

Risk Management in the Banking Sector: Case of TRNC

Pelin Yaylali, Okan Veli Safakli¹

European University of Lefke, Faculty of Economics of Business, Department of Business Administration, Gemikonağı-Güzelyurt, Northern Cyprus Mersin 10 Turkey
Email: pelin.yaylali1@hotmail.com, osafakli@eul.edu.tr

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Abstract

Since 1980's the concept of risk management entered into the agenda of financial markets and specifically after the introduction of Basel II Accord, has become the core basis in the banking sector. Financial liberalization, increased competition between financial institutions, the development of credit markets, the expansion of the credit derivatives market and the invention of new financial instruments, mainly complicated the management of credit risk for the banks and other integrated risks as a result of these developments. The first step in effective risk management process is to identify the risk exposures of the banks, to measure these risks and to develop methods to control and mitigate these risks. At this stage, Basel Accords and various regulations on risk management set forth by different supervisors are taken into account. In this study, the concept of risk management and its developmental stages until its current framework have been analysed and the implementation phase within TRNC has been examined.

Keywords: Risk, Risk Management, Basel II, TRNC, Banking Sector

Introduction

The complex structure of the financial markets and the effect of globalization on this complexity resulted in the inevitability of globally harmonized legislations and more effective supervision requirements. In this process, risk management not only has been improved and become the main focus of effective supervision and monitoring, but also become one of the basic functions that guide the decision making in the banking sector. Especially after Basel II, the concept of risk management which has a pivotal status in banking system were analysed in line with the targeted framework and the implementation processes in TRNC. Furthermore, the adequacy of these processes, the steps to be taken and the areas with inadequate Basel 1 implementations were also examined. It seems that countries that want to integrate with the world, largely adopted Basel II, and began the implementations.

¹Corresponding author

The Concept of Risk Management

Risk and Risk Management

Risk describes the incident of an uncertainty about future, the negative expectations and the probability of occurrence of something negative during these uncertainties and the possibility of deviation from an expected or estimated result. In terms of banking, it is a possibility of incurring loss for the bank. In banking sector, risk should be considered and managed together with return. The preparation of detailed scenarios on what could go wrong in terms of expectations and the calculation of loss probabilities for every case, and the determination of the possible negative impacts on the bank's own funds (capital) will ensure being ready at all conditions and therefore controlling risk. Hence risk management enters into the agenda of the banking sector at this stage.

Risk management deals with what will be encountered in the future as a result of the transactions undertaken in the past and what kind of problems, challenges and losses will occur due to these risks rather than dealing with what happened in the past or what's happening recently. It considers the possible future risks and focuses on how to ensure an adequate capital (own funds) against these possible risks and how to create a sustainable capital structure. Basically, banks encounter two kinds of risks: transaction risk that is integrated with transactions and control risk.

The basic difference between risk management and internal audit is at this point. Internal audit detects the errors resulted from past transactions. On the other hand, risk management takes the necessary measures to avoid the possible negativities in the future. Risk management, at the same time, has to be under the supervision of internal audit. In this respect, the support and supervision towards the risk management processes by the internal audit and compliance activities is necessary to ensure integrity, accuracy and consistency. Therefore, the appropriateness and validity of the system and procedures used for an effective risk management should constantly be kept under the supervision and control of internal audit.

The Purpose of Risk Management

The purpose of risk management is not to inhibit the banks from taking risks but to safeguard that they take risk as much as their capital structure allows. Banking is a business dealing with risk and avoiding risk will mean incurring losses for the banks. The main objectives of risk management in banking sector are;

- To improve the financial performance of the bank,
- To prevent the bank to encounter major losses that it cannot cover or consider as acceptable.

A well-organized, sustainable risk management system that can be adapted to various conditions in compliance with the bank's structure, volume and financial activities is a guarantor deterring the bank from retaining an inactive capital. In this sense, although the supervisors consider the banks taking less risk and with higher capital adequacy as more secure, the situation is slightly different from the shareholders' perspective. Banks should implement these regulations in a manner not only to ensure compliance with the legislation or to meet the requirements but also to protect their shareholders, (Altıntaş, 2006, p. 3). Hence, supervisory authorities should put their efforts not only for the enforcement of legislations but also for the creation of effective systems. The main threat for the banking system is considering risk management process only as a reporting tool for supervisors and

taking this into account as a work to be completed in terms of legislative compliance. This would be a major mistake that can be made by a supervisory authority.

