

AN EVALUATION OF THE RISK MANAGEMENT PRACTICES OF COMMERCIAL BANKS IN NORTH CYPRUS

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ABSTRACT

The important role that an effective risk management system plays in ensuring banks' profitability and continuity is widely proven. The Basel II guidelines, which will soon be applied internationally requires that banks and other financial institutions have a comprehensive risk management framework in place in order to effectively deal with all the risks inherent in banking.

This study evaluates the risk management practices of banks in North Cyprus. Given the absence of a political settlement in Cyprus where the Turkish Republic of North Cyprus is not recognized by any other country except Türkiye, banks in North Cyprus do not feel obligated to adopt the principles of Basel I and Basel II. Even after a major financial crises between 2000-2001 a significant number of banks still do not have internal auditors and do not conduct integrated risk management. Our survey found that, in 2006 only 43% of the banks in North Cyprus were aware of Basel II, while the rest have almost no knowledge about it. A settlement of the Cyprus problem would require the banking sector in North Cyprus, to come into compliance with the Basel II principles and operate in a more prudent fashion.

Key Words: Risk management, banking risks, risk management techniques, banking.

INTRODUCTION

Financial liberalization, globalization and technological innovations have changed the way banks operate. These developments, despite the enormous benefits they brought, they made the financial environment more volatile, increasing the banks' exposure to financial risks. In order to preserve the stability in the international banking system, the Basel Committee on Banking Regulation and Supervisory Practices was set up in 1974, with its secretariat located at the Bank for International Settlements (BIS).

Basel Committee issued Basel I and then Basel II in order to establish international rules and regulations for banks with an objective of strengthening the soundness and stability of the international banking system (BIS, 1997).

Particularly, after the introduction of Basel II, risk management became a key focus of bank management as well as bank regulation.

Banks establish risk management departments in order to operate their risk management systems efficiently. The risk management department in a bank ensures that the bank's risks are jointly monitored. It also aims to maintain the risk profile of a bank within the predetermined limits (BIS, 2003). The techniques for measuring, controlling, and managing the various types of risks have been evolving over the last three decades. Asset and Liability Management techniques, such as gap and duration analysis, have been in use since the 1970s to mainly hedge against interest rate risk (Cornet and Sounders, 1999). Various financial risks that appeared as a result of liberalization and the globalization of the financial markets raised the need for developing more innovative risk management tools, such as the standardized approach, value at risk (VaR), backtesting and stress testing. These risk management tools are now used worldwide in measuring and managing banking risks (BIS, 1996; 2005).

A small island state that is not recognized internationally, North Cyprus, is not obligated to adopt the principles of Basel I and Basel II. This has however, proved to be very costly for North Cyprus. A major financial crises between 2000-2001 caused twelve domestic commercial banks to fail (Safakli, 2005). The objective of our survey and study of the banks in North Cyprus was to see if following the banking crises of 2000-2001 the banks significantly improved their risk management practices. This research contributes to the literature by showing evidence that even a major financial crises may not be sufficient to change the risk management culture of banks. Therefore risk management practices of banks should be encouraged and supported by banks associations as well as the regulatory bodies in the country.

1. Economic and Financial Sector Review of North Cyprus

Since 1974, the island of Cyprus has been divided into two parts - North Cyprus and South Cyprus, with the Turkish Cypriots living in the northern part and the Greek Cypriots in the southern. In the international arena, the "Republic of Cyprus" is represented by the Greek Cypriot government, whereas, Turkish Republic of Northern Cyprus (TRNC) is recognized only by Türkiye and it remains unrecognized by the international community (TRNC Public Information Office, 2005).

The political uncertainties in the island have surely negatively affected the development of North Cyprus economy where low per capita income and high inflation rates have prevailed during the last three decades (SPO, 2003). Furthermore, due to the unrecognized status of North Cyprus, international aid to North Cyprus has been too small, making North Cyprus highly dependent on continuous financial support from Türkiye. The estimated average growth rate of the real value of aid and loans received from Türkiye has been 10.24% during 1977-2003, while, the ratio of the value of these transfers to GDP has been around 11.57% for the same period (State Planning Organization, 2003).

