

An Analysis of the Internal Audit and Internal Control Systems of Banks in TRNC

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ABSTRACT

This research investigates the internal audit and internal control systems of banks in TRNC. Internal audit is one of the most important units of a bank. It includes checking and assessing overall accuracy and consistency of banks' operations. During the last three decades the bank management and operations of banks have evolved due to financial liberalization, globalization and technological innovation which also increased operational risks. Banks are required to develop their internal control systems to protect themselves against increasing operational risks. Basel introduced a framework on internal audit in 2012. The Basel criteria on internal audit became the most commonly used world standard in the banking sector.

This research was conducted in two phases. First I compared the banking law of TRNC with the Turkish standards and Basel standards on internal auditing to find out whether the banking law of TRNC was in line with Turkey or Basel standards. Second, I developed a structured questionnaire and surveyed the majority of banks in TRNC in order to establish facts on how the internal audit and control systems work in the banking sector of TRNC. The findings indicated that there are major weaknesses in the existing auditing and control systems of banks in TRNC.

Keywords: Internal auditing, internal control, TRNC, Basel, Turkey.

ÖZ

Bu tez KKTC bankacılık sektörünün iç denetim ve iç kontrol sistemlerini araştırmaktır. İç denetim bankanın en önemli birimlerinden bir tanesidir. İç denetim banka faaliyetlerinin doğru ve tutarlı olduğunu kontrol edip değerlendirmektir. Son otuz yılda finansal liberalleşme, küreselleşme ve teknolojik yeniliklere bağlı olarak bankaların yönetimlerinde ve işlemlerinde önemli değişiklikler meydana geldi. Bankalar artan operasyonel risklere karşı etkin bir iç kontrol sistemine sahip olmak zorundadırlar. Basel, 2012 yılında iç denetim ilkelerini yayınladı. Bu ilkeler dünya çapında bankalar tarafından en çok kullanılan iç denetim standardıdır.

Bu tez iki aşamadan oluşmaktadır. Birinci bölümde KKTC bankalar iç denetim yasalarını Türkiye ve Basel standartlarıyla karşılaştırıp, KKTC bankacılık sektörünün Türkiye ve Basel standartlarıyla uyum içinde olup olmadığını saptamaktadır. İkinci bölüm ise KKTC bankacılık sektöründe iç denetim ve iç kontrol sistemlerinin hangi düzeyde olduğunu araştırmaktadır. Bu amaçla, KKTC’de faaliyet gösteren bankaların büyük bir çoğunluğuyla yapılan anket çalışması bankaların iç denetim ve iç kontrol sistemlerinde önemli eksiklikler olduğu ortaya çıkartmıştır.

Anahtar kelimeler: İç denetim, iç kontrol, KKTC, Türkiye, Basel

DEDICATION

To My Family

ACKNOWLEDGMENT

I would like to express my sincere gratitude to my advisor Prof. Dr. Hatice Jenkins for her continuous support and encouragement and her patience during my research. She helped me every step of my research as a mentor and as an expert in the field of banking. Without her supervision, this work could not have been completed.

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LIST OF ABBREVIATIONS

BRSA	Banking Regulation and Supervision Agency of Turkey
CAATs	Computer Assisted Audit Techniques
CB	Central Bank
COBIT	Control Objectives for Information and Related Technology
CRA	Credit Rating Agency
FFIEC	Federal Financial Institutions Examination Council
FX	Foreign Exchange
GBP	Great Britain Pound
GDP	Gross Domestic Product
GNP	Gross National Product
IB	Islamic Bank
IFI	Islamic financial institution
IIA	The Institute of Internal Auditors
ISI	Import Substitution Industrialization
ISU	Internal System Unit
IT	Information Technology
ITIL	Information Technology Infrastructure Library
SPO	State Planning Organization
TRNC	Turkish Republic of North Cyprus
TL	Turkish lira
US\$	United State Dollar

Chapter 1

INTRODUCTION

Banks have a significant role in economic development because they are the main and the most important financial intermediaries in most countries. Banks' main sources of funds are deposits, borrowed funds and long-term capital. Banks use their funds for different kinds of financial instruments. Loans, securities and reserves are main uses of bank funds. Deposits and loans are the largest portion of the balance sheet of banks.

During the last three decades banks management and operation have evolved due to financial liberalization, globalization and technological innovations. These improvements, although brought many benefit they also created higher uncertainty, thus banks' risk has increased. The increase in the risk exposed by banks, forced banks and Central Banks to innovate new risk management techniques and increased the importance of internal control and internal auditing. The proper functioning of these units is very important for banks regulators to create safe and sound financial systems.

Many financial crises in the past was created by the economic crises, and many financial crises caused by the failures of financial intermediaries. Due to the international business and trade between countries economic and financial crisis are not staying in one country but it is spreading all around the world. Banks are very

important for a sustainable and growing economy. From the past to the present many international meetings and conferences were held in order to stabilize the international banking system. The Basel Committee on Banking Supervision is a committee of banking supervisory authorities that was established in 1974 by group of ten countries governors of their Central Banks.

In 1988 Basel Committee on Banking Supervision arranged Basel I accord so as to establish rules and regulation for international banking system. According Bank for International Settlements, Basel I accord required internationally operating banks to sustain at least 8% of capital ratio considering a percent of risk-weighted assets. After, fast changes in financial market many banks were faced new challenges which were not addressed in Basel I. As a result, Basel committee recommends issuing new accord in 2004, which was named Basel II. According to Bank for International Settlements website, main objective of Basel II is to control how much capital has to be hold by bank to secure toward the operational and financial risks. In 2013 Basel committee decide to come together to update international banking regulation. According to Bank for International Settlements website, objective of Basel III is propose regulatory framework on stress testing, market liquidity risk and bank capital adequacy.

Banks regulators and management has been given great importance to the internal auditing and internal control, especially after Basel committees. The significance of concentrating on internal auditing and internal control has become essential function for an efficient and proper bank management.

Internal auditing is the department that monitors banks' internal control system. Internal audit unit assure adequacy and compliance with the banks policies and procedures. Internal audit is the most important department of banks which acts as eyes of senior management and the board of directors on overall activity of the bank.

Internal control department is in charge of applying policies and procedures that has been determined by the senior management and the board of directors. It is very significant for banks to have efficient internal control function because in this way banks can assure objectives and goals will come through. Strong internal control will also assure that policies, internal rules, banking laws, regulations and plans are complied.

This thesis analyzes and evaluates the internal unit systems of banks in Northern Cyprus. In addition it aims to assess whether the banking law on internal system in North Cyprus is different from the Banking systems of Turkey and Basel Committee on Banking Supervision.

Chapter 2

A REVIEW OF THE ECONOMY AND THE BANKING SECTOR OF TRNC

2.1 The Political and Macroeconomic Conditions in TRNC

Cyprus is the biggest island of the Mediterranean Sea after Sicily and Sardinia, which is geographically surrounded by Africa, Asia and Europe continents. After military intervention in 1974, Cyprus has been separated into two parts. The North Cyprus and the South Cyprus. The Turkish Cypriots are in the north and the Greek Cypriots are living in the south. The Turkish Cypriots declared the Turkish Republic of Northern Cyprus (TRNC) in 1983, however TRNC is still unrecognized in international arena and it is only recognized by Turkey. Since 1974 there was much effort by UN and European countries to unify Cyprus but these efforts were unsuccessful. Referendum under the Annan Plan demonstrated that the party does not want solution was the Greek Cypriots. The economist magazine stated that “In April 2004 some 65% of Turkish-Cypriots, lobbied from Ankara, voted in favor, but 76% of Greek-Cypriots said no” (2010, para. 4).

TRNC is highly dependent on economic, political and military support and aids from Turkey. Al Jazeera stated that there are approximately 30,000 Turkish Armed Forces are based in TRNC. About one-third of the budget accounted is aid from Turkey. Also there are a large number of Turkish citizens from Turkey who live in Cyprus either as worker or students. By the end of 2014 there were 81,000 Turkish citizens

living in TRNC (SPO, 2014).

Since 1974, Turkish Cypriot was applied economic embargos that left the TRNC with low economic growth. Due to international embargos on TRNC ports, TRNC can conduct international trade and business only via Turkey. The absence of free export and import activities has prevented economic development in TRNC. For last six years average real GDP growth rate was 1.44%. Especially in 2006 real GDP growth rate was -5.7% (SPO, 2014).

No Turkish Cypriot team can also join international sport competitions. Successful athletes should obtain other country citizenship in order to attend Olympic Games. Meliz Redif was first Turkish Cypriot who competed in Olympic Games but she had to attend games under Turkish citizenship. Many international bands or musicians concert are blocked. Thereby, it is becoming more difficult to advertise TRNC to the world and to attend international cultural activities. In TRNC people can only use international transport and communication via Turkey. Thus, transportation and communication prices are high in TRNC.

From past to present, TRNC was always depended on Turkish aid. Since early 1950s Turkey is supporting Turkish Cypriots financially and economically, thus Turkey plays a substantial role in the Turkish Cypriot economy. Turkey has implemented many economic development plans in TRNC. Some of these economic plans were good but some of were not successful. Bozkurt stated that “Turkey implemented an Import Substitution Industrialization (ISI) model from 1960-1980 where technology, capital goods and inputs were imported and the final product was domestically

produced” (Bozkurt, 2014, Page 88). However, ISI model collapsed due to the trade embargos imposed on TRNC. “...Dependency on Turkish aid is understandable as a compensation for the semi-closed economy situation. However, in the long-run this dependency should be reducing...” (Gorgulu, 2014, page 5). As a result of all economic plans and financial aids, TRNC became more dependent to Turkish lira and Turkish economy.

Figure 2.1 shows Turkish financial aid to TRNC Between 2002 to 2014. During some periods, there were very little declines but overall it can be seen that Turkish financial aids are upward sloping. Especially, during 2012-2015 Turkey gave 3 billion TL, which was approximately one third of the GDP.

Even though Turkey give many benefit to TRNC, there were some economic crisis occurred in the island for being too much dependent to Turkey. TRNC officially began to use Turkish lira in replacement of Cypriot pound in 1975. This decision caused many problems because the Central Bank of TRNC becomes dependent on to the monetary policy of the Central Bank of Turkey. Devaluation and inflation in Turkey caused instability in the TRNC economy. In 1994 economic recession started in Turkey and Turkish lira started to lose value at end of the year.

As there is strong economic connection between TRNC and Turkey, devaluation in Turkish lira has affected economy in TRNC. In 1999, IMF convinced to implement anti-inflation program in Turkey. Unfortunately, Turkey was unsuccessful to implement this program. As a result, according to Akpınar (2009) Turkish lira has collapsed and devaluated by 40% in 2000. The effect of this crisis on TRNC

economy was very severe, where 12 local banks went bankrupt.

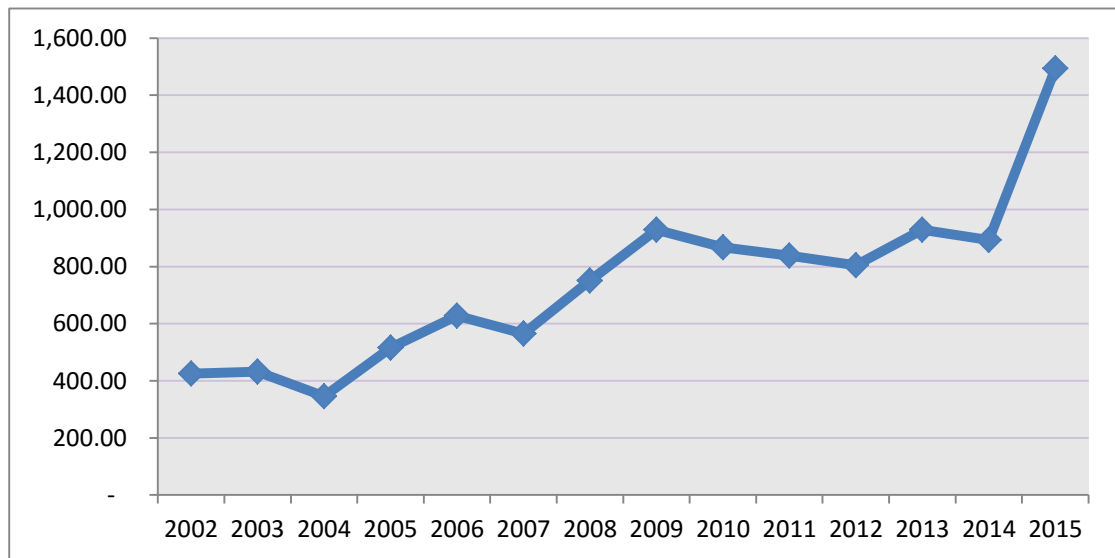


Figure 2.1. Turkish Aid Transfers to TRNC during 2002-2015 (Million TL real)
Source: Republic of Turkey, Embassy of Nicosia, 2014, page 114