The main objectives of risk management are; to observe risks to be able to avoid uncertainties and to measure risks to be able to control them. "You can't control what you can't measure" is a reality that should not be ignored. To achieve the aforementioned objectives, banks should integrate some functions into their risk management systems and establish certain procedures within their structures. These are; the establishment and implementation of strategies, the development of competitive advantages, the inclusion of risk management in the decision making process for risk exposures, in price policy, risk control and reporting (Bessis 2002, p.11, Cited by; Varlık 2010, p.86).

The Process of Risk Management

Risk management process involves the stages such as the identification of possible risks that may be encountered by the banks, the digitizing, analyse, supervision and reporting of the determined risks by using appropriate risk measuring methods, setting up of risk policies and determining the risk management decisions that will be applied against the risks and assessing the results of the risk management policy. In the risk identification stage, the properties and causes of the risk exposures are recorded and the sharing of this information with all departments is ensured. Effective institutional communication channels have major importance in this process.

Regulatory/supervisory authorities consider the board of the directors and senior management of the banks as the responsible bodies for the development of strategies for risk management, the implementation of the developed strategies and the creation and implementation of policies. Risk policies of the banks and the implementation procedures related with these policies, are formed by the board of directors by taking into consideration the opinions of the risk management unit. These are defined as the written standards and established and put into force by the written approval of the board of directors to be implemented by the senior management (Notification of the Central Bank of TRNC). It is very important that the risk policies set out the specific criteria for all units in a bank, and are in a comprehensible, meaningful and practical structure.

Risk management policies and the content of the related implementation methods should at least cover the headings below (Yüzbaşıoğlu, 2003 p.8).

- The organization and the scope of the risk management,
- Methods of risk measurement,
- The scope of the role and responsibilities of the risk management group,
- The structures and meeting frequency of the different level risk committees,
- The methods determining the risk limits and the procedures to be followed in case of infringements,
- Notification and warning procedures to be established and their implementation,
- Compulsory approvals and confirmations to be given in a variety of situations.

Risk management policies should define the appropriate reporting and approval processes. For example, the case where the approval of the general manager for the hedge transactions exceeding the set monetary limits is necessary or the double signature requirement for some transactions. Therefore, there is a need for an internal audit system functioning in a healthy manner. In case of improper functioning of this stage risk management can become a chaos. As a result of risk management, we need a structure to measure the existing risks with different statistical methods, to assess these risks together and to assess the risks that cannot

be measured with the risk management models by using stress tests and scenario analysis. It is necessary to calculate the risk taken and the return obtained and to allocate capital on a sector by sector basis in order to ensure the effective use of an integrated risk management system and capital. Diversification of the credits given by the bank on the basis of sectors and products, the prevention of intensity by increasing the number of customers and setting upper limits for the credits can be given as examples for the policies related with asset side risk management (Kaval 2000, p.33, Cited by, Varlık 2010, p.90).

As for market risk, diversifying risk by investing in a variety of risk and return group's within the portfolio of the securities owned by the bank, daily monitoring of the price changes in the market and changing the market value of the portfolio according to the daily and seasonal changes by reflecting the changes on the assets constituting the portfolio (marking to market), also determining the limits for positions as well as limits in relation to the long positions that employees in charge of these processes within the bank's trading unit are allowed to take, applying stop loss orders as a priority in order to stop the positions creating losses by applying the pre-defined loss limits (stop loss), investing in new market assets and determining limits for the trading of these can be listed as examples for asset management policy (Kaval 2000, p.49. Cited by; Varlık 2010, p.90)

The selection and management of loans together with balance sheet management is of paramount importance in the successful implementation of the policies related to financial risk. Liability side policies are policies implemented under the assumption that; the risks cannot be completely overcome and that adequate risk is undertaken for profitability. They are the policies for establishing the potential to cover the risks (Kaval 2000, p.33 Cited by; Varlık, 2010, p.90).