The Turkish subsidies have been greatly helpful in covering the budget deficits that North Cyprus has experienced over 30 years (Noë and Watson, 2005).

On the other hand, linking the small economy of North Cyprus with Türkiye's unstable economy also brought some disadvantages for North Cyprus. Over the last three decades, every economic problem in Türkiye directly affected the economy of North Cyprus. For example, the banking crises of North Cyprus between 1999-2000 originated from the financial crisis that took place in Türkiye during the same years (Ozkan, 2005). The great vulnerability of the island's economy to the fluctuations of Türkiye's economy is largely due to the fact that both countries use the same currency and Türkiye is the chief trading partner of North Cyprus.

Given the small size of the country, the financial sector of North Cyprus has been characterized by a large number of banks. In 1999, there were 37 banks operating in North Cyprus with 25 of them established after 1980 (Oney, 2002). In the 1980s, the high interest rates, charged on business loans and low levels of capital requirements to open a bank, made it very attractive for large firms in a variety of sectors to open their own bank to finance their businesses. Inefficient bank supervision made it even easier for businesses to open banks and take excessive risks with depositors' savings.

During the financial crises in North Cyprus in 2000-2001, twelve banks failed. The estimated cost of the banking crisis reached to around US\$ 200 million or about USA \$ 1,000 per person. As a consequence, in 2002, the banking law in North Cyprus was amended. This new banking law has contributed to the re-establishment of banking sector stability and bank growth. By 2006, the number of local banks operating in North Cyprus had shrunk to 24 (Central Bank, 2006). While the total assets of banks declined during the financial crises in 2001, it recovered quickly and more than doubled in 2004 compared to 2001 (Table 1).

Table 1: Banks Balance Sheet (in Million US \$)

Year	1985	1990	1994	1999	2001	2004
Total Assets	200.4	426.0	696.1	1,571.7	1,204.0	2,763.2
Total Loans	113.9	156.8	234.5	844.9	397.0	808.3
Total Deposits	71.3	233.7	423.9	889.0	823.8	2,390.4
Total Equity	14.4	37.2	50.8	59.4	59.2	141.6
Total Assets/GNP (%)	83	72	126	163	132	172
Total Loans/GNP (%)	47	27	42	106	44	50
Total Deposits/GNP (%)	30	40	76	92	91	149

Source: TRNC Central Bank Annual Reports (2002), (2004).

Although macroeconomic instability in Türkiye in 2000-2001 triggered the North Cyprus banking crises, the weak balance sheet structures, undercapitalization and excessive risk taking made a banking crises in North

Cyprus inevitable (Safakli, 2005). Adopting the new banking law in 2002 improved the capital structure of banks as the minimum capital requirement increased from US\$ 20,000 to US\$ 2 million dollars. This however does not indicate whether banks have been managing their risks better than during the pre financial crises period.

2. Evolution of Risk Management

Risk management has been practiced by banks for as long as banks have existed. Using much less sophisticated techniques than those available today, banks have always tried to measure, control and manage the risks that threaten their banking business. Though, in the past it was easier to manage banking risks as banks were small and much less complex organizations than the ones today. In addition, in the past, banks mainly serving the domestic markets were often subject to strict regulations on interest rates charged on loans and paid on deposits. Hence, the interest rate and foreign exchange risk exposures were much smaller.

The increased concern toward better risk management systems and techniques in the world can be traced back to 1971 when the fixed exchange rate system broke down (Crouhy, and Mark, 2001). In addition, the oil price shocks, like the one in 1973, resulted in high inflation and large fluctuations in interest rates (Jorion, 2000). Viewed broadly, many of the risk management issues faced today by banks can be linked to the effects of deregulation and globalization. The liberalization of interest rate controls, the privatization of publicly owned banks, and the expansion on the variety of financial instruments, provided new business opportunities for banks but they also increased the need for proper risk management systems to be put in place in order to control the risks and uncertainties deriving from these changes.

As Penza and Bansal (2001) pointed out, the Basel Capital Accord of 1988 was the first step towards tighter risk management. This accord established minimum capital requirements to be employed by commercial banks in order to protect against credit risks. It also stipulated that internationally active banks should hold an amount of capital that was approximately in line with simple measures of the riskiness of their assets, and that all banks would be subject to the same capital charges. The agreement was amended in 1996 to incorporate market risk, and finally in June 1999, the Basel Committee proposed a new accord known as Basel II to replace the 1988 Accord. Currently most of the banks are in the process of adopting Basel II rules regarding their capitalizations.