Table 2.1. Main Macroeconomic Indicators

	2000	2001	2002	2003	2005	2006	2007	2008	2010	2011	2012	2013
Population	208,886	211,191	213,491	215,790	220,289	257,513	268,011	274,436	277,680	283,281	292,129	301,988
GNP (Million \$)	1,039.9	908.8	941.4	1,283.7	2,327.8	2,845	3,598.8	3,995.6	3,750.6	3,908.5	3,840.8	3,969.5
GNP Per Capita (\$)	4,978	4,303	4,409	5,949	10,567	11,837	14,765	16,158	14,703	15,403	15,038	15,302
Real Growth Rate (%)	-0.6	-5.4	6.9	11.4	13.5	13.2	1.5	-3.4	3.6	4.0	0.5	1.3
Share of Agriculture in GDP (%)	6.9	7.4	8.9	9.4	7.0	6.3	6.3	5.1	5.9	5.6	5.6	5.3
Share of Industry in GDP (%)	10.5	11.4	11.2	10.2	9.2	9.5	9.4	10.7	9.8	8.6	8.4	8.4
Share of Construction in GDP (%)	4.5	3.6	4.4	5.0	5.4	7.9	7.9	7.1	5.6	6.3	4.8	4.9
Share of Trade and Tourism in GDP (%)	16.1	15.4	15.3	16.0	17.6	15.5	13.7	14.2	16.0	18.7	19.9	20.1
Share of Public Services in GDP (%)	24.0	18.6	19.7	21.6	20.5	20.3	21.8	21.7	21.0	19.9	18.6	17.7
Export (Million \$)	50.4	34.6	45.4	50.8	68.1	68.1	83.7	83.7	96.2	152.9	122.4	120.7
Import (Million \$)	424.9	272.0	309.6	477.8	1,255.5	1,376.2	1,539.2	1,680.7	1,604.2	1,699.9	1,705.3	1,699.4
Unemployment Rate (%)	1.29	1.63	1.62	1.37	8.20	9.40	9.40	9.80	11.90	9.50	8.70	8.40
Net Tourism Revenues (Million \$)	198.3	93.7	114.1	178.8	328.8	303.2	381.0	383.7	405.8	459.4	571.9	616.1
Inflation (%)	53.2	76.8	24.5	12.6	2.7	19.2	9.4	14.5	3.3	14.7	3.6	10.2
Share of Budget Revenue in GNP (%)	37.9	29.9	32.6	40.1	39.8	36.8	40.9	37.6	37.1	35.7	39.5	35.9
Share of Budget Expenditure in GNP (%)	51.0	46.0	56.5	53.9	47.7	46.9	45.5	46.1	47.1	43.4	42.9	43.0

Source: TRNC State Planning Organization (SPO), (2013)

There were no dramatical changes in the population of TRNC in 2005. During 2000-2013 average annual population increase was 4%. GNP per capita has increased dramatically, between 2000 - 2013 it increased by 12.08%. The rapid increase in GNP per capita was attributed to exchange rate between Turkish lira and US dollar. TRNC could not sustain real growth rate trend compare to pre 2006 period. In 2004 the GDP rate of TRNC was 15.4%. However, in 2009 it dropped to - 5.7%, and decreased 1.3% in 2013. There are two reasons for this enormous decrease in real economic growth. First reason was global mortgage subprime crisis and the second reason was severe economic policies and plans forced by Turkey (Bozkurt, 2014).

Industrial sector of TRNC is not developed enough to compete with other countries. In order to improve the industrial sector of the island, there should be more incentives for the entrepreneurs. Industry is not independent from factors like; trade, transportation, labor and technology. As it is illustrated in Table 2.1, we can see that there was not enough development in the industry sector. Overall during the period of 2000-2013 the share of industry in GDP has declined.

Globalization and increasing international activities also increased competition in the tourism sector. Especially after the subprime mortgage crisis the competition has increased further because tourism is source of income and it could help countries to recover economic crises. The share of tourism in GDP was considerably high in TRNC. There was some decrease in tourism during 2006 and 2008. This was due to global economic crisis. Tourism is still one of the main sources of foreign currency for TRNC.

After Turkey recovered from economic crisis of 2001, inflation has decreased and Turkish lira started to gain value. These developments in Turkey brought important improvement in the construction sector in TRNC. In 2002 and 2003 the share of construction sector in percent of GDP was almost 20%. However, the construction sector lost its' fast grow movement after 2003. The public sector used to capture the biggest portion in share of GDP but after 2012 tourism and trade become the biggest in percent share of GDP. Between 2000 and 2013 the average share of the public sector in GDP was 22%.

There is big gap between exports and imports. Imports are always more than the exports. This is indicating a big trade deficit. From 1977 to 2003 unemployment rate was always less than 3% in TRNC (SPO, 2013). However, starting from 2004 unemployment rate increased fast but when we compare it with the developed countries unemployed rate is not very high. The TRNC economy is depended on to the Turkish economy. Thus, when the Turkish economic conditions are good, inflation falls in TRNC, but when it is bad, inflation increases. As it is illustrated in Table 2.1 the inflation rate in TRNC is fluctuating frequently.

As it can be derived from the discussion above, the political environment in TRNC is not stable and this affects the economic performance. Economic development and solutions problem is becoming more difficult due to political instability. Furthermore, the TRNC economy is too much dependent on the Turkish economy because the Turkish lira is used in TRNC and if it loses value, TRNC will have trouble in its' economy. For example, the 1994 and 2000 banking crisis in TRNC appeared due to economic instability and currency deprecation in Turkey. In 1994 two local banks collapsed due to bad loan. In 2000 banking crisis 12 local banks

went bankrupt. The total cost of 1994 and 2000 banking crisis TRNC economy was about 200 billion Turkish liras.

2.2 The Past and Present of the TRNC Banking Sector

Currently, there are 22 retail banks in TRNC. In terms of their ownership structure, there are 14 private, 1 public and 7 branch banks as it is presented in Table 2.2. In total there are 225 bank branches and 2855 bank personnel in TRNC banking sector. Banks are under the supervision of the Central Bank of TRNC. They run under the Banking Law numbered 39/2001. Basic points of this law will be discussed in later part of this section.

The Banking Law numbered 39/2001 was introduced after severe economic crisis in 2001. In order to supervise and regulate the banks in the Central Bank of TRNC updated and changed the certain points of this Law. As it is displayed in Table 2.3, during 2001 the banking sector performance declined. The most important reason behind this was the financial crisis in Turkey. Total banking sector assets in 2001 has decreased compare to 1999 but it started to recover in 2004. Total assets increased unusually after 2001 until 2007. From 2001 to 2004 total assets increased more than 100%. Global financial crisis in 2007 has affected TRNC banking sector too. Impacts of global financial crisis are viable on total assets of banks. Total asset growth has slowed down during this period. Moreover, as it presented in Table 2.3 in general total loan, deposit and equity has moved same direction with total assets.

As it is attributed in Figure 2.2, we can analyze the balance sheet of banks in relation to GNP. One's economic conditions are bad saving will decrease and people will spend more money for same quantity consumptions.

Table 2.2. Total Assets and Total Liabilities at Banks (in million US \$)

Year	1999	2001	2004	2007	2010	2012	2014
Total Assets	1,517.7	1,204.0	2,763.0	5,082.4	5,447.8	6,172.6	6,364.4
Total Loans	844.9	397.0	808.3	2,115.6	2,711.5	3,520.2	3,835.3
Total Deposits	889.0	823.8	2,390.4	4,238.4	4,429.0	5,023.9	5,050.8
Total Equity	59.4	59.2	141.6	369.7	605.5	673.6	645.0

Source: TRNC Central Bank (2004). TRNC Central Bank Web site (<http://www.kktcmerkezbankasi.org/node/483>)

Table 2.3. Distribution of Banks

OWNERSHIP STRUCTURE	NAMES OF BANKS	NUMBER
Public Banks		1
	Kıbrıs Vakıflar Bankası Ltd.	
Private Banks		14
	K.Türk Koop.Merkez Bankası Ltd.	
	Türk Bankası Ltd.	
	Limasol Türk Koop. Bankası Ltd.	
	Asbank Ltd.	
	Kıbrıs İktisat Bankası Ltd.	
	Nova Bank Ltd.	
	Creditwest Bank Ltd.	
	Yakın Doğu Bank Ltd.	
	Şekerbank (Kıbrıs) Ltd.	
	Akfinans Bank Ltd.	
	Kıbrıs Kapitalbank Ltd.	
	Universal Bank Ltd.	
	Viyabank Ltd.	
	Kıbrıs Faisal İslam Bankası Ltd.	
Branch Banks		7
	T.C.Ziraat Bankası	
	Türkiye Halk Bankası A.Ş.	
	HSBC Bank A.Ş.	
	Türkiye İş Bankası A.Ş.	
	Ing Bank A.Ş.	
	Türkiye Garanti Bankası A.Ş.	
	Türk Ekonomi Bankası A.Ş.	
Total		22

Source: TRNC Central Bank web site (<http://www.kktcmerkezbankasi.org/node/483>) (2015)

On the other hand, when economic conditions are good people can save money.

Total assets and total deposits relative to GNP are moving in same directions because

TRNC does not have capital and money market. Banks acted only as a financial intermediary so they collect deposit and give loans. When we analyze the structure of banks' balance sheet loans and deposits contain the biggest portion of assets and liabilities. During 1999 and 2007, there was too much instability in total assets and deposits relation to GNP. After 2007 total assets and deposits relation to GNP was more stable because of less credit risk.

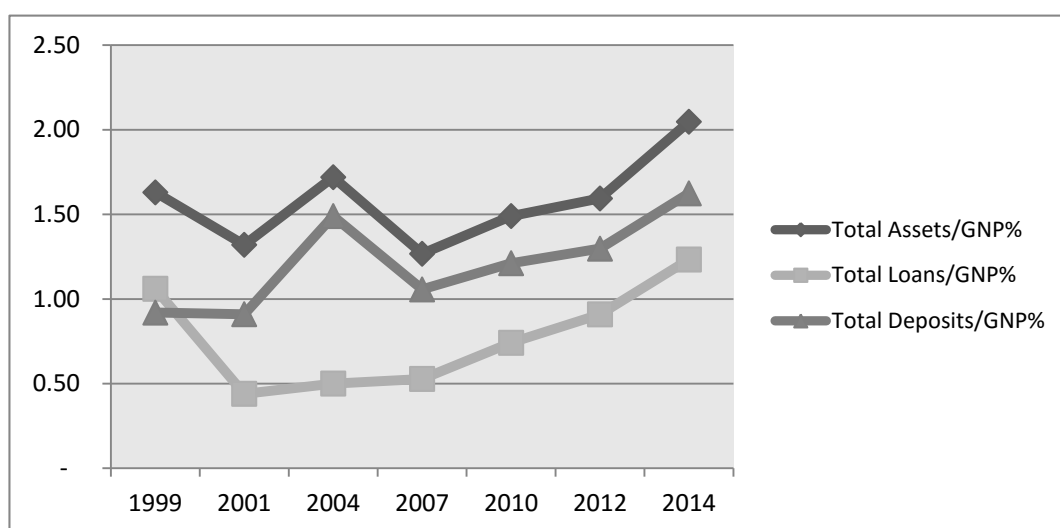


Figure 2.2. Balance Sheet of Banks Relation to GNP

Source: TRNC State Planning Organization (SPO) (2013). TRNC Central Bank Web site (<http://kktcmerkezbankasi.org/veriler/istatistiki-veriler/para-banka>)(2015).

Banks' balance sheet ratios are presented for the period between 1999-2014 in Figure 2.3. Between 1999 and 2004, deposits played significant role in financing banks assets. Deposit to asset ratio was increasing up to 2004 but then started to decrease. Having bigger deposit to asset ratio means deposits are main source of funds and banks can have liquidity problem when deposits decrease. Ratio of loans within assets was decreasing till 2004, this was due to increase credit risk and reduction of deposits. After 2004, the ratio of loans to assets enhanced parallel with loans to deposits ratio. Equity to asset ratio is another important indicator for assessing sector.

When equity to asset ratio is increasing, it indicates that banking sector capital structure is improving and vice versa. During 1999 to 2004 equity to asset ratio was downward sloping due to the banking crisis. After the 2001 crises economy recovered and equity to asset ratio increased steadily.