Risk Management and Capital Adequacy

One of the most complex problems in the banking sector is determining the optimal level of capital. Although a bank operating with excessive capital does not pose a problem for the supervision authority it poses a serious problem for the investors. Keeping a portion of bank's capital as idle capital and not undertaking adequate risks in proportion with the capital, results in reduced profitability and return on equity of the bank. There are two ways to increase the return on equity: to increase profitability by undertaking risks and to decrease capital/own funds. Citibank could not bring its return on equity to a satisfactory level and repurchased 3 billion shares in 1995 and public banks in 2004 returned their equity capital back to the Treasury in order to reduce the capital adequacy ratio down to a reasonable level. These cases of Citibank and public banks in Turkey can be considered within this context.

The level of economic capital of a bank should meet the amount of unexpected losses (Matten 2001, p. 20-21 Cited by; Altıntaş, 2006, p.36). At this point, it is important to measure the unexpected losses and distinguish them from expected losses. The capital that will cover the unexpected losses arising from the risks undertaken is called economic capital or venture capital. The credit rating of a bank is considered to be high as long as its probability of bankruptcy is low. This is closely related to the economic capital.

In banking, as in any business, capital fulfils the following important functions;

- Representing the ownership of the business,
- Ensure funding for the activities of the business (Altıntaş, 2006, p.58)

Funding of the activities in banking cannot be solely based on capital. Borrowing debt is a banking activity. Therefore, borrowing is unavoidable. However, a well-capitalized banking sector enables the access to credits and even cheaper credits. The most important factor

reducing the systemic risk is a strong capital structure. Capital and liquidity problem only in a single bank can be enough to trigger systemic risks.

Risk-based capital adequacy ratio (Basel I) has not only been accepted in our country, it has been generally accepted in all countries of the world and has become an international standard. By gradually increasing the risk sensitivity of the regulation and introducing Basel II, capital adequacy regulation has gone beyond being just a tool to measure capital adequacy but become the centre of risk management. Basel II, in risk measurement, is more a dynamic structure with a room for improvement. It is not static as Basel-1. Basel II Accord, which was published in 2004, has been transposed into an EU Directive in 2006 and road maps were developed for the implementation. Particularly in credit risk, Basel-II is an approach which requires substantial amount of resources and effort as well as an important preparatory process.

The Development of Risk Management in Banking

The establishment of Bank for International Settlements (BIS) on 17 May 1930 to regulate the international payment system can be considered as a milestone. Following the recovery of the impacts of 1930 depression via Keynesian methods, banks slowly began to undertake risks (Tulgar, 1993, p.19). After the Second World War, the post-war debt securities issued by national governments in order to accelerate public reconstruction and developments, become a major investment item for the banks that were in a passive condition. As the demand for credits increased, asset management was first entered into the agenda of banking in this period besides liquidity.

In 1960s, as the banks were unable to meet the demand for credits with the available assets they started to look for new short-term liabilities. Negotiable certificates of deposit and Eurodollar deposits were the first instruments that emerged. With these instruments, banks began to receive funds from big companies as well. Liability structure and liability management of the banks began to gain importance during this period. While changing interest rates were becoming a risk factor that needs to be controlled by banks but also were the first signs of the need for risk management (Kılınc, 1991, p.51).

The oil crisis between the years 1973-1980, and its effects on the banking sector triggered the increase of fluctuations in interest rates and accelerated the search for new instruments against this risk. During this period, the concept of liquidity gained a different dimension. Although initially the liquidity of the banks was related with cash and assets that can be converted into cash, later on it began to be evaluated with the ability of banks to provide new funds on demand. As a result of fixed bank return on assets and increased cost of funds due to the increased interest rates, banks began to suffer from losses. The first measure taken by the banks against this situation was applying a floating interest rate over the loans that are extended. Transferring the interest rate risk onto customers brought credit risk into spotlight. In the 1970s, with the beginning of fluctuations in foreign currency exchange rates, banks had to deal with exchange rate risk as a newly emerging risk in addition to liquidity and interest rate risks. As the risks were multiplied, having a holistic approach towards risk management was inevitable.

