T.C. DOĞUŞ UNIVERSITY

SOCIAL SCIENCE INSTITUTE

MASTER OF SCIENCE IN FINANCIAL ECONOMICS

AN ATTEMPT ON THE APPLICABILITY OF BASEL III LCR (LIQUIDTY COVERAGE RATIO) AND CAR (CAPITAL ADEQUACY RATIO) REQUIREMENTS TO SELECTED FOOD RETAIL SECTOR FIRMS AND A COMPARISON WITH TRADITIONAL FINANCIAL RATIO ANALYSIS

Master of Science in Financial Economics Thesis

Bucan Türkmen

201386003

Advisor: Ass. Prof. Dr. Bülent Günceler

Istanbul,2014

PREFACE

I would like to thank firstly to my manager Alper Karakoç for supporting me for my master degree, my Assistant Proffessor Bülent Günceler for his academic guidance, to my dearest wife Ceren Türkmen and my daughter Beren Türkmen for their endless supports, to my colleague and friend L. Çiler Öklü for her deep understanding and lastly but not least to my colleague and friend Pelin Altun for her full support.

In this academic study, application of BASEL criterias on retail sector firm and their effect on financial security is examined. Moreover, by this way, we emphsize that the difference between financial ratio analysis.

(Istanbul, December 2014) Bucan Türkmen

ÖZET

Bankalar, para ve sermaye piyasasında, fon ihtiyacı olanlar ile fon fazlası olanlar arasında aracı görevi yapmaktadırlar. Fon fazlası bulunan kişi, kurum ve kuruluşlardan toplanan fonlar, fon ihtiyacı bulunan kişi kurum ve kuruluşlara aktarılmaktadır. Bu noktada, fon fazlası olanlara, talep ettikleri anda, paralarını ödemek zorunda olan Bankalar, fon ihtiyacı olan kuruluşlardan ise parayı, aktarıldığın anda kararlaştırılan tarihte geri alacaklardır. Her ne kadar kredinin geri çağırılması, hukuken ve sözleşme bazında mümkün olsa bile, itibari açıdan ilgili banka için büyük sakıncası olduğundan, bu işleme başvurulmamaya çalışılmaktadır. Dolayısı ile bu noktada iki büyük problem baş göstermektedir. Birincisi, vade uyumsuzluğu, ikincisi ise kredi güvenliğidir.

Vade uyumsuzluğu, fon arz edenlerin, yatırdıkları fonların vadelerinin, fon talep edenlerin talep ettikleri vadeden kısa olması problemidir. İkincisi ise; verilen kredinin, vadesi geldiğinde ödemesinin yapılamaması veya belirtilen vadeden daha geç bir tarihte yapılması durumudur. Bu iki problem, aslında tek bir noktan, likiditeden, hareket etmektedir. Birinci nokta, bankanın, ikinci nokta ise fon talep eden kişi, kurum veya kuruluşun likiditesini, yani ödeme yükümlülüğünü yerine getirilebilme gücünü ön plana çıkarmaktadır.

Finansal krizlerin yayılması, bir veya birden fazla borçlunun borç yükümlülüğünü ifa edememesi sonrasında, finansal kuruluşun likidite yükümlülüğü açısından aciz duruma düşmesi, dolayısı ile kendi borcunu ifa edemez noktaya gelmesiyle, diğer alacaklı finansal kuruluşların da zincirleme olarak batması sonucunda ortaya çıkmaktadır. Finansal krizler, hükümetleri bile zor durumda bırakan noktalara ulaşabildiğinden, finansal kuruluşların ve bunların borç verdiklerinin likit olması durumu son derece önemlidir. Bu önem ülkeler içinde ve ülkeler arasında platformda değerlendirilmektedir. Uluslararası Ödemeler Bankası (BIS), Basel komitesi, finansal krizlerin çıkmasını ve yayılmasını önlemek amacıyla Basel komitesi adında bir komite toplamıştır. Bu komite bazı kararlar alarak, finansal kuruluşların mali güvenliklerini sağlamayı amaçlamıştır. Mali kriterler, bazı değişikliklerden geçerek günümüzdeki halini almıştır. Bu noktada vurgulanması gereken husus, bu kriterlerin yalnızca finansal

kuruluşları bağlamasıdır. Borçluya, finansal kuruluş olmadıkça, herhangi bir zorunluluk vs. getirmemektedir.

Finansal kuruluş, fon aktarımı yapacağı kişi, kurum veya kuruluşu seçerken bir takım değerlendirme ölçütleri kullanmaktadır. Mali analiz, kuruluşun, mali durumunu ortaya koymaya çalışan yöntemlerden biri ve büyük firmaların değerlendirmelerinde kullanılan değerlendirme araçlarından en önemlisidir. Bu değerlendirme sonucunda ortaya çıkan, ölçüte göre kredi verilmesi veya verilmemesi kararı alınmaktadır.

Bu tezde, finansal kuruluşlara uygulanan, mali güvenlik kriterlerinden, likidite ve sermaye yeterliliği kriterlerinin, firmalara uyarlanması durumunda ortaya çıkacak tabloyu gözler önüne serilmesi amaçlanmıştır. Bu uygulamayı yaparken karşımıza, finansal kuruluş mali tablolarıyla, reel sektör firmalarının tablolarının uyuşmaması problemi çıktı. Bu problemi aşmak için, dönüştürme işlemleri uyguladık. Ayrıca ölçek farkından dolayı, ilgili güvenlik kriterlerinde komite veya ulusal denetim kurullarının, finansal kuruluşlara uyguladığı bazı katsayı ve oranları yumuşatarak kullandık.

Bu uygulamayı, reel sektör firmaları arasından finansal kuruluşlara en çok benzediğini düşündüğümüz sektör olan perakende sektörünün, BİST'te yer alan firmalarına uygulayarak, üç firmanın analizi gerçekleştirildi. Mali analiz tekniklerinden oran analizi ile uyguladığımız yöntem karşılaştırıldı.

Anahtar kelimeler: Basel, LKR, SYR, Oran Analizi

SUMMARY

Banks, in financial markets, work as intermediaries between who need funds and those who have fund surplus. Funds gathered from a person, agency or institute are placed to a person, agency or institute who need funds. At this point, banks have to pay their money to those who have fund surplus on demand, while call back from organizations who need funds at a particular time set when the money placed. Even though it's possible to recall a credit, this process is avoided for the reason that reputationally it has big reservations. Accordingly, in this point two main problems appear: First one is maturity mismatch and the second is credit safety.

Maturity mismatch is the problem of being shorter the fund maturity of investors than demandants. The second problem is the situation that withholding payment of a placed credit when it is due or late payment. These two problems actually arise from a single point: liquidity. First point features the liquidity, in other words capability of obligation to pay, of the banks while the second of a person, agency or institute who demand funds.

Spreading of financial crisis emerges with becoming unable of a financial institution after one or more debtor fail to discharge of obligation, because of inadequacy of liquidity, and accordingly with reaching a point of failing to discharge of obligation of this financial institution itself, failing the other creditor financial institutions successively. Financial crisis can reach a point that put even governments in a tight spot, it's essential that financial institutions and whom they lend to be liquid. This significance is evaluated within countries and in a platform between countries. Bank of International Settlements (BIS) set up a committee, named Basel Committee, in order to prevent emerging and spreading the financial crisis. This committee targeted to ensure the financial security of financial institutions taking some decisions. Financial criteria, with some changes, take their present form. The point to be emphasized is that these criteria only bind the financial institutions. There is no obligation for the debtors unless being a financial institution.

Financial institutions use several evaluation standards while choosing the person, agency or institute to whom are credit a fund. Financial analysis is one of the methods to present

the financial status of an institutions and the most significant of all evaluation tools in using evaluations of big firms. According to the criterion in consequence of this evaluation, a decision is made whether to give a credit or not.

In this thesis, it is aimed to show the contingency situation in case of adaptation the liquidity and capital adequacy criteria to firms. While implementation process, we confronted an inconsistency problem of financial statements of between financial institutions and real sector firms. In order to overcome this problem we implemented transformation processes. Because of the scale difference, we also used some parameters and ratio smoothing, which committees and national board of audits use to audit institutions.

We implemented this study to the firms which operates in stock market of retail industry, which we suppose that it is the most approximate sector to financial institutions from among the real sector firms. Three firms are analised and, then compared the ratio analysis, one of the financial analysis techniques and our adopted method.

Keywords: Basel, LCR, CAR, Ratio Analysis

CONTENTS

Page

ABBREVIATIONS

AIRB Advanced Internal Ratings Based Approach
BIS Bank for International Settlements
BIST Borsa Istanbul
BRSA Banking Regulation and Supervision Agency
CAR Capital Adequacy Ratio
CBRT Central Bank Republic of Turkey
CDS Credit Default Risk
EBIT Earning Before Interest and Taxes
FIRBA Foundation Internal Ratings Based Approach
GDP Gross Domestic Products
ISE Istanbul Stock Exchange
IT Information Technology
KAP Public Disclosure Platform
KKB Credit Reference Agency
LCR Liquidity Coverage Ratio
LKR Likidite Karşılama Rasyosu
OECD Organisation for Economic Co-operation and Development
OR Operational Risk
SA Standardized Approach
SME Small Market Enterprises
USA United States of America
USD Unites States Dollar
VAR Value at Risk
VUK Tax Procedure Law

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

Following the financial crisis that was globally effective, starting from 2007, a new framework that restricts the usage of high leverage and defines liquidity risk and systematic risk in detail was defined in order to make banking and finance system more resistant to a possible crisis. While companies operating in the finance sector are tried to be surrounded with audit and supervision in every possible aspect, a body of rules on such a scale that companies in the real sector must comply does not exist.

This research is aimed at building an improved analytical model for financial risk calculation focusing on financial statement ratio analysis and Basel III regulations will be discussed in detail. The model's insight is based on two expectations: 1) an attempt to include real sector into financial sector's risk regulations and 2) adding a new liquidity ratio into usual balance sheet ratio analysis tool kit, in order to test any entity's credit pay back capacity. By inclusion some of the latest financial sector regulation requirements to financial analysis, this model will show that credit decision might be more accurate than before.