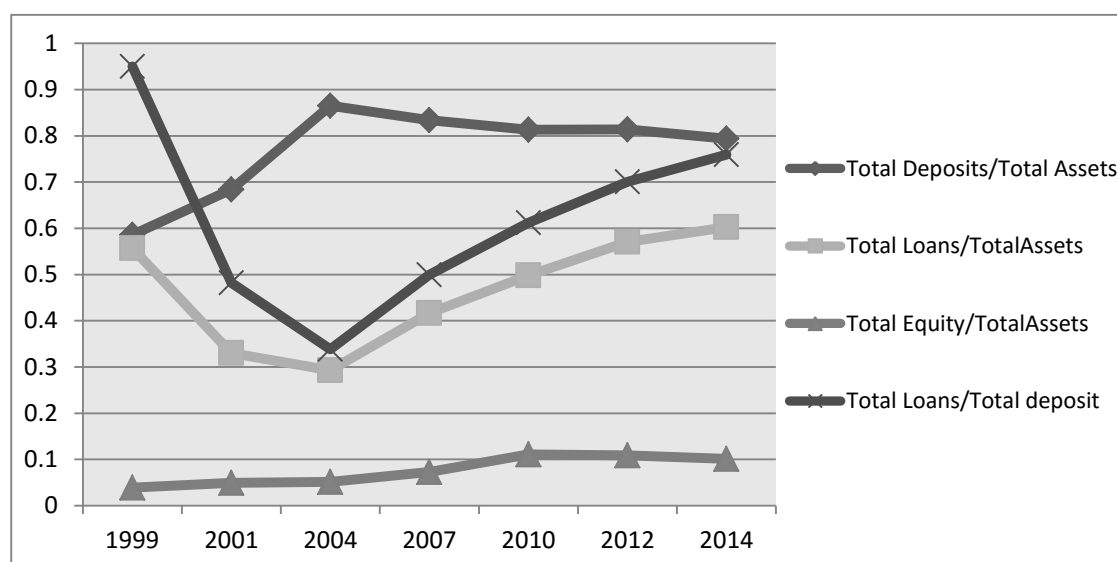


Figure 2.3. The Balance Sheet Ratios of Banks

Source: TRNC Central Bank Web site (<http://kktcmerkezbankasi.org/veriler/istatistik-veriler/para-banka>)(2015)

As it was shown previously, TRNC banking sector consist of state, private and foreign branch banks. Private banks captured 63.4% of total asset share at the end of 2014. Here is a significant point to mention, K.Türk Koop.Merkez Bank is a private bank but it is under the supervision of the government. K.Türk Koop.Merkez Bank has 22.6% of the banking sector total assets, 25.28% of total loans and 24.25% of total deposits in 2014.

Regarding to loans provided by the sector, private banks offered the biggest share of loans. As presented in Table 2.4, 63.9% of total loans were offered by the private

banks in 2014. On the other hand, foreign banks offered 31.9% of loans in 2014. This is a significant amount considering to number of foreign branch banks in TRNC. Moreover, this means that foreign banks have significant role in TRNC economic activity. That can be also crosscheck by looking total share of deposit hold by foreign banks. The state bank has very small role in the TRNC economic activity, it has 4.2% share of total loans and it attracted only 5.9% of total deposits. It is found that 67.2% of total deposits were in private domestic banks.

Table 2.4. Number of Banks and Development in Banking Groups

	Number of Banks	Total Asset (%)	Total Loan (%)	Total Deposit (%)
	Dec. 2014	Dec. 2014	Dec. 2014	Dec. 2014
State Banks	1	5.5%	4.2%	5.9%
Private Domestic Banks	14	63.4%	63.9%	67.2%
Foreign Branch Banks	7	31.0%	31.9%	26.9%

Source: Own Calculation (2015), TRNC Central Bank Web site (<http://kktcmerkezbankasi.org/veriler/istatistiki-veriler/para-banka>), (2015).

Regarding to their size there are big differences among banks. By the end of 2014 the five biggest banks made 54.17% of total assets. Moreover the biggest five banks gave 61.15% of total loans and collected 54.77% of total deposit by the end of 2014.

Meantime, the biggest ten banks make up the 78.79% of total assets. They also have 79.35% of total loans and 79.01% of total deposits. Hence, almost 80% of the total assets, loans and deposit were owned by the biggest ten banks in the sector, while remaining 12 banks share the remaining 20% of assets, loans and deposits. The main reason for huge difference of asset sizes between biggest ten banks and the rest are,

most of the small banks are family banks. It is becoming difficult for small banks to compete in banking sector given that they have only 20% share of assets.

Table 2.5 presents the asset and liability structure of the banking sector of TRNC. With the 60% of share, loans make the biggest part in total assets. Loans play significant role in economic development of TRNC. Moreover, 74.09% of total deposit was utilized for issuing loans in 2014.

Investments in securities are pretty low. This is because of the political situation in TRNC and inefficiency of the capital markets. If a local bank in TRNC is willing to engage in capital markets, they can participate via foreign branch banks. In addition, total liquid assets were 22.2% of the total assets of the banking sector in 2014. Whereas in 2004 total liquid assets was 45% of total banking sector assets. In addition to that, deposits hold the biggest portion of liabilities in 2014. The 81.3% of total liabilities were captured by deposit, it shows that deposits are main source of funds of banks. The main role of banks in TRNC is to collect deposit and give loans. Other banking activities are not developed in TRNC.

As previously mentioned the economic crisis started in TRNC during 2001 originated in Turkey. Many banks collapsed and many of them faced very high non-performing loans ratio. Gradually, the impact of economic crisis was recovered, and the risk exposed of banks was decreased. Today the non-performing loan ratios are more bearable.

Table 2.5. The Asset and Liability Structure of the Banking Sector

Assets	Million US \$	% Share
	Dec. 2014	Dec. 2014
Total Liquid Assets	1,415.57	22.2%
Security Portfolio	380.34	6.0%
Loan	3,832.23	60.2%
Non-Performing Loan (Net)	107.05	1.7%
Other Assets	571.29	9.0%
Total Assets	6,363.01	100.0%
Liabilities		
Deposits	5,172.30	81.3%
Loan	274.17	4.3%
Other Liabilities	576.33	9.1%
Capital	340.21	5.3%
Total Liability	6,363.01	100.0%

Source: Own Calculation (2015), TRNC Central Bank Web site (<http://kktcmerkezbankasi.org/veriler/istatistiki-veriler/para-banka>)(2015).

When we analyze non-performing loans in the banking sector, we found that state bank has the highest percent of non-performing loan ratio (14.9%). Private local banks are following state banks with 2.9% of non-performing loan ratios. If we compare the banks, the foreign branch bank has smallest percentage of non-performing loan among its competitors. The reason why foreign branch bank has smaller non-performing loan ratio is, they receive financial support from the origin country. Thereby, foreign branch banks have smaller risk to expose compare to private and state banks. In addition to that, when banks have low non-performing loan ratio, they will set aside smaller amount of money to cover probable loan losses. Thus, they will have more money for investment opportunities.

Table 2.6. The Non-Performing Loans, Loan Loss Provision and Non-Performing Loans Ratio by Banking Groups

	Dec-14			
	Non-Performing Loans (Million US\$)	Total Loan (Million US\$)	Loan Loss Provision (Million US\$)	Non-Performing Loans Ratio (%)
State Banks	24.0	160.70	7.5	14.9%
Private Banks	70.6	2,449.19	20.8	2.9%
Foreign Branches	7.5	1,222.34	9.8	0.6%
Total	102.1	3,832.23	38.1	18.4%

Source: Own Calculation (2015), TRNC Central Bank. Web site (<http://kktcmerkezbankasi.org/veriler/istatistiki-veriler/para-banka>)(2015).

Deposits are main source of funds in TRNC banking sector and they always retain bigger share of total liability. For example, in December 2014, 81.9% of liabilities were deposits. In TRNC banking sector, deposit are allocated in four main currencies; TL, US\$, GBP and EUR. As it presented in Table 2.7, TL deposits captured almost 60% of total deposit and FX deposit captured almost 40% of total deposit in December 2014.

Deposit structures of banks are very similar because TL dominated deposit retain higher portion in all banks. As presented in Table 2.7 private banks hold 67.19% of total deposit compare to state bank and foreign banks.

Table 2.7. Compound of Deposit and Liabilities by Banking Groups

	December 2014	
	(Deposits in Million US\$)	% Share of Deposits by types of Banks
State Banks	304.49	5.89%
TL	172.92	56.79%
FX	131.58	43.21%
Private Banks	3,475.01	67.19%
TL	1,939.81	55.82%
FX	1,535.20	44.18%
Foreign Branches	1,392.80	26.93%
TL	724.69	52.03%
FX	668.11	47.97%
Total	5,172.30	100.00%
TL	2,837.41	54.86%
FX	2,334.89	45.14%

Source: Own calculation (2015), TRNC Central Bank Web site (<http://kktcmerkezbankasi.org/veriler/istatistiki-veriler/para-banka>)(2015).

All banks in TRNC are subject to 39/2001 banking law. Purposes of this Act are, to protect rights and benefits of depositors, establish and ensure confidence and stability in financial market, make sure that credit system is operating effectively, to control set up, management, operation and liquidation of banks in TRNC

According to the TRNC banking law, the minimal amount of capital required to establish a bank is US\$ 2,000,000 equivalent in Turkish lira. However, the Central Bank is authorized to increase up to the twice amount needed to meet the requirements and minimal capital stipulated (Article 6, paragraph 1, (D)). Foreign branch banks banned to receive deposit and give loan to origin country. (Article 7, Paragraph (1)).

In order to secure depositors, the Central Bank requires all banks to separate 10% of annual net profit for possible loan losses. This requirement will continue until the sum of money becomes equal to the paid capital. This money can only be used in offsetting losses of lending. (Article 18, paragraph (1)).

In terms of risk boundaries this Banking law has very important points explained in Article 23. The Central Bank is in charge of the loan amount given to customers as well because giving too much loan to a single customer may increase default risk and credit risk. According to paragraph 2 (A) no banks are allowed to give a loan that is more than 25% of total equity or 4% of total deposit, whichever is greater. In addition, paragraph 2 (b) states that when a loan exceeds 10% of total equity or 2% of deposit whichever is greater, the Central Bank categorizes those loans as large loans. The sum of large loans cannot exceed ten times of the bank's equity.

In order to monitor and control risks that banks are exposed to and to be consistent with changing law and other circumstances, the board of directors must establish effective and adequate internal audit, internal control and risk management systems (Article 4, paragraph 1)). All banks are liable to establish internal systems units, regardless of their size.

The Central Bank allows banks to purchase company shares as well, but there are some limitations on purchasing shares. For example, banks are restricted to purchase shares of financial institutions and the amount of investment made on company shares is restricted to not exceed 15% of banks' funds that operate in TRNC. Total amount of investment on shares is restricted to not go beyond 60% of banks' funds that operate in TRNC (Article 26, paragraph (1)).

Central Bank has significant controls on preparation of banks' financial statements. According to the Banking Law all statement should be prepare in TL currency and in the format that desinged by Central Bank (Article 29, paragraph 1 (2)). Banks' balance sheets and profit and loss statements which are going to be submit to Central Bank, are required to include signiture of banks' chair of board or his deputy and they should be approved by an independent audit firm(Article 32, paragraph 1 (1)).

In addition,the Cental bank is aiming to minimize the exchange rate risk via controlling banks open position. Accordingly, the maximum amount of open position that bank can hold is 20% of liability (Article 33, paragraph 1).

The implementation of the Banking Law and checks of all banking transaction, control of banks' assets, receivables, equities, depts and balance between profit and loss accounts and determination of all other elements that affect banks are done directly by the Central Bank inspectors (Article 34, paragraph 1 (1)). Beside Central Bank inspectors, there are autohorized indipendent auditing firms that inspect banks as well. All banks in TRNC are subject to inspection, regardless whether they are state, private or foreign branch banks.

Central Bank mentions important points in the law in terms of strengthening the financial structure. If auditing result reveals that a bank is not obeying banking law and acting unconfidently, Central Bank will require necessary change. Unless bank is not doing necessary change, Central Bank can dismiss part or all members of the board and can assign new board of directors (Article 37, paragraph (1(A))). If the Central bank discover a bank having liquidity risk or think that a bank has potential to have liquidity risk, the Central Bank will limit this bank is investment in long term

or fixed assets and investment in security markets (Article 37, paragraph (2(a, b))). If the Central Bank find out that there are conflict of interest in any banks and board of directors are using resources for their own purposes and not protecting depositors. The Central Bank can dismiss this bank from banking activity (Article 37, paragraph (6)). Also, depending on types and magnitude of crime, banks staff or managers can be sentenced imprisonment or can be fined.

Chapter 3

THE LITERATURE REVIEW ON INTERNAL AUDIT AND INTERNAL CONTROL SYSTEMS

3.1 Introduction

After global financial crisis many hidden problems in the financial system were detected. It was the financial crisis that made those problems visible. Unethical behavior of credit rating agencies (CRAs) increased the damage of the global financial crisis because many CRAs hid real condition of financial intuitions. (Hayali et al, 2012, page 126) “Bank failures have more important outcomes than an ordinary company failure”. When people lost their confidence against financial firms and companies, they may stop investing in banks. Thus, this can damage banks performance. In order to, gain backs the confidence of investors and to minimize the occurrence of financial crisis, auditing is essential.

External auditing and internal auditing are two specific types of the auditing in banks. We first explain external the auditing, and then focus on the internal auditing in detail. External auditing is an unconfined system that is independent from the organization. External auditing is used to identify organizations risks as well as examine their financial statements. Reports of external auditor are very important for shareholders because their reports are only way for investors to learn and asses risk and reliability of a financial institution. External auditing has significant effect on banks. According to Ojo (2006), if an adverse report is given about the bank in the

audit, this could have serious implications for the bank. Thus, based on report produced by external auditors shareholder and investor can have better opinions about bank and they can search other investment opportunities Thus, based on report produced by external auditors shareholder and investor can have better opinions about bank and they can search other investment opportunities.