In 1974 the executive governance of Central Banks' of the G-10 countries established the Banking Regulation and Supervision Committee (Basel Committee) under the roof of BIS, with the aim of improving the supervisory quality of banking supervision and monitoring and with the main purpose of ensuring the common standards globally for all banks. As a result of the oil crisis in the 1970s, BIS has prioritized the supervision of banks with international

operations. The Committee provides a wide scope of standards and recommendations for the countries. In addition, the Committee encourages the regulatory authorities to select the appropriate standards for their national systems. In this way the Committee aims to bring the member states closer to each other in terms of common standards rather than putting effort in the detailed harmonization of monitoring techniques (BIS, 2007).

The decisions taken by the Basel Committee are not formally binding and are recommendations however; they are based on and empowered by the European Union and the member states of the Committee which adopted them as legislation (Varlik, 2010, p.134). One of the first successes of the Basel Committee was the regulations regarding the capital adequacy of banks. The report on the "Approximation of capital adequacy and international standards" was published in 1988 has been accepted by many countries in a short time. The study which is also known as "Basel Capital Harmonization" is mainly based on credit risk. Despite the increase of variety of risks in international markets, credit risk remains the most important risk category for the banks (Okay, 2002, p.126).

The Development of Risk Management in TRNC And Turkey

In the TRNC, the 16 November 1944 dated "Chapter 150 Interest Law" states that the amount of interest that may be claimed via a court proceeding shall not exceed the amount of the main debt. This law was repealed with the 16 May 1983 dated and 31/1983 numbered Turkish Cyprus Federal State Central Bank's Law's Article 57 which also provided the establishment of the Central Bank. However, the temporary article of this Law states that "Until the competent authorities empowered by this law set out the rules that determine the rates of interest, the existing law determining the interest rates shall be applied". Following the entry of the Central Bank Law into force in 1983, the increase in interest rates was inevitably put into force with inflationary effects by the authorities on 29 February 1988 for the first time via a decision through the Central Bank Board of Directors' Decree numbered 135 stating that "the amount that can be claimed for the debts and other credit responsibilities via a court proceeding as accumulated interest, both for Turkish Lira and foreign currency, shall not exceed three times of the principal debt amount". The Money and Exchange Law numbered 38/1982 foresaw a closed regime. A number of amendments were made in 1988, 1992 and 1994 towards liberalization and following this foreign currency accounts started to be opened in this period.

With the Central Bank's decree date 22 May 1991 numbered 223-224, it was determined that interest shall not exceed four times in Turkish Lira and one time in foreign currency terms. With the Central Bank's decree dated 28 April 2000 numbered 447-448 it was determined that interest shall not exceed ten times in Turkish Lira and three times in foreign currency terms. The necessary provisions were made and these decrees came into force with the approval of Council of Ministers.

On 22 December 2001, the restrictions applied under decree 447 and 448 were repealed with the decision of the Central Bank Board of Directors. Since November 2001, following the coming into force of 41/2001 numbered Central Bank Law, Central Bank Decrees were adopted without the need for Council of Ministers approval.

In the TRNC, the interest rates over deposits and loans and all kinds of expenses and commissions were determined by the Central Bank and submitted to the Council of Ministers via the Ministry of Finance until 1991. With the 223 numbered decision of 22 May 1991, the banks in TRNC started to determine interest rates, all kinds of commissions and costs freely.

With this decision, they were also obliged to put out these rates publicly available and carry out reporting to the Central Bank.

Until 1991, the banks in the TRNC were in a passive state and far from competition as they had no profitability concerns arising from financing costs, as the TRNC was a country which was not open to the world with dysfunctional capital markets and a dependent foreign exchange regime. In this period risk management was considered as collecting deposits and giving credits. The supervision concept in the banking sector came to the agenda after this period. The Central Bank's inspection and supervision board was improved and the number of personnel was increased between the years 1993-1995.