Our study is trying to explain fragilities caused by undercapitalization and liquidity shortage. Since the aforementioned criteria are designed for financial sector, the relevant items of balance sheet and income statements of retail companies were analysed subject to analysis after converted into financial sector balance sheets.

Financial ratios are mathematical comparisons of financial statement accounts or categories. These relationships between the financial statement accounts help investors, creditors, and internal company management understand how well a business is performing and areas of needing improvement.

Financial ratios are the most common and widespread tools used to analyze a business' financial standing. Ratios are easy to understand and simple to compute. They can also be used to compare different companies in different industries. Since a ratio is simply a mathematically comparison based on proportions, big and small companies can be use ratios to compare their financial information. In a sense, financial ratios don't take into consideration the size of a company or the industry. Ratios are just a raw computation of financial position and performance.

Ratios allow us to compare companies across industries, big and small, to identify their strengths and weaknesses. Financial ratios are often divided up into six main categories: liquidity, solvency, efficiency, profitability, market prospect, investment leverage, and coverage.

In this study, we will examine the financial ratios which are calculated by considering the main financial statements of three big players in the retailing shopping market are named Carrefoursa, Kiler and Migros. The implemented financial ratios are Short - Term Solvency or Liquidity Ratios, Asset Management Ratios, Debt Management Ratios and Equity Ratios. The current ratio is an important measure of liquidity because short-term liabilities are due within the next year. The current ratio helps investors and creditors understand the liquidity of a company and how easily that company will be able to pay off its current liabilities. This ratio expresses a firm's current debt in terms of current assets.

The sample in this study is composed of three major retail industry companies whose stocks are traded in primary national market at BIST. According to companies' 2013 year-end financial data, accessed from Public Disclosure Platform (KAP).

This study is comprised of five sections. In the first section, following the introduction, the conceptional framework of this study will be discussed in three sub-sections; classical financial statement ratio analysis, the historical development of Basel criteria for risk management and a general overlook at the Turkish food retail sector. Third part is the literature survey. In the fourth part of the study, after usual ratio analysis is applied to each of the financial statements of the firms independently, an application of Basel III's liquidity and capital adequacy criteria will be done. In the last part, results and suggestions will be given depending on the risk status of the food retail sector firms revealed according to both the financial statement ratio analysis and Basel III liquidity criteria.

2. CONCEPTIONAL FRAMEWORK

2.1 Methods of Financial Analysis Used In Terms of Commercial Loan Valuation: Ratio Analysis

When we examine the stages of credit giving, it can be seen that these stages are comprised of credit worthiness analysis, allocation of appropriate credit, monitoring and managing both performing and non-performing loans. Since it is vital for financial sector to analyze the financial statements of the loan applicant, a complete financial analysis is crucial. An effective financial analysis is minimizing the potential risks undertaken by making realistic interpretation of actual state and correct predictions at the stage of loan provision.

Financial statements are generally comprised of income statement, balance sheet, statement of cash flows, and a statement of retained earnings. From the aspect of making better credit decisions, forecasting, etc. financial statement analysis is a method or process involving specific techniques for evaluating risks, performance, financial health, and future prospects of an organization.

Different stakeholders have different interests and apply a variety of different techniques to meet their needs. For example, equity investors are caring about the long-term profitability and sustainability of their investment and growth of dividend payments. Creditors want to ensure on time interest and principal payment so interested in the organisation's debt and earning structure.

Common methods of financial statement analysis include fundamental analysis, DuPont analysis, horizontal and vertical analysis and the use of financial ratios. (Horrigan, 1965, 559)

A common method of financial statement analysis, namely The Graham and Dodd approach, is referred to as Fundamental analysis which can be dated back to the influential book "Security Analysis" by Benjamin Graham and David Dodd, and it includes:

- Economic analysis;
- Industry analysis;
- Company analysis

Horizontal analysis compares financial statement items over time, in order to test the entity

performance over time.

Vertical analysis is a proportional analysis of financial statements, which is also referred as common sizing. Each financial statement item listed in the financial statement is listed as the percentage of another line item, total sum or partial sum.

Financial ratios are very powerful tools to perform some quick analysis of financial statements. There are four main categories of ratios: liquidity ratios, profitability ratios, activity ratios and leverage ratios which can be analyzed over time and across competitors in an industry.

- **Liquidity ratios** are used in determining how quickly a company' assets can be converted into cash in times of financial difficulty or bankruptcy. In other words, they are measuring the entity's ability to remain in business. The most common liquidity ratios are the current ratio and the liquidity index.

  The current ratio is current assets/current liabilities and measures how much liquidity is available to pay for liabilities.

  The liquidity index shows how quickly a company can turn assets into cash.
- **Profitability ratios** are ratios exhibit profit earning capacity of a company. A few popular profitability ratios are the breakeven point and gross profit ratio.

  The breakeven point calculates how much cash a company must generate to break even with their start-up costs.

  The gross profit ratio, shows a quick snapshot of expected revenue, can be calculated as follows;
- **Activity ratios** are re showing the management quality of company's resources. Two common activity ratios are accounts payable turnover and accounts receivable turnover. These ratios demonstrate how long it takes for a company to pay off its accounts payable and how long it takes for a company to receive payments, respectively.
- How much a company relies upon its debt to fund operations are revealed by **leverage ratios**. Common leverage ratios used for financial statement analysis are the debt-to-equity ratio

As derived from Wikipedia, DuPont analysis uses several financial ratios that multiplied together equal return on equity, a measure of how much income the firm earns divided by

the amount of funds invested.

In recent years, several researchers have employed statistical techniques to determine the usefulness of ratio analysis in predicting any possible loan applicant failure. The most important question arises about ratio analysis is about ratios' predictive power pre-bankruptcy.

While ratios do provide data about the current financial status of the firm, they do not exhibit information about management capacity, future strategies and the underlying economic conditions. From this aspect, for ratios to predict failure, they should model the underlying inside and outside economic environment. In other words, ratio analysis is fruitful only after the fact.

2.2 Historical Evaluation Of Banking Regulations

Banks have a vital role in the economy such that; they access funds through either by collecting savers' money, issuing debt securities, or borrowing on the inter-bank markets. The funds collected are invested in short-term and long-term risky assets, namely credits.

From this aspect, banks comprise an important role over money creation process by centralizing monetary surplus and injecting it back into the economy in return for interest. Hence, they perform an interest bearing redistributive role. So, unsurprisingly they are subject to supervisions and regulations. If we consider a limited historical overview of banking regulation and bank failures, this broad view of the evolution would be helpful to have a better understanding over the current regulatory state.

Whenever a financial institution runs into liquidity problems, the supervision or regulatory authorities provide the necessary temporary funds according to the theoretical framework of Lender of Last Resort. Since the financial fragility resulting from capital and liquidity inadequacy of a financial institution can spread over other "healthy" institutions through various channels and have more devastating effects, government interventions are common. Since these interventions' burden is borne on taxpayers, supervising and regulating before should be preferred instead of intervening at insolvency.

According to the aforementioned chronology of banking regulations and market risk

regulations[1], we can conclude that usage of different financial statement ratios in order to maintain a minimum requirement that can establish financial stability has been tested for more than a century.

As stated in Balthazar (2006,15), this short and somewhat selective overview of the history of banking regulation and bank failures allows us to get some perspective before examining current regulation in more detail, and the proposed updating. We can see that, at least, an international regulation answers to a growing need for both a more secure financial system and some standards to develop a level playing field for international competition. But only after the numerous banking crises of the 1980s was it imposed as an international benchmark.

In addition to this, we can conclude that regulations have started in the USA, then spread into Europe and Japan, and lastly became binding on other developing countries.

2.2.1 Basel Banking Regulations

Bank for International Settlements (BIS) has formed Basel Committee in 1975 in order to draw framework of relevant minimum capital adequacy standards in banking sector. Member countries of the Committee are represented both by their central banks and the organizations with official responsibility in banking supervision.

The Committee's proposals had to receive the approbation of all participants, each having a right of veto. The entire Basel framework was thus a set of rules fully endorsed by participants.

Although the Basel Committee is not officially authorized to set laws and rules, it can produce drafts and proposals about banking sector regulations and can bring them into discussion. In this scope, although Basel Committee regulations are advisory, any country's banking system that does not comply with the regulations pays it back by increased risk premiums on international arena.

The rules were designed to reduce riskiness, but national supervisors could implement stronger requirements.

[1] Detailed information can be found at appendices

2.2.1.1 Basel I

Basel I Capital Adequacy Settlement (to be called Basel-1) was published to apply uniform capital adequacy calculation methods among countries and to reduce fluctuations in international banking markets. (Çelik and Kızıl 2008, 20)

The Accord focuses on *credit risk* (other kinds of risks are left to the purview of national regulators) by defining the minimum amount of capital that must be held according to the bank's on- and off-balance sheet positions against a bank bankruptcy. (Atiker,2005;1 and Balthazar,2006;17)

The main objectives of Basel I Accord can be stated as follows;

- Strengthening the *soundness and stability* of the international banking system.
- Diminishing existing sources of *competitive inequality* among international banks.

In order to define a minimum level of capital requirement, Basel Committee first defined the term "capital"

The Committee recognized two classes of capital by function of its quality: Tier 1 and Tier 2.

Tier 1 (Core Capital): Tier 1 capital includes stock issues (or shareholders equity) and declared reserves, such as loan loss reserves set aside to cushion future losses or for smoothing out income variations. It focused almost entirely on credit risk.

Tier 2 (Supplementary Capital): Tier 2 capital includes all other capital such as gains on investment assets, long-term debt with maturity greater than five years and hidden reserves (i.e. excess allowance for losses on loans and leases). However, short-term unsecured debts (or debts without guarantees), are not included in the definition of capital. Tier 2 capital was limited to a maximum 100 percent of Tier 1 capital.

Goodwill had then to be deducted from Tier 1 capital and investments in subsidiaries had to be deducted from the total capital base.[2]

[2] Goodwill was deducted because it was often considered as an element whose valuation was very subjective and fluctuating and it generally had a low value in the case of the liquidation of a company. The investments in subsidiaries that were not consolidated were also deducted to avoid several entities using the same capital resources.

