Capital Standards.*Switzerland: Bank for International Settlements, p.12-18

[22] Babuşcu, Şenol. 2005. *Basel II Düzenlemeler Çerçevesinde Bankalarda Risk Yönetimi.* (Risk Management in the Banks Under Basel II Regulation Perspective). Ankara: Akademi Consulting and Training, p.24

Some products also require security, most commonly in the form of property. Banks make their credit decisions by trading off the cost and benefits of a loan according to the risk and the interest rate charged. However, interest rates are not sufficient to compensate credit risk. Loan agreements are written documents that provide protection and control on the side of the lender financial institutions. Useful obligations that a loan agreement may bring can include following provisions:

- The limitation of borrower's ability to weaken its balance sheet intentionally e.g. paying dividends or borrowing further.
- Allowing bank to monitor the debt by requiring audits and monthly reports.
- Allowing bank to decide when it can recall the loan based on specific events or when borrower's financial ratios are deteriorated at a level.

Other risk definitions that can be included in credit risk are as follows:[23]

Nonpayment risk: Risk caused by when loan given by bank is not paid back. This case is often realized during economic crisis times.

Realization of risk before completion of transaction: This is the case when it has been diagnosed that counterparty will not fulfill its obligations in the agreement.

Country Risk: Borrower's not fulfilling its obligations due to its country's political, economic, social structure in the mean time.

Transfer Risk: Borrower's nonpayment of its obligation in the same or another convertible currency due to its residential country's economic situation and legislation.

Standardized Approach and IRB Approach are two main approaches in calculation of credit risk in Basel II.

[23] Babuşcu, op.cit , p.24

a) Standardized Approach:

The Basel Accord allows banks to make a choice between two broad methodologies in their calculation of credit risk for their capital requirements. One of these broad methodologies is to measure credit risk in a standardized form supported by external credit assessments. Credit and other receivables' risk weights are determined considering rating notes given by external rating agencies such as Standard and Poors, Moodys and Fitch.[24] These loans and receivables are taken into account by using various risk weights assigned in relation to the borrowing entities such as government, banks, brokerage firms, and corporates. For instance, 20% of risk weighting is determined for a company with a grade between AAA and AA, while that of 100% is assigned for a company in the BBB+ and BB- scale. On the other hand, there are extensive determinations that allow lower risk provisions or diminish credit risk. Collaterals and guarantees are among these determinations. Credit risk in credit evaluation process is depended on the company's financial statement figures (e.g. balance sheet, income statement) and characteristic factors (e.g. management and partnership background, management and organization structure, product or service improvement, foreign trade capacity, market share). The result is denoted as company rating. With this evaluation process companies' credit allocation, banks' risk exposure and how much provision banks need to make according to this exposure caused by the allocation are determined. In addition, credit risk of realized loans is assessed according to elements such as transaction's type, collateral structure, and monetary unit. Thus, allocated loan is determined as "High risky" or "Low risky" and credit pricing is made in relation to risk levels.

Simplified Standardized Approach: Different than standardized approach, export finance agencies' risk rating grades have a significant affect in this approach. This methodology values risk weight of all loans' given to companies as 100% and considers credit derivatives

[24] *International Conversions of Capital Measurement and Capital Standards.*Switzerland: Bank for International Settlements, P.19

as "Risk reducing tools" in risk management. Besides, only number 1 option is allowed for receivables from banks and risk weights changes between 0% and 150%.[25]

Table-1 Risk Weights Used in the Standardized Approach

ASSETS	**Options**	**AAA/AA -**	**A+/A-**	**BBB+/BBB-**	**BB+/B-**	**Lower than B-**	**Without Grade**
Loans given to Treasury/Central Banks	According to ECAI grades	0%	20%	50%	100%	150%	100%
Loans given to other Government Institutions	Treasury wise	0%	20%	50%	100%	150%	100%
	Option-1	20%	50%	100%	100%	150%	100%
	Option-2	20%	50%	50%	100%	150%	20%
Loans Given To Banks	Option-1	20%	50%	100%	100%	150%	100%
	Option-2	20%	50%	50%	100%	150%	50%
	Opt.2-(Short term)	20%	20%	20%	50%	150%	20%

Assets	AAA/AA -	A+/A-	BBB+/BBB-	BB+/B-	Without Grade
Loans Given To Firms	20%	50%	100%	150%	100%

ASSETS	RİSK WEIGHTS
Retail Loans	75%
Residing Based Real Estate	35%
Bad Debts	According to specified conditions; 50 %, 100% or 150 %

Source: Aras, Güler. 2005. "*Basel II Uygulamasının Kobilere Etkileri ve Geçiş Süreci".* (The Effect of Basel II on SMEs and the Transition Process). Istanbul: Yıldız Teknik Üniversitesi Sosyal Bilimler Enstitüsü.

[25] Atiker, op.cit, p.6

Examples for Standardized Approach

EXAMPLE 1:

Total loan risk of non-rated (A) A.Ş in X Bank is determined as 1,5million TRY and has gross sales of 24 million TRY. 74.000 TRY of the firms cash loan is guaranteed by the holding that has an S&P rating of BB. The loan is considered non-collateralized in Basel I since company guarantees are not considered in Basel I.

According to Basel II, this firm is an SME since its annual gross sales figure is lower than 50 million Euros. However, since its total loan amount is more than 1 million Euros, it is in the corporate portfolio. The risk is considered non-collateralized as the guarantor's rating note is lower than A-. The result is that the loan customer's risk rating will be 100%. However, a retail SME that has a risk rating note of 75% would be able to obtain loan with lower interest amount since less risk premium is attributed to this firm.

EXAMPLE 2:

Non rated firm (C) A.Ş. has the total risk of 500.000 TRY from its total loans in (X) Bank. It has annual gross sales of 800.000 TRY and 100.000 TRY credit demand. Cash Blockage will be taken as loan collateral. (D) A.Ş. also demands 100.000 TRY loan amount while its total credit risk is also 500.000 TRY and has gross sales of 700.000 TRY. It is also non-rated and customer bills or acceptances will be taken from it as collateral.

Firms in Basel II are SMEs when their gross sales are lower than 50 million Euro and they are evaluated in the retail portfolio, if their total loan amount is lower than 1 million Euros. Both firms will be weighted as 75 % risk weight since they are in the retail portfolio. According to Basel II; company (C) will have the factor of cash blockage that decreases its credit risk. Company (D)'s customer bills or acceptances is not accepted as collateral. For this reason company (C)'s net credit risk will be lower than that of company (D) and it will be able to find loan with lower cost.

EXAMPLE 3:

Non-rated (E) A.Ş. has 100.000 TRY of loan demand. Its total credit risk in (X) Bank is 500.000 TRY and has gross sales of 800.000 TRY.Credit collateral of it is cash blockage. (F) A.Ş. has also 100.000 TRY loan demand and has total credit risk of 500.000 TRY and gross sales of 700.000 TRY. Credit collateral will be partnership guarantee.

According to Basel II, it is an SME since it has gross sales of less than 50 million Euro. It is also evaluated in the retail portfolio since its total credit amount is less than 1million Euro. It will be weighted as 75 % risk weighing due to its being in the retail portfolio. According to Basel II Standard Approach, cash blockage in the (E) A.Ş's collateral has decreasing risk effect while the collateral of (F) A.Ş. is not accepted since partnership guarantees are not accepted as collateral. For this reason the net credit risk of company (E) will be lower than that of company (F) and it will be able to find loan in a less costly amount.

b) Internal Ratings Based Approach:

Banks can determine their own credit risk on their own provided that they comply with minimum standards. It is expected that this approach will prompt banks to improve their own risk management methodologies and provide them an ample scope. The IRB Approach is based on measures of unexpected losses and expected losses. According to this approach, unexpected losses and expected losses measurement based risk components are probability of default, loss given default, exposure at default and effective maturity. Likewise the Standard Approach, credit risk is divided into diversified categories such as risks exposed to firms, governments, banks and partnership shares.[26]

[26] *International Conversions of Capital Measurement and Capital Standards.*Switzerland: Bank for International Settlements, p.52

Under the IRB Approach, banks apply broader definition to their risk exposures. The defined asset classes are corporate, sovereign, bank, retail and equity. Where IRB Approach is not applicable, the risk weight for these exposures is 100%, and these risk weighted assets represent unexpected losses only. Banks are allowed to use different definitions in their internal risk management and measurement systems. However, they would need to prove to supervisors that their use of different asset classes is consistent with the standards.

Corporate exposure is a debt obligation of a corporation, partnership or proprietorship. Banks are allowed to consider SME exposures separately. Sovereign exposures incur all exposures to sovereign entities which cover sovereigns and their central banks, certain public sector entities and multilateral development banks that do not meet criteria for a 0% risk weight under the Standardized Approach. Retail exposures include exposures to individuals such as educational loans, auto loans and personal finance, residential mortgage loans, loans extended to small business and managed as retail exposures. Small business exposures below €1 million can be treated as retail exposures if the bank assigns such exposures as retail exposures in their internal system. Equity exposures include both direct and indirect interests. However it needs to carry a residual claim on the assets or the income. In addition, it does not incur an obligation to the issuer and it is not redeemable.

Foundation IRB Approach

Under this approach the banks are allowed to develop their own model to estimate the probability of default for individual clients and or group of clients. This approach is subject to approval of local supervisory agencies. Under this approach banks are required to use Loss given default parameter and other parameters according to the regulator's rules when calculating the risk weighted assets. The probability of default is the possibility that a loan will not be repaid and fall into default.[27]

[27] Ibid, p.59-60

Advanced IRB Approach

Similar to Foundation IRB Approach, at this approach the banks are allowed to develop their own empirical model to quantify required capital for credit risk. Like Foundation IRB, banks can use this approach only subject to approval from their local regulators. Under A- IRB banks are supposed to use their own quantitative models to estimate probability of default, exposure at default, loss given default and other parameters required for calculating the risk weighted assets. Then total required capital is calculated as a fixed percentage of the estimated risk weighted assets.[28]

Credit risk is considered the most important and sensitive risk type in banking industry. Following results can be inferred in the credit risk management area:

- 88% of banks make credit risk measurement.[29] Scoring and rating system is used especially for commercial firms and corporations. Risk measurement is often made from 10 or less degree. Most banks have their internal provisions for risk rating applications. However, almost none of them have a periodic application where these degrees are revised.
- Risk rating procedure is mostly used in the credit allocation. Most banks also use risk rating in the collateral provisions beside pricing and making provisions.
- Most banks have diversified works and methods in default estimation.
- Almost all credit risk models are developed banks' internal system.
- Banks' credit risk measurement results are often effective in determining credit policies.

Credit risks main source are the loans that are allocated by banks although other causes exist in relation to the operations. In other words different various financial instruments can cause credit risk other than credit products. For instance, money market transactions, foreign exchange transactions, repurchase agreements, security transactions, forwards etc. are

[28] Loc.cit
[29] Babuşcu, op.cit, p.255

instruments that increase credit risk. According to banking law transactions that carry credit risks are as follows:

- Cash loans.
- Letter of guarantees, letter of credits.
- Securities.
- Forward transactions.
- Matured cash loans.
- Interests due but not repaid.
- Receivables from reverse repo transactions.
- Options and other derivative instruments.
- Partnership shares.

Credit risk determination, measurement of this risk, supervision, provision of control, reporting and capital allocation against these risks are parts that are belong to credit risk management process. Credit risk management's main goal is to set up a relationship between credit portfolio quality and bank's goals.

Credit Risk Strategies and Policies:

One of the significant parts of credit risk management is the determination of related strategies and credit policies. Decision of choosing customer segment and type in the banking credit strategy especially in the loan giving process is significant. Determination of credit risk and credit policies is under the responsibility of the banks' main board as the top management. The relationship between the determined strategy and the profit expected is the core issue in strategy developing. The main board also needs to consider the banks' capital level according to the policies and strategies and the exposed risks. Determined policies and strategies should be share with the whole personnel and cooperation is needed to reach the goals.

Credit risk perception, measurement, follow up, control and procedures and policies established for reporting are among the main items in the risk management. Credit policies should refer the allocation process and determine suitable risk limits and develop portfolio composition in consideration with product, sector, and regional differentiation.

Responsibilities and Functional Differentiation:

Related banking provisions should explicitly relate credit risk management personnel's responsibilities and job definitions and these should be in written provisions. In order to provide healthy credit risk management, responsibilities should be explicit and not in a matrix combination. In order to minimize credit risk, the person who evaluates the loan and the person who markets the loan should be different persons. In addition to this, the persons who determine the credit limits and interest rates should also be different.

Risk Based Pricing:

In addition to the competition of profitability level, banks should consider the required capital evaluation and the risks they take. Loans should be re-priced according to these evaluations. Banks should consider the relationship between the risk and the expected return in the evaluation of the maturity of the loan as well as the allocation. For this reason priced and non-priced items should be distinguished. Expected and unexpected losses should be examined together in risk based pricing. Provisions for expected losses and cost of the capital set according to the unexpected losses should influence credit pricing.

Risk Limits:

One of the significant mechanisms in credit risk management is the determination of credit limits. Credit risk limits changes according to debtor, risk group, sector, region, country and product type etc.

Credit Follow Up:

Credit follow up refers the soundness of customers' financial structure, conformability of credit provisions, and use of confirmed loans by the customers, collateral adequacy and repayment. Credit follow up should be updated in determined terms. In addition to this, loan composition should be significantly considered. In fact, sectoral, regional, product, risk rating, maturity, collateral composition of the credit risk should be diversified and grouping in one of these items should not be allowed. If grouping in one of these is allowed, problems in this category would cause significant negative impact to the bank. For instance, if a bank allocates its 30 % of loans to the food industry, non-repayment of the loans would significantly change bank's financial statement and affect this sector negatively. Besides the sectoral wise case, allocation to the firms operating in a specific region is also a risky situation for banks. Unexpected occurrences such as catastrophes would increase the probability of non-repayment of the loan. Early warning signals cause the inspection of the problems in the firm's financial positions and operations of debtors in the portfolio. This situation is inevitably evaluated by credit follow up. Perception of early warning signals is significant to take necessary precautions against non-repayment risk of the firms.

Credit Risk Management Tools:

Credit risk management covers establishment of credit process, early warning signals, rating application, establishment of required limits and collaterals, use of credit derivatives, risk measurement, calculation of economic capital, stress-testing and scenario analysis.

a) Credit Process

Credit process begins with customers' credit application and continues with customer interview, customer credit value inspection, loan structuring and giving, follow up and end of the process.

The selection of loan customers are made according to general credit policies, aimed a customer profile and marketing strategies. The following are the customer types that are avoided:

- Customer types that can cause troubles in bank's relationship with regulatory authorities.
- That has operations that are against country and society utility.
- Does not operate according to general accepted moral rules and ethics of the society.
- That can affect bank's place in the society in a negative way and can be subject to media in this way.
- That has operations in the sector which is considered risky according to the bank's culture.
- Caused realized risks for the bank with its operations in the past.
- That has operations other than its main operations and these operations (social, politic activities) cause the ignorance of its main operations.

b) Early Warning Signals

It takes a period of time that a loan can be problematic. As the loan becomes problematic, its solution becomes more difficult. The best way to resolve the problem is to diagnose the problem when it's happening and prevent this problem occurs. This solution is much more economic in time, amount and labor comparing to the other situation. The inference is that early warning is highly significant.

Credit follow up is the most important thing in early diagnose of the problem. In the credit follow up process in order to early diagnose the problem, it is possible to develop models that can warn the bank before the problem occurs. These models are called "Early Warning Systems".