Determination of interest rates, weak competition, coupled with the uncertain state of the supervisory authority in terms of competencies and responsibilities prevented the development of the concept of risk management. With the liberalization of the foreign exchange regime after 1997 (38/1997 Money Exchange Law) the obstacles limiting the banks' foreign exchange transactions were eliminated and the banks were faced with exchange rate risks. Due to insufficient regulations in the banking sector, unprofessional family owned administrative structures, excessive desire for growth, mismanagements experienced with the impact of inadequate capital structures, operational inefficiencies and an uncontrolled credit risk, the industry experienced a severe crisis in 2000 and still suffers from its continuing effects.

In Turkey, the perception on risk was much more focused on operational risks (wrong transactions, abuse, etc. based risks) due to the implementation of restricted exchange regime until the 1980s, while supervisory rules gained a great importance in this period. Since the 1980s, in parallel with the liberalization in the economy, the banking sector experienced many fluctuations in interest rates, exchange rates and securities. These processes have directed the banks towards considering their risk management techniques (Çelik and Ekinçi, 2002, p.17).

One of the most important factors increasing the importance of risk management in Turkey is the competitiveness that evolved in the banking sector in the 1980s with the development of money and capital markets. The opportunity of credit customers to find direct funds from money and capital markets and the institutional and individual investors seeking investment alternatives for their savings besides deposits disturbed the balance of the financial sector. Competitive environment was the main indicator showing that the banks were unable to find low cost financing. The development of wholesale banking, the increase in the number of investment banks, the newly opened branches of foreign banks in Turkey and the continuation of the activities of Turkish banks on international platforms, have increased the severity of competitiveness in the banking sector. In the 1990s competition found a new direction and this created new tools in money/monetary and capital markets. Credit types and resources have been changed, new credit opportunities have been discovered and new profitable areas to utilize these opportunities have emerged. The most important development in this period was the fact that banks started to compete not only with the amount of deposit or credits, but also with the services they provide.

International developments have occurred simultaneously with the developments in Turkey. The increased globalization and the dependence on technology together with the increasing diversity of products formed the main agenda of the international finance sector. These developments are the main causes of the increasing importance of risk management in banking.

Since 2000, the banking sector in the Republic of Turkey and the TRNC has gone through a restructuring process backed by a solid legal foundation. In 2001, with the aim of increasing the efficiency of government supervision over banks, the Banking Law 39/2001, the Saving Deposit Insurance Fund Law 40/2001 and the Central Bank Law 41/2001 came into force. Following the adoption of the Banking Law 39/2001 and with the authority given under this law, new regulations were came into force as well. For the first time, under Banking Law 39/2001 Article 15 paragraph 3, the risk management system was considered together with internal audit, control and management systems. The first regulation introduced in this period was the capital adequacy regulation based on Basel I and the capital adequacy of banks begun to be measured effectively. In 2004 and for the first time in the sector one of the market risk factors and one of the most important risks of TRNC banking, the exchange rate risk, begun to be measured and included to the risk-weighted assets in capital adequacy calculations. Market risk calculations were added to the risk-weighted assets in 2007, while operational risk calculations were added in 2008. The notification that is also referring to the risk management defined under Article 15 paragraph 3, can only be published in July 2008. The implementation took a period of almost two years. Following the harmonization period, starting from 2010 and along with the establishment of units in the banks within the limits set by the law, the structural framework established. But the Central Bank, being the supervisory authority, did not introduce regulations and implementing regulations to define the implementation, the supervision aspect as well as the supervision of measurement approaches and methodologies did not develop. On the other hand, as the regulations were not followed by a series of elements that will further develop this system into a banking culture, this process become a dysfunctional system where the banks only fulfilled their responsibilities in terms of legislative compliance and employment of staff. Important steps are still needed on the way to modernise risk management systems. The aim should be to reach a point where the focus is not only to meet the legal requirements but also to satisfy the needs of the banks in accordance with their activities and structures. Unfortunately, there are no published documents showing the steps taken on this subject.