Since 1970s, banks internationally have used various asset and liability management tools, such as the repricing gap and the duration gap methods to measure their financial risks (Rose and Hudgins, 2005). In addition to these tools more sophisticated and appropriate risk management techniques have been

developed during the last three decades. For example, value-at-risk (VaR) methodologies become a standard risk measure for financial risk management (Marshall and Siegel, 1996). This method enabled banks to measure their short-term, such as daily, weekly, or monthly risk exposures. Stress testing is another risk management technique that is largely used by banks in recent years (BIS, 2005). Unlike VaR models, which usually assume the existence of normal market conditions, stress testing makes the measurement of the possible loss that banks can experience in unusual or extreme scenarios.

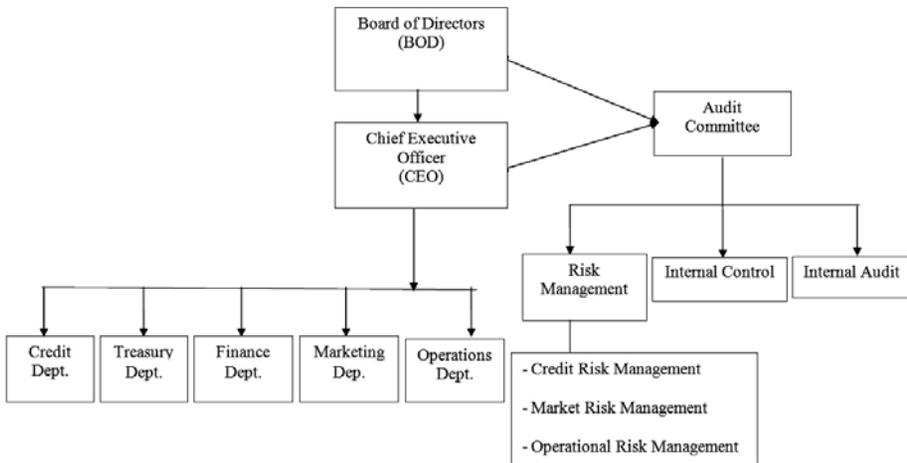
Making use of these sophisticated risk management techniques, however, requires banks to embrace a risk management culture and develop the necessary organizational structures that will allow them to use these techniques effectively.

3. The Conceptual Framework

The organization structure of banks has changed in recent years in order to keep pace with the rapid innovations in the financial arena. A simplified structure of a banking organization is illustrated by the Reserve Bank of Australia (2005), in **Figure 1**. Among the departments of a bank, the Risk Management Department has a special place in the banks' organization structure. Given the mixture of risks that banks are exposed to, it is logical to have a separate and independent Risk Management Department (Basel Committee on Banks Supervision, 2001).

The Board of Directors (BOD) that lies at the top of any banking organization sets the bank's strategy and objectives, and is also responsible for setting the risk exposure limits of the bank.

It can be said that the BOD is the lead risk manager of a bank. It is the body that should set the bank's policies. The General Manager or Chief Executive Officer (CEO) is responsible for implementing the policies set by the BOD. On the other hand, the Audit committee of the BOD is usually linked to both the BOD and to the CEO and is an extension of the BOD risk management function. This committee has the ultimate control over the Risk Management, Internal Control and Internal Audit departments (Van Greuning, 2003). International experiences suggest that the risk management, internal control and audit functions should be organized into distinct units in a commercial bank (Jorion, 2000).

Figure 1: A Simplified Organizational Structure of Banks

(Source: Reserve Bank of Australia (2005). Annual Report)

Within the Risk Management department, which is overseen by the Chief Risk Officer (COR) or manager, there are separate groups to credit risk, the market risk and the operational risk. It is vital that the risk management department works in coordination with all other units in the bank.

As Van Greuning (2003) argues the Risk Management is based on the accountability of several key players. Regulators, supervisors, shareholders, directors, executive managers, internal auditors, and external auditors all play crucial roles in facilitating risk management.