Table 1.1 A definition of capital (Balthazar,2006,18)

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

BASEL I defined capital and structure of risk weights for banks. The minimum capital requirement was fixed at 8% of risk weighted assets A portfolio approach was taken to the measure of risk, with assets classified into four buckets (0%, 20%, 50% and 100%) according to the debtor category.

Cook Ratio shows the equity (principal)[3] that must be held against pre-defined risk weighted assets. In this scope, a regulation focusing on this implementation was also published in our country in 1989. Turkey applied capital adequacy rate as 5% in 1989, 6% in 1990, 7% in 1998 and 8% as of 1998.

Designed originally for internationally active banks of the G10 countries, has been used as a basis for banking regulations in more than 100 countries. Although Basel I created a *worldwide benchmark* for banking regulations, it also faced with a lot of criticism.

Opponents state that the risk weights imposed by Basel-1 do not involve any evaluation according to riskiness. It subjected borrowings of OECD member countries by a risk weight of %0 and borrowings by OECD banks subject to 20% risk weight. 100 % risk weight was applied to non- OECD member countries. That is why the first framework is also named as "Club Rule".

In addition to this the main weaknesses of the Accord, can be counted as follows, as stated

[3] Equity definition in Cook ratio (Tier I – goodwill) + Tier II+ subordinated loans-values deducted from capital (capitalized expenses, financial contributions etc.)

in Balthazar (2006, 35-36)

- The *lack of risk sensitivity*; According to the risk weights, a corporate loan to a small company with high leverage and a loan to a AAA-rated large corporate company are both treated in the same manner.
- A *limited recognition of collateral*; Eligible collateral and guarantors is limited.
- An *incomplete coverage of risk sources*. Credit risk has been defined as the most important banking risk and factors such as interest rate risk or exchange risk have not been taken into account for capital adequacy. After financial bankruptcies in the U.S, this deficiency was taken into consideration and a more sensitive capital adequacy concept emerged. (Çelik and Kızıl, 2008, 19) The 1996 Market Risk Amendment filled an important gap, but there are still other risk types not defined by the Basel I Accord.
- A "*one-size-fits all*" *approach*. The requirements are virtually the same, whatever the risk level, sophistication, and activity type, of the bank.
- An *arbitrary measure*. The 8 percent ratio is arbitrary and not based on explicit solvency targets.
- No recognition of *diversification*. There is no difference among risk centralization and risk diversification. The credit-risk requirements are only additive

2.2.1.2 Basel II

Although BASEL-1 was the first international instrument assessing the importance of risk in relation to capital and proved to be a milestone in the finance and banking history, the time has come to move a more sophisticated framework.

Due to the aforementioned limitations of BASEL I, the Committee decided to propose a more risk-sensitive framework in June, 1999 which was signed as BASEL-II accord.

The objective of BASEL-II was to "*promote safety and soundness in the financial system; enhance competitive equality; constitute a more comprehensive approach to addressing risks; and to develop approaches to capital adequacy that are appropriately sensitive to the degree of risk involved in a banks' positions and activities".*

The main objectives of Basel II Accord can be stated as follows;

- To increase the quality and the stability of the international banking system.
- To create and maintain a level playing field for internationally active banks.
- To promote the adoption of more stringent practices in the risk management field.

The last item, which is firstly pronounced, is the most important characteristic of the new accord, implying a shift from ratio-based regulation, towards a regulation that relies upun internal data, practices, and models

Moreover, it addresses a lot of Basel 1's criticisms and, in addition to that, it placed both a new risk definition into the body of standards and brought along some important changes in the definition of Market Risk and Credit Risk. (Çelik and Kızıl, 2008, 20)

Basel II Accord built its concepts on three fundamental "Pillars". These three pillars involve the determination of minimum capital as well as the maintenance of the determined capital through capital audit and market authority, namely Minimum Capital Requirement, Supervisory Review Process and Market Discipline. (BDDK, 2005)

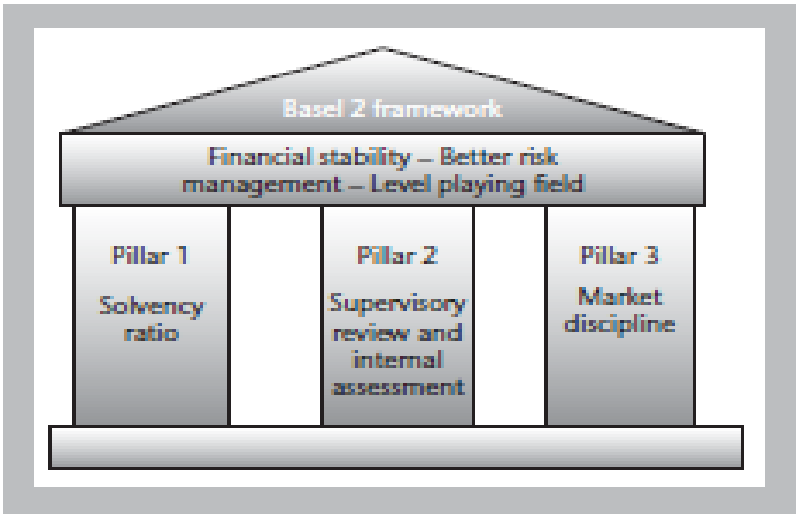

Figure 1.1 The three pillars (Balthazar, 2006, 45)

Pillar 1; according to the update of the previous required capital calculation, capital is still considered as the main buffer against losses and bankruptcy, RWA is still viewed as the most relevant control ratio,in addition to that the 8 percent requirement is still a loophole to be preyed upon, but the way assets are weighted has been significantly changed. Minimum Capital Requirement is based upon certain calculations at which minimum capital

requirement has to be maintained. Basel II provides three approaches of increasing sophistication to the calculation of credit risk capital: the Standardized Approach (SA), the Foundation Internal Ratings Based Approach (FIRBA) and the Advanced Internal Ratings Based Approach (AIRB). Basel II also introduced capital requirements for operational risk (OR) for the first time. Operational risk is defined as the explicit capital requirement for risks related to possible losses arising from errors in processes, internal frauds, information technology (IT) problems, etc. Again, there are three approaches, counted below in Figure 1.2. Lastly, market risk was defined as "the risk of losses in on- and off-balance sheet positions arising from movements in market prices", caused by; the interest rate risk and equities risk in the trading book and the foreign exchange risk and commodities risk throughout the bank.

There are two main option for calculating the required capital for market risk: the Standardized Approach and the Internal Models Approach.

In **Standardized Approach**, capital requirements for interest rate and equity positions are designed to cover two types of risks, namely specific risks and general risks.[4] For specific risk, interest rate-sensitive instruments receive a risk-weight by function of their type and their maturity. For general risk, securities are categorized into several buckets by function of their maturity and another capital requirement is estimated.

In **Internal Models Approach**, banks are allowed to use their own VAR models to calculate their capital requirements, which are far from the scope of this study.[5]

According to the revisited Cook Solvency ratio, the eligible capital must cover at least 8 percent of the risk-weighted requirements related to three broad kinds of risks

[4] Specific risks are defined as movements in market value of the individual security owing to factors related to the individual issuer (rating downgrade, liquidity tightening …). General risks are the risks of loss arising from changes in market interest rates, or from general market movements in the case of equities.

[5] see, for instance, Holton, 2003

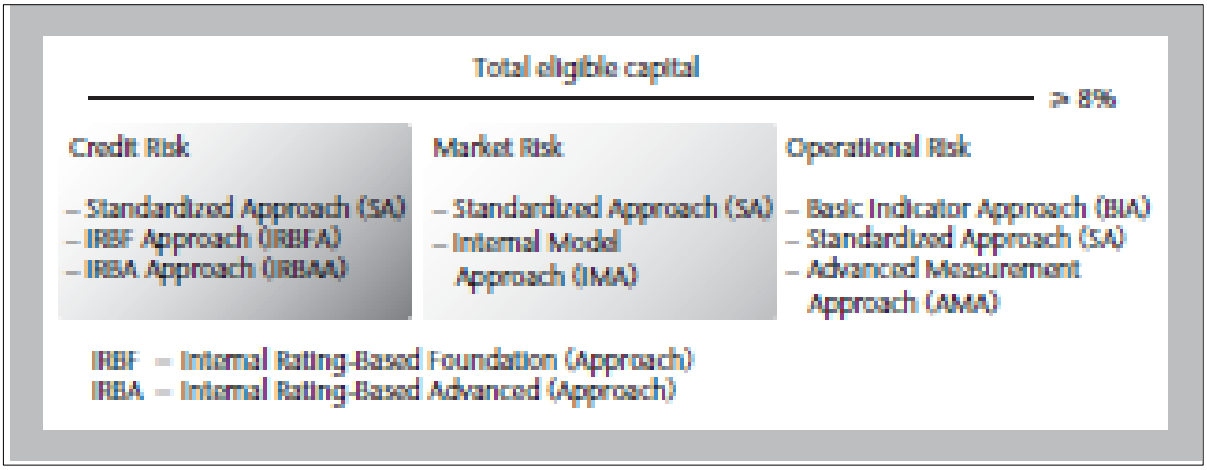

Figure 1.2 Solvency ratio (Balthazar, 2006, 45)

Pillar II is based on *internal controls* and *supervisory review*. It requires banks to have internal systems and models to evaluate their capital requirements in parallel to the regulatory framework and integrating the banks' particular risk profile. Banks must also integrate the types of risks not covered (or not fully) by the Accord, such as reputation risk and strategic risk, concentration credit risk, interest rate risk in the banking book. (Balthazar, 2006, 46)

The third fundamental pillar of Basel II depends on market authority. Banks are expected to build comprehensive reports on their internal risk management systems, which will have to be publicly disclosed to the market at least twice a year, increasing transparency in the sector.

Rating systems are at the heart of the Basel 2 Accord. Efficient rating systems are the key requirements in reaching the IRB approaches. Rating systems must have two dimensions: one for estimating the PDs of counterparties and one to estimate the LGD related to specific transactions.