Comparison of Basel-I And Basel-II

The "Basel Accord" on capital adequacy measurement of 1988 is considered as the major success of the Basel Committee and has received an unexpected degree of acceptance. Its main goal was to strengthen the consistency and stability of the international banking system and to calculate the minimum capital levels for banks operating in the international arena (Basel.1988.S.1.). However, it was widely implemented and the implementation was not only limited with international banks, national authorities made this Accord a part of their legislation. This approach provided methods to measure risk-weights of the assets of the banks and to calculate the minimum capital required in terms of these assets. The Basel Accord of 1988 has only four risk classifications. These can be listed as follows;

- Countries that are members of the OECD: 0% risk weight (Club Rule)
- Non-OECD countries: 20% risk weight,
- Loans backed with collateral: 50% risk weight,
- Companies and banks in non-OECD countries: 100% risk weight

Time has revealed some weak points of this assessment. The criticism towards these weak points can be summarized under two headings (TBA 2007).

- In the risk based capital approach, the concept of capital is not sufficiently defining the capacity of the bank to cover the expected or unexpected losses. For example provision for

credits may surpass the risk requirements during good periods however during negative periods the progress is reverse and the provision can be insufficient.

- The risk measure used is not sufficient. The differences in the credit risks were not taken into account while assessing the risk of the assets. As a result of this, in order to meet their risk based capital ratios, banks had to change their financial instruments and make "arbitrage". This situation created an advantage for the OECD countries which actually have higher credit risks however on the contrary this created a disadvantage for the non OECD countries with high credit worthiness. This matter was the most criticized part of Basel I.

The internationally accepted shortcomings of Basel accord can be listed as follows (Servigny and Renault 2004, p.394, Cited by: Varlık, 2010, p.21);

- There is no incentive in the Accord to bring the capital adequacy to 8%.
- The definition of risk factors does not reflect the risk level of credit users accurately. All companies are assessed in the same group without any distinction of credit worthiness.
- Capital adequacy ratio is not providing sufficient information about default risk levels.
- The effect of distribution of risk is not shown among the important factors.
- The differences between the real and the book values are increased.
- There are incentives for the disposal of quality assets (a credit given to a high- risk company and a credit given to a less-risk company has the same capital allocation and if the profit margin of a high-risk company is considered as high it can be said that it is encouraging credits to high risk companies)
- Deterioration in the quality of banks' balance sheets was observed.

In addition to these, Basel I does not take into account the economic capital which causes regulatory arbitrage and is the target of critics because it does not allow the development of risk method of reconciliation where the legal capital calculated using the standard method is higher than the economic capital.

The main differences between Basel I and Basel II are;

- The capital requirements in terms of credit risk in Basel I which is based on the principle of OECD membership and named as "club rules" is repealed with Basel II.
- The credit risk in Basel II is determined according to the credit ratings of the parties taking the credit. Some methods in the Basel II use the ratings of international independent rating agencies' (eg. Standard & Poor's. Fitch. Moody etc.), however some advanced methods (subject to the approval of banking supervision authority) use the banks own internal assessment ratings.
- Basel I only has capital requirements for credit and market risks. In addition to these risks in Basel II, operational risk is included in the capital requirements. In Basel II operational risk is defined as the risk caused by the inadequate or defective internal processes, people, systems or external events (eg, losses as a result of embezzlement, earthquakes, IT failures) and requires a capital allocation for these kind of risks.

The Basel Committee requires the banks to evaluate and identify their capital levels themselves by using Basel II criteria. However, the evaluation process of the banks and the capital adequacy processes are required to be completed under the supervision and control of banking supervisory authority. In addition, Basel II criteria require the public disclosure of information related with capital adequacy and draws a framework showing how to perform the supervision (BRSA, Basel II in 10 questions, p.4.).

Basel II consists of three structural pillars;

- Minimum Capital Requirement,
- Supervision of the Supervisory Authority

- Market Discipline (Public Information)

The main logic of Basel II in using different risks in the capital framework is the less sensitivity of simple methods as they will measure the risks as riskier or less risky than reality and therefore will require capital allocation from banks may be more than or less than required. In this Accord the use of advanced measurement methods by banks is encouraged.