3.2 The Internal Auditing Standard

Internal auditing is one of the most important units of a bank. According to Nnenna (2012) investors are assured that their interest are being properly protected and managed, the internal revenue board gets the assurance that the profit figure on which tax is not manipulated, and at the end the auditor records proscribes measures for improved and efficient future performance. Internal audit is checking and assessing overall accuracy, sufficiency and concurrency of the internal control system. Nnenna (2012, p.72) is stating that “Internal audit prevents and detects errors and frauds and also produces a reports of the true and fairness of the financial statements”. Banks are keen to establish strong internal audit system because it is the best and easiest way for the board of director to analyze and evaluate the overall performance of the bank.

In order to understand and improve the auditing standards in banks, Basel criteria on internal audit is the most recommended one. The Basel framework on internal audit established in 2012, it was a replacement of the internal audit in banks and the supervisor’s relationship with auditors study done in 2001. If a bank is not complied with the Basel criteria, it is recommended to comply with the framework established by the Institute of Internal Auditors in 2012 in USA. To get expected benefit from auditing that previously mentioned, all activities of the bank should fall within the

scope of the internal audit. It is very important to have independent and objective internal audit departments because through auditing the board and senior management can watch the overall functioning of the bank.

In 2012 the Basel Committee on Banking Supervision has issued the internal auditing function in banks. It has been agreed that Basel criteria on internal auditing is the best and the most reliable criteria. Thus, most of the banks are using Basel criteria. In the following part of this section, basic points of Basel criteria on the internal auditing will be discuss.

3.2.1 The Functions of Internal Auditing

Independence and objectivity is very important features that auditors must have because in absence of that auditor cannot fulfil their assignment in integrity. In order to get expected benefit from internal auditing department Kayalı and Yüksel (2012) stated that auditing should not be restricted, audit activities should be conducted free from any interference. The role of the board of directors on auditing activity is important. According to Basel (2012) criteria on internal audit function in banks the boards of director have to ensure that auditors have sufficient knowledge to investigate every unit and department of the bank. Internal audit department should not engage in planning and perform of any internal control measures because this may damage their objectivity. Whereas, when board of director request advice from the auditor to improve certain parts of internal control, auditor can give suggestions. Basel (2012) criteria on internal audit function in banks states that whenever it is possible the audit personnel in department should be rotated to other departments of the bank because doing routine work may decrease their objectivity. Auditors should not work in auditing department too many years because this can damage their

objectivity. For example, in Turkey the maximum number of years that bank employees can work in auditing unit is 8 years.

Professional competency is another important key function for a sufficient internal audit activity. Professional competence and due professional care ensures that auditor has certain knowledge and skills qualification that will enable them to do investigation completely and confidently. Banking sector is one of the most rapidly growing sectors, therefore opportunities and complexity in activities are growing as well. According to Chartered Banker Professional Standards Board Framework (2011, page 3), “To be able to recognize and apply the appropriate ethical and professional attitudes and behaviors, individuals must have gained the requisite levels of professional and technical competence relevant to their role”. Internal audit staff should be trained periodically and should be ensured that they know best auditing techniques. In order to have sustainable professional competence board of directors and head of internal auditors should make sure auditors are trained sufficiently.

According to the Business Dictionary the word ethics is “professionally accepted standards of personal and business behavior, values and guiding principles”. Internal auditors can investigate any department and they have access to the excess amount of information. However, as a requirement of ethics, they should not use this information for personal gain and malevolent action. In order to develop professional ethics, banks should apply code of ethics to auditor or obligate auditor to comply with international standards such as; the Institute of Internal Auditors (IIA) or International Standards on Auditing (ISA). According to Basel criteria on internal audit (2012), a code of ethics should at a minimum address the principles of

objectivity, competence, confidentiality and integrity. When professional ethics sustain in the banks, the board of director and senior management can get better benefit from internal auditing result.

One of the ways that bankers can improve and get more benefit from internal audit unit is to have clear, updated and comprehensive audit charter. According to IIA website “The internal audit charter is a formal document that defines the internal audit activity purpose, authority, and responsibility” (2012). Basel criterion on internal audit is stating that, all banks are liable to have an internal audit charter that defines aim, position and power of auditor within the banks. Basel (2012) criteria on internal audit function in banks states that an internal audit charter should contain standing, authority and responsibilities and relations with other control unit, aim and scope of auditing, liability of internal audit head. Periodically, internal audit charter should be update and it should be ensured to comply with international standards.

In order to have a strong and reliable feedback from internal audit reports, every activity and department of the bank should be within auditor scope of activity. According to Basel (2012) criteria on internal audit function in banks, the scope of activity should include examination and evaluation of the appropriateness and effectiveness of the internal control, risk handling system of all banks activity including subsidiaries and branches. Board of director should set up an annual internal audit plan and may change certain part based on risk exposed.

Auditor should make sure that risk management system cover all risks that bank can have. Such as; credit, liquidity, interest rate, operational and legal risks. All methods used to mitigate risk exposed should be subject to investigation. Koutoupis and

Tsamis (2009) state internal audit needs to focus on risks, rather than compliance activities using a cyclical approach. Banks are requested to have certain amount of capital ratio, this ratio should be within certain limits otherwise bank will have liquidity problem. Another important responsibility of internal auditor is to ensure that bank capital adequacy and liquidity is sufficient. Auditor should do stress testing on capital amount so they can see how much more it can drop or increase. Basel (2012) standards on internal audit function in banks states that banks are very big and each department has to inform the board of directors and senior management with their activity report. Internal auditor should control, whether regulatory and internal reporting is on time, trustworthy and appropriate.

Internal auditor should ensure that banks' personnel and banks' activities are in accordance with rules, laws, code of ethics and market conventions. Auditing of the finance function is very important activity because board of director can ensure that whether financial data and reports are accurate or not. As it is stated in Basel (2012) criteria on internal audit function in banks, internal audit department should periodically review the balance sheet statement, profit and loss statement and other financial statements. During investigation auditor should control validity and credibility of information used in the estimation of values. The confirmation of pricing model and credibility of data used in such models has to be controlled during auditing.

According to Basel (2012) criteria on internal audit function in banks, permanency of the internal audit function is important requirement for powerful internal audit unit. Board of directors and head of internal audit should ensure that all departments are

subject to investigation. If internal auditing is partly or fully outsourced board of directors are responsible on control and maintain permanent internal auditing.

3.3 The Auditing in Islamic Banks

According to Institute of Islamic Banking and Insurance “Islamic Banking refers to a system of banking or banking activity that is consistent with the principles of the Shari'ah (Islamic rulings) ”. Geographically, Islamic banks are mostly spread to the Asia, Africa and the Middle East. In 1974, the first commercial Islamic Bank (IB) was established in Dubai. The IB did not grow very fast but after global financial crisis share of IB has skyrocketed and today it captured an important portion of the sector. Ghalait (2015, page 4) stated that “Globally, Islamic banking assets were estimated at around 17 percent in 2013...” As the Islamic banks began to have an important portion of the sector, it is necessary to know their internal auditing structure.

There are two international IB auditing standards. They are Accounting and Auditing Organization for Islamic Financial Institutions (AAOIF) and the Islamic Financial Services Board (IFSB). Objectives of IB auditing are similar Basel criteria on internal audit but Islamic bank auditing include shariah (Islamic law) obligation as well. Hanifa (2010, page 3) stated that “Auditing of Islamic financial institution is not only confined to the statutory financial audit but also to what is known as the shariah review, which is the raison d’etre for IFIs”.

3.4 The Auditing of Information Technology

Information technologies are rapidly growing helping the development and competitiveness of financial institutions. Since computers and other information technology systems have developed, banks are using them continuously. Senft and

Gallegos (2008, page 3) state that “The role of IT control and audit has become a critical mechanism for ensuring the integrity of information systems and reporting organization finances to avoid and hopefully prevent future financial fiascos such as Enron and WorldCom”.

In order to be competitive in the sector, banks must have good IT infrastructures. However, it is not enough for banks to have developed IT system, banks must be able to control and audit their IT system efficiently. IT auditing is an investigation and appraisal of IT process and infrastructure. Because of IT auditing is a complicated and difficult process, many banks outsource it. There are many IT auditing standards all around world but I will define IT auditing standards based on criteria defined by Federal Financial Institution Examination Council (FFDIEC) handbook. Many countries created and developed their IT auditing based on FFDIEC criteria. For example, Turkey Banking Regulation and Supervision Agency has benefitted from FFDIEC IT auditing criteria. Control Objectives for Information and Related Technology (COBIT), Information Technology Infrastructure Library (ITIL), Committee of Sponsoring Organizations of the Treadway Commission (COSO) are other most famous organization that established IT auditing standards.

In order to have effective internal control system bank should have effective internal auditing system which should include an effective IT auditing. It is responsibility of the board of directors to provide an effective IT audit function. In order to have sufficient and effective IT auditing with in internal audit , board of directors can educate current staff or hire new IT auditors or they can outsource IT auditing service.

The basic principle of the IT auditing is to evaluate the IT environment in integrity and credibility and control it independently and objectively. According to the Federal Financial Institutions Examination Council (FFIEC) Information Technology Examination Handbook (IT Handbook), in order to maintain sufficient management surveillance, IT auditor should appraise IT programs, strategies, policies and methods. IT auditor should continuously check whether accounting methods and other bank transactions are complied with banks' polices and rules. Moreover, IT auditor should report weakness of IT technology and should give recommendation to improve the system. Senft and Gallegos (2008) state that the auditing of complex technologies and communication protocols involves the internet, intranet, extranet, electronic data interchange, client servers, local and wide area network, data communications, telecommunications, wireless technology and integrated voice/data/video systems.

There are many advantages of the IT technology to banks. With IT, there are limitless 24 hours banking services and bank can store and access enormous amount of information easily and cheaply. IT audit is very significant for banks because IT auditing gives guarantee that banks' system is protected. Additionally, IT auditing ensure that reliable and appropriate information is passing to the users. Banks store customer personal information such as; credit card and other types of personal information of their customers. Bank has to secure all these information via adequate IT auditing. In order to improve IT auditing coverage, banks should use Computer Assisted Audit Techniques (CAATs). CAATs are exercise of utilizing computer to do automate auditing processes.

3.5 The Relation between Internal Control and Internal Auditing

The banking and finance sector is one of the most significant actor that enhance economic and technological development in a country. After globalization banking transactions widespread and activities became more complicated. Change in banking activities increased importance of the internal controls because it became more difficult to control all those complicated activities and thousands of personnel. For this reason, the need of having effective internal control system has in increased. The internal control is not policy or rules that implement for certain period of time, it is daily activity that implement by every unit and staff of bank.

Control activities are consisting of two steps; first step is set up of banks rules and procedure, second step is superintendence of whether banks rules and procedures are applied. “Internal control is assures the conformity of activities within the laws and regulations and improve the reliability of financial reporting” (Hayali et al, 2013, page 1). Every unit and department of bank is interrelated with each other. When a staff do not complete responsibility and behave unethically, it will damage internal control system of the bank. Thus, it is significant that all employees at the banks beleive the value of internal control and they fully participate in the operation.

Internal auditing and internal control are very important units of the banks that should be used together. Internal auditing assess efficiency of internal control system because auditor has right to investigate all departments. Internal auditing enables the board of directors to see, how internal control system is functioning. There are positive correlation between internal audit and internal control because efficient internal audit gives important feedbacks to the board of directors. Thus, board of

directors can see banks' weaknesses and they can find appropriate component to fix problem that have been discovered.

3.6 Internal Audit and Internal Control System in TRNC

According Banking Law 39/2001 all banks has to establish internal system unit (ISU) that includes internal control, internal auditing and risk management systems (Article 15, Paragraph (3)). All banks are liable to comply with the notifications on internal audit, internal control and risk management system (Article 1, Paragraph 1). In order to ensure monitoring and controlling of the banks' risks and control of compatibility to changing sectoral circumstances in all branches and units of the banks, banks are required to have an adequate and effective internal system unit that is placed under the board of directors.

The board is responsible for the establishment and control of the ISU. Board of directors is liable to determine quality, mission and responsibility of personnel that will work in ISU (Article 6, Paragraph (4)). Also, board of directors should ensure that ISU personnel are professionally compatible to do their assignment and they should ensure that ISU personnel are participating in local and international educational programs (Article 6, paragraph (7)). In order to facilitate the board of director responsibility and increase their control on bank, senior management has to ensure corporate strategies and goals set by the board of directors are being implemented.

According to TRNC Banking Law on internal system units, internal audit unit aims to provide assurance that banks' strategies, policies and risk management systems, acts and other related legislations are carried out in accordance with principles and to

make sure that internal control system operate effectively and adequately (Article 10, paragraph (1)). Without any restriction the internal audit unit should be able to investigate banks' all activities.

In terms of cycle of the auditing, it is separated into periodic auditing, risk based auditing and special auditing (Article 10, paragraph (3)). According to Banking Law on internal system unit, internal audit unit should include investigation of the following items (Article 10, paragraph (3));

- Adequacy and effectiveness of the internal control and the risk management system should be evaluated.
- Review of information systems, including electronic banking services and electronic information system.
- Compliance of operations to the acts and other applicable legislations, the bank's strategies, policies and procedures shall be checked.
- Reliability of the reports submitted to the Central Bank, the board of director and the senior management should be checked.
- The internal audit manager should examine the changes in risk assessment methods.