Early warning systems are not necessarily financial. Non financial early warning systems can be the following:

- Changes in the key partners or persons in the management.
- Appropriateness of the education level of the partners to the firms operating area.
- Behavioral changes of the partners and managers.
- Partners' membership in political parties, organizations, etc.
- Work experience, commercial morality and managerial morality, firm's operating area and transparency.

While financial early warning signals can be as follows:

- Significant increases in commercial receivables.
- Firm's losing of its receivable ability.
- Increases in the losses of the suspected receivables.
- Increases in the matured receivables.
- Increasing sales to specified customers.
- Firm's exposed foreign currency risk.
- Operational losses.
- A trend in decreasing gross sales.

c) Scoring

Scoring is a modeling used for individual and small enterprises rather than commercial and corporate portfolios of the banks. It covers more firms than risk rating system covers. Because of this, it has more widely used. This methodology was initially established for retail loans and credit cards. It provides time efficiency in the reach of customers and makes banks' use of their sources more actively. The statistical approaches in the basement of scoring are used in calculating the probability of the non-repayment of the loans. The main goal is to minimize the loan losses in the credit portfolios.

d) Rating Application

Rating application is to determine the non-payment risk of core amount and interest in the loan. Ratings can be classified as short-term and long-term or local currency and foreign currency.

Rating application has the diversified aims in general. These are:

- With the help of measuring the firms risk rating minimize the credit risk of the bank and optimize the risk level.
- Analyze the firms' risk ratings in terms and follow up the general overview.
- Compare with the firms in the credit allocation process from their risk rating notes.
- Minimize subjectivity and personal immoral behaviors and provide objective evaluation to the firms.
- Assist to create general pricing policy by taking risk rating notes as the basis and apply different pricing for different risk ratings.

Following subjects are needed to be considered in the risk rating system in the firm evaluation process.

Function of the Rating System:

Rating system functions are needed to be explicitly related in order to clarify the rating process and facilitate the credit allocation and evaluation process. For this reason rating function has two main functions. These are pricing and portfolio management. In addition to this, limit setting and determination of provisions are amount the system functions.

Characteristic of the Rating System:

Risk rating system should be attributed to objective dataset as much as possible. However, since it is very difficult to obtain updated financial dataset today, in some cases specialist overviews become significant. Also in some cases firm based other items are added to the rating and specialist overviews are considered.

Objective-Subjective Item Weights:

As it is mentioned above risk rating is attributed to objective items. However, subjective items (Firms knowledge and sectoral experienced, market share in the sector etc.) can be considered more significant than objective items in the small enterprises due to the fact that obtaining financial dataset of these is difficult. On the other hand, objective items are considered more significant in the evaluation to the sizeable enterprises since obtaining financial dataset is easier due to the fact that they issue financial statements quarterly. It is sensible to decide that both subjective and objective evaluation is made for medium sized corporations.

Methodologies applied for different portfolios:

Same methodologies should be used in the evaluation and weighting of different portfolios although some tiny differences occur. This should be made in order to keep the standardization and facilitate the process.

Examining future prospects:

In the developed markets, evaluations and studies were developed to measure the debtors' future repayment strength of the loans core amount and interest. These studies say that debtors expected performance will be parallel to the past year data, income statements and balance sheets will be close to past performance. This method is applied with annual projections although it is not the whole decision item.

Cash Flow Analysis:

Today cash flow analysis is significant in credit analysis due to the developments in banking. Balance sheet and income statement ratios were determination items in the past. In order to perceive firms' cash flow development, looking at the changes in the working capital accounts and planned investment expenditure amounts is satisfactory. In fact, if a firm has

financial problems, the first thing to do for this firm is to decrease its investment expenditure. This may inform us on the firms' prospective debt repayment capacity.

Ratio Analysis:

Another quantitative analysis item to be considered in the credit evaluation process is to compare firms' past ratios and the sector averages. Ratios should not be a sole determination item and comparing ideal values to the ratios is far from a sensible analysis. In fact, firms do not operate in ideal conditions in many sectors.

Sector and Country Analysis:

For a healthy credit evaluation, all sector and regions should be analyzed, firms' place in the sector and region and future expectations for the firm should be determined. County's risk structure should be analyzed in the loans related to the firm's operation in foreign countries. The effect on the repayment ability should be analyzed.

Actions should be taken by the management:

The management should form an active risk management culture for an active risk management. The system and process should be confirmed by the management and a control mechanism should be established in order to maintain a healthy system. Rating process is formed by establishing the system follow up and supervising. In this aspect, each mechanism should have an independent control system.

Revision of the given ratings and updating occasion:

As it is widely related in Basel II, debtor firms' ratings need to be updated at least annually. The ratings attributed to the firms that are highly risky and have problematic loans should be updated as much occasion as possible.

Rating Personnel:

In order to make an objective evaluation of the rating, this should be done by the credit department rather than the marketing department personnel that are active in loan giving. This will increase the effectiveness of the credit evaluation process. However, marketing department can not be totally independent in this process. It would make sense to benefit from their experiences about the firms' positive and negative ways since they are actively in dialogue with the customers.

e) Collateralization

Loan collateral is a type of guarantee in order to recycle the risk. Collateralization is maintained in the credit allocation process. Peculiarities of the collateral is determined and is suitable contract is produced and given to the customer. The loan amount and its collateral equilibrium is one of the significant points that should be considered in the credit allocation process. This equilibrium is called "Margin Ratio". Banks may demand additional collateral in the loan process if this margin is diminishing.

Collaterals are expected to be covering the whole credit risk amount. Credit amount is not sufficient, costs, taxes and interest should also be covered by the collateral amount. Collaterals that are attributed to asset pledge should have a margin and this margin will be saved till the end of the loan. Specialists should make the evaluation of these assets. These should be insured against unexpected situations and these insurance values should be same as the specialist valuations. The collaterals should be saved and kept by the bank itself. Collaterals that are liquid should be the once that are demanded first.

Collaterals are mainly considered in the two subtitles: Tangible collaterals and intangible collaterals.[30]

[30] Ibid, p.120-122

Tangible Collaterals: Cash blockage, deposit blockage, precious metals, security pledge, commodity pledge, management pledge, receivables blockage, customer bills etc. are the items in this group.

Intangible Collaterals: Guarantees, letter of guarantees etc. are the items in this group.

Open Loans can be added to this classification in the aspect of credit evaluation. These loans do not require collateral.

f) Credit Derivatives

Banks started to transfer their risks in order to facilitate asset concentration in the beginning of 1990s. These instruments are derived from a specific asset group and named as "Credit Derivative". General application of these instruments is as follows. The non-repayment risk of the receivable is transferred to the other party by paying a specific premium amount to this party. For instance, a specific risk amount of (X) Bank on a company exists. This risk is transferred to (Y) Bank with a fixed amount paid to it. If company does not repay its debt, (Y) Bank will pay this amount to the (X) Bank. The purpose of this is to diversify the credit portfolio and give loans to the sectors that bank is not able to enter.

MARKET RISK

Market Risk is the probability that banks make losses in the positions they hold due to the risks caused by fluctuations in financial markets. These fluctuations cause risks such as interest rate risk, foreign exchange risk and equity position risk. The probability of making losses due to these risks is called market risk.

Market risk was included in the capital adequacy calculations in 1996 and it was accepted to be separated into two parts from the year 1997:[31]

[31] Candan, Hasan and Alper Özün. 2006. *Bankalarda Risk Yönetimi ve Basel II.* (Risk Management and Basel II in Banks). İstanbul: Türkiye İş Bankası Kültür Yayınları. p.47

1. Risks come from by interest rate based assets and equity positions that are held by banks for their short term trading activities.
2. Foreign exchange rate risk and commodity risk regarding banks whole position.

Two methodologies are used in order to measure these risks:

1. Standard Method,
2. Internal Modeling Approach.

In the Standard Methodology interest rate based assets such as governments bonds and interest rate swaps, and equities are categorized and additional capital ratio is determined according to these categories. Additional capital ratio is determined for both specific and overall market risk. Internal methodologies are applied only if banks fulfill required provisions and this is confirmed by the supervisory agency. These modeling are not limited on a determined basis, generally "Value at Risk" calculation models; specifically "Variance Covariance Matrix Based Models", "Historical Simulation" and "Monte Carlo Simulations" are allowed to be used.

OPERATIONAL RISK

Operational risk can be defined as banks' risk of losses due to faulty or inappropriate realizations caused by the operation of their internal procedure, systems, personnel or external events. Three methodologies are used in operational risk measurement. These are;

1. Basic Indicator Approach,
2. Standard Approach,
3. Advanced Measurement Approach.

According to Basic Indicator Approach; banks should make 15% provision of their last three years' gross income. In the Standard Approach; banks, whose activities are separated into different kind of parts, should have additional capital for each of these activities from their

last three years' gross income between that of 12% and 18%.[32] These activities are categorized as follows: Corporate finance, sales and operations, retail banking, commercial banking, payments, trade and brokerage services, asset management and retail brokerage. According to Advanced Measurement Approach; additional capital requirement is determined in relation to the risk coefficient that is formed by banks' Operational Risk Measurement System. Banks need to fulfill determined standardizations in order to apply Standard Approach and Advanced Measurement Approach. Besides, use of Improved Measurement Methods is needed to be confirmed by supervisory agencies.

Liquidity Risk:

Banks must hold cash and highly liquid financial instruments in their assets to cover their liabilities that they must pay or fulfill. If they do not possess these instruments, they would come across liquidity risk. This risk occurs when the bank is not able to cover its short term liabilities with its short term assets. In addition to this, this risk increases when customers withdraw their money from their accounts and the bank is not able to provide funds from the interbank market or international financial markets.[33]

Generally, depositors invest in the financial instruments that are short term. On the other hand investors choose long term opportunities considering inflation risk and other related risks. For this reason, banks' sensitivity to liquidity risk increases everyday. Due to recent developments in the world economy including the uncertainty and financial crisis, most developing market economies are viewed risky. While investing in developing market countries such as Turkey, investors have become choosier than they were in the past. This causes banks to prefer to stay more liquid. Large scaled banks come across less liquidity risk exposure than smaller banks. There are two main reasons for this statement. One reason for

[32] Ibid, p.233-248

[33] Mandacı, Pınar Evrim. 2003. "*Türk Bankacılık Sektörünün Taşıdığı Riskler ve Finansal Krizi Aşmada Kullanılan Risk Ölçüm Teknikleri"* (Exposed Risks of Turkish Banking Sector and Risk Measurement Techniques Used to Cope with Financial Crises). İzmir: Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Cilt 5, Sayı 1, p. 67-84.

this is the amount of deposits in their assets. In fact, when depositors start to withdraw their deposits form these kinds of banks, it will not have a considerable negative effect since its percentage in the total assets would be relatively low. The other reason is that; since these kinds of banks have large scales, they are able to compete with good interest rates and they come across with lower risks due to the fact that they can enter the markets in most suitable terms.

2.1.2. PILLAR II (CAPITAL ADEQUACY SUPERVISION)

The Second Pillar includes supervisory agencies' audit process on Risk Management Approach of banks. Generally, this process includes increasing bank's capital limit in its capital evaluation and precaution process other than capital addition. In addition, the process includes strengthening banks' internal control units, and necessary supervising work considering realized banking activities' conform to management structure and corporate culture and strengthening the areas that are seemed to be relatively weak. The supervisory review process is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks. Supervisors are expected to evaluate the banks' assessment of their capital needs relative to their risks and intervene when needed. Concentration of risk which is not wholly examined in the First Pillar is mentioned in a detailed way in this Pillar. In addition to this, the risks that have not been mentioned (Interest rates regarding banks' accounts, liquidity, strategic and reputation risk as well as operational risk from operation environment) and external factors (economic effects) are covered in the Second Pillar.

Main standards that are aimed for the second pillar are as follows[34]:

[34] *International Conversions of Capital Measurement and Capital Standards.*Switzerland: Bank for International Settlements, p.205-212

1. Banks should posses an own process in which they can evaluate the capital adequacy in accordance with their determined risks and strategies. Comprehensive assessment of risks should be applied. All material risks exposed by the bank should be addressed by in the capital assessment process. Top management revision system should be owned and capital adequacy evaluation should be made in a satisfactorily active way. Final evaluation should be made after the revision of the internal control unit. Formal auditing of the supervisory agency should be on site, external independent agency reports should be considered as well as periodic reports. This Pillar framework gives capital adequacy responsibility to the management of the bank. 5 peculiarities are mentioned in the process of the capital adequacy evaluation.

a) Supervision Fulfilled by the Top Management and the Main Board: According to Basel II Accord capital management in relation to the determined risk criteria is mentioned significantly. One of the most important duties of the management board is to determine the bank's risk criteria and provide the developing of the suitable strategies.
b) Trustworthiness of the Capital Adequacy Evaluation: Reliance of the capital adequacy evaluation covers the suitability of the risk criteria limits to the exposed risks and examining whether these limits are exceeded under financial stress.
c) Comprehensive Evaluation of the Risks: Risks that are partially examined in the first Pillar (Concentration Risk) and the risks that has not been covered in the First Pillar and as well as the external factors are examined in this Pillar.

Credit Risk: In Basel II; risk rating systems, Portfolio Approach, securitization, credit derivatives, sizeable loans and concentration areas were decided to be covered in the advanced credit risk evaluation. Concentration limits in relation to loan portfolio can be determined according to various concepts. Here, debtor loan type, sector, collateral type, region area can be considered.

Operational Risk: According to Basel II, in order to manage operational risk banks should develop an internal system to evaluate capital adequacy. This structure covers the policy that summarizes main features of the bank's operational risk approach. Basel II Accord demands supervisory authorities' supervision regarding the consonance of the capital adequacy calculation approach for the operational risk to the risk profile.

Market Risk and the Interest Rate Risk Related to the Banks' Accounts: The evaluation of market risk is attributed to the standard approach and value at risk computation. According to Basel II framework, the interest rate risk in relation to banks' accounts is a potential risk which needs to be supported by capital.

Liquidity Risk: Basel II Accord mentions that every bank needs to have a satisfactory system in order to measure, follow up, and control liquidity risk. Bank should evaluate its capital adequacy by considering the markets liquidity and its liquidity profile.

d) Monitoring and Reporting: A sufficient system should be formed in order to follow up and report the exposed risk amounts and evaluate their effects on the bank's changing risk profile's capital necessity. These reports should facilitate managers' evaluation of future capital needs in relation to the banks' risk profile and their adjustment in their strategic plans according to these needs.
e) Auditing by the Internal Control System: The participation of independent internal and external auditing in the capital evaluation process control should be provided. Management Board is responsible for providing the examination of the bank's internal auditing and supervision of the operations in a regular and prudent way.

2. Supervisory Agency should expect banks to operate above the minimum regulatory ratios and can demand additional capital requirement more than the lower capital limit if it foresees that a prudent condition is necessary. Several methods can be applied to ensure that banks are operating with sufficient levels of capital. The

Supervisory Agency may set trigger and target capital ratios or define categories above minimum ratios to identify the capitalization level of individual banks.

3. Supervisors should review and assess banks' internal systems that assess capital adequacy and strategies. In addition to this, banks' ability to monitor should be evaluated as well as their compliance with regulatory ratios. In the minimum capital requirement process; the supervisory authority should take necessary actions to provide an environment where precautions can be taken according to appropriate risk characteristics. For instance, the bank can be wisely audited and keep followed, its dividend distribution rights can be limited, or if the bank need additional capital and therefore it will issue capital, this should urgently be realized.
4. Supervisory authority may intervene if the bank's capital decreases to a level under the required capital of its risk profile. If the capital level can not be saved or increased the supervisory authority may enforce bank to take precautions to solve the problem. The supervisory agency can demand additional capital issuance if this is necessary.