If a bank adopts its economic capital as a system that takes into account the unexpected losses in the credit decisions, Basel II will not have an impact on bank credits. The system foreseen by this approach requires a capital adequacy highly sensitive to credit risk (Sironi and Zazzara 2003, p. 99). The Basel Committee suggests two different methods for measuring the amount of credit risk:

- Standardized Approach
- Internal Rating- Based Approach

In the Standardized Approach risk weights are determined according to the ratings determined by the international rating agencies. Therefore, the quality of the external credit ratings has become extremely important. In Basel II regulation, it is stated that the External Credit Assessment Agencies must be unbiased, independent, internationally accessible, enlightening the public and must provide information from quality sources. The regulations also include some principles to ensure that the banks act in accordance with standardized approach while using the external rating results. It is expected from the banks to continuously take into account the ratings determined by the same rating agency and set their risk weights in a certain standard frame. In cases of multiple evaluations it is expected to consider the highest rating in risk weight calculation.

The bank investing in securities firstly will use the credit rating determined for these securities. In the absence of credit ratings, the risk weight will be determined by using the rating of the company exporting the securities or the rating of another security with the same terms and conditions exported by the same company (BRSA, 2004, p.35).

In the internal ratings approach (IRA), banks will classify the risks of the banking portfolio according to their characteristics. Corporate credits, treasury and central bank credits, bank credits, retail credits and equity investments are the asset categories mentioned. Every asset class taken into account within the IRA frame consists of three basic components:

- Risk components; projections of the bank on risk parameters,
- Risk weight functions; Functions where the risk components are converted into risk-weighted assets and hence the capital requirements,
- Minimum requirements; the minimum requirements that must be met by the Bank to be able to set an IRA for a specific asset category,

Risk components includes; probability of default (PD), loss percentage in case of default (LGD), risk amount in case of default (DA) and effective maturity (M) (BSRA June 2004 p.82).

On the basis of basic internal rating approach, the bank itself predicts the probability of default. The amount of loss in case of default and the amount of risk in case of default are provided by the national supervisory authority as data. In the improved or advanced internal ratings approach, banks determine the loss ratio in case of default, the default risk amount and the maturity based on the in-house historical data, in addition to the probability of default. For a proper implementation of the model, the mentioned data should be collected and made functional by the bank. Banks that will use the internal ratings approach need an advanced technological infrastructure, data sets and specialized staff. These will impose additional costs to the bank. In addition, it is very important for the supervisors to improve

themselves in these aspects. It is aimed to ensure sensitive risk measurements, efficient assessments and effective use of sources for the banks using this method.

The Current Situation and The Implementation in Trnc

In the TRNC, a Basel I model capital adequacy regulation was made under the Banking Law 14/2000 and at that time, the problems and effects of the crisis period were taken into account, while provisions were made to deduct the loans used by the shareholders from the capital. In 2002, the Basel I compliant capital adequacy regulation which was made under the Banking Law 39/2001 came on to the agenda and this was followed by the foreign exchange risk and market risk measurements under the implementations that came into force in 2004 and 2007, and the operational risk measurements in 2008. Beginning from July 2010, the capital adequacy has been calculated as 10%. Market risk calculations were made a part of Basel I by the Basel Committee in 1996. On the other hand, operational risk is considered as a part of the Basel II and has begun to be implemented in the sector by the Central Bank. Although it has been implemented since 2008, the implementation status could not go beyond the main indicator calculation which is the simplest method. Since Basel II is not applied for credit risk the calculations based on portfolio classifications could not be made in the sector. However, the Committee provides three methods for the banks to measure the capital requirements for operational risk in the continuously rising complexity and risk sensitivity. These are named as;

- (1) Basic Indicator Approach,
- (2) Standardised Approach, and
- (3) Advanced Measurement Approaches.

The Committee recommends the banks to improve their existing range of approaches as operational risk measurement systems and practices develop. International banks and banks exposed to operational risk are expected to use an approach much more complicated and risk profile compliant than the Basic Indicator Approach.