Risk management should work in synchronization with the internal control and internal auditing departments. Internal control and internal audit play also important roles in the well-functioning of the banks. Among the various functions of internal control, is the important role it plays in assessing the adequacy of the control framework in place to manage risks (Carmichael, 2005). The tasks that internal auditors perform have changed in modern banking. As Van Greuning (2003) points out traditionally internal auditors have performed an independent evaluation of a bank's compliance with its internal control systems, accounting practices, and information systems. Whereas, modern internal auditors' tasks are to guarantee the well-functioning of the bank's corporate governance, control systems, and risk management processes.

Effective risk management is a crucial management issue for providing stability and soundness for the banks. In order for the banks to respond to the assortment of risks they are exposed to, they should employ an integrated risk

management structure so that all the exposures are jointly managed. The Asset and Liability Committee and Credit Risk Committee should all be integrated into a single framework. Apart from interest rate risk and credit risk that these committees try to manage, all other types of risks should come to their attention. To have effective risk management in a bank a “risk management culture” needs to be adopted. The integrity and the accuracy of the data in the institution is another important factor that leads to the efficient management of risks. Furthermore, internal control practices in the institution play a key role in the identification and addressing of risks.

Broadly speaking the above factors provide the basics for an efficient risk management system. The success of a comprehensive risk management framework however, depends greatly on the implementation of the risk management policies and procedures, the effective use of technology, and the independence of risk management professionals (Subcommittee and Working Group on Risk Management Principles, 1999). Moreover, it is important that there is sufficient coordination of the risk functions across the banking organization.

The integrated risk management frameworks of different types of banks should differ. Mulder (2005) argues that the creation of a comprehensive risk management structure should be unique for each individual bank. This is because banks differ in their level of complexity.

The cost of the IT investments needed and the well-qualified staff that integrated risk management requires, makes it imperative that the adoption of the Risk Management framework is done according to the banks’ specific requirements, in other words the level of sophistication of the banks operations should be taken into consideration.

Basel II highly focuses on improving the Risk Management Systems in banking. Banks intending to implement Basel II need to establish an independent Risk Management unit, and employ strict disclosure and transparency policies. As Fratzscher (2005) argues, the adoption of Basel II, although it imposes many challenges, both to the regulators and to the banks, is worth adopting due to the improvements in bank management it brings about.

4. Data, Methodology and the Survey Results

This study uses a survey method to assess the risk management practices of commercial banks in North Cyprus. The questions were reproduced from a similar survey conducted on Turkish banks in 2003, by Banks Association of Türkiye. The headquarters of 21 commercial banks in North Cyprus were visited and data was collected with face to face interviews with the General Managers of these banks. Out of 21 banks, one bank was a state owned commercial bank, 14 of them were private banks, and 6 of them were foreign bank branches. Out of 21 commercial banks, 19 banks, in other words 80% of

the total commercial banks accepted to participate to the survey study while two of them declined.

Survey results were analyzed and assessed in six major areas as follows:

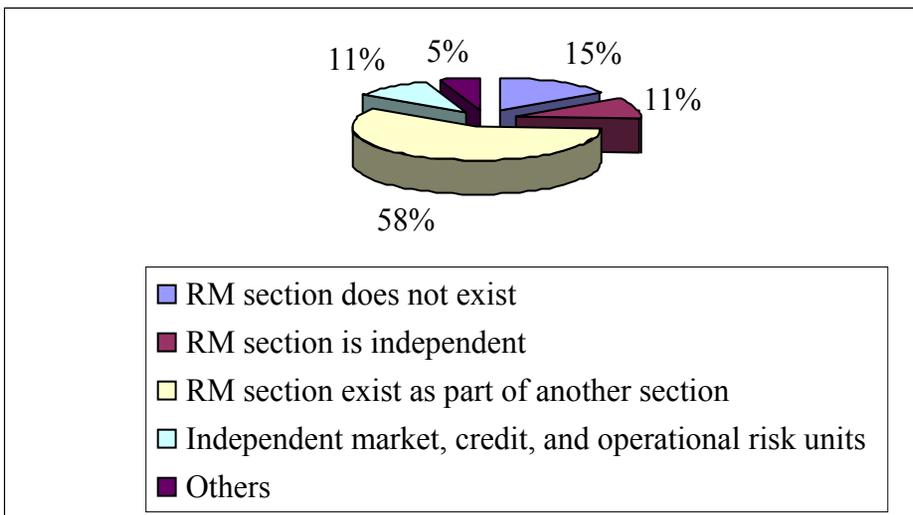
1. Organizational Structure,
2. Prudential Regulations,
3. Market and Foreign Exchange Risk,
4. Asset and Liability Management,
5. Credit Risk, and 6) Operational risk.