- There must be clear policies to describe the risk associated with each internal grade and the criteria used to classify the different grades. There must be at least seven rating grades for non-defaulted companies and one for defaulted.
- The rating process must be transparent enough to allow third parties to replicate it and to assess the appropriateness of the rating of a given counterparty.

- A scoring model can be the primary basis of the rating assignment, but the bank has to prove that its scoring model has a good discriminatory power, and the way models and analysts interact to arrive at the final rating must be documented.
- Banks must record all the data used to give a rating to allow back-testing.
- The bank must have an independent unit responsible for construction, implementation, and monitoring of the rating system. It must produce regular analyses of its quality and performances. At least annually, audit or a similar department must review the rating system and document its conclusions. (Balthazar, 2006, 115-116)

2.2.1.3 BASEL III

As it is stated in the book by Reinhart and Rogoff (2010), the whole world approached the situation as “this time is different” and believed that possible crises can be foreseen and ruled out with Basel II criteria considering its sophisticated risk weighting formulas. In the meantime, high interest sub-prime credit volume extended without considering payment capacities of borrowers reached its highest level since its beginning, at the beginning of 2007. (Türkmen and Türkmen, 2014)

The first sign of the serious crisis that sub-prime credit market caused the world to suffer still was the bankruptcy of American "New Century Financial" in April 2007. American giant “Lehman Brothers” and “Merrill Lynch” bank also went into bankruptcy in September 2008. “Given the history and volumes of both banks, the day when these two declarations were made was accepted as the worst day of crisis and the actual commencement date of crisis”, ending the economic environment called “Great Moderation”. (Ebu Hasbu, 2010)

This crisis showed that sufficient measures were not taken against possible crisis and existing system involved serious deficiencies. Moreover, the crisis affected the real sector as well and substantial falls were seen in the welfare level and job losses occurred. (Cangürel, Güngör, et.al, 2010, 5)

Nouriel Roubini states that major players who contributed to the creation of Basel II failed before the rules were implemented fully and they are at the phase of rejecting Basel II now. (Candan, 2008, 80)

The main criticisms of Basel I and basel II are as follows,

- Portfolio invariant risk; capital required to back loans should depend only on the risk of that loan, not on the portfolio to which it is added (Gordy, 2003). In other words, it does not penalise portfolio concentration, concentration issues are left to supervisors in Pillar 2.
- CDS Effect; The banks were able to transform the buckets of risk themselves with derivatives, thus undermining the fundamental idea of capital weights, without having to trade as much on the underlying securities on primary markets.
- Omittance of counterparty risk; a major issue with the failures of Lehman Brothers and AIG.
- Procyclical nature of the system; that tend to underestimate risks in good times and overestimate them in bad times.

Due to the fact that the financial crisis was costly and troublesome and in order to ensure that financial system is more resistant against possible future crises, a new Basel Accord including the requirements for increase in liquidity and capital quality, taking into consideration economic cycles and increase in capital requirements was revealed, which finds its meaning in the new accord as; As far as improving the definition of capital is concerned, the report stresses that equity is the best form of capital, as it can be used to write off losses.

Its main aim is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, improve risk management and governance, strengthen banks' transparency and accountability.

The reform Schedule prepared by Basel Committee was announced to the public on September 12th, 2010 with a press release. From this aspect, it was seen that the scope of the plan was not limited to an expansion of bank specific obligations but also it was planned that additional obligations were also planned in order to compensate systemic risks. (Cangürel, Güngör, et.al.,2010,5)

The features of BASEL-III, which make it more stringent than BASEL-I and II are as follows.

- introduce much stricter definition of capital
- banks will be required to hold a capital conservation buffer of 2.5% to absorb losses during periods of financial and economic stress

- the countercyclical buffer has been introduced in order to slow banking activity when it overheats and will encourage lending in bad times, ranging from 0% to 2.5%
- The minimum requirement for common equity, the highest form of loss-absorbing capital, has been raised under Basel III from 2% to 4.5% of total risk-weighted assets. The overall Tier 1 capital requirement, of common equity and other qualifying financial instruments, increase from the current minimum of 4% to 6%.
- Within the harmonization process planned until 2018, additions may be made to the capital level that must be held according to economic cycle, a leverage rate not based on risk may be established among off balance sheet items and total assets and Tier I capital. Two new rates - Liquidity Coverage Ratio and Net Stable Funding Ratio – were included in new regulations.

2.3 Food Retail Sector

2.4 Definitions

The concept of retailing, which has Persian origins, can be defined as the services for transferring goods among producers and consumers. Retailing covers all the activities about marketing directly to end consumers only if the goods are not used for commercial purposes or reselling, used just for fullfilling personal or family needs. In other words, retailing is the final stage in the distribution process.

Other definitions of retailing can be counted (but not limited to) as follows;

- A sales format based on selling goods one by one or in a few pieces. (Türk Dil Kurumu)
- Selling of a material or an item to people other than any kind of retailers or tradesman (Turkish income tax Act)
- A set of business activities carried on to accomplishing the exchange of goods and services for purposes of personal, family, or household use, whether performed in a store or by some form of nonstore selling. (American Marketing Association)

As the evolution of food retail sector is examined, we see that the number of small-scale retailers tend to decline against supermarket, hypermarket and chain stores. Food retail

sector is experiencing the highest level of competition among other sub-sectors of retailing. Food retail businesses are oftn categorised according to their scale size as; large and small scale markets.

- **Supermarket:** with at least 400 m² sales area,selling more than one third of total sales as non- food goods.
- **Hypermarkets:** with 2500 m2 closed sales area and enough parking space, applied self-service method, 40,000-60,000 kinds of food (60%-70%) and non-food (40%-30%) are presented with combinations of products
- **Wholesale Retail Establishments:** Classified according to the sales policy of businesses performing retail and wholesale functions simultaneously is described as a "warehouse" stores.
- **Discount Markets: I**mplementing lowest price policy with a quite narrow product range is distinguished from retailers. Offering prices below the market prices, giving relatively little place to sales of branded products, with self-service system. (Benito, vd., 2005, 63)

2.4.1 The Historical Evolution of Turkish Food Retail Sector

The retail sector is a part of an economic system that includes individuals and companies engaged in selling of *finished* products to end users in general public. The sector has displayed significant transformation over the past fifty years.

The modern era of food retailing essentially began in 1912, with A&P's introduction of the economy grocery store format. . The next major innovation was the introduction of the supermarket format, which brought scale economies to the stores themselves, 50 years ago by pioneers in the food industry. The third major trend is the rise of computerization and the complementary explosion in product variety that occurred throughout the 1990s, laying the ground work for modern superstores and the entry of Wal-Mart.

The increasing demand coming from "outreaching" Eastern Bloc countries is an important factor in changing the industry's evolution. However, the industry's principal development is said to be in the 1990s.

In 1990s, political and economic developments all over the world as a result of globalization influenced the retailing sector. The need and desire to reach themore goods,

widespread use of credit cards and increases in other financial possibilities and increase payment opportunities positively developed the retail sector, hence total sales of the sector has increased worldwide.

During the first years of Turkish Republic, due to central food distribution system, retailing sector remained short. in 1936, which entered into force with the law on prices of food commodities tried to be hold under State control, by a Law in force in 1936.

The devaluation of TL in 1946, low production and lack of organisation in distribution systems and lack of capital caused foodstuff insufficiencies in crowded cities in the midst of 1950s.As a solution, the attempt is made to organise chain stores and Encourage Foreign Capital Act was enacted in 1954.

In Turkey, economic and social transformation gained momentum particularly after the 1980s. Turkish retail sector has displayed significant transformation since 1980s. Prior to the late 1980s, the characteristics of an average retail firm were: small-scale, capital-weak, independent, and family owned. (Kaynak, 1982, 1986; Tokatli and Boyaci, 1998) A large number of food retailers operating on a global scale have entered into Turkish markets in these years. During 1990s, the liberal economic reforms accompanied by global economic trend in the world have led to major shift in the operational and organizational structure of the retail sector.

Beginning from 2000s, despite the sudden stop in 2001 crisis, the sector has became preferred by foreign capital by mergers and acquisitions especially after 2005

Retail sector constitutes a high share in GDP and indicated a growth of 40 percent performance over the past five years (Oral,2006)

2.4.2 The Current Conditions of Turkish Food retail Sector

Retail sector is one of the largest sectors within the economy for many countries. In the US, the sector is considered as the second largest industry in terms of the number of employees, approximately summing up to %18 of total employment in the USA in 1990s (Vargas, 2004). (Bhattacharya et al., 2007). With increasing globalization, the retail sector is face to face with changing rivals and more competitiveness over better performance. (Koh et al., 2006). On contrary to the highly profitable traditional retailers of the past, large retail enterprises are struggling harder and harder. Due to the arrival of large retailers

and supermarket chains which offer a wide array of goods with relatively cheaper prices, and partly due to changing shopping habits small stores are threatened.

According to a research by AMPD&PwC in 2007, the total retail sector became the fourth biggest after energy, education and health sectors. In terms of employment capacity, the sector employs about 2.5 million people. According to the same study, the sector constituted approximately 137 billions of US dollars of total revenues and the number is expected to reach around 200 billion of US dollars by the year 2010.

Table 3.1: Number of firms in retail sector by size in Turkey (AMPD&Pwc (2007), Türk perakende sektörünün değişimi ve ekonomi üzerindeki etkileri) [6]

	Size & Firm Type[8]	1996	2000	2001	2002	2003	2004	2005
Large Firms	1) Hypermarkets	41	129	149	151	143	152	160
	2) Large Supermarkets	91	306	357	368	367	396	454
	3) Supermarkets	289	726	835	909	968	1082	1258
	Total (1+2+3)	421	1161	1341	1428	1478	1630	1872
Small Firms	4) Grocery Stores	175	150	141	135	138	138	136
	5) Small Supermarkets	0,9	1,8	2,3	2,5	2,8	3,2	3,7
	Total (4+5)	176	151	144	138	141	141	139

According to the report prepared by Deloitte "Retail Sector Assessment 2013", Turkey's retail sector is estimated to exceed the size of USD 300 billion. Organised retailers reached 55% share of the food retail sector, where it comprises a 44% share of the retail sector as a whole.