It is stated that Basel II requires a long term preparation and establishment of infrastructure both for the banks and the supervisory authorities. The countries which experienced this transposition period have worked very effectively to meet the target dates and most of them had to postpone this transition. When we look at the improvement periods of Basel II and afterwards;

Basel II- was agreed in 2004. It is an approach developing credit risk measurement and including operational risk. The implementation date was projected as 2006.

Basel 2.5- was agreed in 2009. It was related with the improvements to be made in the risk measurements of securitization and trading of securities. It was intended to come into force in December 2011.

Basel III- Consisted of improvements aimed at improving the supervision standards of the supervisors and establishing universal principles for liquidity standards. It was published in 2010, but the transition was projected to take place between 2013 and 2019.

At the G20 leaders' meeting in 2011 it was projected that the implementations of Basel II and 2.5 would be completed by the end of 2011 (BIS, 2014 p.2).

During the implementation period of Basel II many countries have faced difficulties. However, researches have shown that Basel II would be adopted by many countries, as with Basel I. For example, the Financial Stability Institute (FSI), conducted a survey in 2004 and 100 of the 107 participating countries of the study stated that they are planning to use the Basel II over time (Karabiyik and Anbar, 2006, p.39-40)

The new Basel II regulation which is anticipated to be applied to all credit and investment institutions including banks is based on the risk-based capital management and risk-based loan pricing (Aksoy, 2007, p.74). With Basel II, a shift from the subjective method of 'determining the credit process' to the process of 'determining how risky the credit with its various elements' was experienced and also the pricing mechanism established according to these principles. Credit risk is measured with the risk level of the borrower and the risk level of the credit transaction. While the risk of the credit borrower is measured with the company rating system, the risk of the transaction is assessed based on various factors such as transaction type, collateral, maturity and currency.

The most notable characteristic of the TRNC banking system's balance sheet is that the liabilities consist of short-term liabilities and assets consist of long-term assets. The biggest asset in the balance sheets is the banks' credit items. Large exposures are usually the borrower's overdrafts that have become the capital of the company. Due to this, the liquidity risk constitutes a significant importance in the management of assets and liabilities. Effective stress test infrastructure and duration analysis are needed in managing the interest and liquidity risks arising from the mismatch of the maturity of assets and liabilities that are not liquid. On the other hand, the importance of compliance with dynamic Basel II, which is based on company rating and assessment, is increasing day by day.

Although an initiative was taken with the implementation of the operational risk in TRNC, credit risk applications are still subject to the Basel 1 level and static risk weights adopted. At this stage, especially the excessive overdrafts implementations and the sizes of the businesses, which are mainly small and medium-sized enterprises, should be considered and the standards relating to the banking sector measurements should set and awareness on credit standards in businesses should be raised. The implementation still can take a long time as this will require significant time, infrastructure and sources both from supervisory authority and financial markets. Meanwhile, further work is to be made on interim arrangements, chart of accounts, bookkeeping systems and risk rating methods so these will also take long time. The important point is to institutionalize the minimum mechanisms that will ensure the transparency in both the financial and real sector. BIS Committee also recommends the evaluation of the harmonized Basel II implementations in small countries by the bigger countries.

Conclusion

In today's world, where international competition is growing day by day and the technological developments are eliminating the barriers against trade and finance, it is inevitable to bring TRNC's most important financial element; banking sector to a competitive standard. While doing this, the Basel II, which is extensively implemented, foresees the adaptation of the real sector. This reveals the necessity of improving the weaknesses of the businesses in TRNC.

In order to have a competitive edge during the EU accession process, especially financial sector and companies operating in trade and industrial sectors that are in need of credits, should be well prepared. The business world that we live in and want to be integrated into has put these implementations into force and the relevant criteria has been set accordingly. Turkey has almost completed its work in this direction. Therefore, the banking sector and other related sectors should be introduced with the necessary work to be completed on this subject, nonetheless by making a start with the determination of the road maps and national initiatives.

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