4.1. Organizational Structure

International experiences have show that the risk management, internal control and audit functions should be structured separately in commercial banks (Basel Committee on Banks Supervision, 2001). Our survey results indicate that only 11 % of banks in North Cyprus have an independent risk management division, whereas 58% of banks stated that their risk management division exists as part of another department, and 15 % of banks have no risk management section at all (**Figure 2**)

On the other hand, 11 % of banks indicate that they have employed independent market, credit, and operational risk units, and 5% of the banks that did not select any of the above options. These banks were the branches of Turkish banks, which stated that the risk management was performed by their head offices in Türkiye.

Figure 2: Organization of the risk management section in TRNC banks



Regarding to the frequency of the meetings of the risk management committee or the equivalent managing body if the former does not exist, the results showed that about 90 % of the banks do not conduct regular meetings. These banks indicated that meetings are organized occasionally, as the need arises.

On the other hand, 32 % of banks stated that they do not employ an internal auditor at all, whereas 68 % of banks stated that they have an internal auditor and risk manager however this task is assigned to the banks' General Managers. This structure implies a conflict of interest.

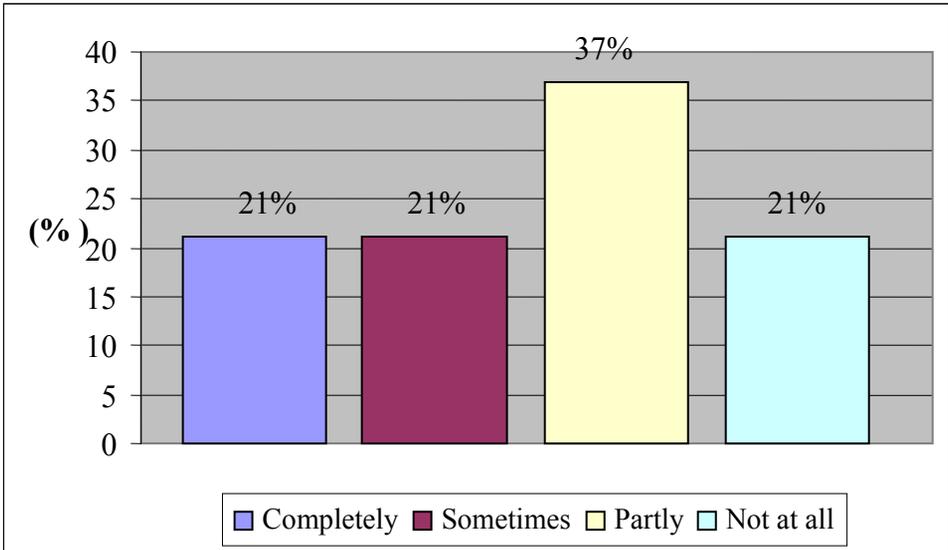
In only 53 % of the banks is the internal control and internal auditing sections separate from each other. Almost half of the banks carry these two different tasks in a single section. This creates a potential conflict of interest which reduces the banks' effectiveness while exposing the banks more to risks. Moreover, the non-existence of a separate risk management unit in most of the banks, and the basic responsibilities that this unit carries out seem to be disregarded by most of the banks in North Cyprus.

According to the survey results 84 % of the banks stated that they are developing their own policies and procedures for market, credit and operational risks. However, this result is contradictory to the finding that most of the banks do not have a risk management department.

The survey responses also reveal that 68 % of the banks have not received any consulting services on internal audit or risk management. However, 32% of these banks are foreign branches that obtain these services from their overseas centers.