2.1.3. PILLAR III (MARKET DISCIPLINE)

The aim of market discipline is to provide the discipline in the market by financial statements that are transparent and conforming to internationally generally accepted accountancy standards. Banks must issue all the required information in time and transparently in order to share their realized performances with public periodically. Thus, market participants can make related evaluation. Market discipline is complement to the minimum capital requirements (Pillar1) and the supervisory review process (Pillar 2). The information that banks are required to issue include their capital structures, portfolio structures, capital adequacy, credit risk, equity wise investment risk, methods to diminish credit risk, market risk and risk of securitization and interest rate risk. The Third Pillar greatly increases the disclosures that banks must make. This is implied to let the market see the overall risk position of the bank and to let the counterparties to price and transact appropriately.

Bank's disclosures should be consistent with the evaluation of its top management and board of directors. Under Pillar I, banks use different techniques and methodologies to evaluate their risks and capital adequacy. The committee mentions the importance of providing disclosures that are based on this framework and provide the market a consistent, understandable and comparable disclosure.

Market discipline can provide a safe and sound banking environment where supervisors require firms to operate in a sound and safe manner. Supervisors have the authority to require regulatory reports from the banks. In addition, there are other enforcement methodologies that supervisors may apply. Financial penalties are one of the common enforcements that are applied.

One of the main reasons for Pillar III is to complete Pillar I and Pillar II. In order to prompt market discipline, Basel Committee established some kind of enforcement in the area of public information disclosure. This application covers capital adequacy, exposed risks and risk evaluation process and facilitates investors' having information about the banks' risk level and how they manage these risks.

With the provision of market discipline, depositors', investors' and related parties' obtaining sound and comprehensive information is aimed to be provided. This inevitably assists these parties' financial decision making. In fact, the aim is to minimize risk and uncertainty and provide financial stability.

There should be a consistency between the evaluation of the banks' top management and the public disclosure of the bank. The regulation which enforces banks' to fulfill public information provides banks' to operate more consistently and prudent.

Some applications to the Third Pillar are as follows: Local supervisory authorities are partially or fully authorized to disclose banks' reports to the public. This is done in order to provide the suitable publicizing. In Turkey, independent auditing companies are authorized to audit the banks' and their subsidiaries' consolidated balance sheets, profit and loss statements and cash flow statements semi annually. The annual information exists in the financial reporting should be independently audited information. All financial expressions and footnotes should be consistent with the independent auditing reports as well as the financial statements. "Significance Rule" is started to be considered more importantly with Pillar 3. According to this, a bank should decide whether it is suitable to disclose the kind of information by this rule. Another important item is the secret and private information and its coverage. Depositors' information is generally viewed private information and sharing this information to the other banks and third parties is not allowed in Basel II.

Banks can use any publicizing tool as they wish if otherwise is not stated in the third Pillar. In this situation, banks should disclose their publicizing channels to the public. These channels can be press, web pages of the bank or its quoted stock exchange or the public authority's web page. Publicizing information that is stated in the Third Pillar should be done semi-annually. Turkish Banking Regulation enforces banks' to disclose their financial statements quarterly (March, June, September and December). This should conform to the regulation implied by BRSA. The disclosure process does not wholly as in the Third Pillar. In the Third Pillar banks should relate their main aims and policies about their risk areas (i.e. Credit, Market, operational, interest rate risk of their accounts, equity risk). This should cover the following:

- Strategies and process.
- Their risk management structure and its organization.
- Risk disclosure and measurement systems' structure and coverage.
- Financial hedging and risk minimizing policies.
- Strategies and processes in order to follow up financial protection and risk minimizing tools.

2.2. EXPERIENCED CASES REGARDING THE IMPORTANCE OF RISK MANAGEMENT

Risk management has been one of the significant areas that institutions should consider and experienced cases due to lack of suitable risk management techniques have implications to this statement.

1. Barings Bank

Bankruptcy of Baring's Bank is an interesting story as it was viewed as a conservative bank throughout the world. The bankruptcy was attributed to a single trader, Nick Leeson, who lost $1.3 billion from derivatives trading. This lost caused the bank's bankruptcy as the firm lost its entire capital.[35]

With large positions in the stock futures of the Japanese stock market, the loss was made. Nick Leeson as the chief executive officer had been opening large positions in stock futures on the Nikkei 225. Baring's notional positions on the Singapore and Osaka exchanges added up to a $7billion. As the market fell more than 15 percent in the first two months of 1995, Barings futures accumulated enormous losses.[36] In addition to this, since options had also been sold in reverse to the market move, these losses grew more and more.[37] As losses increase, Leeson increased its open positions in the belief that he was totally right. He started to be unable to cover the payments required and he simply left the bank in February 23.[38]

The outcome showed the lack of controls in Baring's Bank since Leeson had control both the trading desk and the back office. Back office is the department that has the functions of confirming trades and check whether the trading activities are realized according to the guidelines. In most banks, traders often have limited capital to trade and they are subject to trade limits. In addition, most banks have a separate risk management department unit to provide another control on traders. One of the reasons why Lesson was not controlled is that

[35] Jorion, Phillipe. 1996. *Value at Risk: The New Benchmark for Managing Financial Risk.* New York: Mc.Graw Hill, p.29

[36] Loc.cit

[37] With the sale of these options, stable market had been bet.

[38] Jorion, loc.cit

he created trust as he made great profits before his last belief which caused the bank go to bankruptcy. Another reason was attributed to the matrix reporting structure of the bank.

Eventually the bank's shares went to zero and its bond-holders received 5 cents on the dollar[39]. The disaster that made the prestigious British bank go to bankruptcy can be attributed to both operational and market risk. Leason's previous profits inevitably show that he was taking considerable amount of market risk as more risk may more easily result in great profits or gross loss.

2. Metallgesellschaft

An American company's subsidiary MG Refining and Marketing industrial Corporation operating in Germany wrote off enormous losses due to its positions in derivatives market. They sold 180 million barrels of oil contract to one customer. The company chose to enter the short term future market rather than hedging this with long term forward contract. This resulted in maturity mismatch. After the significant decrease in oil prices in 1993, the company was required to give one billion USD of additional collateral. They began to imply higher prices to their product and made 1.3 billion USD losses[40]. The company's top management was totally changed because of this.

3. Orange Country

Orange Country case is an example for the result of neglecting market risk and a non-satisfactory audited local governmental fund. Bob Citron, the fund manager of the municipality fund covering 7.5 billion USD, was the fund manager who was managing the municipality's revenues. He made a reverse repurchase agreement to collect additional 12.5 billion USD by collateralizing this fund. This additional short term capital was invested in various institutions notes (agency notes) that have average maturity of 4 years so that nearly 20 billion of investment was made[41]. This system worked well in the term when short term

[39] Loc.cit
[40] Bolgün, op.cit, p.54-55
[41] Loc.cit

interest rates were low. However, the interest rates significantly increased in 1994 and the system began to make reversal. Due to the significant increase in the interest rates Wall Street demanded additional collateral and this conveyed the company's balance sheet as a loss. This resulted in the investor withdrawals from the fund. Eventually, 1.8 billion USD of loss was written off and the fund went to bankruptcy[42].

4. Enron

Enron was the 7th biggest corporation in the United States. Its operation was in gas distribution and had gross sales of more than 100 billion USD[43]. The most significant reason for the bankruptcy of this company was the illegal accountancy procedures which conceals company losses and risks by transferring them from the company's balance sheet to other companies. Since the losses were concealed, the company's shares were significantly lost their value and these losses became not concealable. The investors of the company experienced enormous losses due to this fact. This case not only affected Enron but it also decreased the reputation of Arthur Andersen which was the independent audit company auditing Enron. The other reason for this is the concealing of the reports that had passed from independent auditing. The result had a significant implication to the auditing and consulting area. After this experienced case, consulting firms' auditing activities were begun to be viewed questionable and regulations were made to provide an environment where auditing and consultancy are made by separate firms.

5. Bank of Credit and Commerce International (BCCI)

This event occurred in the beginning of 1990s in the United Kingdom. It is related to significant illegal operations that BCCI entered into[44]. The operations that do not conformed to regulations were initially diagnosed by the independent auditing firms and these were reported by them. However, this was concealed in order to prevent a panic situation and

[42] İbid, p.56
[43] Ibid, p.61
[44] Babuşcu, op.cit, p.36

restructuring was applied to the bank. This could not solve the problem and bankruptcy procedures were applied to the bank.

After the supervision, it was diagnosed that some operations was taken out of its books. For instance, deposit amount of 600 million USD were not shown in its accounts. In addition, 2 billion USD of loans were given to the partners[45]. The loans that caused losses were transferred into its offshore subsidiaries. This event resulted in the critics to the Bank of England for the first time. These critics were about the lack of its sufficient and satisfactory supervision and regulations.

6. Banco Intercontinental (Baninter)

This event occurred in the beginning of 2000s. The case is about the deposits transfer to the loans in the way that do not conform to regulations, the deletion to the computer recordings of the loans, non recorded withdrawals from some accounts etc.

These applications were diagnosed in the merging process of this bank to the other bank. The ownership was taken by the Central Bank in 2003 since the depositors started to withdraw their deposits[46].

7. Parmalat

This event is named as Europe's Enron and occurred in 2003. Italian food company, Parmalat is the owner of the case. Parmalat was established as a family owned company and it is one of the largest scaled groups in Italy with its 7.6 billion gross sales. Banks viewed Parmalat as a prestigious and profitable customer. The realization of the scandal was occurred just after the cancellation of the bond issue. The markets were hesitated due to the doubt about Parmalat's speculative trading of its investor's money. This doubt occurred after the determination about the 500 million Euro amount of participation of the company to the Epicurum fund established in Cayman Islands by the company[47]. The reputation of Parmalat

[45] Loc.cit
[46] Ibid, p.36
[47] Bolgün, op.cit, p.63

was lost in the markets and the company could not reset this reputation and entered in to a situation which caused the firm to be close to bankruptcy.

Table 2: Main Similarities about the Cases

FIRM	DATE	LOSS(MILLION USD)
Worldcom	**2002**	**103.900**
Enron	**2002**	**63.400**
Global Crossing	**2002**	**25.500**
UAL Corporation	**2002**	**25.200**
Adelphia Comm.	**2002**	**24.400**
Pasific Gas	**2001**	**21.500**
Kmart	**2002**	**17.000**
Orange Country	**1994**	**1.810**
Shell Sekiyu	**1993**	**1.580**
Kashima Oil	**1994**	**1.450**
Metallgesellschaft	**1994**	**1.340**
Barings Bank	**1995**	**1.330**
Demirbank	**2000**	**1.250**
Ashanti	**1999**	**570**
Yakult Honsha	**1998**	**523**
Codelco	**1994**	**200**
P&G	**1994**	**157**
Natwest	**1997**	**157**

Source: Babuşcu, Şenol. 2005. *Basel II Düzenlemeler Çerçevesinde Bankalarda Risk Yönetimi.* (Risk Management in the Banks Under Basel II Regulation Perspective). Ankara: Akademi Consulting and Training, p.43

Following are the similarities that are realized if these case instances are examined:

- Immoral operations of the bank personnel,
- Lack of information transfer,
- Mistakenly followed accountancy recordings,
- Insufficiency in accountancy regulations,

- Insufficiency of the auditing process,
- High fluctuations in the financial markets,
- Personnel's wrong operations,
- External shocks.

2.3. TECHNICAL PREPERATION FOR BASEL II IN TURKEY AND SOME OTHER COUNTRIES

European Commission made Basel II necessary for all banks in European Union. For this reason, as a prospective member it is inevitable for Turkey to adopt Basel II. Basel II process was started to be applied in January 2007 in European Union and G-10 countries while January 2009 will be the beginning time in Turkey. It is expected for Turkey to apply "Advanced Internal Evaluation" method after January 2010. Turkey has two years to adopt Basel II Standards. With the application of Basel II some difficulties and disadvantages will be realized in Turkey. In order to minimize these and take diversified precautions, the banks and the regulatory agencies were entered into a preparation process. Banks' and corporations' true perception is an important issue.

Regulatory agencies and banks are basic actors in the process of restructuring in order to reorganize their internal systems and corporations. Banks and regulatory institutions has been implementing preparation process since 2002. Turkey joined the "3rd Quantitative Impact Study" with its 6 banks. The aim of study is to analyze Basel II applications and rules that were brought up with the new Accord. Besides, local quantitative impact study was made with the participation of 23 banks in July 2007[48]. This study constituted an information infrastructure for prospective application realizations and various analyses is being made.

[48] Yayla, Münür and Yasemin Türker Kaya. 2005. *" Basel II, Ekonomik Yansımaları ve Geçiş Süreci"* (Basel II, its Economic Influences and the Transition Process). Istanbul: Bankacılık Düzenleme ve Denetleme Kurumu. ARD Çalışma Raporları: 2005/3. p.3

In addition to the 3rd Quantitative Impact Study, other studies have been made. Related organizations gathered and conduct the process of transition in coordination. These organizations are the Banking Regulation and Supervision Agency, Treasury, Central Bank of Turkey, Capital Markets Board of Turkey, Banks' Association of Turkey and the Basel II Coordination Committee formed by the participation of various authorized individuals of banks and implements the process of adaptation in a coordinated way. This committee supports related departments and organizations about Basel II impacts and its application policies. Basel II is not only important for banks but it is also important for many firms in real sector. Real sector organizations operating in Turkey have the following prominent peculiarity: According to Istanbul Chamber of Industry's end of the year 2004 figures; 660 of the primary 1000 firms, according to the central bank figures in the end of year 2003, 6800 firms of nearly 7500 firms are considered SME in relation to the Basel II criteria.[49] Thus, SMEs' have significant impact considering their numbers.

Basel II Process in the EU:

European countries constitute 9 of the G10+ member countries. For this reason there is a link between Basel II and EU applications. However, there are some differences specific to the EU countries. Risk management framework in the EU was made suitable to Basel Standards by the regulation by EU Commission in 1999. The main goal of this regulation was to increase the competition in financial services and decrease the firms' capital costs. For this reason EU accepted Basel II in 2006 and will adopt its current regulations by the end of 2007. The expectation is to apply the advanced approach from January 2008. 13 new member countries are expected to conform to these applications.[50]

Supervision operations were started to be considered more significantly with Basel II. For instance, supervisory authorities in Germany are Bafin and Bundesbank. These authorities have some studies for the Basel II transition process. These studies cover sending banks'

[49] Yılmaz, Hatice Biçen. *"Basel II ve Kobiler Üzerindeki Etkileri"* (Basel II and its Effects on SME's). Bursa: Paradoks Ekonomi, Sosyoloji ve Politika Dergisi, Yıl:3,Sayı:1. www.paradoks.org

[50] Ibid, p.38

question sets, education of the auditors and some other diversified studies. Germany is viewed the most advanced country in the transition process among EU countries. CP-189 document was published in France, Luxembourg, Belgium, Sweden, Holland and United Kingdom[51]. This document is related to internal rating approach application. In addition to this, credit and operational risk consultancy groups were formed in these countries.

United States

There is a divided situation with regards to supervision and auditing in the United States. In fact, country wise and province wise regulatory authorities cause a bank to be supervised by more than one regulatory institution. Basel II is supported by nation wise responsible OCC, province wise and bank holding wise responsible FED and other banks' responsible FDIC. Basel II is applied to the 20 banks which constitute two third of the banking sector.