When the number of stores is considered, Migros ranks first in the multiple retail format where CarrefourSA ranks second and Tesco Kipa ranks third and BIM ranks first among the discount markets.

[6] The floor size (TFS) is : **(1)** Hypermarkets TFS >2500m2 : **(2)** Large Supermarkets ;1000< TFS<2500m 2 :**(3)** Supermarkets 400< TFS<1000m 2 :**(4)** Groceries and Bakkals: TFS<100m 2: **(5)** Small Supermarkets: 100<TSF<400m2

3. LITERATURE SURVEY

In recent years, several researchers have employed statistical techniques to determine the usefulness of ratio analysis in predicting firm failure.

There are lots of studies that examine both the scope and evolution of Basel criteria and its effects on financial markets when implemented. Our goal is not to be exhaustive but a broad overview of previous studies will help to better understand the current contribution of this study on that literature.

In the study by Mermod and Ceran (2011), risks that the banking sector was subject to and capital adequacy proposals against these risks, were evaluated comparatively for Turkey-Europe- the U.S.A, in line with Basel Committee's recommendations.

In the studies of Şahin (2012), Şahin (2013), Cengiz (2013) and Gürel, et,al. (2012), the general framework concerning the Basel minimum capital regulations was mentioned. Külahi et.al. (2013), examined Turkish Banking Sector's compliance process to Basel I-II-III Criteria.

Taskınsoy (2013) mentions that, the new capital requirements of Basel 3 will not considerably affect Turkish Banking Sector.

In the study by Sungur and Okur (2014), according to the survey made in Ankara, it was concluded that the familiarity of Basel criteria among selected SMEs was very low. Kaderli, Doğu, Arabacı (2013) study also aims at determining the effects of Basel 3 and new Turkish Commercial Code on SME's finance problem.

Demir, Michalski, Örs (2014), by concentrating especially on additional capital costs to be brought on trade financing instruments, examined possible foreign trade effects of Basel 3.

As it can be seen, the studies examining the effects of Basel criteria are stressing its effects indirectly through credit costs due to changing rating schemes and its positive effects on standardization and transparency of balance sheets. No study was encountered, that directly tries to apply Basel III citeria to real sector balance sheets and by this way increasing the financial ratio analysis tool kit. In this context, we believe that our study will shed light to other studies from this aspect.

4. ANALYSIS

4.1 Data

Banks face a number of risks while conducting their business, and how well these risks are managed and understood is a key driver behind profitability. Banks borrow money by accepting funds deposited on current accounts, Banks can create new money when they make a loan, namely credit.

Credit, stemming from the Latin originated word “believe”, is the trust which allows one party to provide resources to another party by arranging either to repay or return those resources. New loans throughout the banking system generate new deposits elsewhere in the system. The money supply is usually increased by the act of lending, and reduced when loans are repaid faster than new ones are generated. Excessive or risky lending can cause borrowers to default, the banks then become more cautious, so there is less lending and therefore less money so that the economy can go from boom to bust When adequate liquidity cannot be supplied with the right maturity at the right time against possible losses, due to credit defaults and other investments, the bankruptcy process starts and bankruptcies that emerge in the system drive the financial sector into confidence crisis and causes the credit channel to fail and thus, the economy will be completely affected.

According to the report prepared by Deloitte "Retail Sector Assessment 2013", Turkey's retail sector is estimated to exceed the size of USD 300 billion. Organised retailers reached 55% share of the food retail sector, where it comprises a 44% share of the retail sector as a whole. The majority of companies that operate in the retail sector are SMEs. Due to the need for high quality quantitative data for balance sheet analysis, our sample selected among the companies whose stocks are quoted on Istanbul Stock Exchange (ISE), whose audited data is obtainable from Public Disclosure Platform (KAP) The sample is as follows, CARREFOURSA, KİLER GIDA, MİGROS TİCARET.

When the number of stores is considered, Migros ranks first in the multiple retail format where CarrefourSA ranks second and Tesco Kipa ranks third and BIM ranks first among the discount markets.

In addition to classical ratio analysis, we aim at implementing liquidity and capital adequacy legislations, which financial sector instutions are subject to, to retail sector

balance sheets. In this scope, interpreting financial fragility of retail sector will be interpreted according to international norms as recommended by Basel III.

Tablo 1: Selected B/S and P/L items of sample companies

COMPANY	NET SALES 1000TL 2012	NET SALES 1000TL 2013	Δ 2013/2012 %	GROSS PROFIT/ SALES %	OP. PROFIT / NET SALES %	NET P/L NET SALES %	2012 NET PROFIT 1000TL	2013 NET PROFIT/ 1000 TL	2013 INVENTORIES 1000 TL
MİGROS	4,682,402	7,126,925	52,2	26,58	3,31	-6,49	88,136	-463,133	851,243
CARREFOUR	2,551,253	2,600,533	1,9	23,80	-4,37	-3,87	-10,356	-100,755	262,835
KİLER	943,573	1,014,228	7,4	25,93	1,37	-2,5	6,513	-25,494	345,843

4.1.1 Carrefour

4.1.1.1 Short Description[7]

Carrefour Group is a global retail chain in 32 countries,with approximately 10 thousand stores and more than 470 employees. Its first store opening in France dates back to15 June 1963. In Turkey its first store opened in 1993 has introduced the hypermarket format in to Turkish consumers With Sabancı Holding; its second CarrefourSA was opened in Adana in 1997.

More than 95 million active customers pass in a year. As of today, with 28 hypermarkets and 215 supermarkets, approximately with 7500 staff and investments above $ 2 billion so far, CarrefourSA is contributing to the national economy and employment.

4.1.2 Ratio Analysis

The company's current ratio, is 0.8 implying that the firm meets its 80% of current year obligations with its current assets, this position has deteriorated to 0.66 causing a net working capital deficit in 2013, which is an important problem.

[7] Obtained from company website

While liquidity ratio in 2012, is realized as 0.44, it decreased to 0.29 in 2013; implying a possible liquidity problem in short time, unless required provisions are taken

When the cash cycle is calculated over debt repayment, receivables and inventory holding period, we examine a positive difference against the firm both in 2012 and in 2013.

Total net sales exhibit an increase both in nominal terms from 2012 to 2013. Gross profit margin did not change. Profit margin in 2013 with 4.84 % continues to decrease. The net period profitability realized in 2012 is 1.36%, the firm ends up with a loss after financial expenses in 2013.

Equity turnover slightly increased, due to decreased equity caused from 2012 loss. Return on equity was negative both in 2012 and 2013.

4.1.3 Migros

4.1.4 Short Description[8]

The pioneer of organized retailing in Turkey, Migros today offers spacious stores in a wide range of formats and locations whose vast selection of stationer, glass and kitchenware, appliance, book, recorded media, clothing and other necessities give it the ability to satisfy nearly all of the shopping needs of its customers.

Migros is known for its innovation and progress in retailing. Constantly expanding the geographical reach of its service network with the addition of new stores, Migros was Turkey's top retailer and ranked 199th in the world's retailing league table in 2011.

4.1.4.1 Ratio Analysis

The company's current ratio, is 1.02 implying that the firm meets its 102% of current year obligations with its current assets Although the firm has a little net working capital surplus, this position has deteriorated to 0.84 causing a net working capital deficit in 2013.

While liquidity ratio in 2012, is realized as 0.60, it decreased to 0.48 in 2013; implying a possible liquidity problem in short time, unless required provisions are taken

[8] Obtained from company website

When the cash cycle is calculated over debt repayment, receivables and inventory holding period, we examine a negative difference against the firm both in 2012 and in 2013. Due to, current rate and liquidity ratio deterioration, we also examine a deterioration in cash cycle. Total net sales exhibit an increase both in nominal and real terms from 2012 to 2013. Gross profit margin did not change. Profit margin in 2013 with 4.84 % continues to decrease. The net period profitability realized in 2012 is 1.36%, the firm ends up with a loss after financial expenses in 2013.

Equity turnover increased, thanks to the increased revenues. (5.28% in 2012, 2013, 6.81%) Return on equity was 7% in 2012, and is now back to negative in 2013.

4.1.5 Kiler

4.1.6 Short Description[9]

The Company traces its origins to the opening of a supermarket by Hikmet Kiler, one of the founders of the Company, in 1984. Between 1984 and 1994, the members of the Kiler family were involved in the ownership and operation of several retail stores in different formats and in 1994 Kiler Alışveriş Hizmetleri Gıda Sanayi ve Ticaret A.Ş.

Company continued its operations and grew in Marmara region and reached to 33 stores by the end of 2004. In 2005 The Company commenced its regional expansion through the acquisition of 47.0 per cent. of Canerler Gıda, a retail chain consisting of 48 stores in Ankara. Kiler's regional expansion continued into the Trace region, through the acquisition of the shares of Güler Alışveriş Hizmetleri Sanayi ve Ticaret A.Ş. with 14 stores in 2006 and by the end of the year Kiler reached a total number of 105 stores. Combined with organic growth and the acquisitions in Black-Sea and the Mediterranean regions, the Company had 138 stores across four regions of Turkey by the end of 2007. Kiler continued its growth story in 2008 and strengthened its position in the Black-Sea and Central Anatolia regions and moved into the Aegean region through the acquisition of the Yimpaş supermarket chain from Yimpaş Holding A.Ş., adding a further 12 stores. Organic growth continued in 2009 and by the end of the year, the Company's number of stores had reached 162. The number of stores reached to 172 in 26 cities in Turkey through further organic growth by the end of 2010.

[9] Obtained from company website

Four store concepts are used as an internal classification: K1 stores, which have a sales area of up to 600 square metres; K2 stores, which have a sales area of between 600 and 1,300 square metres; K3 stores, which have a sales area of between 1,300 and 2,500 square metres; and K4 stores, which have a sales area of over 2,500 square metres. In line with its preferred focus on the supermarket segment, the Company's stores have an average sales area of approximately 900 square metres. The number of products offered varies depending on the size of the store.