4.2. Prudential Regulations

According to the survey results 21 % of the banks stated that they do not comply with the Basel I principles, whereas 37 % of them indicated that they take Basel I guidelines into consideration to some extent. This is a very troublesome response knowing that these principles are the minimum requirements that all the banks, regardless of their sizes, should consider. Nevertheless, the directives of the Central Bank in North Cyprus requires banks to have a minimum capital to asset (CAR) ratio of 8 %, the same as the global capital adequacy standard introduced by the Basel Committee in 1988. All the banks operating in North Cyprus are obliged to fulfill this minimum CAR, and if not, the banks are prohibited to extend credit until reaching the adequate capital amount imposed by the regulations.

Figure 3 Banks' Compliance with Basel I Principles

In addition, all the banks indicated that they present the reports related with the management of risks to their executive bodies before sending them to the Central Bank. However, the responsibility to prepare these reports, in most of the banks, is with the banks' General Managers or with the Accounting Department, but not with the Risk Management Group.

4.3 Market Risk and Foreign Exchange Risk

The survey responses revealed that banks in North Cyprus do not use advanced risk management techniques, such as value at risk (VaR) or stress-testing, in order to assess their market and foreign exchange risk. However, 37% of the banks stated that they make use of backtesting.

On the other hand, more than half of the banks stated that they do calculate economic capital, and 74 % of them indicated that they incorporate the results of the market risk measurements in the decision making process. In addition, most of the banks stated that they submit monthly internal audit and risk management reports to the Board of Directors or to the General Manager.

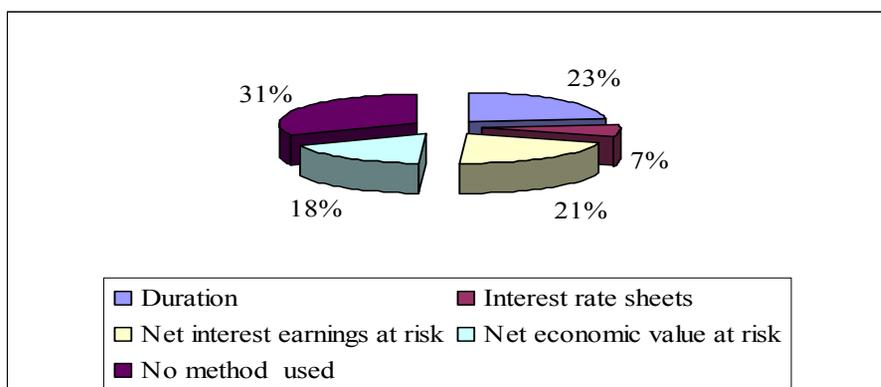
4.4 Asset and Liability Management

Due to the high and volatile inflation and interest rates prevailing for the last 30 years, the liabilities on banks' balance sheets mainly consisted of short-term deposits. For example, in 2004, 60 % of the total deposits had a maturity of up to one month, and the longest deposit maturity was up to one year (Safakli, 2003). Known that these short-term deposits are used to finance long-term

investments we can say that banks in North Cyprus are highly exposed to liquidity risk. Moreover, 57 % of the total deposits in the banking sector are denominated in foreign currency and the rest in Turkish Lira which indicates that banks in North Cyprus are also considerably exposed to foreign exchange risk (TRNC Central Bank, 2004).

Given the high liquidity, interest rate and exchange rate risks that banks in North Cyprus are facing, it is important that these risks are mitigated by appropriate asset and liability management techniques. Sixty nine percent of banks indicated to use various asset and liability management techniques to deal with their liquidity and foreign exchange rate risks whereas 31% of banks indicated that they don't use any risk management techniques to manage their risks. Out of 69 % of banks, 23 % of them indicated that they use duration analysis to measure their interest rate risk. In addition, other methods, such as interest earnings at risk (18 %) and economic value at risk (21 %), are used to measure risk (**Figure 4**). However, the responsibility of managing interest rate risk in most of these banks remains with the General Manager or the treasury department instead of a risk management division.

Figure 4 Methods Used by Banks in Measuring the Interest Rate Risk



4.5. Credit Risk

The survey results reveal that majority of banks in North Cyprus do deal with credit risk and classify their credit clients according to their risk levels. In these classifications most of the banks cover all credit clients, though some of them seem to be focused more in assigning rankings only to their business clients. In addition, 95 % of the banks take into consideration both qualitative and quantitative factors when making the risk classifications. Furthermore, 90% of the banks do look over their customer credit ratings at least once a year, with many of the banks conducting inspections every three months.