Asia/Pacific

1. Australia: APRA is the authorized institution that is responsible for the banks' supervision. APRA is responsible for the application of Basel II as the authorized institution. Public was informed about Basel II from APRA's press announcement. In addition to this, some other studies were done in relation to public information. Specifically, the announcement regarding was made in 2005. There are 200 banks that are capable of accepting deposits in Australia. However, four of them cover 96 % of the sector. Banks that have AA- or higher rating are expected to evaluate much of their assets by advanced approaches as they were use their internal approaches in the application of Basel II. IRB application is probable to the smaller sized banks if they conform to related regulations. APRA started to apply the new accord in 2007 and it maintains its related studies and research[52].

2. Hong Kong: HKMA accepted Basel II as the official supervisory authority. Some various studies are maintained about IRB.

[51] İbid, p.39
[52] İbid, p.40

3. Singapore: MAS is the regulatory supervisory authority. Basel II studies are maintained and banks are willing to apply IRB.

South Africa

Central Bank of South Africa's Basel II transition process was started in 1999 and analyzing studies about the effects were maintained. IRB Application was considered with contacting banks in 2004. It is expected that Basel II will be applied from 2008.

2.4. THE EFFECT OF BASEL II ON TURKEY

As mentioned before, significant effects on Turkey is expected due to the fact that Basel Committee constitutes a systematic risk culture in banking as well as taking banks' risk management as the core issue. When the risk management culture is formed, banking system will be much more efficient and financial markets will have the right structure. When any related problem arises, this will be more easily diagnosed and resolved. Both corporations and banks will be affected from Basel II. Banks need to apply revision process in the additional capital needs. If banks do not use the risk measurement methods regarding Basel II, their capital need will increase and there will be an increase in the costs of the loans that they release to the firms. For this reason, before the application of Basel II, firms and banks should complete their preparation processes. As they recognize the points that they are lack of, they need to revise and fulfill the necessary revisions required to adopt Basel II. With the application of Basel II, efficiency will increase as well as the efficient use of the capital. Economic usage of the resources will be realized in the economy and financial structure will be stronger.

Besides, loans that are given to Turkish banks will be more risky in the computations of capital requirement of foreign banks. As risk rating of the banks operating in Turkey is generally BB-, their risk weighting will be 100%. Turkish financial sector will find more costly

debts and lower limits in the cases of legal capital requirement consideration regarding the release of loans. Since international banks consider economic capital rather than the legal capital, the abolishment of OECD member criteria will be expected to have limited effect on Turkey.

1. The Effect of Basel II on Banks and Financial Markets

With the application of Basel II, risk level of firms and loans will directly affect the banks' credit costs. As credit rating of the firms that demands the loan, the bank will use more of its determined risk exposure, or will be exposed to more risk thus require additional capital and more of its resources become outside its expected usual return. In addition, requirement of the release of public information will increase as well as its costs. Additional costs will come from the establishment of the expected risk management systems in relation to the active risk management process. As the relationship between the regulatory authorities and banks improve, data collection will become more costly.

The market and credit organizations relationship will improve. However, costs will increase due to the active operation of personnel and systems. Market risk will be able to be measured at the desired time on the position basis but systematic precautions will be applied regarding the risk capital and return formation.

Risk rating system will be improved on the sectoral basis but this has the cost of increasing activeness of risk rating firms in developing markets.

2. Adaptation of Turkish Banking Sector to Basel II

Turkish financial system has significantly improved on a more developed and healthy scale since 1999. "National Revision and Auditing Authority" implements various studies regarding the deficiencies of Turkish Banking System and how these deficiencies are resolved as well as the ways to reach a stable financial system. Banking Law is renewed and various revisions were made in the part of this process.

Banking Act that was legislated in 1999 in order to establish a stronger banking system incurs the following revisions in the case of risk management.

- Much of the 25 basic principles in relation to the active auditing for banks were stated in this act.
- "Banking Regulatory and Supervision Agency" were founded as the new supervisory authority.
- Transparency principles in management process were significantly considered in the act.
- Systems that consider risk as the basis in the auditing process to banks became more important and examined in this new act.

Revisions made to strengthen banks' financial structures as well as audit and revise the banking system are stated in the "Banking Law". European Union's published directives and generally accepted global applications were taken as a basis in the preparation of this new act. According to this, act number 4389 was revised and the new act 4491 brought up the main following changes:

- In order to provide independent managerial and financial auditing, Banking Regulatory and Supervisory Agency was founded.
- Banking auditing and supervisory authority was handed over to the Banking Regulatory and Supervisory Agency.
- Provisions to establish a new bank were made more difficult.
- Internal control of the banks began to be compulsory.
- Loan limits and large amount loan definitions were revised.
- Actions to be taken to the financially weak banks were revised to be defined in a more detailed way.
- Bank partners' and managers' responsibilities were increased with the new legislation.

Table 3: National Auditing and Supervisory Authorities

Independent Authority	Independent Authority + Central Bank	Central Bank
United Kingdom-FSA	Germany	Argentina
Canada-OSFI	United States	Austria-ONB's
South Korea-FSC/FSA	France	Czech Republic
Switzerland-SFBC	Thailand	Holland
Australia-APRA		Spain
Sweden		Portugal
Denmark		Greece
Turkey-BDDK		
Finland		

Source: Bolgün, Evren and Barış Akçay. 2003. *Risk Yönetimi.* (Risk Management). İstanbul: Scala Yayıncılık.

As it can be seen on the table, national regulation and supervision is given to the independent authority in some countries while this authority is in the central bank's responsibility in some others and it is also shared between the central bank and the independent authority in some countries. In Turkey, national supervision and auditing is under the responsibility of the Banking Regulatory and Supervision Agency.

Nowadays, risk management and banking problems are taken into account as global basis rather than national basis. Global levels and consonance to the generally accepted international standards are considered rather than the magnitude of the systems.

Increasing globalization causes developing global markets, which eventually increases Turkish banks' competition and profit margins are diminished. Banks' revenue expense composition has been changed due to the diminishing profit margins. For this reason, banks' increasing external earning operations has been more common. As it is seen global wise, parallel to the improving banking techniques, risk management techniques and analysis are expected to be more significant.

III. SME and SME LOANS

It may be sensible to relate SMEs' general position in Turkey before relating Basel II's probable effects on SMEs. In this section, general SME definitions in Turkey and their financial problems will be related.

1. SME Definitions in Turkey and Other Countries

Looking at the applications and related provisions in Turkey, one can recognize that different organizations have different SME definitions. The main reason why definitions are different from each other is the difference among the criteria used. Definitions are changed according to the operating sector, initial costs amount, number of working labor. According to the SME definition of the European Union; SMEs are enterprises that have less than 250 workers, their revenues is less than 50 million, and their total balance sheet amount is less than 43 million. According to Basel II criteria, the 50 million Euro criteria exist and this amount will be inevitably valid in Turkey. For this reason, most big companies in Turkey will be in the SME segment rather than being in the commercial segment. Different SME definitions made by different organizations are as in the following table:

Table 4: Different SME Definitions Made by Different Organizations

INSTITUTION	SECTOR	NUMBER OF WORKERS	INITIAL INVESTMENT COST	GROUP RELATIONSHIP
KOSGEB	Manufacturing Industry	≤ 150		
Halk Bank	Manufacturing Industry	≤ 250	< 1.500.000 YTL	
Eximbank	Manufacturing Industry	≤ 200	< 2.000.000 USD	
Turkish Treasury	Manufacturing Industry, Agriculture, Tourism, Health, Education, Metal, Software Development	≤ 250	< 950.000 YTL	< % 25
Undersecreteriat of Foreign Trade	Manufacturing Industry	≤ 200	< 2.000.000 USD	
State Institute of Statistics		< 100		
State Planning Organization		< 100		
Credit Guarantee Fund		< 250		

Source: Yüksel, Ayhan. *2004. "Yeni Basel Sermaye Yeterliliği Uzlaşısı (Basel II)"* (The New Capital Accord:Basel II). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Presentation Notes.

There is not a specific definition for SMEs in the United States. However, according to "Small Enterprise Act", which was legislated in 1953, "Small Enterprise" is an enterprise that has independent ownership and management and it has not got significant power in its operating field. Generally, enterprises that have less than 500 or 1000 employees (depending on their operating field) in the U.S. manufacturing sector are considered "Small Enterprises". The wholesale trade sector views enterprises that have less than 100 employees as small enterprises.

According to the SME definition of Organization for Economic Cooperation and Development (OECD), enterprises that have less than 20 workers are very small, enterprises that have number of workers of 20-99 are defined as small whereas enterprises that of 100-199 are defined as medium-sized enterprises.

According to the European Union, SME definition which was regulated in 1 January 2005 enterprises that have gross sales of less than 50 million Euro and less than 250 workers are considered SMEs if they conform to the independency criteria.

SMEs are important for Turkish economy as they are important for any economy. They have considerable share in the total number of companies, creating employment and net added value. For instance, according to the State Institute of Statistics, firms that number of workers less than 250 constitutes 99.89% of the total firms.

Table 5: General Industry and Enterprises Figures

	Firm magnitude groups according to the number of workers	Distribution (%)
SME	**1-250**	**99,89%**
Micro	0	1,38
Micro	1-9	94,94
Small	10-49	3,09
Medium	50-99	0,3
Medium	100-150	0,1
Medium	151-250	0,08
Large	**251+**	**0,11**

Source: Yüksel, Ayhan*. 2004. "Yeni Basel Sermaye Yeterliliği Uzlaşısı (Basel II)"* (The New Capital Accord:Basel II). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Presentation Notes.

As it can be seen in the following table, the ratio of total number of SMEs over the total number of firms is the highest in Turkey. However, looking at the employment ratios one can see that this ratio is lower than the other countries. If investment ratios are checked, it can be seen that small enterprises' ratio is relatively low as 6.5%. This is due to the fact that almost all SMEs in Turkey are family-oriented enterprises, nor they are given special importance or invest in the high profile workers.

Table 6: SME Figures in Different Countries

	USA	Germany	India	Japan	United Kingdom	South Korea	France	Italy	Turkey
Ratio of Small Enterprises over Total Enterprises (%)	97	100	99	99	96	97,8	100	97	99
Employment Ratios in Small Enterprises (%)	50	64	63	81	36	61,9	49	56	46
Investment Share of Small Enterprises (%)	38	44	28	40	29,5	35,7	45	37	6,5
Production Share of Small Enterprises (%)	36	49	50	52	25,1	34,5	54	53	38
Exporting Share of Small Enterprises (%)	32	31	40	38	22,2	20,2	23	-	8

Source: Yüksel, Ayhan*. 2004. "Yeni Basel Sermaye Yeterliliği Uzlaşısı (Basel II)".* (The New Capital Accord:Basel II). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Presentation Notes.

Table 7: SME Balance Sheet Ratios According to their Scales

%	Small Scaled	Medium Scaled	Large Scaled
Equities/Total Liabilities	51,3	51,5	53,4
Bank Loans/Total Liabilities	18,9	20	17,1
Commercial Loans/Total Liabilities	13,4	15,1	15,1
Current Ratio	128,9	141,9	162,3
Receivable Turnovers(Days)	76	67	52
Net Profit/Net Sales	-1,3	2,8	5,6
Net Profit/Total Assets	-0,5	2,4	6,3

Source: Yüksel, Ayhan*. 2004. "Yeni Basel Sermaye Yeterliliği Uzlaşısı (Basel II)".* (The New Capital Accord:Basel II). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Presentation Notes.

As it can be seen from the table above, firms general liability usage distribution in their balance sheets was analyzed. According to these data, equity, commercial loans and bank loans ratio in financing significantly vary. However, liquidity ratio decreases when firms' scales decreases. The reason for this is that; small scaled enterprises have more liquidity problems. In addition, there is an increase of receivable collection as the size decreases. Profitability becomes lower, even this decrease causes losses in the small enterprises.

2. Advantages and Disadvantages of SMEs

SMEs have the significant share in the economy of a country and they have some advantages comparing to sizeable corporations. SMEs produce more products with smaller investment and they can also apply product differentiation. They can create employment with lower amount of investments and set up closer customer and personnel relationships. This is one of the main causes of implementing healthy management operations. They can create supply in a limited demand environment and easily adopt demand changes. In addition, provision of scale in among regional developments and assistance of diminishing unfairness in income

distribution are other implications. Another advantage is their completeness of sizeable companies in product basis. For instance, giving support to mass production by providing necessary intermediate goods.

On the other hand, there are also disadvantages that SMEs can come across. Their technological levels are low and for this reason they are unable to compete with sizeable corporations. They can not always follow commercial and technological improvements both locally and globally. SMEs have managerial wise troubles. One of the main reasons for this is because most of them are family oriented organizations and these companies are far from professional corporate culture. Another disadvantage is that, SMEs' working strategy is doing "out of the book" business in order to avoid paying tax. So that financial statements of these institutions do not always provide true representation.

Inactiveness and deficiencies of financial functions are also caused by insecure financial data. These firms are being unable to use subventions due to these deficiencies and they are having problems in obtaining loans causing a situation in which they have a limited level of reaching alternative financial instruments due to the fact that they can not provide funds from capital markets. In addition, these small partnerships are having difficulties in financial planning, risk management, strategic decision making etc. They are not successful in global environment because of not having satisfactory technical equipment, labor, and financial resources. This inevitably results in their level of competitiveness being too low.

3. Financial Resources of SMEs

The most important instruments that are used for SMEs for financing are funds coming from financial system and these are bank and participation bank loans, leasing, factoring, funds provided from consumer financial companies and capital markets. In addition to these, commercial debt coming from both contracted and non-contracted relations, debts coming from partners and subsidiaries and government supported liabilities and equities are also

significant in obtaining financial source. The most significant of these funds is equity. This is because it is the first usable item in obtaining financial resources. It is one of the basic sources in the costs of establishing a company especially in the provision of setting up the factory and its necessary equipments. It is also the basic necessary resource when new investments are the case.

One of the financial difficulties that SMEs experience is their difficult situation in issuing stock comparing to sizeable firms. As it was discussed before, problems coming from their accounting books and financial liabilities are main reasons for this issue. Besides, it is not an uncommon situation that SMEs prefer to stay as small sized companies due to the fact that their partners are sometimes unwilling to lose their power in company management and they are doubtful about accountability and profit sharing. SMEs resource providing ability is at low levels due to investors' low demand in their shares. The reasons for this are these stocks' risky nature and their nature of being in the investment level or unable to give dividends. This is the demand wise reasons while their difficulties in entering capital markets are the supply wise reasons.

When the related limitations above are considered, the most critical financial resource for SMEs are the loans provided by banks. Banks' doubtfulness in providing these loans are caused by SMEs' managerial problems, financial management problems, unsatisfactory financial statements, inadequate financing of their equities and their cost of being inspected in their loan applications. They are exposed to harsh loan terms in amount, maturity, interest rate and collateral. Due to this reason SMEs financial costs increases. As their counterparties, banks' loan providing terms have various precautions. For instance, their interest rates applied to late repayments increases, collateral items and credit policies change or banks' additional capital requirement increases. These increases are realized with issuing additional capital or increasing its equity.

One of the significant problems that SMEs come across is providing collateral/guarantees for the loans that they use from banks. The main collaterals that are demanded are real estate pledges and guarantees taken by the partners or their group firms. In addition, customer cheque is another common collateral item. Another common collateral item that has been common is the guarantees given by the Loan Guarantee Fund established to provide these types of guarantees. If the firms' liabilities other than their equities are checked, it can be seen that they mainly use high leverage and bank loans cover outstanding amount in this group.