There should be periodic internal audit reporting. Internal audit unit makes reporting to the board of directors through internal system responsible or committee. Internal audit manager must have minimum seven years job experience. Internal audit manager have to determine an annual audit plan that includes auditing policies and procedures. After approval of internal system officer and board of director, internal audit manager conduct internal audit activities within this framework (Article 13,

Paragraph (3)). In addition to annual auditing plan, the board of directors can require special auditing to certain unit of the bank.

Internal audit report should include identification of problems and summary of the results, scope and objectives audit, detailed result of audit, the recommendations and their benefits. Internal audit manager has to present an activity report to the internal systems unit minimum every three months. These reports should include (Article 13, paragraph (8));

- Training of inspectors that received during the reporting period,
- Significant accounting issues and hesitant issues related to the audit finding and reporting to the Central Bank,
- A summary of audits conducted on the information system,
- Risk assessment and their summary,
- Opinions for the elimination weaknesses.

Internal control is the second significant unit of internal system. The Banking Law on internal system unit define internal control as; rather than just a procedure or a policy to be applied at a certain moment, all levels within bank must continue to consistently and it is a process that requires the participation of all staffs (Article 11, paragraph (1)). The purpose of the internal control system is, to protect the assets of the bank, to ensure effective and efficient operation, to assure integrity, timely availability reliability of accounting and reporting systems.

To achieve the expected benefits from internal control system bank should ensure; clearly written determination of powers and responsibilities of the staff, minimized

conflict of the interest within the bank and establishment of the double-sided cross-checking with signature (Article 11, paragraph A (3)).

The Banking Law on the internal system unit specified important notes regarding to the information system. Article 11, paragraph B is explaining the basic requirements from banks about their information system unit. According to the article 11 and paragraph B, all bank concerned information should be store reliably in electronical environments. In order to do stress testing and scenario analysis all information should be available in electronic system. On account of ensuring the security and continuity of information systems, it should be regularly updated.

Communication structure and communication channels are another significant terms that valuable for the efficient internal control system. As it noted in the article 11 paragraph C, there should be adequately upward and downward flow of the information that clearly define and notify lower and upper level of managers about the banks' objectives, strategies, policies, practices and procedures. Problems faced by the bank staff or the issues personnel deem suspicious should be easily flow to the management positions in their unit or the internal system managers.

According to the article 11 and paragraph D, all banks are required to have emergency and contingency plan. Against possible emergencies and unexpected situations banks should make plan on a priority operation, transfer of the authority and arrangements for the supply of personnel during unexpected situations. Banks should periodically review and test the emergency and contingency plans at the appropriate time.

3.7 The Internal Audit and the Internal Control Systems in Turkey

By the end of 1990 and the beginning of 2000, Turkey had severe many economic problems. Many banks collapsed due to the poor governance systems. The Banking Regulation and Supervision Agency (BRSA) was established to recover losses in the banking sector. Since BRSA was established, banking sector in Turkey become more stable and it was not affect by the recent global financial crises. Banks are under the supervision of the BRSA. According to the BRSA law published on the Official Gazette No. 26333 on November, 01 2006, all banks are liable to establish internal system unit. Basic points of this law will be discussed in the following sections of the thesis.

According to Başpınar (2005) banks in Turkey are subject to three types of auditing. In Turkey there are internal auditing by banks personnel, external auditing by credit rating agency and public audits by Banking Regulations and Supervision Authority.

In order to ensure monitoring and controlling of banks' risks and control of compatibility to changing sectoral circumstances in all branches and units of the banks, there should be adequate and effective internal system unit. The board of directors is responsible to create effective, adequate ISU that operate in accordance with the Banking Law on the internal system unit (Article 5, paragraph (1)). The senior managements responsibility is to control implementations of the strategies and policies approved by the bank board and other duties given by the internal system officer.

The purpose of the internal audit is to provide assurance that bank operations are in line with banks' strategies, policies, principles and relevant legislations. It also aims

to assure adequacy and effectiveness of internal control and risk management systems (Article 21, paragraph (1)). All activities of the banks without any restrictions domestic and overseas branches and headquarters should be examined on the risk basis and should be inspected periodically. Periodic and risk based auditing should include followings (Article 21, Paragraph (3));

- Evaluation of the adequacy and effectiveness of internal control and risk management systems,
- Revision of the electronic information system and electronic banking services,
- Examine the accuracy and reliability of financial statements and accounting records,
- Review of the information systems, including electronic banking services and electronic information system,
- Compliance of operations to the acts and other applicable legislations, the bank's strategies, policies and procedures shall be checked,
- Reliability of the reports submitted to the board of directors and the senior management.

In case of using risk measurement model, the bank should have following regarding to risk measurement models (Article 21, paragraph (4)).

- Risk measurement models and methods include the daily risk management,
- Pricing models and valuation systems used by the Bank,
- Risks covered by the risk measurement models used by the Bank,
- Accuracy and appropriateness of data and assumptions used in risk measurement models,
- Accuracy of the retrospective tests used for risk measurement model,

Internal audit function in banks carried out by the internal audit unit. Internal audit manager must have at least seven years of banking experience. Internal audit managers supervise, monitor and direct the internal audit activities. They assess whether inspectors have required qualifications and they prepare training programs to improve inspectors' skills and abilities (Article 22, paragraph (2)).

Inspectors are very important for banks' internal audit because they have the main responsibility for internal auditing activities. Skills and powers of inspectors should be specified clearly. According to the Banking Law on ISU, inspector should have the following qualities and powers (Article 23, paragraph (1-4));

- Inspectors shall perform their duties and responsibilities impartially and independently,
- In any event that the independence and impartiality of investigator is reported to the audit committee, the investigator will be withdrawn from the duty.
- In order for inspectors to fulfill their duties and responsibilities effectively, inspectors must inspect all banks' branches and departments.
- Inspectors are required to have knowledge and skills for auditing the information technology.

The Banking Law on ISU states that in order to have better internal audit unit, bank should have an internal audit plan. The Internal audit plan should be prepared by internal audit manager and the senior management. Plans should include approval of the internal system officer and the board of directors. In case of requirements, internal audit officer can update plan in accordance with policy. The internal audit plan should include the purpose of audit, priority and importance of department that

will be inspect, the time of inspection and the resources needed for audit activities (Article 28, Paragraph (3)).

After the auditing plan, internal audit unit is required to prepare a work program. The working program includes auditing objectives and details to achieve this goal. According to article 29 paragraph (1), working plan should include, control of records to be audited, risk assessment, the use of sampling methods and techniques.

Due to the large amount of activities to be audited, sampling methods and techniques can be used. Investigators should consider following in selection and application of sampling methods and techniques. They should decide on sampling target, the size and characteristics of the sampled group and the selection of the sampling methodology should be determining clearly (Article 30, paragraph (3)).

Internal audit reports include, whether a unit or an activity is complying with relevant legislation, policies and procedures. It also include whether internal controls system is effective and efficient. Internal audit report should include identified a detailed result of the audit and the recommendations and their benefits (Article 31, paragraph (1)).

Every three months internal audit manager has to present an activity report to the internal system unit (Article 31, paragraph (4)). These reports should include training of inspectors received during the reporting period, significant accounting issues and hesitant issues related to the audit finding, a summary of audits conducted on the information system, risk assessment and their summary, opinions for the elimination weaknesses (Article 31, paragraph (4)). Internal control system determines internal

control activities and how they will be carried out according to nature and complexity of activities. There should be sufficient number of professional expertise and internal control staff to complete the internal control tasks. The manager of the internal control unit must have a minimum of seven years of banking experience (Article 19, paragraph (7)). The internal control personnel perform operational activities in the units which they perform, the headquarters or branches.

Functional segregation of duties is very important in internal control system of the bank. In order to prevent error and fraud, conflict of interest, manipulation of information and misuse of resources, powers and responsibilities of all staff and committee should be clearly determined. (Article 10, Paragraph (1)).

Establishment of the information systems is very valuable for an effective internal control system. According to the Banking Law on ISU, bank should have following characteristic in internal control system. All the information about the banks should be safe in the electronic environment and should be accessible at any moment. Stress testing and scenario analysis should be made (Article 11, paragraph (2)).

There should be adequate upward and downward flow of the information in the structure of the organizations that clearly notify lower and upper levels of personnel about the banks' objectives, strategies, policies, practices and procedures (Article 12, Paragraph (1)). Problems faced by the staff or any transaction they see suspicious should be delivered to the officer of that unit or should be passed on to the internal control unit.

The management and business continuity plan is mandatory for the banks. Under any operational interruptions, in order to minimize the damage on financial reputation of the bank board of directors should create management and business continuity plan (Article 13, Paragraph (1)). Business continuity plan require determine business impact analysis and recovery strategy.

Control of the communication channel and information systems should be done. With control of the Banks' information systems and communication channels, information obtained within the bank intended to be reliable, complete, traceable, consistent and appropriate and ensuring that information can be accessed by the relevant departments and personnel on time (Article 16, Paragraph (2)).

Control of the financial reporting system is another activity of internal control system. Control of the financial reporting system aims to ensure the integrity and reliability of accounting and reporting systems. Compliance checks are another significant activity of the internal control system. All activities that carried out or planned to be done should be compliance with the laws and other applicable legislations and the bank's internal policies and rules.

Chapter 4

RESEARCH METHODOLOGY AND CONCEPTUAL FRAMEWORK

4.1 The objective of the Research

In TRNC, banks' internal audit and internal control systems have never been studied before, therefore this thesis aims to fill this gap by examining these systems. First, we examine the regulations of TRNC with respect to banks' internal audit and internal systems. Then we use a survey method to find out whether banks comply with the TRNC banking law with respect to internal audit and internal control systems.

Questionnaire: This research is based on a survey methodology. The survey questionnaire was prepared by comparing the similarities and differences of the banking laws of TRNC, Turkey and Basel with respect to internal audit and internal control systems. This comparative analysis helped us to find out whether TRNC banking law is in line with Turkish Banking Law and Basel standards for internal control and internal audit. The Central Bank of TRNC established internal systems unit legal framework in 2008. This legal framework not has become a law yet but it is a notification that requires banks to obey. In Turkey internal system unit regulations established in 2006 by the Banking Regulation and Supervision Agency. The Basel framework on internal audit established in 2012, it was replacement of the

internal audit in banks and the supervisor's relationship with auditors study done in 2001.

Table 4.1. The Sample Banks

Ownership structure		Names of banks	Asset size (tl) in December 2014	Their Share in the Sector
Public Banks				
	1.	Kıbrıs Vakıflar Bankası Ltd.	822,625,023.00	5.5%
Private Banks				
	2.	K.Türk Koop.Merkez Bankası Ltd.	3,356,649,432.00	22.5%
	3.	Limasol Türk Koop. Bankası Ltd.	589,378,710.00	4.0%
	4.	Asbank Ltd.	577,952,637.00	3.9%
	5.	Kıbrıs İktisat Bankası Ltd.	1,017,611,861.00	6.8%
	6.	Nova Bank Ltd.	90,016,700.00	0.6%
	7.	Creditwest Bank Ltd.	1,404,624,082.00	9.4%
	8.	Yakın Doğu Bank Ltd.	503,998,935.00	3.4%
	9.	Şekerbank (Kıbrıs) Ltd.	188,162,155.00	1.3%
	10.	Akfinans Bank Ltd.	100,933,418.00	0.7%
	11.	Viyabank Ltd.	138,232,047.00	0.9%
	12.	Kıbrıs Faisal İslam Bankası Ltd.	51,628,518.00	0.3%
Foreign Branch Banks				
	13.	T.C.Ziraat Bankası	942,104,751.00	6.3%
	14.	Türkiye Halk Bankası A.Ş.	380,556,625.00	2.6%
	15.	Türkiye İş Bankası A.Ş.	1,313,896,068.00	8.8%
	16.	Ing Bank A.Ş.	28,175,665.00	0.2%
Total assets in the sector			14,891,244,379.00	77.30%

Source: TRNC Central Bank web site (<http://www.kkctmerkezbankasi.org/node/483>) (2015)

We developed a questionnaire consisting of 61 questions. The questionnaire is prepared in order to examine, how banks implement their internal audit and control systems. The structure of the questioner includes filling blanks, multiple choice and

Likert Scale questions. After, I interviewed banks, I analyzed results in the SPSS statistics software.

In total there are 22 banks in TRNC. Out of these 22 banks 16 of them accepted to participate our research. We interviewed the audit department manager of these 16 banks, and completed the questioners. Therefore our sample consist of 16 banks which corresponds 73% of banks is terms of the number. However these 16 banks capture almost 80% of the total banking sector assets in TRNC (see Table 4.1).

4.2 The Conceptual Framework

In chapter three internal audits and internal control systems were explained based on the Central Bank Law of TRNC. In addition, the world (Basel) and Turkish (BRSA) standards on bank internal auditing and internal control were discussed. TRNC has many economic and financial connections with Turkey. Thus, it is beneficial to find out differences and similarities of the internal auditing and internal control regulations of these two neighboring countries. The reason for including the Basel criteria of the internal audit and internal control system in this thesis is to compare TRNC internal audit and internal control system with the world standards.