4.1.6.1 Ratio Analysis

The company's current ratio, is 1.01 implying that the firm meets its 101% of current year obligations with its current assets Although the firm has a little net working capital surplus, this position has deteriorated to 0.89 causing a net working capital deficit in 2013.

While liquidity ratio in 2012,is realized as 0.36, it decreased to 0.20 in 2013; implying a possible liquidity problem in short time, unless required provisions are taken

When the cash cycle is calculated over debt repayment, receivables and inventory holding period, we examine a negative difference against the firm both in 2012 and in 2013. Due to, current rate and liquidity ratio deterioration, we also examine a deterioration in cash cycle. Total net sales exhibit an increase both in nominal and real terms fron 2012 to 2013. On the other hand gross profit margin showed a slight decrease. Profit margin in 2013 with 3.06 % continues to decrease. The net period profit realized in 2013 is 0.06%, the firm ends up with a loss after financial expenses.

Equity turnover increased, thanks to the increased revenues. (4.42% in 2012, 2013, 4, 92%) Return on equity was 3% in 2012, and is now back to negative in 2013.

4.2 Procedure[10]

Ratio analysis is that the items in balance sheet or income statement divided by another item. They generally evaluate some situation like, liquidity, profitibilty etc…

[10] This part depends mostly to the previous version of this study by Turkmen, N.C. and Türkmen B. (2014), which was prepared as a proceeding to ICEF (September 8-9 2014),and a chapter of a book which is expected to be published in 2015.

The ratios that used in the thesis are :

- CURRENT RATIO (CTR): current assets diveded by short tem liabilities. The ratio measure that if the firm stops at that time with the current assets with full valuehow many times the short term liabilities can be pay.
- LIQUIDITY RATIO (LR): current assetswithout inventories diveded by short tem liabilities. The ratio measure that if the firm stops at that time with the current assets less inventories with full valuehow many times the short term liabilities can be pay
- ACCOUNT RECEIVABLES TURNOVER (ART) net credit sals diveded by avarege trade receivables. This ratio which measure hwe many times a business collects its average accounts receivable
- DAYS' COLLECTIONS IN ACCOUNT RECEIVABLES (DCAR) 365 divided by ACCOUNT RECEIVABLES TURNOVER, measuring the how many daysis the collection period.
- INVENTORY TURNOVER (IT) Cost of good sold divided by avarege inventory, the avarege inventory is sold how many times
- DAYS' SALES IN INVENTORIES (DSI) 365 divided by INVENTORY TURNOVER, evaluate that the inventory in how many days
- PAYABLES TURNOVER (PT) Cost of good sold divided by avarage account payables, evaluating how many times paying its average accounts payables
- DAYS' PAYMENT IN ACCOUNTS PAYABLES (DPAP) 365 divided by PAYABLES TURNOVER, how many daysis the payment period.
- EARNINGS BEFORE INTEREST AND TAXES MARGIN (EBITM)
- EARNINGS BEFORE INTEREST AND TAXES divided by net sales(revenue) measures that its profit margin before interest and taxes.
- RETURN OF EQUITY (ROE) Profit diveded by equity, measuring the profit according to the capital

Since Basel III criteria are defined for financial sector, relevant items of retail sector financial statements should be harmonized with financial sector financial statements before any analysis.

First of all, the balance sheet of retail sector firm should be adapted to Basel criteria. Some

items are perfectly accord to it; but some items are not even related, at first glance.

In this scope, the abovementionaed criteria were implemented to every company's balance sheets after corrections which are done by considering every company's footnotes individually and then, arithmetic mean was taken and inferences tried to be made in the context of liquidity and capital adequacy for the retail sector.

Related general trial items are grouped in one item in balance sheet. The relation is considered by general accepted principles of accounting. On the other hand, in finance, it is required re-grouped the items. However, it is not easy. Moreover, it should be adapted also into form of Basel. Therefore, for the thesis, corrections are done via footnotes in the annual report of firms, which is metioned below.

The methods used in this study are summarized below.

Basel methods are considered to financial sector, which are the big companies comperatively real sector. Financial firms, like banks, have much qualified employee, and have also budget to invest to computer systems and softwares. They also have deep knowledge about operations, risks, clients etc… More importantly, local authority, BRSA, compels the use of these methods. Consequently, for the perfect measurement, the can use all the Basel methods. However, we cannot use these software in thesis and also retail firms will not do that, according to budget. Basel III brought along new methods for credit risk evaluation but for convenience, Standardized Approach to credit risk will be taken into account in this study and Basic Indicator Approach at measurement of operational risk.

Four methods of operational risk measurement, which can be applied according to the preference and development level of relevant bank or local authority, were determined for facilitating the evaluation and digitization of operational risks. These are Basic Indicator Approach, Standardized Approach, Alternative Standardized Approach and Advance Measurement Approach.

Since our target is implementing the abovementioned ratios to real sector companies, simplicity of applicability is important in terms of time and capital saving, so basic indicator approach will be used with little modification instead of other relatively complicated measurement techniques.

Basel methods, are considered to financial sector, which are the big companies comperatively real sector. Financial firms, like banks, have much qualified employee, and have also budget to invest to computer systems and softwares. They also have deep knowledge about operations, risks, clients etc… More importantly, local authority, BRSA, compels the use of this methods. Consequently, for the perfect measurement, the can use all the Basel methods. However, we can not use these software in thesis and also retail firms will not do that, according to budget. We prefer to simple method of Basel, the Standardized Approachv at credit risk evaluation and Basic Indicator Approach at measurement of operational risk.

Liquidity Coverage Ratio calculation is evaluated in the scope of the Regulation on Measurement and Assessment of Liquidity Adequacy of Banks.

Regulation on Measurement and Assessment of Liquidity Adequacy of Banks throw lights to the matter of Liquidity Coverage Ratio calculation.

According to the regulation, liquidity level is found by calculating TRL and FX total of balance sheet items on un-consolidated basis and total FX-liquidity coverage ratio is calculated over FX balance sheet items on un-consolidated basis. At this study we investigated only the first ratio.

Even in audited annual reports, we can not find all items of the regulation. Liquidity level have to be developed by TRL and FX, but we use only TRL coverage ratio.

Liquidity Coverage Ratio is calculated by dividing total amount of high-quality liquid assets with net cash outflows.

High quality assets is calculated by summing current assets that are not calculated as cash inflow in the calculation of net cash outflow (maturity receivables beyond relevant maturity -including checks and bonds-, advances, taxes and any type of state receivables, semi-finished goods and raw materials -except the ones that do not have the direct selling opportunity in organized or unorganized markets-)

Other interpretations and corrections on balance sheet items are given below.

- Commodities is taken into account of liquidity ratio. They do not need extra investment to be ready to sell. However, they should be discounted.
- Inventories should be separated from divided into parts according to whether direct sale opportunity exists in organized or unorganized markets and sales averages of inventories on item basis should be determined from past data.
- Commodities is taken into account of liquidty ratio. They do not need extra investment to be ready to sell. However, they should be discounted.
- Trade receivables and checks are threated as the loans item in the bank's balance sheet and interpreted accordingly. In this scope, when determining the liquidity multiplier in relation to checks received, the decision should be made based on past payment performance and whether there is any guarantee taken.
- For determining liquidity multiplier, received checks should be evaluated by indemnities. Also past performans of check issuer is important. Bank guarantee is the most powerful indemnity so,multiplier for checks with bank guarantees are accepted 1.
- The multiplier for checks, where the trade linked to them is arised from a dealership relation with an underlying bank letter of guarantee is accepted to be 1.
- The multiplier for unguaranteed checks, for those which payment history is determined to be good (i.e. those with very good corporate Credit Reference Agency (KKB) or individual KKB score) is 0.5 and for others the multiplier should be accepted as zero.
- Unguaranteed checks should be considered by past performance, which can be supplied form for corporations in Credit Reference Agency, or personal score also can be taking into account. Under this evaluation, if issuers performance are good, than the multiplier is 0,5
- Since maturities of trade receivables is not known, the multiplier is determined according to average maturity calculation (1- (average maturity/365) and receivable

quality and guarantee criteria should also be taken into account as mentioned above.

- The maturities of trade receivables can not be supplied from annual reports, the multiplier is determined according to average maturity calculation (1- (average maturity/365) and receivable quality and guarantee criteria should also be taken into account as mentioned above.

- Inventories are threated as securities in the bank's balance sheet. In this scope, inventory items that can be identified as commodities are taken into account as cash inflow after depreciation allowances are set aside. The multiplier that can be used for liquidity calculation is accepted as (1-inventory keeping unit[11] /365)/2 or 1-(1/(inventory turnover*2)). On the other hand, parts of the inventory items whose direct sale opportunity does not exist in organized or unorganized markets (such as; semi-finished, raw materials, order advance payments etc.) are omitted from cash inflow.

- Short-term loans, trade payables and other short-term liabilities are simulated to deposit item in the bank's balance sheet and in this scope, interests of bank loans should be calculated as cash outflow. The sum of other short-term liabilities excluding advances and deposits is taken into account as cash outflow.

- 60% of trade payables to relevant parties and 75% of the trade payables to non-relevant parties are taken into account as cash outflow excluding payables to financial companies or general expenses except goods purchases. Finally, a portion of pre-paid expenses corresponding to the period under analysis are taken into account.

Capital Adequacy Ratio for retail sector companies is calculated as defined in the Cook Ratio. In this scope, the following assumptions are made for calculating the total credit risk, market risk and operational risk in the denominator.

- *When we simulate the structure to bank balance sheet, trade payables, other payables, receivables monitored in fixed assets, advances made and pre-*

[11] It will be calculated by only taking commodities into account.

paid expenses items that are similar to "loan" item, are taken into account in the calculation of value at credit risk.