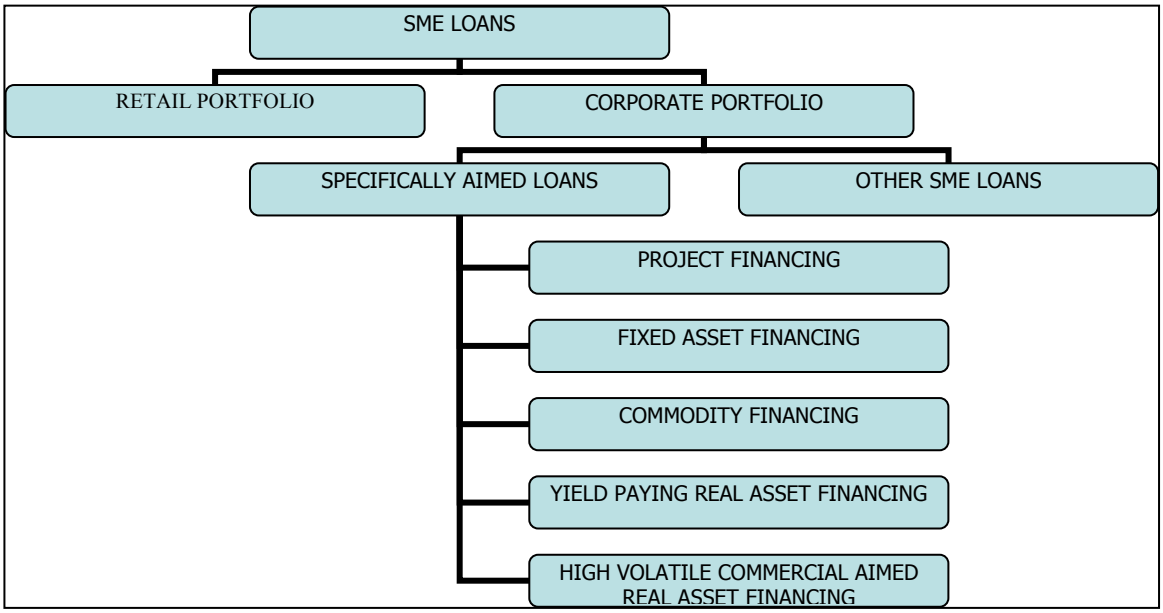
SME Definition According to Basel II and SME Loan Classification:

According to Basel II, basic criteria for the companies in the SME segment is their annual gross sale amount and this amount criteria is determined as 50 million Euros under Basel II standards. If the firms have annual gross sales of less than 50 million Euros, they are classified as SME under Basel II standards. However, in some cases considering firms' annual gross sales is not sensible. For this reason, banks and the supervisory agencies do sometimes choose to apply the criteria of balance sheet total amount.

Another significant necessity in the classification is the determination of the portfolio in which the SMEs take place in the loan process. These portfolios are "Corporate Portfolio" and "Retail Portfolio"[53]. Mostly commercial loans take place in the "Corporate Portfolio" while individual loans take place in the "Retail Portfolio. In order to be in the retail portfolio, total used loan amount for the firm's group companies' must be less than one million Euro and their total loans need not to have a significant amount in this retail portfolio. On the other hand, companies with larger scale take place in the corporate portfolio and this need to cover the loans that can not be classified in the retail portfolio. According to Basel II, banks must also classify the loans in the corporate portfolio. "Project Financing", "Fixed Asset Financing", "Commodity Financing", "Yield Paying Real Asset Financing" and "High Volatile Commercial Aimed Real Asset Financing" are main items in this issue.

[53] Garanti Bankası, op.cit, p:13

Table 8: SME Loan Classification



Source: Yüksel, Ayhan. 2005. "Basel II'nin KOBİ Kredilerine Muhtemel Etkileri". (Possible Effects of Basel II on SME Loans). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Araştırma Raporları: 2005/4

4. Possible Effects of Basel II on SMEs

Basel II's probable effects on SMEs will be related under two main points. First, evaluation of SME loans on banking side will be made, later the probable effects on SMEs will be related.

<u>According to Banking Side</u>

Looking at the new regulation it can be seen that debtor-loan quality has been more significantly considered and regulation adopted credit culture is aimed to be improved in time. Besides, market discipline, transparency, increased and active competitiveness are expected. In addition, significant changes in customer relationship and product pricing are expected.

In the calculation of capital adequacy ratios of banks, their externally audited internal rating method is adopted to be improved. After the new risk management improvement adaptation, this will inevitably affect the customers. Basel II gives the high importance to the satisfactory

rating systems. According to this, under the Standardized Approach, firms in the corporate portfolio classification (Corporate SMEs takes place in this classification) are rated by independent rating organizations and firms in the retail portfolio are not subject to this kind of a rating methodology, they are evaluated with a fixed ratio. Looking at an improved aspect instead of this, banks should posses their own rating systems. It is expected that banks set up their own rating systems and use in their loan processes in the proceeding years.

If Basel II's proposed advanced methodologies are not used in risk measurement process, their capital necessity will increase. This will inflect loan costs of these firms. With the application of Basel II, loans are evaluated as "good", "risky" or "less risky" and these will inflect the prices when loan pricing is made. Certainly, this will affect the loans SME used loans in the amount wise and pricing wise. This can be in the negative way or positive way. The maturity, classification, collateral, firms rating notes are sum of the criteria that can influence the loan price in the negative or positive way.

<u>According to SMEs</u>

SMEs have a significant place in Turkish economy and they should be ready for global competition with the EU process. They should save their competition advantage as much as possible as well as their flexibility and adaptation advantage. If the firms do not use this advantage, they will have to come across increasing problems that they should cope with. As it was related before, different than proceeding definitions, in order to determine capital adequacy in Basel II, SME classification limits will be determined according to total gross sales figures. In fact, SME is defined as the firms that have no more than total gross sales of 50 million Euro and retail corporate classification is made and firms that have more than 1 million Euro total loan amount are classified as corporate SMEs.

Table 9: Gross Sales Comparison of Different Enterprises

Loan Amount(K)	Annual Gross Sales(C)	Classification
K>1.000.000 Euro	C>50.000.000 Euro	Corporate
K>1.000.000 Euro	C<50.000.000 Euro	Corporate -(SME)
K<1.000.000 Euro	C<50.000.000 Euro	Retail -(SME)

In addition to the classification in the table above, small firms that are known as having relation together or this kind of partnership issues are considered as single enterprise. This kind of enterprises in the portfolio can not have total cash or non-cash loans of more than 0.2 % of the retail loan portfolio[54]. Also the enterprise that is evaluated in the retail portfolio of the bank will be considered in the corporate portfolio of the other bank if it is used amount in the other bank is about one million Euro. In fact an enterprise that has annual sales of less than 50 million can be considered in the retail portfolio of one bank while it can be considered in the corporate portfolio of the other bank if it is loan used amount exceed one million Euro in the second bank. Certainly its risk weight will be risk weighting of the corporate portfolio of the second bank.

In today's regulation the enterprise that is considered SME if all peculiarities show today's definition. If its bank apply Basel II Standard Methodology and its total loan exceed one million Euros, it will be evaluated in the corporate portfolio and the risk rating note that is given by external rating agencies will be considered by the banks. This situation will inevitably affect the enterprises that use high amount of loans.

As it is known, the unrated corporate firms' risk weighting will be taken as 100 % and will not be less than country risk rating note.

Most firms in Turkey are not exposed to external ratings. The supervisory agency allows the banks to use 100 % risk weighting for the firms in their credit portfolio without considering

[54] Loc.cit

their credit ratings. In this situation banks follow a prudent way to use 100 % risk rating or use the firms' credit rating notes if they have or use 100 % risk rating for non-rated firms.

Although firms may use the advantage of being in the retail portfolio BRSA will be supervising the banks' and this subject, it may increase the standard risk weighting attributed by examining past collateral positions. Besides according to Basel II, it is expected and wished that banks use their own internal rating (IRB).

In addition to these, the information of the firms that use loans from banks as well as that of the individuals will be kept in the credit bureau system and this application will be opened to all the banks. Banks that are in the loan application process will easily reach this information which is about the past performance of the loans which were used by their enterprise and individual customers. This inevitably helps the minimization of the risk questioned.

The firms that are evaluated in the corporate portfolio and that are not rated by an external organization have a risk rating of 100 % and this ratio can not be more than the country risk rating note. If firms have a risk rating note, this note can be better than their countries' risk rating note. It should be considered that Turkey's foreign debt cost may decrease due to the EU adaptation process as well as Basel II application process. This would cause Turkey's weighting note increase and its general risk weighting decrease to 50 % and 75 % levels from the 100 %. This would allow banks to reduce the interest rates that they apply in their loans. In fact, this is a sensible expectation due to the fact that the risk weighting applied for the firms in corporate portfolios would also be reduced to the country levels of 50 % and 75 %. Banks would use less additional capital for these loans and this would bring out a considerable cost advantage.

There are two approaches in the loan process of SMEs. These are "Traditional Approach" and "Basel II Approach". According to the Traditional Approach, generally accepted approach before Basel II, the main aim in banks is to give "Good Loan". In this aspect the firm is

examined by sophisticated specialists. Its inspection is made and loan allocation is made to the firm that is satisfactory after all these inquiries. These loans are collateralized and repayments are followed. This approach is applied as a profit cost spread basis since it is not a risk based application. The disadvantage of this approach is that it is subjective since the evaluation made by one specialist can be different than the evaluation made by another specialist. In fact, quantifying the risk is not the case in loan pricing in this approach. This may bring out the situation in which good firms who are able to manage their risks use this as their advantages. In addition, different banks may have different evaluation criteria in the sector, thus a market price is not formed because of the different bank evaluation criteria. Due to these disadvantages, there is an inclination to risk based rating in order to overcome these disadvantages.

There is a transition to determine risk of various items of the loans and pricing in consideration with these rather than the subjective "good credit" process. Under the new approach rather than good or bad evaluation is made according to risky and less risky criteria.

To be more precisely, related credit risk for SME representatives is the risk occurred on banks' side from the firms' used loans. In this aspect the risk is related two items. These are "Risk of the one who uses the loan" and "Risk of the loan itself". Loan using firms risk is measured by the firm rating system and transaction risk is measured with its maturity, collateral, currency, transaction type etc.

SMEs rating and the rating systems' effect on SMEs is a considerable issue with Basel II. The risk criteria of whom used the loan is measured with the firms' rating notes. The risk rating note determined by the bank or independent rating companies after the evaluation of the firm's financials (balance sheet, income statement, cash flow statement, etc) and characteristic (managers and partners' resumes, sector experiences, market share etc.)

peculiarities show the risks carried by the loan and it is effective in the determination of both the bank's capital and the SME loan cost.

As the firms' risk rating note decreases, banks will be needed to keep more capital in order to reduce the risk to minimum and this inevitably causes more costly loan usage for the firms that have low risk rating notes.

Table 10: Risk Weighting Levels According to External Rating Notes

External Rating Note	**Retail Risk Weighting**	**Other Firms Risk Weighting**
From AAA to AA-	75%	20%
From A+ to A-		50%
From BBB+ to BB-		100%
Lower than BB-		150%
Not Rated		100%

Source: Pekak, Bürra and et al. 2004. *"Risk Yönetimi ve Basel II nin Kobilere Etkileri"*. (Risk Management and Basel II's Effect on SMEs). İstanbul: Türkiye Bankalar Birliği Basel II Yönlendirme Komitesi.

As it is seen on the above table, better rating notes cause low costs for the loans on firms' side. Firms' risk rating notes are expected to be updated. In the cases where banks give risk rating notes they need to to update these rating notes at least once a year. This update has a significant role in the loan allocation process and determination of the risks.

Another effect of Basel II on SMEs is the collaterals demanded in the loan evaluation process. According to this; customer acceptances will not be accepted as collateral with the application of Basel II although this item has been used as collateral. This is a disadvantage for SMEs.

5. Possible Problems That SMEs May Come Across and Proposals

Financing problem is the main significant problem that SMEs may come across with the application of Basel II. SMEs' most common problem in the maintenance of their operations is the financing problem. The core factor of this problem is their weakness in their capital structure. In order to solve this, these firms mainly demand loans from banks. In fact, they apply to other financial instruments only occasionally. Their operating capital is used in their evaluation in addition to their risk rating note from independent rating organizations and banks when they are subject to evaluation. For this reason, a firm that has sound in its capital structure would be able to get loan in less costly way comparing to another firm that has a weaker capital structure.

From the experienced financial problems, it can be seen that SME managers' financial knowledge is not satisfactory. Besides they have a problem in employing experienced personnel. In addition, their provision of this knowledge from specialists seemed to be limited.

Another problem that SMEs may experience is the "Transparency" problem. As it is known the new accord brings out this standard as a significant factor. This is a pre-requirement in order to provide a healthy relationship between banks and SMEs. In order to constitute a healthy and active rating and loan process, financial dataset and objective dataset need to be provided to independent rating organizations and banks in time, in a reliable and sufficient way. SMEs may produce different financial statements to different entities. Main problems in the SME rating are caused by their insufficient balance sheet to the loan application process (Negative capital and loss) and non-booked operations. SMEs that are satisfactorily managed and financed and provide all necessary information in time and in an adequate way are able to obtain the best rating and the best loan terms.

In addition to the financial information some objective information needs to be taken into account in the rating process. Firms need to have some peculiarities in order to obtain a

good rating note. Qualified management structure, qualified personnel, provision of improvement in the product/service, obtaining accounting, control and risk management entities, maintaining good financial management, providing satisfactory relationship between product/service and technology, market share, competitiveness, sales and marketing ability are reliable factors.

SMEs will come across risk based pricing and collateralizing implications in the application of Basel II. Maturity, amount, kind of the loan are basically factors that affect risk based pricing. Cash, gold, main index shares, deposit or deposit certificate, investment funds, notes are considered collateral while real customer notes and bills and their partner or group guarantees are excluded from being collaterals in Basel II.

6. Actions Needed to be Taken by the SMEs

It has been discrepancies in the financial stability from time to time in Turkey. In an economic instability condition, problems in one sector can affect the other sector. In fact, risk management is a significant criteria for financial stability. For this reason some various regulation and supervision is made especially in the SME loan process. These regulations and supervisions inevitably affect SMEs and SMEs need to take actions against these new standards that the new accord brings.

Transparency is another significant factor for SMEs in the Basel II transition process. In fact, the risk rating system made by independent auditing and banks requires SMEs to revise their recording system and made their books to cover all the required information. In Turkey, SMEs is a significant factor in economic growth due to the fact that SMEs constitutes an important share in the economy. However, they are highly fragile since they were not established on sound structure. This is one of the reasons for the fluctuation of the GDP. In these terms where GDP fluctuation growth country wise black money grows. On banking side since this non-taxed business is a significant problem that is not easily be solved, the banks are not able to price loans in a sound way. This is because they are almost unable to make

decisions in the credit allocation process and risk allocation. In fact, this situation increases credit cost since it increases credit pricing. This extra cost is a disadvantage for SMEs due to higher loan prices. Developing information in the market to affect the entities' perception is one of the most important factors to constitute an environment where risk based approach can be applied in a most active basis. Studies made in this area have a common decision. In this decision, SMEs are taken as the core group to examine in order to restrict the non-taxed business. If this non-taxed business is abolished, SMEs will benefit from the pricing advantage.[55] In addition, they will revise their booking system and improve it in order to find bank sourced financing. In fact, they would keep all their enterprise operations in their books and share this information with banks. This is not a fact that can happen in a short period. For this reason, this case is a disadvantage for SMEs.

Perception of the rating system by SMEs is expected as well as the actions that they would take against this. This is because many firms have already perceived the process and obtain their rating note. If SMEs do not wish to have extra loan cost, they need to perceive the process and take precautions.