As it is listed in Table 4.2, TRNC internal audit and internal control systems are compared with the world and the Turkish systems. Before we start to analyze the findings of the survey, it is beneficial to know similarities and differences of internal audit and internal control system of the TRNC with the rest of the world.

According to the Basel and BRSA banks must have an auditing committee but in TRNC it is optional to have an auditing committee. Having an audit committee is better for the bank because the audit committee can decrease the conflict of the

interest and hence reduce the corruption. In Turkey, audit committee members cannot be a staff or partner of an organization that audit or rate the bank. This prevents sided and biased rating and auditing. According to the Basel and BRSA an audit committee member cannot have kinship with the board of directors and the general manager, in order to reduce window dressing and fraud. Whereas, TRNC Banking Law does not put any restrictions on the audit committee members' qualities. This is major weakness of TRNC Banking Law.

According to the Basel and BRSA auditor can audit all bank managers except the board of directors, the senior management and the internal system manager. The auditor can audit rest of the bank management. In TRNC Banking Law this rule is not available. Also, Basel and BRSA state that there should be periodic meeting between internal auditors and external auditors for having different perspective and view regarding to banks' conditions. However TRNC Banking Law require only internal system unit manager have periodic meeting with external auditors.

Internal auditors are the most informed staff of a bank regarding to law and other auditing issues. Thus, auditors can provide consulting and advisory services within the bank however in TRNC the banking law does not have such item. According to Basel internal auditing standards the internal audit unit should not participate in selecting and designing of internal control measures because this can decrease their objectivity. Also, if the bank uses outsourced auditors, these auditors should operate under internal audit unit because internal audit manager should assess the external audit findings before submitting their reports to the upper level of management.

Table 4.2. The Comparison of TRNC Internal Auditing and Internal Control Systems with the Turkish and the Basel Standards

	Requirement of the Law	TURKEY	TRNC	BASEL
1	Bank must have an audit committee.	True	Optional	True
2	Audit committee member cannot be staff or partner of an organization that audit or rate the bank.	True	Not mentioned	Not mentioned
3	The audit committee members are required to have minimum bachelor degree and ten years of the banking and finance experience.	True	Not mentioned	Not mentioned
4	The committee members should not have kinship with the board of directors or the general manager.	True	Not mentioned	True
5	There should periodic meeting between internal auditor and external auditor.	True	Not mentioned	True
6	The internal audit unit should not participate in selecting and designing internal control measures.	Not mentioned	Not mentioned	True
7	Outsourced auditors are under control of internal auditors.	True	Not mentioned	True
8	Internal audit personnel should rotate with in internal audit function in order to decrease negative affect of the routine work.	Not mentioned	Not mentioned	True
9	Auditors should control the reliability and accuracy of reports made to the Central Bank.	Not mentioned	True	Not mentioned
10	Quality and provision of the loans and other receivables should be report to the Central Bank begging of a year.	Not mentioned	True	Not mentioned
11	Risks covered by the risk measurement models, the accuracy and appropriateness of the data used and the pricing models should be within the internal auditing control.	True	Not mentioned	True
12	Auditor can audit all bank managers except the board of directors, senior managements and internal system managers’.	True	Not mentioned	True

13	Any event that prejudicial the independence and impartiality of investigator will cost their job.	True	Not mentioned	Not mentioned
14	Inspectors should have sufficient knowledge and skills to audit bank's information technology.	True	Not mentioned	True
15	Internal auditor should test the capital adequacy and the liquidity conditions of bank	True	Not mentioned	True
16	Sampling methods and techniques can be use during the auditing.	True	Not mentioned	Not mentioned
17	The internal audit staff can provide consulting or advisory services within the bank.	True	Not mentioned	True
18	Main IT auditing standards are	FFDIEC and CobiT	Not mentioned	FFDIEC and CobiT, COSO and ITIL
19	Internal control systems should control the information used in the financial report.	True	Not mentioned	True
20	Internal control unit should control financial reports to see, if they are prepared in accordance with the law.	True	Not mentioned	True
21	Internal control unit is physically located at the headquarters of the bank.	True	Not mentioned	Not mentioned
22	The manager of the internal control unit must have a minimum of seven years of the banking experience	True	Not mentioned	Not mentioned
23	Internal control unit need identify uncontrollable risks and should decide to accept or withdraw from activity concerned.	Not mentioned	Not mentioned	True

In TRNC banks' auditor can only compare the Central Bank's finding with their finding but there is no periodic meeting with the Central Bank staff or external auditors.

Internal auditors have a very heavy work load and they are mostly doing routine work. In order to decrease negative effects of the routine work, Basel is suggesting rotating auditors within internal audit function. However, in TRNC banking law there is not requirement to rotate auditors within the bank.

According to the TRNC banking law, auditor should control reliability and accuracy of reports made to the Central Bank. However, in Basel and BRSA rules this is not required, because regulators do not want banks to spend time on controlling reports that already have been submitted to the Central Bank. They also think it is the duty of the Central Bank to control whether reports are accurate or not. In addition, according to the TRNC banking law, banks have to reports their loan provisions and other receivables should to the Central Bank of the beginning of every year. However, in order to improve control on the banks, this has to be more frequent.

The scope of activity of the internal audit is very important and it has to be defined clearly. According to the Basel and BRSA of Turkey rules on internal auditing framework, internal auditor should control risks covered by the risk measurement models, the accuracy and appropriateness of the data. However in TRNC banking law these requirements are missed.

IT auditing is a very significant requirement for banks. According to the Basel and BRSA, internal auditor should have enough skills and knowledge that can audit IT system of the bank but this is not the case in the TRNC banking law. FFDIEC, CobiT, COSO and ITIL are most recommended standards of IT audit by BRSA and Basel. In TRNC, the banking law does not suggest any IT audit standards.

Capital adequacy and liquidity issues are important for banks because when customers want to withdraw their deposits banks should be able to return the depositors money. Thus, Basel and BRSA are stating that internal auditor should test capital adequacy and liquidity condition of the bank, but this is absent in TRNC banking law.

Financial reports are significant for the board of directors and senior management of banks to assess the financial conditions of the banks. Thus, Basel and BRSA require internal control department to control whether information used in financial reports are true and in line with. Another important duty of internal control unit is to identify uncontrollable risk like country or political risk. Internal control unit is physically located in headquarter of the bank and internal control manager must have minimum seven years of banking experience. All this issues that mentioned in this paragraph are missing in the TRNC banking law.

Chapter 5

RESEARCH FINDINGS

I visited and interviewed 16 banks that accepted to participate our research. These 16 banks answered most of the questions and provided very useful information on their internal audit and internal control units. Below I discuss the findings.

5.1 Internal Systems Within the Organizational Structure

International standards on internal systems are stating that internal audit, internal control and risk management units should be independent from each other but they should operate under internal system unit of the bank.

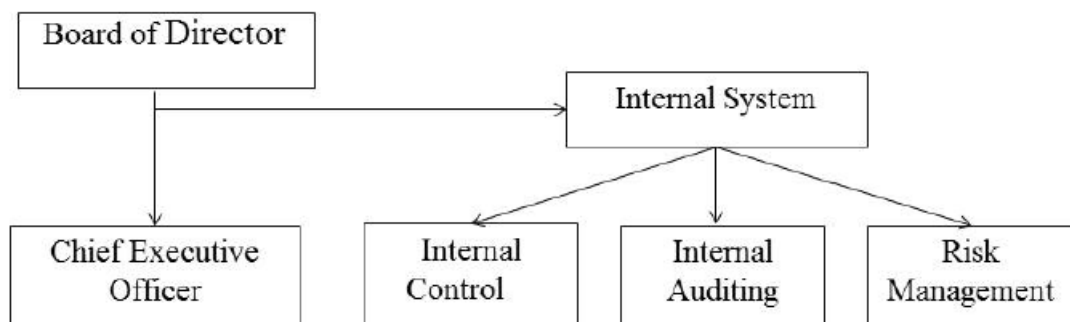


Figure 5.1. Internal Systems Organizational Chart

During my survey I had opportunity to learn, how organizational structure of the banks is. In general, TRNC internal system organizational structure is displayed in Figure 5.1.

According to the TRNC Banking Law (Article 4, paragraph (1)) on internal systems all banks in TRNC are liable to establish an effective internal control, internal auditing and risk management units. Based on survey finding currently all banks has an internal audit and risk management department except 2 local private banks. In terms of the date of establishment of the internal system units, it appears that ten banks established their internal audit systems before 2008 and 6 banks established this unit after 2008. Additionally, ten banks established internal control and risk management units after 2008, i.e. after it become compulsory by law.

Then I analyzed the number of personnel hired in internal system units. I found that internal auditing department has the biggest number of the personnel (66 personnel) in comparison to internal control (29 personnel) and risk management departments (26 personnel). Due to work loads of auditors, they require more staff to perform auditing duties. Based on my finding 45% (7 banks) of banks has at least four people hired in internal auditing department.

5.2 Frequency of Bank Audits

Internal audit activities of the banks should be continuous. As presented in Table 5.1 13 banks (81.3% of banks) stated that they audit the bank less than three times a year.

Table 5.1. The Frequency of Internal Audits

Number of auditing in a year	Number of Banks	Percent
1	8	50.0
2	5	31.3
4	2	12.5
5	1	6.3
Total	16	100.0

This is against the TRNC banking law because according to the banking law an internal audit department should submit an activity report to the board of directors every three months (Article 13, paragraph (8)). Only three banks appear to meet this condition out of 16 banks.

5.3 Audit Plan

The Basel, the Turkish Banking Law and the TRNC Banking Law state that banks should have an annual audit plan. When we asked banks, whether they have an audit plan, two of the banks stated that they have no audit plan. This is against TRNC Banking Law. According to TRNC Banking Law on internal system unit internal audit manager must have an annual audit plan that includes auditing policies and procedures. Also, 50% of the banks stated that auditors are absolutely loyal to the internal auditing plans however the other 50% of the banks do not believe that this is the case.

5.4 Auditing Committee

The Basel and the Turkish Banking Law requires that banks must have auditing committees but the TRNC Banking Law does not require it. Based on my findings, there are nine (56.3% of banks) banks that have an auditing committee. The biggest committee is consisting of nine people. In general auditing committee members are internal systems responsible, internal control director, internal audit director, compliance unit manager, risk unit manager, one board member, legal counsel, the general manager and financial controller. In terms of qualification of the audit committee members nothing has been mentioned in the TRNC Banking Law, but in Turkey, an audit committee member should not have kinship with the board of directors and the general manager. Also, a committee member should have minimum bachelor degree and minimum ten years of banking and finance experience.

5.5 IT Audit

In order to be competitive in the banking sector, banks need to have advanced IT technology and infrastructures. However, it is not enough for banks to have developed IT system, Banks also should control and audit their IT systems efficiently. According to the result of my survey there are three banks (18.75% of banks) that do not have IT auditing at all. Whereas, the TRNC Banking Law on internal system unit it stats that banks should audit their IT systems as well (Article 10, paragraph (3). The Basel and the Turkish Banking Law stating that, an auditor must have sufficient knowledge and skill to audit banks' IT system. However, most of banks in TRNC outsource IT auditing. There are seven banks (43.57% of banks) that do IT auditing themselves. IT auditing is not very developed in TRNC banking sector. Moreover, 45% of banks do not believe that they are fully capable in IT auditing.

5.6 Prudential Regulations on Internal Auditing

As mentioned in chapter 2 banks operate under the Banking Law numbered 39/2001. The Banking law on internal system unit of TRNC is very similar to BRSA rules on internal systems unit but in TRNC law many parts are missing.

According to our findings 10 banks (62.5% of banks) stated that they comply with Basel II standards for the management of their assets. Also, 3 banks (18.8% of banks) stated they comply with Basel III standards and only one bank comply with Basel I standards for the management of their assets. However, 2 banks (12.5% of banks) stated that they do not go beyond the Central Bank rules and regulations on assets management. The survey result shows that 14 banks (87.5 % of banks) use Basel criteria and the Central Bank rules for management of their assets.

Table 5.2. Banks' Asset Management Principles

Standards Bank Use	Number of Banks	Percent
Basel I	1	6.3
Basel II	10	62.5
Basel III	3	18.8
Only Central Bank principle	2	12.5

The Central Bank audits banks by examining the reports submitted to the Central Bank and by auditing bank on the site. The Central Bank audits are very important and useful for banks and banks' customers. Auditing helps Central Bank to identify any potential problems that could cause serious damage to the banking sector. These potential problems can be solved by the Central Bank before they become serious. Additionally, through the Central Bank auditing customer reliability against bank can improve because the Central Bank prevents unethical behavior. According to the survey result 13 banks (81% of banks) stated that they are subject to the Central Bank inspection maximum once a year.