- *Basic indicator approach was adapted in the calculation of operational risk. According basic indicator approach, capital obligation is equal to 15% of the average of last three years gross income. However, since transaction types in retail sector is more restricted than banking sector, we believe that taking basic indicator rate into account as 5% will be more proper.*

- *Total amount subject to market risk may be expressed as the sum of exchange rate risk, risk of value loss of fixed assets, inventory depreciation risk (in this scope, it can be evaluated as general market risk) and interest rate risk, stock market position risk and subsidiary risk.*

- *Exchange rate risk will be taken into account as balance resulting from offseting of the same currency assets and liabilities. The examination is made in the framework of exchange rate risk table in the footnotes of balance sheet and if the statement shows 10% increase or decrease in exchange rate, 10 times of this value is taken into account or if it shows 5% increase or decrease, 20 times of this value is taken into account.*

- *Interest rate risk is the difference between liquid assets subject to interest and bank loans. In addition to this, if net working capital deficit exits, full sum of net working capital deficit should be included in the interest rate risk with the foresight that new short-term finance requirement will arise.*

- *Total of fixed assets, except machine, equipment and fixtures, are taken into account for tangible asset value loss risk.*

- *Inventory depreciation risk is a risk resulting from the decrease in market value of inventories. It is ignored in the scope of our sample, since these companies obtain goods from suppliers with the opportunity of returning them in case of deterioration, damage, etc.*

- *Stock market position risk is a risk that a company may be exposed to due to capital value impairment of the stocks that the company holds and the highest risk amount that the company may be exposed to will be as much as the total of securities portfolio.*
- *Subsidiary risk may be associated with the value decrease in affiliates and subsidiaries that the company has. It is equal to the total of Affiliate-Subsidiary items and goodwill balance linked to such organizations.*(Türkmen and Türkmen, 2014)

4.3 Results And Evaluations

If we first consider the traditional ratio analysis results, ratio by ratio,

by looking at the current rates, each of the three companies, a reduction can be seen. From this aspect, we can state that, in terms of their short-term debt payments, they came to a worse the situation.

Liquidity Ratio: looking at the current liquidity ratios of the companies, we see yhay it exhibit a negative trend over the years.

Account Receivables Turnover: Companies exhibit different mechanisms, we see that while Kiler and Migros examine improvements in account recieveables turnover, Carrefour suffers from deterioration. This situation can also be examined in average duration to collect account receiveables.

Inventory Turnover: Turnover rates fall in all three firms, implying a longer inventory holding time.

Payables Turnover: Each of the three years of firm turnover rate also decreases. This leaves the countries with larger comfortability areas in debt pay back.

Equity Turnover of all three firms are increasing due to decrease in equities. In addition to that return on equity is decreasing over years which is an incentive for investors to consider management analysis.

Growth Rate of Equity Capital growths of firms are decreasing over the years, in addition

to that growth rate of long term sources is also decreasing.

Balance sheets of selected retail sector companies were subject to analysis in the scope of Basel III. LCR and CAR were calculated per company, then sample average is calculated over the results. In conformity with the sector's structure and in line with our expectation, LCR rates were found to vary between 1,15% and 2,13%. The sample average is 1,57 %. Taking into account that; LCR is a liquidity obligation designed for increasing the resistance of banks against adverse shocks, it can be stated that our sample hold high quality liquid assets at sufficient amount to meet immediate and severe cash outflows for at least 30 days.

If we examine the results firm by firm;

CarrefourSA; According to the application output done according to the aforementioned procedures, the firm's liquid asset stock makes up to TL 442,712,956. Although the firm's individual LCR is 1.15, a little below the sector average of 1.57, this situation is acceptable.Althıug the firm experiences net working capital deficit according to traditional financial ratio analysis method, the case is reversed under Basel III liquidity criteria.

Migros; According to the application results done according to the aforementioned procedures, the firm's liquid asset stock makes up toTL 1,935,337. Although the firm's individual LCR is 1.52, a little below the sector average of 1.57, this situation is acceptable.Although the firm experiences net working capital deficit according to traditional financial ratio analysis method, the case is reversed under Basel III liquidity criteria.

Kiler; According to the application results done according to the aforementioned procedures, the firm's liquid asset stock makes up toTL 3,844,807,65.8. Although the firm's individual LCR is 2.13, above the sector average of 1.57, this situation is fine.Althıug the firm experiences net working capital deficit according to traditional financial ratio analysis method, the case is reversed under Basel III liquidity criteria.

When CAR results are considered, we see that the sector average value is 10.25%[12]. On the other hand, CAR takes values between 23.03% and 3.67% per single firm. The big difference results from operational risks which is a sub-item of CAR.

[12] Depending on calculations made by Türkmen and Türkmen (2014)

If we examine the results firm by firm;

CarrefourSA: The transformed amount of equities isTL 590,848,117, amount of credit risk is 71,701,797TL, amount of operational risk is 1,552,674,976.25 TL The calculated FX risk is 38,044,150 TL, which implies a risky stance. Interest rate risk is 17,374,369 TL, Subsidiary risk is 238,516,963TL, hence total market risk sums up to 940,898,861TL.

From Cook ratio calculation, the firm's individual CAR is is far above the sector average of 10.25%. In this case, the firm's riskiness stance is sufficient under credit worthiness.

Migros; The transformed amount of equities is 444,368,000 TL amount of credit risk is 111,283,000 TL, amount of operational risk is 4,033,841,458.33 TL The calculated FX risk is 2,573,800.00 TL that implies a risky stance. Interest rate risk is 2,330,692,000 TL, Subsidiary risk is 2,253,122,000 TL hence total market risk sums up to 7,950,452,000 TL.

From Cook ratio calculation, the firm's individual CAR is 3.67%, which is far below the sector average of 10.25% In this case, although Migros exhibit a less risky stance under traditional ratio analysis, the structure is riskier under new calculations of CAR and market risk.

Kiler; The transformed amount of equities is 193,125,000 TL amount of credit risk is 677,360,000 TL, amount of operational risk is 70,563,000 TL The calculated FX risk is 100,310,000 TL. Subsidiary risk is 2,253,122,000 TL hence total market risk sums up to 322,374,000 TL.

From Cook ratio calculation, the firm's individual CAR is 20.10%, which is far abovethe sector average of 10.25% In this case, the firm's riskiness stance is sufficient under credit worthiness. Although MKiler exhibit a less risky stance under new computations, the structure is riskier under traditional ratio analysis..

Table 4.1 Selected ratio analysis

	CARREFOURSA		KİLER		MİGROS	
	2012	**2013**	**2012**	**2013**	**2012**	**2013**
CURRENT RATIO (CTR)	0.80	0.66	1.01	0.89	1.02	0.84
LIQUIDITY RATIO (LR)	0.44	0.29	0.36	0.20	0.60	0.48
ACCOUNT RECEIVABLES TURNOVER (ART)	151.16	127.59	52.25	56.24	113.21	148.88
DAYS' COLLECTIONS IN ACCOUNT RECEIVABLES (DCAR)	2	3	7	6	3	2
INVENTORY TURNOVER (IT)	10.37	8.85	3.17	2.26	12.78	6.39
DAYS' SALES IN INVENTORIES (DSI)	35	41	115	161	29	57
PAYABLES TURNOVER (PT)	4.93	4.50	3.90	3.43	3.25	3.23
DAYS' PAYMENT IN ACCOUNTS PAYABLES (DPAP)	74	81	94	106	112	113
EARNINGS BEFORE INTEREST AND TAXES MARGIN (EBITM)	0.01	-4.43	5.97	3.06	5.06	4.84
EQUITY TURNOVER (ET)	2.79	3.03	4.42	4.92	5.28	6.81
RETURN OF EQUITY (ROE)	-0.01	-0.12	0.03	-0.12	0.07	-0.44
GROWTH RATE OF LONG TERM SOURCES	-0.43	-10.82	-7.86	-21.75	-3.91	-8.35
GROWTH RATE OF EQUITY (GREY)	-1.38	-11.03	5.21	-11.75	5.59	-34.22

5. CONCLUSIONS

New Basel III package combines prudential developments on micro and macro levels. The purpose is creating proper capital plans to deal with systematic risk and evaluate the increase or decrease course that economic developments will bring. On the other hand, Basel applications and parallel BRSA applications are complicated and highly deep for implementation of real sector companies. It is difficult to be implemented by real sector companies due to lacking appropriate labor force and expensive technical infrastructure and infrastructure investment that should be made is expensive, moreover supervising such applications is hard.

If these measurements are done by the companies, more clear and measurable information can be obtained about the aforementioned applications. On the other hand, it is not possible to make accurate measurement by the data that the company discloses. In this context, for the companies disclosing data to KAP (Public Disclosure Platform), it must be obligated that trade and non-cash loans which are expected to be converted into cash in next year are stated with their maturity details in the footnotes. Moreover, affiliates and subsidiaries that are bigger than 5% of the parent company total assets must definitely take place in the consolidated report. All asset and liability items valued with foreign currency must be stated with the relevant type of foreign currency unit in the footnotes. In the present situation, the financial assets with the type of foreign currencies are stated but the stock, the part of the receivables that will be collected in foreign currency, the part of the payables that are tracked in foreign currency are not shown, and additionally the receivables and payables indexed to foreign exchange are not stated.

During the exchange risk measurements, some auditing firms prepare net foreign exchange positions by clearin the positions of different types of foreign currencies after converting to TL, but with that method cross currency fluctuation risk must be taken into consideration.

According to the basic indicator approach of technique of operational risk measurement, the capital requirement equals to 15% of the last three year’s average gross income. Beside the fact that the rate applied in this study is determined hypothetically as 5%, it is possible to be changed according to the sector and the branch of business of the company. In case that an improved database related to the past operational risks is found, this rate may be changed in the light of this data.

The companies that take place in this study are leader companies of the sector and competent in terms of corporate management and data reporting. However, it is not possible to find this transparency across Turkey. It is possible to set up rules much more simply for the companies which prepare balance sheets according to VUK (Tax Procedure Law), for example; if the rate of net working capital deficit to total assets is more than 25%, an obligation to close the deficit within 6 months and/or to transfer equity in cash or in kind as much as half of the deficit.

As for the financial data securities of SMEs, it will ensure the accuracy of the bank loans item disclose the CBRT credit limit and risk information to the financial advisors who approve the financial statements of the companies.