In addition, firms should increase their management quality. Increasing management quality means financing opportunity, more liquidity and low capital costs. The enterprise that has better managed would save itself from economic disasters and cope with economic crisis. Firms should consider these basic managerial factors:

- Behave all shareholders equally in all operations.
- Except for their commercial secrets, they need to share all financial and objective information with public and other related organizations.

[55] There are some reasons for black economy in Turkey. High inflation rates from 1970s affected negatively to the enterprise revenues and sources. Tax payers in the economy have become unwilling to pay high tax rates. Unjustified tax distribution in the country is another reason for the black economy. Additional tax burden caused by the governments' new regulations is another problem for the firms. The reasons why the black economy is not thoroughly controlled and audited are the problems in the administrative structure, insufficient supervision and lack of coordination and information among the departments. Generally, high tax rates and lack of clarification in the regulation are among the main causes for the problem.

- They need to be accountable to the persons in their management and their shareholders.
- The firms' operations with their company management should conform to all the legal regulations, internal regulations and the company's main contract.

In addition to these SMEs should do the followings:

- The enterprises should operate in their main operating subject.
- They need to end their non-taxed business.
- The risks that they come across due to their operations should be hedged by financial instruments.
- They should use the collaterals that are offered by Basel II.
- Their capital structures need to be strengthened in order to increase their rating levels and diminish their loan costs.
- International and generally excepted principles should be applied to their financial statement in a trustable and objective way.
- Investments and new technologic improvements should be applied to their reporting and data sets.
- Any part of the enterprise management should adopt corporate management perception.
- In order to decrease risk to minimum, qualified employees are needed.
- Decision process should consider all risks and the system should be established in order to facilitate this.

Basel II's difficult implications made SMEs to seek for alternative financial instruments except for loans from banks. For instance, factoring, leasing, partnerships with foreign investors, issuing shares on the stock exchange, credit guarantee funds and additional partnership in order to strengthen their capital.

Factoring and leasing methods are two common alternative financial instruments that are used today. In addition to this, SMEs can establish limited or full partnerships with foreign investors. Due to the difficult implications that the capital markets board regulation imposes, SMEs do not often apply stock issuing process.

Another alternative financial source is the "Credit Guarantee Fund" established in 1991[56]. This is one of the popular financial instruments used. The aim of this organization is to guarantee the cash and non-cash loans used by the SMEs. Young entrepreneurs and tradesmen are the other entities that benefit this application. The main goal in this application is to resolve the collateral problem that the SMEs come across. This increases the ability of SME loan use after Basel II application. In addition to this, this process provides on going and less costly loans to wider range of entities.

[56] Credit Guarantee Fund Official Website, www.kgf.com.tr

IV. CASE STUDY

The risk rating notes of the SMEs are relatively low in the firms' credit allocation process. One of the most significant reasons for this is the non-transparency of the SME balance sheets. In fact, most firms in Turkey do not reflect their whole operations to their financial statements and the main reason for this is to avoid paying tax. For this reason, the firms usually choose to operate in the sectors that allow high profitability margin and they manipulate their financial statements in order to report lower profit margin. Even the profitable firms can be seen having losses due to the items (gross sales, cost of goods sold etc.) that were written off from their financials and thus avoid paying tax. Generally window dressing is the special adjustments made in the firm's financial position to give the appearance of a healthy balance sheet whereas actual conditions may state otherwise. This may be the case for bigger firms and it may be done in order to show the firm's financial position in a stronger way. However, this is not the case for the SMEs in Turkey, since they do not take part in capital markets. What they do as window dressing is the reverse. In fact, their avoiding of paying tax is their main reason to manipulate some of their financial figures. Window dressing is done just before the statement date in Turkey. This is usually done at the end of a fiscal year or quarter.

Turkish SMEs' non-transparency of their balance sheets is coming from some of their balance sheet and income statement items. In fact, they manipulate some specific items in order to diminish their profit margin. Gross sales are the main item that can be seen that it is manipulated in non-transparent SME income statements. Since they are usually accountable to the authorities in their exporting and documentation procedures are comprehensive in exporting, they usually do not reflect unreal figures in their abroad sales. Therefore, it can be said that domestic sales are one of the most common items that are manipulated in non-transparent Turkish SME income statements. Costs and expenses inevitably are the other items that can decrease the firm's net profit. Playing with cost of goods sold figures to show higher costs than the realized ones is in fact another way to decrease the firm's profit margin. In fact, a firm's gross profit is calculated by subtracting its gross sales from its net

sales. Therefore, lower net sales or higher cost of goods sold will both result low gross profits. A firm's net profit before tax is calculated by taking out its expenses from its gross sales. Higher expenses would mean lower net profit considering the firm's gross profit. Thus, another way to manipulate the firm's income statement seems to show its expense figures higher than the realized ones. According to the firm's operating area, the manipulated expense types can vary. If a window dresser firm operates in the advertisement sector, its marketing expenditures would be the item which is suitable to be manipulated. On the other hand, if this firm operates in the manufacturing sector, it would be sensible for it to manipulate its sales expense figures. The manipulation in the firm's income statement will inevitably affect its balance sheet. For instance, its profit or loss will increase or decrease its equity figures. In addition to this its stocks will be affected from its manipulation of cost of goods sold or net sales figures.

In order to obtain loan from a bank, the firm needs to make credit application to the bank. Credit applications require the firm's financial figures as well as the other documents. In order to prove the financial figures, the firm needs to supply its financial statements to the bank. These financial statements are expected to be up-to-date and to be confirmed by independent auditors. The bank's credit portfolio analyst examines these financials in the credit allocation process. If the analyst realizes that these financial statements do not reflect real figures, therefore manipulated by the firm in order to pay lower taxes or to show its position stronger than the real, the analyst would apply revision to the financial statements considering to IFRS principles. Revised balance sheets and income statements would be the balance sheets and income statements that would be evaluated in the credit allocation process. In fact, these will enter into the bank's rating evaluation. The rating evaluation of the bank's can be done considering external agency notes or bank's internal rating system.

Looking at the banks' rating systems, one can see that financial statements are mostly the determination factor in the production of the risk rating notes. In fact, the ratio of financial statements over all appraisable assets is 65 to 70 percent in the risk rating models. Gross

sales volume, profitability, cost of goods sold, the pressure of financial costs on the profitability liquidity ratio and debt ratios are among the most considered items in the calculation of the risk rating. Remaining 30 % to 35 % of the process covers the non-financial appraisals. For instance, the firms' partnership structure, partners and managers sector experiences, firms' operating age, market share, its bank loans are among these kinds of appraisals that are examined. However, as it was mentioned before, the most significant item in the computation of the risk rating is the financials.

According to the calculated risk rating note, the bank would be exposed to low or high risk and if this is low, the bank would give less costly loan. This is one of the impacts that increase firms' profitability. After Basel II started to be applied, the firms should be expected to minimize the non-transparency in their balance sheets and income statements in order to obtain loans that have low costs, thus higher risk rating from the banks will seem to be sought. The sample case relates how firms' risk rating note is changed after the window dressing in the firms' balance sheet and income statement was abolished. The aim of the case study is to see the existence of the non-transparency of the financials of the firms in a specific firm in a detailed way. The degree of the non-transparency of the firms could give an idea of how much this affects firms' risk rating notes in a negative way. In fact, mostly the advantage or the disadvantage of the SMEs after Basel II will be directly related to this degree of the non-transparency. If this is abolished, the firms will take higher risk rating notes. However, keeping these non-transparency financials, the firms will not be able to find loan in acceptable interest rates or even they will not be able to finance themselves form the banks.

Maja Textile Co. is a textile firm operating in the textile industry.[57] Its main operating area is producing underwear for adults and children. In Turkey, the firm has two brands that are known by the householders. The firm has both domestic sales and exporting. Nearly 60 % of the firm's sales are realized in Turkey and 40 % of its sales are exported to other countries

[57]The company is a real firm of a real bank's customer. The name of the company was changed to a virtual name due to confidentiality purposes.

like European and Former Soviet Union Countries. Its partners and managers have sector experiences leaning into a long period of time. In fact, the two partners of the firm have spent their nearly 30-35 years in the sector and these partners are relatives. Maja Textile is in the SME segment with its nearly 250 employees working in the two factories in two different cities. Being in the SME segment, this firm experiences similar problems as other SMEs have. For instance, almost all SMEs have family oriented partners and managers. Besides, adaptation of these kinds of firms to new technology is at a very slow pace and they are usually deprived of qualified workers. These negativities also cause these kinds of firms to have lower risk ratings comparing to corporate firms. This also affected Maja Textile's risk rating note negatively.

The firm does not have any importing and its production structure mostly uses non technological equipment. The main reason for the firm's loan demand from the bank was to compensate its financing need. Maja Textile Co. has been operating in the sector for about 10 years. Two relative partners are in the main board of the firm and they have been in the sector for a long time. However, they do not have sufficient education level. Three of the biggest banks in Turkey have been allocating loans to this firm. These loans are both denominated in TRY and foreign currency indexed.

Table 11: Balance Sheet of Maja Textile Co.

BALANCE SHEET	31.12.2006	*
LIQUID ASSETS	184.213	3%
NOTES RECEIVABLES(NET)	71.256	1%
RECEIVABLES	292.993	5%
INVENTORIES	737.879	13%
ADVANCES GIVEN FOR PURCHASES	37.553	1%
OTHER CURRENT ASSETS	346.311	6%
TOTAL CURRENT ASSETS	**1.670.205**	**30%**
OTHER FIXED ASSETS	292.580	5%
OTHER RECEIVABLES	**292.580**	**5%**
NET TANGIBLE FIXED ASSETS	3.543.485	64%
TOTAL TANGIBLE FIXED ASSETS	**3.555.790**	**64%**
TOTAL LONG TERM ASSETS	**3848370**	**70%**
TOTAL ASSETS	**5.518.575**	**100%**
SHORT TERM BANK LOANS	1.176.389	21%
NET NOTES PAYABLE	26.100	0%
NOTES PAYABLE	404.429	7%
ADVANCES RECEIVED	149.574	3%
OTHER SHORT TERM LIABILITIES	46.226	1%
TOTAL SHORT TERM LIABILITIES	**1.802.718**	**33%**
LONG TERM BANK LOANS	1.997.333	36%
OTHER LONG TERMLIABILITIES DUE TO SHAREHOLDERS AND SUBSIDIARIES	1.093.535	20%
TOTAL LONG TERM LIABILITIES	**3.090.868**	**56%**
TOTAL LIABILITIES	**4.893.586**	**89%**
CAPITAL	500.000	9%
RESERVES AND RETAIL EARNINGS	27.542	0%
NET PROFIT OF THE YEAR	97.447	2%
SPECIAL FUNDS	0	0%
SHAREHOLDERS EQUITY	**624.989**	**11%**
TOTAL LIABILITIES	**5.518.575**	**100%**

* : Ratio to Total Assets

Table 12: Income Statement of Maja Textile Co.

INCOME STATAMENT	31.12.2006	*
DOMESTIC SALES	1.281.645	53%
EXPORT SALES	1.122.794	47%
GROSS SALES	**2.404.439**	**100%**
(-) SALES DEDUCTIONS	-1.159	0%
NET SALES	**2.403.280**	**100%**
(-) COST OF SALES	-2.163.145	-90%
GROSS PROFIT OR LOSS	**240.135**	**10%**
(-) MARKETING,SELLING AND GENERAL ADMINISTRATION EXPENSES	-277.627	-12%
OPERATING PROFIT OR LOSS	**-37.492**	**-2%**
INCOME AND PROFIT FROM OTHER OPERATIONS	277.205	12%
(-) EXPENSES AND LOSSES FROM OTHER OPERATIONS	-26.458	-1%
(-) FINANCIAL EXPENSES	-90.890	-4%
ORDINARY PROFIT OR LOSS	**122.365**	**5%**
EXTRAORDINARY REVENUES AND PROFITS	0	0%
PROFIT OR LOSS BEFORE TAX	**122.365**	**5%**
(-) PROVISIONS FOR TAXES PAYABLE AND OTHER STATUARY OBLIGATIONS	-24.918	-1%
NET PROFIT OR LOSS FOR THE YEAR	**97.447**	**4%**

* : Ratio to Net Sales

It is known in the sector that this firm and other firms in the sector operate with 30 % of profit margin. However, the firms' financial statements do not convey this situation. However, this firm operates with the profit margin of about 10 %. Gross sales of the firm are seemed to be shown lower than the real figure and in parallel; expenditures are seemed to be higher than the real figure. In addition to these, since the firms' profitability was reported lower, its equity is observed smaller. After the examination of the firm and the sector, the firm was considered to be operating 50 % non-transparent in some items in its financial statements.

Risk Rating Methodology (IRB Approach) used in the evaluation of this firm is belong to a private commercial Turkish bank and the risk rating model used in the risk rating calculation can not be related comprehensively in this thesis. However, the IRB risk rating model's peculiarities can be summarized as follows. As it was mentioned before, 65%-70% of the evaluated items are coming from the financial data whereas the remaining part of the evaluation was made by using non financial data. The reason for giving importance to the financial data is for objectiveness and establishment of sound loan allocation. The initial

application of the risk rating model to the firm gave the firm the worst risk note (D) among A-B-C-D scales. The meaning of these scales to the bank can be summarized as follows:

Scale A: This is the highest rank among the scales. It means that the firm has very sound financials and partnership and it is very strong in its sector. Its net sales are relatively high and its profit margin is very high. In addition to this, its costs are in a minimum level due to the technology it uses as well as its specialization. Moreover, its current assets and equity are high enough to finance itself. Generally, sector leader firms are given this risk rating note from the bank. The bank's credit portfolios analysts are easily compensate credit demands of the firms in this scale. In fact, the firms in this scale relatively increase the quality of the credit portfolios. Lowest interest rates are applied to the loans given to this scaled firms.

Scale B: These firms are evaluated as good firms in their sectors. However, they are not usually the leaders in their sectors. They have some specific deficiencies that A scale firms do not have. Quality of their personnel or their technological levels can be the cause of their being in scale B rather than being in scale A. These firms would not be able to obtain loans with the lowest levels that scale A firms take. However, it can be said that they obtain lower loans considering the other scales.

Scale C: These firms can obtain loans from the bank. However, these loans are relatively high due to the risk that these firms carry. Collaterals play an important role in the credit application process to these firms. Portfolio analysts usually try to guarantee themselves as much as possible in the credit allocation process. In fact, this can either be with higher interest rates or sound collaterals. Credit follow up process to these firms is more comprehensive than the firms in better scales.

Scale D: The firms in this scale are too risky and the credit portfolio managers would be unwilling to allocate loans to these kinds of firms. In fact, they are financially weak and their financial needs are relatively high due to their high financial debts. These firms can be

expected to go to bankruptcy due to the fact that they are highly leveraged and their equities are too low. The only option for these kind of firms to seek other financial sources rather than banks although these would also be limited considering their financial position.

If Maja Textile abolishes the non-transparency in its balance sheets and income statements, the rating note should be expected to be changed into a higher scale. The non-transparency was questioned by revising the firms' financial statements. The firm's Domestic Sales were increased by 50%. In fact, its domestic sales were increased to 1.922.467 from 1.281.645. The revision carried the firm's gross sales from 2.404.439 to 3.045.261. This made the firm's profit margin conform to the sector average of 30%. The revised balance sheet and income statement is much more accurate than the initial statements as the sales figure and costs of the firm were shown in a more sound way. This resulted in higher profitability and, the firm's higher profitability caused higher equity. In fact, its shareholders equity figure was increased more than threefold. (From 624.989 to 2.177.446) In addition, just like the increase in the sales figures, its current assets increased due to the accurate receivables and stock figures. Eventually, risk rating note was increased when the revised figures (profitability, sales volume, costs, liquidity ratios and debt ratios) were used. The new risk rating note of the firm was calculated as B. This situation is inevitably a positive situation for both the bank and the firm since it means lower exposed risk and lower additional capital for the bank and lower loan costs for the firm.