Table 5.3. Frequency of Central Bank Auditing

Frequency of Auditing	Number of Banks	Percent
Once every 6 months	2	12.5
Once every 12 months	13	81.3
Once every 24 months	1	6.3
Total	16	100.0

Most of the time, the Central Bank audits are done in the banks' headquarters. In order to have better auditing results, Central Bank should audit every branches and units of a bank. Our survey findings demonstrate that 5 banks (31.25% of banks)

think the Central Bank rules are insufficient because they think the Central Bank rules are very old and it should be updated.

The Central Bank require notification from banks on staff that employed in internal systems departments because they want to make sure that personnel in those departments are qualified in terms of knowledge and experience.

5.7 Qualities and Activities of the Internal Auditors

As discussed in chapter 3, the internal audit department is very significant for the banks' executive management because having developed internal auditing system enable banks to have reliable information on their performance. Thus, the board of directors can discover problems and risks in advance and prevent them from happening. Internal auditors have to be professionally qualified to perform auditing activities. According to the survey result, staffs hired in internal auditing departments are experienced. 13 banks' (81% of banks) auditors have more than 7 years of job experience. It is important to have experienced staff but that is not enough. The banking sector is one of the most rapidly growing sectors in the economy so auditors have to receive sufficient training programs to catch up with the development in the banking sector. According to survey results, all banks arrange training programs for internal auditors. Six banks (37.5% of banks) organize training programs for their auditor minimum twice a year, and six banks (37.5% of banks) organize training programs for auditors minimum four times a year. Only one bank did not answer, the questioner how frequently the auditor receive training programs. In terms of locations of training programs, there are training programs in the banks, some banks train their auditors through online programs as well.

Table 5.4. Annual Frequencies of Training Programs

Frequency of Training Program	Number of Banks	Percent
2 times a year	6	37.5
3 times a year	3	18.8
More than 4 times a year	6	37.5
Not Answered	1	6.3
Total	16	100.0

Based on survey results the educational backgrounds of auditors are mostly MBA and master degree in economics and banking and finance. 12 banks' (75% of banks) auditors have bachelor degrees and 4 banks' (25% of banks) auditors have master degrees. According to survey result all banks believe that their internal auditor have sufficient capacity in terms of experience and vocational training.

According to the survey result 6 banks (37.5 % of banks) stated that the internal audit department has been working towards compliance with international standards on internal auditing. In order to comply with international standards, internal audit departments of banks use Basel criteria and the Central Bank rules but rests of the banks 10 banks (62.5% of banks) only use the Central Bank criteria on internal auditing.

To get expected benefits from internal auditing, all activities of the bank should fall within the scope of the internal auditing. It is very important to have independent and objective internal audit departments because through auditing the board and senior management can watch overall functioning of the bank. According to survey result there is no bank that believes internal auditors are unable to do their jobs because of pressure and fear of losing their jobs and all banks stated auditors have job security.

In order to develop ethical behavior of auditor, bank should have professional ethics booklet. 13 banks (81.3% of banks) stated that they have a professional ethics booklet for all personnel. 3 banks (18.8% of banks) stated that they do not professional ethics booklet for auditors. This is a shortcoming for banks that can increase unethical behaviors.

5.8 Professional Ethics and Internal Fraud

If an auditor acts fraudulently he or she may be subject to various punishments. As it presented in Table 5.5 below, 7 banks (43.8% of banks) stated that they fire the person who act fraudulently but they do not inform the police and they do not take him to court. As a result that person can find job somewhere else.

Table 5.5. Banks' Action Against Their Personnel in Case of Internal Fraud

Types of the punishment	Frequency	Percent
Fire	7	43.8
Warning	1	6.3
Legal investigation	1	6.3
Legal investigation and Warning	2	12.5
Not Answered	5	31.3
Total	16	100.00

In other countries banks are required to report internal fraud to the police, hence the fraudulently person get punished. In TRNC banks should start legal investigation and report the case to the Central Bank and the police. With respect to survey finding only 3 banks (18.8% of banks) start legal investigation in case of fraud activities. 5 banks (31.3% of banks) did not answer about types of punishment when they discover a fraud case in their bank.

According to the TRNC Banking Law the board of directors should enable internal auditor to investigate all units and staff of the banks. According to survey finding all banks believe that auditors can easily audit all units of the bank without any limitations. However, two banks stated in case any internal fraud activity reported to the internal audit department, the auditors cannot began investigation before permission of the internal systems manager. This shows that the internal auditors are not independent in these banks.

5.9 Communication Channels

Communication structure and communication channels are other significant factors that contribute to the efficient internal auditing system. In case of any internal fraud, there should be communication channels for banks' personnel or bank customers to report the fraud. 2 banks (12.5% of banks) stated that there are not sufficient communication channels for the banks' personnel and customers to report internal fraud activities. However, TRNC banking law on internal system is stating that banks must have sufficient communication channel to learn internal fraud in the bank (Article 9, paragraph (3)). On the other hand, the banks that stated they have sufficient communication channels generally communicate via e-mail, phone or directly contacting to internal audit department and general manager.

5.10 Protecting Confidential Information

Banks are liable to protect customers' deposits and keep their information as confidential. Therefore bankers should put limitation on confidential information accessed by their personnel in order to prevent them to use this information for their own interest. Banks have lots of information in their system about their customers and there should be a restriction on who can access this information. There should be control on information that should be subject to limitation. Internal control unit

should make sure that personnel access to appropriate information. According to survey result 5 banks (31.3 % of banks) stated that all personnel of the bank are able to access customers' financial information. However, TRNC banking law on internal system unit is stating that banks should have rules and limitation on who can access to customers' financial information (Article 11, paragraph (3)). 11 banks (68.7% of banks) stated that they control their personnel who can access financial information of customers thorough an effective internal control system.

Table 5.6. Protecting Confidential Information

Way of Control	Number of Banks	Percent
Login result check	7	43.8
Through Internal Control	6	37.5
Trusting Staff	2	12.5
Not Answered	1	6.3
Total	16	100.0

As it distributed in Table 5.6, preventing confidential information via control of log result is the most used way. 7 banks (43.8% of banks) stated that, they prevent confidential information via control of login results. Control of login result is very useful way for banks to control personnel on accessing customer information. Beside that 2 banks (12.5% of banks) stated that, they prevent confidential information via trusting personnel but this not a protection.

5.11 Preventing Internal Fraud

For security checks banks should have online access to the customer signature and photograph from all of the banks' branches. Otherwise somebody can forge customers' signature and withdraw money from their account. According to my

survey finding only 7 banks (43.8% of banks) has online access to customers' picture and signatures online.

Table 5.7. Availability of Online Signature and Photograph

Answers	Number of Banks	Percent
Yes	7	43.8
No	2	12.5
In progress	7	43.8
Total	16	100.0

For security checks rest of the banks do not have an online system to check and confirm the signature of their customer. In addition to that, there is no requirement from the Central Bank that will force banks to have online security checks.

Internal auditors must have enough experience and knowledge to discover internal fraud in the banks but there is one bank that believes internal audit department is insufficient to find out internal fraud within the bank. TRNC banking law require all banks to have an effective internal auditing unit that stop fraudulently behavior (Article 10, paragraph (2)). Also, one of the banks does not have a security camera. Lack of security cameras can encourage banks' personnel to behave fraudulently. Duration of storing camera records is another important issue. As it is displayed in Table 5.8 four banks (25% of banks) store camera recordings for only three months, this is very short time because noticing a fraud may take a year or more. Therefore when the camera records are kept too short, it is a disadvantage for the auditors. 7 banks (43.8% of banks) keeps camera records less than 1 year and 5 banks are not sure.

11 banks (68.8% of banks) stated that they store camera recording in information system department. Unfortunately, 3 banks' (18.8% of banks) internal auditors did not know where they store camera recordings. This indicates that these banks do not show any interest to protect internal fraud through, internal camera recording.

Table 5.8. Storing the Security Camera Recordings

Duration of storage	Number of Banks	Percentage
1-3 months	4	25.0
4-8 months	3	18.8
1 year	2	12.5
Not Sure	5	37.5
Never Delete	1	6.3

Table 5.9. Auditing of Security Camera Recordings

Audit of Camera Records	Number of Banks	Percent
Internal Auditor	8	50.0
General Manager	2	12.5
Internal Auditor and General Manager	2	12.5
IT Unit	1	6.3
General Manager and IT Unit	2	12.5
Not Answered	1	6.3
Total	16	100.0

In addition, it is important to sustain an effective camera recording system in the banks' branches and headquarters. As it is presented in Table 5.9, 8 banks (50% of banks) stated that security camera recordings get audited by the internal auditor. Also, 6 banks (37.5% of banks) stated that security camera recordings get audited by General Manager.

Internal audit department is under internal systems unit of the bank. Thus, internal systems manager is the main responsible person of the internal auditing department.

In order to follow the internal auditing activities there should be periodic meetings between internal auditor and the board of directors. As it is presented in Table 5.10, 11 banks (68.8% of banks) indicated that their board of directors meets with internal auditors at least four times a year. 5 banks (31.3% of banks) stated that their board of directors meets with internal auditors at least 2 times a year. The frequency of these meeting is very low. Therefore, the control of the board of directors on internal auditors can be weakened.

Table 5.10. Number of Meetings with the Board of Directors and Internal Audit Unit

Number of the meeting	Number of Banks	Percent
1	1	6.3
2	4	25.0
4	6	37.5
6	2	12.5
12	3	18.8
Total	16	100.0

According to survey findings 10 banks (62.5% of banks) do not outsource auditors because they do not want to share banks information with outsiders. Rest of the banks (6 banks) outsource auditor whenever they need.

One of the most important activities of auditor is to auditing the quality and provision of loans and other receivables. All banks (16 banks) stated that auditors inspect loan quality and provision of loans and other receivables. The internal audit department has to send report on loans and other receivables to the Central Bank. The internal auditors send their reports to the board of directors via the internal system unit.

According to the Basel framework on internal auditing there should not be promotion tied to the performance of the internal audit inspector because promotion can damage auditors' objectivity. 3 banks (18.8% of banks) stated that they give promotion tied to the performance. There are no limitations on auditor promotion in TRNC Banking Law.

5.12 Likert Scale Questions

As listed in Table 5.11, there are some important information that were discovered during my survey. There is one bank that believes their internal system unit personnel do not work independently and objectively. This is a serious problem needs to be corrected by the banks' board otherwise bank can have serious problems in the future. Additionally, 3 banks (18.25% of banks) do not agree that internal auditors can reduce errors and fraud in the bank. However, it is core of the internal auditor to be able to find, discover and stops fraudulently activities in the bank. In order to prevent fraudulent activities the board of directors and internal auditor has to work together.

All banks (16 banks) that I interviewed believe that internal auditors are loyal to programs and they are sufficient in terms of education and job experience. However, 2 banks (12.5% of banks) stated that auditors may not do their work with fear of losing their job. In order to have a strong internal audit department, auditor should be free to audit all departments and there should not be any limitations. Another important concept is about auditing of the IT. According to the survey result one bank do not believe that auditors are efficient in auditing of electronic banking services and information system.

Table 5.11. Answers to Likert Scale Questions

Likert Questions	Do not Agree (%)	Neutral (%)	Agree (%)
I believe that the internal system unit personnel work independently and impartially	6.25	0	93.75
I find the Central Bank auditing useful and enough.	6.25	0	93.75
I believe that internal auditor reduces errors and abuses in our bank.	18.75	0	81.25
I believe that auditors are loyal to the work program.	0	0	100
I believe internal auditor can audit all unit in the bank.	0	0	100
I believe internal auditors are sufficient in terms of education and job experience.	0	0	100
I believe internal auditors do not do their work securely with fear of losing their job.	87.5	0	12.5
I believe internal auditors are effective in auditing of electronic banking services and information systems	6.25	18.75	75.00

Chapter 6

CONCLUSION

During the last three decades the banking environment has been changed due to financial liberalization, globalization and technological innovations. Even if these changes brought many benefits they also created higher uncertainty and higher risks in the sector. The increase in the risk exposed by banks, forced governors to innovate new risk management techniques and increased the importance of internal control and internal auditing. Internal audit and internal control units are very significant for sustainable development of the banks. Banks' senior management set up rules and procedures via internal control systems. Internal auditors ensure that banks' personnel and activities are in accordance with rules, law, code of ethics and market conventions.

From the past to the present many international meetings and conferences were held to identify policies and procedures that will stabilize the international banking system. In order to have a developed internal audit culture Basel criteria on internal audit is the most recommended one. Additionally the second most recommended standard is a framework established by the Institute of Internal Auditors in USA. There are many countries that require banks to comply with Basel criteria. For example, the European Banking Authority obligates EU member countries to comply with the Basel criteria. Banks are keen to establish strong internal audit system because it is the best and easiest way for the senior management to analyze and

evaluate overall performance of their banks. Thus, it should be priority of banks to make sure that all of their activities are falling within the scope of internal auditing. The scope of auditors' activity should include examination and evaluation of the appropriateness and effectiveness of the internal control, risk handling system of all banks activity including all subsidiaries and branches. Auditor should make sure that the risk management system cover all risks that bank can have.