The credit risk models are used by 44 % of banks in order to approve or disapprove credit decisions. Moreover, 84 % of banks indicated that they

calculate the default rate of their loan portfolios, and they also apply credit concentration limits. These results show that banks are taking credit risk more seriously than other types of risks. This may be due to banks experiences during the financial crises between 1999-2000.

4.6. Operational Risk

The survey results show that the banking sector in North Cyprus has major weaknesses in terms of managing their operational risks. Around 50 % of banks indicated that a computer failure is the only operational risk that they may face. There is however a wide range of operational risks, such as technology, crime and fraud risks that may also affect banks negatively (BIS, 2001). Furthermore, the majority of banks do not make provisions for their operational risk as they do for their credit and market risks.

On the other hand, 74 % of the banks indicated to have written policies on the security of their confidential information. In other words, these banks have taken measures to protect themselves against the operational losses that can result from the confidential information theft. In addition, 47 % of the banks stated to have an emergency plan in response to unexpected developments. Furthermore, a considerably high proportion of banks (79 %) stated that they do develop business continuity plans to be able to respond to crisis situations, therefore guaranteeing the continuity of their activities under all conditions. Nevertheless, much work needs to be done by the banks in terms of the operational risk. Especially with the new Basel Accord becoming obligatory for TRNC banks if a solution to the Cyprus problem is reached, the operational risk management will take a high priority in this sector knowing that a major part of the new accord is devoted to operational risk management.

CONCLUSION

This study aims to investigate the practice of risk management and how this concept is perceived within commercial banks in North Cyprus. The survey results indicated that commercial banks in North Cyprus have a low level of awareness in centralized risk management structures. It is observed that only 11% of the surveyed banks have an independent risk management division. On the other hand, 58% of banks indicated that although they did not have a risk management division their risk management function is performed by other units in the bank. However, the organizational structure of these banks indicated a conflict of interest in banks' risk management as the General Managers of these banks appear to perform the duties of both internal auditor and risk manager at the same time.

It is found that the majority of banks tend to ignore the importance of internal auditing in risk management. According to the results, 32 % of the banks stated that they do not employ an internal auditor at all, which coincides with the 32% of the banks that stated that they do not measure and report their

credit, market, and operational risks. Although not substituting the crucial tasks performed by the risk management division, the internal audit plays a major role in determining the most significant risks in the bank's operations and serves to focus addressing the attention of the management on these risks. Therefore it is essential that the commercial banks in North Cyprus establish an internal audit division.

On the other hand, the survey results indicated that most of the banks have good approaches in coping with credit and market risks. More than half of the banks do calculate the economic capital and the majority of the banks make risk classifications for their credit clients taking into consideration both qualitative and quantitative factors. Moreover, 74 % of the banks stated that they have models in place for dealing with a liquidity risk, and 69 % of them state they make use of Asset and Liability management techniques in order to measure their interest rate risk. Although this may indicate that banks in North Cyprus are performing reasonably well in terms of dealing with market, credit, liquidity, and interest rate risks, they still lack using more sophisticated methods such as VaR and stress testing in measuring and managing these risk types. Moreover, almost no measures are taken by banks in order to deal with their operational risk.

The survey results also showed that Basel I, the world standard for measuring and regulating banking risks, was ignored by 21 % of the banks and another 37 % only partly take these principles into consideration. Moreover, 57 % of the banks in North Cyprus have no knowledge about Basel II principles. The deficiency in following the Basel I principles is partly covered by the directives of the North Cyprus Central Bank where banks are required to meet the same minimum capital requirements of 8 % as the first Accord conveys. However, it is important that the overall Basel I principles are all taken into consideration by the banks, as they provide the basics for proper risk management. It is also important to realize that in case of a settlement to the Cyprus problem where North Cyprus joins the EU, the compliance to Basel II will be inevitable for the banks in North Cyprus. Therefore, the current regulatory structure needs to be strengthened in order to enable banks to formulate a centralized risk management structure and focus on operational risks as well as market and credit risk.

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