Table 13: Revised Balance Sheet of Maja Textile Co.

BALANCE SHEET	31.12.2006	*
LIQUID ASSETS	285.756	5%
NOTES RECEIVABLES(NET)	71.256	1%
RECEIVABLES	454.497	7%
INVENTORIES	1.144.616	18%
ADVANCES GIVEN FOR PURCHASES	37.553	1%
OTHER CURRENT ASSETS	346.311	6%
TOTAL CURRENT ASSETS	**2.339.989**	**38%**
OTHER FIXED ASSETS	292.580	5
OTHER RECEIVABLES	**292.580**	**5%**
NET TANGIBLE FIXED ASSETS	3.543.485	57%
NET INTANGIBLE ASSETS	12.305	0%
TOTAL TANGIBLE FIXED ASSETS	**3.555.790**	**57%**
TOTAL LONG TERM ASSETS	**3.848.370**	**62%**
TOTAL ASSETS	**6.188.359**	**100%**
SHORT TERM BANK LOANS	1.176.389	19%
NET NOTES PAYABLE	26.100	0%
NOTES PAYABLE	483.984	8%
ADVANCES RECEIVED	149.574	2%
OTHER SHORT TERM LIABILITIES	177.533	3%
PROVISIONS FOR TAXES PAYABLE AND OTHER STATUARY OBLIGATIONS	139.092	2%
TOTAL SHORT TERM LIABILITIES	**2.013.580**	**33%**
LONG TERM BANK LOANS	1.997.333	32%
TOTAL LONG TERM LIABILITIES	**1.997.333**	**32%**
TOTAL LIABILITIES	**4.010.913**	**65%**
CAPITAL	1.593.535	26%
RESERVES AND RETAIL EARNINGS	27.542	0%
NET PROFIT OF THE YEAR	556.369	9%
SPECIAL FUNDS	0	0%
SHAREHOLDERS EQUITY	**2.177.446**	**35%**
TOTAL LIABILITIES	**6.188.359**	**100%**

* : Ratio to Total Assets

Table 14: Revised Income Statement of Maja Textile Co.

INCOME STATEMENT	31.12.2006	*
DOMESTIC SALES	1.922.467	63%
EXPORT SALES	1.122.794	37%
GROSS SALES	**3.045.261**	**100%**
(-) SALES DEDUCTIONS	-1.159	0%
NET SALES	**3.044.102**	**100%**
(-) COST OF SALES	-2.130.871	-70%
GROSS PROFIT OR LOSS	**913.231**	**30%**
(-) MARKETING,SELLING AND GENERAL ADMINISTRATION EXPENSES	-277.627	-9%
OPERATING PROFIT OR LOSS	**635.604**	**21%**
INCOME AND PROFIT FROM OTHER OPERATIONS	277.205	9%
(-) EXPENSES AND LOSSES FROM OTHER OPERATIONS	-26.458	-1%
(-) FINANCIAL EXPENSES	-190.890	-6%
ORDINARY PROFIT OR LOSS	**695.461**	**23%**
EXTRAORDINARY REVENUES AND PROFITS	0	0%
PROFIT OR LOSS BEFORE TAX	**695.461**	**23%**
(-) PROVISIONS FOR TAXES PAYABLE AND OTHER STATUARY OBLIGATIONS	-139.092	-5%
NET PROFIT OR LOSS FOR THE YEAR	**556.369**	**18%**

* : Ratio to Net Sales

10 additional companies that have similar characteristics to Maja Textile were chosen to make the rating comparison between their non-revised and revised financial statements. Like Maja Textile, these companies are in the SME segment according to Basel II as they have gross sales figures of less that 50 million euros and they possess less than 250 workers. The risk ratings of these firms were calculated by using the same IRB Approach as in the Maja Textile case and these firms were tried to be chosen from different sectors. The companies' names were denoted as letters (A, B, C, D etc.) due to the confidentiality purposes of both the bank's and the customer sides. Looking at the computed results, it can easily be seen that the firms' risk rating notes become higher as their financial statements become more transparent. In fact, these results support the same inference that the Maja Textile example was proven. The results can be seen in the following table:

Table 15: Case Study Applied to Other Chosen Firms

FIRM'S NAME	NUMBER OF WORKERS	RISK RATING NOTE CALCULATED BEFORE REVISING THE FINANCIALS	RISK RATİNG NOTE CALCULATED AFTER REVISING THE FINANCIALS
A	25	C	A
B	130	C	B
C	10	C	A
D	35	C	A
E	70	C	A
F	80	B	A
G	15	C	A
H	14	C	B
I	40	C	A
J	18	C	A

The characteristics of these firms as well as the calculation methodology can be related as follows:

Firm A: The firm has 25 workers and operates in the marketing of electrical house equipments, handy phones, photograph machines, computers and other electrical equipments. The firm has two partners that are experienced in the sector. Although the firm was initially able to obtain credit, the cost of this firm was at higher levels due to its risk rating note of C. Revising its financial statement, the firm's risk rating note was increased at the highest level which is A.

Firm B: The firm produces zip and it sells its products to both domestic and foreign markets. The firm has the important share in the domestic production. Nearly 130 employees are working in this company. Revising the financial statements of this firm changed its risk rating note from C to B. This means the firm is not too much non-transparent in its financial statements. Although it is one of the leading companies in its sector, its revised financial statements did not achieve to get the score of A. The reason for this is that, the evaluation is not wholly made by the firms' financial statements.

Firm C: The firm operates in the sports shoes sector. It imports its products and sells them to the market. Its sales are both retail and wholesale industries. The firm imports the shoes from China at a very low price levels. It can be said that this firm has very high profit margin. The firm has 10 workers. Because its profit margin is too high, its revised income statement was satisfactory to get a rating note of A.

Firm D: The firm has 35 employees. Its operating area is the dishes sector. It imports and exports 150 different items of porcelain, tee and coffee cups, preservation boxes, ceramic bathroom and kitchen materials etc. As in the previous firm's case, the risk rating note for this firm was increased from C to A. This firm has high sales figures that affect its risk rating note.

Firm E: The firm operates in the clothing industry. It trades fabrics used in the ladies, gentlemen and children clothing production. As a type of clothing it specializes in wool, cotton and polyester. The company has approximately 70 workers. As in the previous firm's case, this firm's rating note was increased to A after the revision was made.

Firm F: Having 80 employees, this firm is a reputable firm in the related SME segment. In fact, its financial statements were attributed the B note before the revision was made. This firm imports electronic products from China and sells these products to the domestic market. Especially hi-fi, home cinema systems, Dvd are in the products that the firm specializes in. Since it is in the electronic commercial sector, its profit margin is relatively higher than the other sectors.

Firm G: As in the previous firm's case, this firm specializes in the electronic commercial sector. Recordable dvd and vcd recorders are the main products that this firm specializes in. Besides, it imports vcd and dvd boxes, cvd and dvd accessorizes and bags. Importing these products, the firm markets these into the domestic sector. It has only 15 workers whom

manage the company and markets these kinds of products. The rating note of the company was increased from C to A.

Firm H: The firm markets mobile phones and mobile phone accessorizes as well as mp3 players and mp3 accessorize that it imports from China. It has only 14 workers specialized in these products. The firm's risk rating note was increased from C to B. Because it is a small firm and their sales are not so high, it could not achieve to get A even though it is in the sector that has high profit margin due to the technological products.

Firm I: The firm has 40 workers and it produces intermediate goods in the textile industry. It not only produces these products, but it does also market these products to the firms that are in the textile industry. Due to high profit margin in the sector, this firm's financial statements were attributed note A after revising its balance sheet and income statements.

Firm J: The firm imports various products changes from cosmetic to small home and garden products. This firm markets these to the domestic market. Having various different products, the firm chose to market these to the wholesale industry. The company has 18 workers specialized in importing and marketing. Also this firm's rating note was increased from C to A after revising its financials.

Looking at Table 15, one can see that the risk rating notes of the firms generally changes two scales after revising their balance sheets and income statements. Although these firms were smaller firms, their risk rating notes achieved high scores due to the fact that most of them specializes in both marketing and importing. In addition to this, most of these ten firms operate in high profit margin industries such as the industries that use high technology. High technology increases the possibility of implying high profits and low costs. Large scaled firms that have high exporting are not generally able to hide their profits. Since their financials show very high amount of profits, it would be sensible to think that smaller firms in the sector that imports and markets these products would also have high profit margins. In fact,

after the revisions made, 8 of the 10 firms achieved to get a note of A which is the best rating note in the system. As it is mentioned before, the risk rating system of the bank was not wholly mentioned.

When revising the financial statements of the ten firms, it was seen that gross sales figures are the main figures that were manipulated. This conforms to the Maja Textile case. However, these firms were chosen from different sectors. The main problem here is that different firm in different sectors have the same peculiarity of window dressing their financial statements if they wish to hide their profits in order to pay lower taxes. For instance, operating in the electronic sector, firm A did not reflect its real domestic sales figures as Maja Textile Company did. This affected the firm's income statement and balance sheet. Revising the financials, its net profit and shareholders equity were increased. As it was mentioned before, the methodology used to calculate the risk rating notes also considers non-financial position of the firms. Therefore, reputable firms in the sector that can easily pass subjective evaluation inevitably achieved higher risk rating notes than the other companies. For instance, being a reputable firm in the sector, it was not hard for firm F to achieve high scores comparing to other firms. In fact, as it was mentioned before 30-35 % of the evaluation is made considering the firm's non-financials. Being very good in this part, the firms can compete with the others in having higher risk rating notes. This case study did not change the firm's non-financial positions when making the revisions. Therefore, if the changes in the risk rating note are examined, one should think that the changes are just coming from the revisions of the financials. However, although similar firms were tried to be chosen, their risk rating notes can be different before and after the revision of their financial statements. The reason for this is the differences between the non-financial positions. Another varying item is the magnitude of the changes before and after the revisions. This is caused by the degree of the non-transparency of the firm's financial statements. The bigger the GAP between the revised and non-revised financials' risk rating notes, the bigger the non-transparency of the firm examined.

Both the examination of these ten firms and Maja Textile case show that the non-transparency degrees of the firms generally increase the firms' risk rating notes up to two scales if these non-transparencies are abolished with the revision in their financial statements. This would inevitably have applications in the Basel II application since risk rating notes will have considerable importance in Basel II application as it was mentioned before.

V. CONCLUSION

After the Bretton Woods System ended, liberalization in the global economic area was started. Economic liberalization movement accelerated in 80's and changes in interest rates and currency rates started to affect global banks, globally operating corporations and the companies that have import oriented production structure. In fact, the volatility in the markets started to bring up new problems for these entities. This initiated risk perception process in the markets. Under the circumstances, banks' short positions in maturity or foreig2wq1n exchange rates, companies' exposed foreign exchange rate risk could cause sizable losses when economic problems occur. In addition to market risk and credit risk, liquidity and operational risk perception began to be formed as risk perception process was growing up due to the problems caused by exposed risks.

In fact, the effect of the market fluctuations on economic entities brought up the necessity of the risk perception in the foreground. The main purpose of the Basel I Committee is to create and improve the risk perception process in the markets and bring up standardization and regulation on risk measurement process. The most valuable study in this fiels was the 1988 Accord in the 80s. This accord was named as Basel I after Basel II came into existence. The main point in the Accord was to strengthen the banks' capital structure and establish a cushion to the fluctuations in the markets. In fact, soundness of the finance sector is vital for saving the healthy structure in the markets. The Accord put into effect the Capital Adequacy Ratio Standardization and viewed it as the basic condition to provide or maintain the soundness of the finance sector. Capital adequacy ratio requires the ratio of capital over the risk weighted assets to be minimum 8%. Local authorities were authorized to increase this scale in some situations. Considering this framework, the banks calculate their risk weighted assets and their capital adequacy ratios according to Basel criteria. This is done by using their Internal Methodologies or the Standardized Approach.

The improvements such as the increasing globalization in the markets in the mid of 90s brought up the need for comprehensive regulation in the risk weighting area. Another reason

for this was that the products traded in the markets had become more complex and especially hedge or speculative purposed derivative trading went into highly advanced levels. Loan improvements can be added to these premises.

In fact, new loan types improved in the markets brought up the need for standard definition in the regulation. Under these circumstances, a new Accord (Basel II) framework was desired. Consequently, Basel II brought up comprehensive definition and standardization to the credit, market, operational and liquidity risk area. The banks risk perception has been relatively improved and qualified personnel employment has been considerably increased with Basel II transition process. In addition, the banks started to compute the risks of the position they take or the risks of the loan that they release, therefore the amount needed for the additional capital in advance in the process of their position taking or credit allocation. This is generally realized by using their internal methodologies. If additional capital is viewed as cost, it would be sensible to think that they estimate their costs. In fact, they are in a position to convey their costs to their prices much more accurately. Subsequently, the banks give loans to highly risky firms with high interest rates or they could refuse their credit application according to their overall credit portfolio position or the firms' risk level.

Generally, firms' risk rating is made by the banks' internal risk rating systems in the credit allocation process. If the evaluated firm is a reputable corporate firm, this firm can be assessed in relation to external factors (e.g. risk rating institutions). Whereas, if this enterprise is an SME, the bank's internal system has a high level importance in the rating. In fact, banks' rating note carries considerable importance since SMEs already experience financial problems. Indeed, SMEs do not possess the financing alternatives that are owned by corporations. For instance, the alternative of issuing shares is a relatively difficult process for SMEs. It is possible for a corporate firm to issue bond whereas this is almost impossible for an SME considering their reputation in the market. Clearly, there are not many financing alternatives for a SME rather than making credit application to a bank. Even SMEs are experiencing problems similar to the alternative financial difficulties in the credit allocation

process. Some of the significant causes for this are the weakness of their equity structure, non-transparency of their balance sheets and income statements. Insufficiency of their financing needs have used collaterals as the main securitization item. In relation to various collaterals obtained, the banks have been releasing loans to the SMEs. Basel II process brings up new developments in the area of collateralization. In fact, sound collaterals are expected in the collateralization process. Sound collateral demand of the banks (e.g. deposit blockage) constitutes problem for the firms that have already financing problems. This is the case for SMEs. It is expected that the firms that are experiencing difficulty in providing sound collateral will seek restructuring possibilities.

Financial statements have considerable importance in the internal credit rating process of banks. The weight of the financial statements in the credit rating process is around 65%- 70 % and this should be considered as an opportunity for the SMEs. However, SMEs mostly do not convey their whole operations to their financial statements in order to partly avoid paying tax. Therefore, financial dataset that have a considerable share in the risk rating process of the banks is currently disadvantage for SMEs. If SMEs wish to obtain higher risk ratings, they should revise their financial statements in a way to reflect their actual operations and strengthen their equity structure.