The board of directors has to watch and control internal auditor very carefully. Otherwise auditor may not fulfil their duties in integrity. The internal audit department is one of the most difficult departments to work. For this reason the board of directors has to ensure that auditors are qualified in terms of knowledge and skills for performing their duties. In addition, the personnel of the internal audit department should be trained periodically and should be ensured that they know best auditing techniques.

Internal auditors carry very big responsibility on their shoulders. Due to work load and routine work it is possible for them to lose objectivity. So internal auditors must be rotated within the internal audit function and they should not work as auditors forever. Internal auditing and internal control are very significant units of banks. In order to have a better functioning bank they should be used together because internal audit unit assesses overall efficiency of internal control system and internal auditor enables senior of management to see if internal systems are functioning efficiently.

In order to ensure the effectiveness and adequacy of the bank's internal systems all banks should have an effective internal system unit. In terms of availability of the internal system unit, it can be stated that 14 banks (87% of banks) have an internal

system unit. There are only two banks that do not have an internal control unit which is against the TRNC banking law. Whereas all banks in TRNC have internal audit and risk management department. Internal audit culture is not very old in TRNC most of the banks established internal audit system after 2008. The Central Bank of TRNC required to have an internal audit system in 2008. According to the Central Bank, banks should do their own auditing minimum every three months but 8 banks (50% of banks) accomplish own internal audit once a year and 13 banks (81.25% of the banks) do own internal auditing less than three times a year. Thus, 13 banks (81.25% of banks) are against the Central Bank rules on frequency of internal auditing. International banks use Computer Assisted Audit Techniques (CAATs) which mean utilizing computers to do automate auditing processes. However, this is not the case in TRNC.

Internal audit department keeps very significant information and it is possible that this information is abused by people who have conflict of interest. In order to prevent conflict of interest in internal audit department bank should have an audit committee that will stop individuals from protecting their own interest. When there is an audit committee the information gathered during audit will be known by more than one person and it will be harder to hide fraud or corruption. Also, possibility of using information for own benefit or possibility of hiding information be can minimized. However, 7 banks (43.8% of banks) in TRNC stated that they do not have an audit committee. The TRNC Central Bank does not require banks to have an audit committee. However, according to Basel and BRSA standards banks must have an audit committee.

Another problem in TRNC is that most of the banks are not capable to do IT auditing. 7 banks (43.8% of banks) believe that they are not fully capable in IT auditing. The TRNC Central Bank requires banks to do IT auditing but they do not guide banks about how they do IT auditing. There are sophisticated international IT auditing standards used by many banks all around the world. For example FFDIEC CobiT, COSO and ITIL are the most famous and the best standards on IT auditing. There are no banks in TRNC stated that they use any world standard of IT audit. There 3 banks (18.8% of banks) that do not have IT auditing at all. In the absence of IT auditing banks cannot know if computer based activities are reliable. Besides that banks cannot follow and control external attacks who want to steal banks' information. Such as, customers credit card and account information.

The banking sector is one of the most rapidly growing sectors in the economy. Thereby, internal auditors should have sufficient knowledge and skills to audit banks. When we assess TRNC banking sector most of the auditors have at least bachelor degree. Also, all banks prepare training programs for auditors at least two times a year. However, only 6 banks (37.5 % of banks) stated that they use Basel standards for their internal auditing. The rest of the banks (10 banks) only use the Central Bank rules and regulations on internal auditing. In order to improve internal audit culture in banking sector, the Central Bank must require banks to use international internal audit standards.

Another problem that realized in the banking sector is about internal fraud. When there is an internal fraud, banks respond to it differently. According to the law fraud is a crime and has to be punished. However, the survey results shows that when there is internal fraud in TRNC, only 3 banks (18.75 % of banks) state they starts a legal

investigation, whereas 7 banks (43.8% of banks) stated that they fire the person without legal charges. In this case fraudulent people can find jobs somewhere else and continue doing the same in other banks. As banks do not want their customers or the outsiders to hear about the fraud case in their banks, the banks' senior management fires their fraudulent personnel but do not start legal investigation. In order to discourage the internal fraud in banks, banks should not hide their fraud cases but share the information with the police and banks' association and the Central Bank. They should report the fraud cases to the police to start a legal investigation.

For a comprehensive internal audit activity banks should have sufficient communication channels. In case of any internal fraud, banks' personnel or customers should be able to report the fraud case to the bank management. This will help banks to detect the fraud early and take actions to stop it before it becomes very damaging. In this respect most banks indicated that they have communications channels, however it is not clear whether those channels are used. Also, 2 banks (12.5% of banks) stated that they do not have communication channels.

Banks are liable to protect customers deposit and prevent any fraud behavior against customers. The world banking standards state that there should be limitation on information accessed by bank personnel. For example, in many developed countries banks' personnel are forbidden to access customers' account unless customer is in the bank. Internal control unit is responsible from making sure that bank personnel cannot abuse their privileges by using the costumers' information inappropriately or fraudulently. Therefore the internal audit must have a IT monitoring system that will raise and alarm when certain limitations are crossed by their personnel. However in 5

banks (31.3% of banks) any bank personnel can access customers' financial information. This is a very big problem in terms of customer privacy. Additionally, this is indicating that 5 banks (31.3% of banks) do not obey the Central Bank rule on customer privacy because TRNC banking law on internal system unit is stating that banks should have rules and limitation on who can access to customers' financial information.

Moreover, in order to protect customers and minimize fraud and cheating within a bank, the bank must have a system that will enable its personnel to access customers' sample signature and photograph online from any of its' branch. This way the bank personnel can prevent fraud by checking customers' appearance and signature online before they proceed with the bank transactions. However, 9 banks (56.3% of banks) do not have online access to customers' picture and signature. Furthermore, there is one bank that does not have any security cameras. In this bank the security is severely compromised because it can encourage the bank personnel to behave fraudulently. Also, 4 banks (25% of banks) indicated that they store the camera recordings only for three months. This duration is very short because noticing a fraud may take months and sometimes it can take years. Therefore the camera recordings must be kept for a much longer time such as 4-5 years in order to make it possible to investigate the old fraud cases. When the camera recordings are kept only a short time, it does not protect the customers as it is expected.

In summary, most of the banks in TRNC trying to develop their internal audit systems themselves without much support and guidance from the Central Bank. Furthermore the Central Bank rules and regulations are very old and insufficient. There are important points that the Central Bank law does not mention but banks

have it. For example, the Central Bank does not require banks to have an auditing plan but 14 banks (87.5% of banks) mentioned that they have an audit plan. Nevertheless majority of banks do not have frequent audits that is required by law. The Central Bank requires only the internal system managers of banks to have periodic meeting with external auditor. However it would be better if the internal auditors also join these meetings. Because, internal auditors are key person for auditing activities.

This study examines the internal auditing and internal control systems of TRNC and compares them to the World and Turkish standards. Also, it shows whether banks are obeying the Central Bank laws. Based on qualitative data the points that drawn from this study are, internal audit and internal control system in TRNC is insufficient and far behind the world standards. Also, there are some banks that do not obey the Central Bank directives on internal systems. In order to make sure that banks are functioning in integrity and accuracy, the Central Bank of TRNC should increase the frequency of audit on banks. Furthermore, the banking law must be updated with enhanced authority given to the Central Bank to penalize banks when they don't follow the banking law.

REFERENCES

- Akpınar, T. (2015, January 12). *Türkiye' de Ekonomik Krizler – 1994, 1998-1999 ve 2001 Krizleri*. Retrieved from: <https://sinestezi.wordpress.com/2009/04/04/turkiye-de-ekonomik-krizler-1994-1998-1999-ve-2001-krizleri/>
(In Turkish)
- Ayagre, P., Gyamerah, I., & Nartey, J. (2014). The effectiveness of internal control system of banks: The case of Ghanaian banks. *International Journal of Accounting and Financial Reporting*, 4(2), 380-397.
- Basel Committee on Banking Supervision (2012). *The internal audit function in banks*. Bank for International Settlements, Basel.
- Basel Committee on Banking Supervision (1998). *Framework for Internal Control Systems in Banking Organization*. Bank for International Settlements, Basel.
- Başpınar, A. (2005). Türkiye'de ve Dünyada Denetim Standartlarının Oluşumuna Genel Bir Bakış. *Maliye Dergisi*. 148, 35-61.
(In Turkish)
- Bozkurt, U. (2014, March). Turkey: From the 'Motherland' to the 'IMF of Northern Cyprus'? *Academia*. 26(1), 77-98.
- BRSA (2006). *The regulation on internal system unit Banking Regulation and Supervision Agency of Turkey*. Bankacılık Denetleme ve Düzenleme Kurumu.

(In Turkish)

Chartered Banker Professional Standards (2011). *Framework for Professional Standards*. Chartered Banker Professional Standards.

COSO (2013). *Internal Control – Integrated framework*. The Committee of Sponsoring Organizations of the Treadway Commission.

FFIEC (2012). *IT Examination Handbook*. The Federal Financial Institution Examination Council.

Ghalait, B. J. (2015, November 28). The rise of the Islamic economy. *World Finance*. Retrieved from: <http://www.worldfinance.com/banking/the-rise-of-the-islamic-economy>

Gorgulu, M. E. (2014). *IX.th International Congress on Cyprus Studies: The Effects of Isolation on the Turkish Republic of Northern Cyprus*. Eastern Mediterranean University, TRNC. (33-55)

Haniffa, R. (2015, December 28). Auditing Islamic Financial Institutions. Retrieved from: www.financepractitioner.com/contentFiles/QF02/glus0fcl/1p/0/auditing-islamic-financial-institutions.pdf

Hayali, A., Dinç, Y., Sarılı, S., Dizman, A., & Gündoğdu, A. (2013). *Importance of internal control system in banking sector: Evidence from Turkey*. Finance and

Economics Conference 2013, Lupcon Center for Business Research, Frankfurt, Germany, July 4-6 2013.

Hayali, A., Sarili, S., & Dinc, Y. (2012). Turkish Experience in Bank Shareholders' Fraud and Bank Failure: Imar Bank and Ihlas Finans Case. *The Macrotheme Review*. 1(1), 117-129

IIA (2015, December 23). *International Standards for the Professional Practice of Internal Auditing*. The Institute of Internal Auditors. Retrieved from: <https://na.theiia.org/standards-guidance/mandatoryguidance/Pages/Standards.aspx>

Institute of Islamic Banking and Insurance (2015, December 16). *What is Islamic Banking?* Institute of Islamic Banking and Insurance. Retrieved from: <http://www.islamic-banking.com/>

Kaymaklı, N., & Yüksel, F. (2012). Türk Bankacılık Sektöründe İç Denetim Faaliyetlerinin Uygulamalı Olarak İncelenmesi. *CBÜ Sosyal Bilimler Dergisi*. Vol 10(2), 162-187.
(In Turkish)

Koutoupis, A., G., & Tsamis, A. (2009). Risk based internal auditing within Greek banks: a case study approach. *Springer*. 13, 101-130.

Mutchler, J. F. (2003). *Independence and Objectivity: A Framework for Research Opportunities in Internal Auditing*. The Institute of Internal Auditors Research

Foundation. Retrieved from: <https://na.theiia.org/iia/f/Pages/The-IIA-Research-Foundation.aspx>

Nnenna, M. O. (2012). The Role of Internal Audit in Financial Institutions (A Study of Nigerian Agricultural and Corporate Bank, First Bank of Nigeria and United Bank for Africa Plc). *British Journal of Science*. 5(1), 72-88

Ojo, M. (2006). Audit Independence: Its Importance to the External Auditor's Role in Banking Regulation and Supervision. *Munich Personal RePEc Archive*. Paper No. 231.

Professional ethics. (2015, December 16). Retrieved from: **Error! Hyperlink reference not valid.**

Republic of Turkey Embassy of Nicosia (2015, October 22). *Report on Turkish aid to TRNC*. Republic of Turkey Embassy of Nicosia. Retrieved from: http://www.yhb.gov.tr/index.php?option=com_content&view=article&id=350:2014-ekonomi-durum-raporu&catid=27&Itemid=252
(In Turkish)

Senft, S., & Gallegos, F. *Information Technology Control and Audit* (Milton Park, Abingdon: CRC Press, 2008), 3.

State Planning Organization (2015, October 23). *Economic and Social Indicators*. Prime Ministry of North Cyprus. Retrieved from: <http://www.devplan.org/Frame-eng.html>

Turkish Republic of Northern Cyprus Central Bank (2015, October 22). *Financial Reports of Banks*. Turkish Republic of Northern Cyprus Central Bank. Retrieved from: <http://kktcmerkezbankasi.org/tr/bankalarinmaliraporlari>
(In Turkish)

Turkish Republic of Northern Cyprus Central Bank (2015, October 23). *TRNC Banking Law*. Turkish Republic of Northern Cyprus Central Bank. Retrieved from: <http://kktcmerkezbankasi.org/mevzuat/bankalar-yasasi>
(In Turkish)

Turkish Republic of Northern Cyprus Central Bank (2015, November 10). *TRNC Banking Law on Internal System Unit*. Turkish Republic of Northern Cyprus Central Bank. Retrieved from: <http://kktcmerkezbankasi.org/mevzuat/bankalar-yasasi>
(In Turkish)