A sample case was examined for the indication of the importance of the financial statements in the risk rating system. A comparison was made in the risk rating note of a firm by the assistance of a Turkish commercial bank's risk management department. Operating in the underwear industry, Maja Textile, whose name was changed due to confidentiality purpose, is a firm that intentionally does not reflect its full operations to its financial statements. Currently, before the Basel II application, collaterals have a great importance for this firm. This firm has sufficient collateral structure and we can see that the bank's credit manager can confirm the loan releases for this firm. However, looking at its financial statements, it is obvious that this firm does not reflect reality to its balance sheet and income statement. For instance, the firm's profit margin was reflected at very low levels although it is operating in

the sector that allows approximately 30 % profit margins. The main reason for this is the firm's concealing of its gross sales. Besides, the enterprise also did not reflect its actual costs but rather reflect higher figure to decrease its profit margin. For these reasons, the firm's profit was shown less than the real amount. Since the profit amount takes place under the balance sheet item of equity, its equity figure was also shown lower. Under these circumstances; a rating was made for the firm by the application of the real bank's IRB Approach used in its Internal Credit Evaluation Process. This was initially made by using the financial statements provided by the firm. As it was mentioned before, liquidity, equity and debt are most considered items since financial statements have paramount importance in the risk rating computation. For this reason, the enterprise was given a low risk rating since it manipulated these items to lower figures. In fact, it was given rating (D) among the A, B, C, D scales. However, the loan was allocated to this firm as its collateral types that it provided were viewed sufficient.

After the Basel II application begins, a difficult term should be expected for SMEs. Because the new accord does not allow most of the collaterals that are currently accepted. The firms that have already maintain financing problems do not have many alternatives rather than taking actions to revise their risk rating. For this reason, they need to make their financial statements transparent. The firm's balance sheet and income statement were tried to be made transparent and it was assumed that real figures were approximated. According to the new situation, a new risk rating was made to the firm. The firm was given to rating (B) this time since its gross sales amount, profitability, and equity amount were increased when its cots were decreased. This rating note is a good rating note in the credit assessment process. Ten other firms that are in different sectors were also examined just after the Maja Textile case study. The results were proved to be similar to Maja Textile Company. High rating noted firm loans will be an advantage for the banks after the beginning of the Basel II application. Therefore, the banks will value risk ratings at higher importance level. For this reason, there will be actions that the firms should take.

The most significant action that the firms need to take is to provide transparency in the financial dataset that they provide. Transparency is not only beneficial for the firms, but also for the economy itself. In fact, transparency increases tax revenues of governments. Another action that SMEs should take is to adopt the changing collateral standardizations. If necessary, they will need to provide additional collaterals. In addition to these, the SMEs should strengthen their equity structure. If necessary, they should increase their capital in specified periods. This would be an advantage for these enterprises as it would inevitably increase their risk rating notes. When the problems that SMEs experience are considered, it can be seen that their deprivation of corporate identity is a considerable disadvantage for them. In order to turn this disadvantage into advantage, they need to get through corporate identity. They should keep this corporation perspective in their management structure. In order to provide these, they should value more to the qualified employees. As qualified manpower increases in the firms, their level of giving importance to technology increases. This is significant in order to increase the market share. Although it would not have a direct effect, it would affect their risk rating notes. In fact, market share has a significant role in the mentioned 30-35 % non-financial evaluation weighting in the banks' internal risk rating systems.

Moreover it is significant for the SMEs to establish risk management culture in their enterprises and thoroughly manage these risks and make their planning and strategies according to the identified risks. It is obvious that satisfactory risk management requires specialization and investment in the manpower. Furthermore, the SMEs should operate in their main operating field in order to increase their operating profits. Credit allocation process of the banks pays attention whether the firm operates in its main sector and it has sufficient sector experience or not.

In summary, considering the whole framework, it can be stated that the firms that strengthen their financial, management and operational structure and provide accurate, sound, sufficient and consistent information to the financial institutions in the markets in

which risk based rating has a great importance should be expected to be relatively more advantageous than the other firms.

REFERENCES

- Akbaş, Rahmi. 2007. *"Basel II ve Amacı".* (Basel II and its Goal). Bilecik: Bilecik Üniversitesi. www.muhasebetr.com
- Altman Edward I, and Gabriele Sabato. 2005. "Modeling Credit Risk for SMEs: Evidence from the US Market".
- Alternatif Bank AŞ. "Basel II". www.abank.com.tr
- Aras, Güler. 2005. "*Basel II Uygulamasının Kobilere Etkileri ve Geçiş Süreci".* (The Effect of Basel II on SMEs and the Transition Process). Istanbul: Yıldız Teknik Üniversitesi Sosyal Bilimler Enstitüsü.
- Atiker, Mustafa. 2005. "*Basel I ve Basel II".* (Basel I and Basel II). Konya: Konya Ticaret Odası Etüd – Araştırma Servisi.
- Bailey, Robert. 2005. "Basel II and Development Countries: Understanding the Implications". London: London School of Economics Working Paper Series, 05 – 71
- Babuşcu, Şenol. 2006. "*Basel II'nin Bankalara ve Şirketlere Etkileri"* (Basel II's Effect on Banks and Companies) Istanbul: Garanti Bankası Eğitim Müdürlüğü. Seminar Notes.
- Babuşcu, Şenol. 1997. *Bankacılıkta Risk Derecelendirmesi (Rating) ve Türk Bankacılık Sektörüne Uygulaması".* (Rating in Banking and its Application to Turkish Banking Sector). Ankara: Sermaye Piyasası Kurulu.
- *"Bankaların Kredi İşlemlerine İlişkin Yöentmelik".* (Publict Act in Relation to Banking Loan Operations). 2004.
- Barfield, Richard. 2004. "Deep Impact, Basel in the European Union" London: Pricewaterhousecoopers. www.pwc.com/basel
- *"Basel II ve Kobiler". (*Basel II and SMEs). İstanbul:YMO Rapor 06/42-46.
- *"Basel II'nin Kapsamı: Reel Sektöre Etkileri". (*Basel II's Coverage: Its Effects on Real Sector) İstanbul: Garanti Bankası.
- "*Basel II Uygulamaları ve Reel Sektöre Etkileri".* (Basel II Applications and Its Effect on Real Sector). www.ekocerceve.com
- *"Basel II Üçüncü Yapısal Blok – Piyasa Disiplini: Raporlama Kapsamı".* (Basel II Third Pillar-Market Discipline: Reporting Content). 2006. İstanbul: Bankacılar Dergisi, Sayı: 58
- "Basel II - The New Capital Accord". Deutsche Bundesbank. www.bundesbank.de
- Besinci, Murat. 2005. *"Bankacılığın Dönüm Noktası: Basel Kriterleri".* (Turning Point in Banking: Basel Criterias). İstanbul: Kadir Has Üniversitesi.
- BIS Official Website. www.bis.org
- Bolgün, Evren and Barış Akçay. 2003. *Risk Yönetimi.* (Risk Management). İstanbul: Scala Yayıncılık.

- Budanur, Burçe. 2006. *KOBİ'lerin Ev Ödevi: Basel II* (SMEs' Homework: Basel II). İzmir: İzmir Ticaret Odası Araştırma ve Geliştirme Müdürlüğü.
- Candan, Hasan and Alper Özün. 2006. *Bankalarda Risk Yönetimi ve Basel II.* (Risk Management and Basel II in Banks). İstanbul: Türkiye İş Bankası Kültür Yayınları.
- "Capital Standards for Banks: The Evolving Basel Accord". www.federalreserve.org
- Credit Guarantee Fund Official Website, www.kgf.com.tr
- Dalgıç, Özgür. 2006. *"Basel II ve Kobi Finansmanı".* (Basel II and SME Financing). İstanbul: Türkiye Kurumsal Yönetim Derneği.
- Davies, Howard. Basel Conference. Presentation Notes.
- Davis, Kevin. "Basel II". Melbourne: The University of Melbourne, Department of Finance, Presentation Notes.
- Evranos, Furkan. 2006. *"Basel II ve Yenilikleri-Sermaye Yükümlülük Hesaplamasına İlişkin Yöntemler".* (Basel II and New Comings- Methodologies Regarding Capital Adequacy Calculation). www.bankaciyiz.biz
- Glantz, Morton. 2003. "Managing Bank Risk-An Introduction to Broad-Base Credit Engineering", Academic Press
- Gökçe, Deniz. 2007. *"Kobi ve Basel II".* (SME and Basel II). İstanbul: Akşam Gazetesi
- Henneke, Jan and Stefan Trück. 2007. "Asset Correlations and Capital Requirements for SME in the Revised Basel II Framework".
- *International Conversions of Capital Measurement and Capital Standards.*Switzerland: Bank for International Settlements
- Jackson, Patricia. 2002. "Bank Capital: Basel II Developments". London: Bank of England.
- Jacobson, Tor, Jesper Linde and Kasper Roszbach. 2004. "Credit Risk versus Capital Requirements under Basel II: Are SME Loans and Retail Credit Really Different?" Stockholm: Sweriges Riksbank Working Paper Series, 162.
- Jakeways, Ian. "The SME Toolkit". Basel II for SMEs. Presentation Notes.
- Jones, Stephany Griffith. 2003. "How to Prevent the New Basel Capital Accord Harming Developing Countries". Geneva: WADMO Conference. Presentation Notes
- Karatepe, Yalçın. 2002. *"Bankalarda Kredi Risk Yönetimi".* (Credit Risk Management in Banking). Ankara: TC Ankara Üniversitesi Siyasal Bilgiler Fakültesi.
- Korkmaz, Turhan. 2006. "*Basel II ve Kobi'lere Etkileri*". (Basel II and its Effect on SMEs) Zonguldak: Zonguldak Karaelmas Universitesi. Presentation Notes.
- Kashyap, Anil K and Jeremy C.Stein. 2004."Cyclical Impications of the Basel II Capital Standards". Chiago: Federal Reserve Bank of Chiago.
- Marlier, Christian. "After Basel II: How Will Banks Assess SMEs". Presentation Notes.
- Mandacı, Pınar Evrim. 2003. "*Türk Bankacılık Sektörünün Taşıdığı Riskler ve Finansal Krizi Aşmada Kullanılan Risk Ölçüm Teknikleri".* (Exposed Risks of Turkish Banking

Sector and Risk Measurement Techniques Used to Cope with Financial Crises). İzmir: Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Cilt 5, Sayı 1

- Mazıbaş, Murat. 2004. *"Basel II İkinci Yapısal Blok (Pillar II):Denetimsel Gözden Geçirme(I-II)"* (Basel II Second Structural Block(Pillar II):Supervisory Revision (I-II)". Ankara: BDDK.Presentation Notes.
- Natter, Raymond and Sivon Barnett. "Basel I-A: A Capital Framework for the Rest of the Industry". Washington, www.barnett-sivon.com
- Özçam, Mustafa.2004. "*Basel II Uzlaşısı".* (Basel II Accord). İstanbul: Sermaye Piyasası Kurulu Araştırma Raporu.
- Parker, Deamon. 2003. "Basel 2: The New Capital Accord, An Introduction and the Implications for Software and Systems Testing". SIM Group.
- Pekak, Bürra and et al. 2004. *"Risk Yönetimi ve Basel II nin Kobilere Etkileri".* (Risk Management and Basel II's Effect on SMEs). İstanbul: Türkiye Bankalar Birliği Basel II Yönlendirme Komitesi.
- Reardon, Edward J., Flanagan Christopher, and Sankaran Srikanth. 2006. "Basel II and Securitization, A Paradigm Shift". London: JP Morgan Securities Ltd.
- Rutledge, William L. 2003. "Rutledge: Implementing the New Basel Accord". New York: Federal Reserve Bank of New York. Speech
- Shim, Ilhyock. 2006. "Corporate Credit Guarantees in Asia". Basel II Quarterly Review.
- Saurina, Jesus, and Carlos Trucharte. 2003. "The Impact of Basel II on Lending to Small-and Medium-Sized Firms". Madrid: Bank of Spain.
- Şenol, Tayfun. 2007. *"Basel II Uygulaması Başladı".* (Basel II Application has Started). İstanbul: Alternatif YMM. www.alternatifymm.com
- Tanaka, Misa. 2003. "The Macroeconomic Implications of the New Basel Accord". Munich: Ifo Institute for Economic Research. CeSifo Economics Studies, Vol.49, 2/2003, 217-232.
- Targan, Ünal. 2006. *"Basel II ve Kurumsal Yönetim".* (Basel II and Corporate Management).İstanbul: Türkiye Kurumsal Yönetim Derneği.
- Teker, Suat, Bolgün Evren K., and Akçay Barış M.,2005. "*Banka Sermaye Yeterliliği: Basel II Standartlarının Bir Türk Bankasına Uygulanması*". (Bank Capital Adequacy: An Application of Basel II Standards on a Turkish Bank). 2005: Elektronik Sosyal Bilimler Dergisi, Bahar, 42/54
- Tiskens, Christoph. 2003. " Basel II and Consequences for SMEs". KFW Bankengruppe. Presentation Notes.
- "The New Capital Adequacy Rules Approved Tricky to Draw Up". 2004. Moody's K.M.V.
- Uyar, Süleyman and Hakan Aygören. 2006. *"Basel II İlkelerinin Kobilere Olası Etkileri: Finansman ve Muhasebe Açısından Değerlendirme*". (Likely Effects of Basel II Principles to Small and Medium Sized Enterprises: An evaluation in Terms of Cost of Capital,

Financial Reporting and Accounting". Mali Çözüm ISMMMO Yayın Organı, Ağustos-Eylül-Ekim, Sayı:77

- Ünlü, Nuri Burak. *"Bankacılıkta Modern Kredi Risk Yönetimi".* (Modern Credit Risk Management in Banking). http://www.ba.metu.edu.tr
- Wagenvoort, Rien. 2003. "SME finance in Europe: Introduction and Overview". EIB Papers, Volume 8, No:2
- Williamson, Piers. 2006. "A Non-Executive View of Basel II and Its Implications". NED Cooperative Financial Services. Presentation Notes.
- Yalçın, Haluk and et al. 2006. "*Şirket Derecelendirmesinde Basel II Perspektifi"* (Basel II Perspective in Company Rating). İstanbul: Pricewaterhousecoopers. Presentation Notes.
- Yalçın, Haluk and et al. 2004. *"Kredi Değerlendirmenin Geleceği-Basel II Yaklaşımı"* (Future of Credit Evaluation-Basel II Approach). İstanbul: Pricewaterhousecoopers. Presentation Notes.
- Yayla, Münür and Yasemin Türker Kaya. 2005. *"Basel II, Ekonomik Yansımaları ve Geçiş Süreci"* (Basel II, its Economic Influences and the Transition Process). Istanbul: Bankacılık Düzenleme ve Denetleme Kurumu. ARD Çalışma Raporları: 2005/3.
- Yılmaz, Hatice Biçen. *"Basel II ve Kobiler Üzerindeki Etkileri".* (Basel II and its Effects on SME's). Bursa: Paradoks Ekonomi,Sosyoloji ve Politika Dergisi, Yıl:3,Sayı:1. www.paradoks.org
- Yılmaz, Figen. 2003. " *Türkiye'de Küçük ve Orta Boy İşletmeler(KOBİ'ler)"* (Small and Medium Enterprises(SMEs) in Turkey). İktisadi Araştırmalar ve Planlama Müdürlüğü.
- Yörük, Nevin. *"Basel II Standartlarının Kobiler Üzerindeki Etkisinin Belirlenmesine Yönelik Anket Uygulaması".* (The Survey Application Regarding the Determination of Basel II Standards' Effects on SMEs). Ankara: Gaziosmanpaşa Üniversitesi.
- Yüksel, Ayhan. 2005. *"Basel II'nin KOBİ Kredilerine Muhtemel Etkileri".* (Possible Effects of Basel II on SME Loans). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Araştırma Raporları: 2005/4
- Yüksel, Ayhan*. 2004. "Yeni Basel Sermaye Yeterliliği Uzlaşısı (Basel II)".* (The New Capital Accord:Basel II). İstanbul: Bankacılık Düzenleme ve Denetleme Kurumu. Presentation Notes.
- Zazzara, Cristiano. 2005. "Basel 2 in the EECs Countries". Sofia: Capialia. Presentation Notes.