REFERENCES

AMPD & PwC. (2007), "Türk Perakende Sektörünün Değişimi ve Ekonomi Üzerindeki Etkileri", http://www.pwc.com/tr/tur/ins-sol/publ/pwcampd_ yoneticiozeti.pdf, [01.12.2014].

Aslan, Murat, Elif Aslan, "The Regulation Of Large Retail Firms In Turkey: A Game Theory Based Analytical Model" *ZKÜ Sosyal Bilimler Dergisi*, 4. 8 (2008): 89–106

Atiker, M. 2005. *Basel I ve Basel II*. Konya Ticaret Odası Bilgi Raporu, Sayı: 41/08, Konya.

Aykut, Cenan."Basel II Standartları" Türkiye Cumhuriyeti Dışişleri Bakanlığı Yayınları: Uluslararası Ekonomik Sorunlar Dergisi 30 (2008): http://www.mfa.gov.tr/data/Kutuphane/yayinlar/EkonomikSorunlarDergisi/sayi30/basel.pdf

Balthazar, L., "From Basel 1 to Basel 3The Integration of State-of-the-Art Risk Modeling in Banking Regulation, 2006

BDDK. Aralık 2010. *Bankacılıkta Yapısal Gelişmeler* Sayı:5. Ankara

BDDK. Mart 2011. *Bankacılık Sektörü Basel II İlerleme Raporu*. Ankara

Bhattacharya, Mithu., Chao-Hsien Chu, and Mullen Tracy (2007), RFID Implementation in Retail Industry: Current Status, Issues, and Challenges. (D. S. Conference, http://tmullen.ist.psu.edu/pubs/dsi_draft_2007.pdf, [01.12.2014].

Blundell, A., Paul Atkinson. "Thinking Beyond Basel Iii: Necessary Solutions For Capital And Liquidity " *OECD Journal: Financial Market Trends*. 2010.1 (2013): Pre-publication version.

Candan, Hasan. "Kriz Sürecinde Basel II'de Öngörülen Değişiklikler." *Bankacılar Dergisi* 65 (2008): 80-90.

Cangürel, O., Güngör, S., Sevinç, V. U., Kayci, İ., and Atalay, S. (2010). *Sorularla Basel III*. Aralık 2010. BDDK Risk Yönetimi Dairesi.

Çelik, Faik, İhsan Kızıl. "Banka Sermaye Yeterliliğinde Basel II Yaklaşımı ve Türk Bankacılığı." *Doğuş Üniversitesi Dergisi* 9.1 (2008): 19-34

Cengiz, Efsane. 2013. "Basel I-II-III Sermaye Uzlaşısı" Master Thesis., Atılım Üniversitesi.

Deloitte. 2014. *Perakende Sektörü Değerlendirmesi 2013*. İstanbul

Demir, Banu, Tomasz Michalski, Evren Örs. "Risk-Based Capital Requirements for Banks and International Trade: Evidence from Basel 2 Implementation in Turkey" [http://acpr.banque-france.fr/fileadmin/user_upload/acp/Seminaires_de_recherche/Chaire_ACP/CapitalRequirementsInternationalTrade.pdf]

Ebu Hasbu, Muhammed. " Bankacılığın Islahı için Oluşturulan Basel 3 Kanunları Yeni Bir

Finansal Krizin Çıkmasını Engeller mi?." *Asharqalawsat Gazetesi* (2010).

Gordy, M.B. (2003), "A Risk-Factor Model Foundation For Ratings-Based Bank Capital Rules*", Journal of Financial Intermediation*, vol. 12.

Gürel, Eymen, Esra Burcu Bulgurcu Gürel, and Neslihan Demir . "Basel III Kriterleri" *Bankacılık ve Sigortacılık Araştırmaları Dergisi* 1.3-4 (2012): 16-28.

Horrigan, J.O., "Some Empirical Bases of Financial Ratio Analysis", *The Accounting Review*, 40.3: 558-568 (Jul., 1965), American Accounting Association, URL: http://www.jstor.org/stable/243060 .Accessed: 26/12/2014 06:46

https://www.ama.org/resources/Pages/Dictionary.aspx?dLetter=R

Johnson, C.G., "Ratio Analysis and the Prediction of Firm Failure" ,*The Journal of Finance*, 25.5: 1166-1168 (Dec., 1970), Wiley for the American Finance Association, URL: http://www.jstor.org/stable/2325590 .Accessed: 26/12/2014 06:44

Kaderli, Yusuf, Süleyman Doğu, Özlem Arabacı . " Basel III ve Yeni Türk Ticaret Kanunu'nun KOBİ'lerin Finansman Sorunu Üzerindeki Muhtemel Etkileri" *EGE Akademik Bakış* 13.4 (2013): 505-513.

Kaynak, Erdener (1982), *Marketing in the Third World*, New York: Praeger.

Kaynak, Erdener (1986), *Marketing and Economic Development*, New York: Praeger.

Koh, E. Chang, Hae Jung Kim and Eun Young Kim (2006), "The Impact of RFID in Retail Industry: Issues and Critical Success Factors",

Külahi, Ezgi Aslan, Göksel Tiryaki and Ahmet Yılmaz. "Türkiye'de Basel I, II, III Kurallarına Uyum Süreci." *Öneri Dergisi* 10.40 (2013): 185-200.

Mermod, Aslı Yüksel, and Mustafa Ceran. "Basel III Doğrultusunda Bankacılık Riskleri ve Sermaye Yeterliliği; Türk Bankacılık Sektörü Üzerine karşılaştırmalı Bir Analiz." *Finansal Araştırmalar ve Çalışmalar Dergisi* 2.4 (2011): 29-38.

Oral, Nuşin. "Perakende Sektörü Yeni Dönem Ortak Akılla Başlıyor", *Arasta Perakende Sektörü Dergisi*, Sayı 29, Mart-Nisan,2006

Oscar G.Benito, Munoz Gallego and Praveen Kopalle , "Asymmetric Competition in Retail Store Formats: Evaluating inter-and intra-format Spatial Effects", *Journal of Retailing*, Vol 81,2005,s.63

Reinhart, Carmen M., and Kenneth S.Rogoff. 2010. *Bu Defa Farklı - Finansal Çılgınlığın 800 Yıllık Tarihi*. İstanbul: NTV Yayınları.

Şahin, İlhan. "Küresel Finansal Kriz Esnasında Geliştirilen Bankacılık Düzenlemelerinden Basel III Kriterlerinin Kapsamı Ve Uygulama Süreci" *Muhasebe ve Finansman Dergisi* (2013): 149-166.

Şahin, İlhan. "Uluslararası Bankacılık Düzenlemelerinden Basel III Kriterlerinin Finansal İstikrara Olası Etkilerinin Değerlendirilmesi" *Finans Politik ve Ekonomik Yorumlar Dergisi* 49.567 (2012): 27.

Shah, Ms Mamta . " Basel-3 And Its Impact On Indian Banking Sector " *Journal of Indian Research* 1.1 (2013): 53-58.

Sungur, Gökhan, and Abdurrahman Okur. "Basel Kriterleri ve Kobiler tarafından Anlaşılmasına Yönelik Uygulama Çalışması" *Bankacılık ve Finansal Araştırmalar Dergisi 1* (2014): 11-23.

Taskinsoy, John . "Rigorous Capital Requirements Under Basel III Possible Impact on Turkey's Financial Sector" *Journal of WEI Business and Economics* 2.1 (2012): 1-30

Tokatlı, Nebahat and Yonca Boyacı (1998), "The Changing Retail Industry and Retail Landscapes The Case Of Post-1980 Turkey", *Cities,* Vol. 15, No. 5, pp. 345-359.

Tokatlı, Nebahat and Yonca Boyacı (1999), "The Changing Morphology of Commercial Activity in Istanbul", *Cities* , Vol. 16, No. 3, pp. 181-193.

Türkmen,N.C. , Türkmen,B., (2014), "Adapting the Basel III Regulations to Real Sector Firms; An Attempt on Retail Sector", *Proceedings of ICEF,* September 8-9 istanbul,Turkey

Vargas, Melody (2007), "*Retail Glossary of Terminolog"y,* http:/ /retailindustry. about.com/od/abouttheretailindustry/a/glossary.htm, [01.12.2014]..

Appendix 1 A Chronology of Banking Regulation 1863–1999[13]

1863 In the US, before 1863, banks were regulated by the individual states. At that time, the government needed funds because the Civil War was weighing heavily on the economy. A new law, the National Currency Act, was voted to create a new class of banks: the "charter national banks." They could issue their own currency if it was backed by holdings in US treasury bonds. These banks were subject to one of the first capital requirements, which were based on the population in their service area. Two years later, the Act was modified in the National Banking Act. The Office of the Comptroller of the Currency (OCC) was created. It was responsible for supervision of national banks, and this was the beginning of a dual system with some banks still chartered and controlled by the states, and some controlled by the OCC. This duality was the beginning of later developments that led to today's highly fragmented US regulatory landscape.

1913 Creation of the US Federal Reserve (FED) as the lender of last resort (LOLR). This allowed banks that had liquidity problems to discount assets rather than being forced to sell them at low prices and suffer from consequent loss.

1929 Crash: the Dow Jones went from 386 in September 1929 to 40 in July 1932, the beginning of the Great Depression that lasted for ten years. Wages went down and unemployment reached record rates. As many banks were involved in stock markets, they suffered heavy losses. The population began to fear that they would not be able to reimburse their deposits, and bank "runs" caused thousands of bankruptcies. A "run" occurswhenall depositors want to retrieve their money from the bank at the same time: the banks, most of whose assets are liquid and mediumto long term, are not able to get the liquidity they need. Even solvent banks can then default. When such panic moves strike one single financial institution, central banks can afford the necessary funds, but in 1929, the whole banking sector was under pressure.

1933 In response to the crisis, the Senate took several measures. Senator Steagal proposed the creation of a Federal Deposit Insurance Corporation (FDIC), which would provide government guarantee to almost all banks' creditors, with the goal of preventing new bank

[13] Obtained directly from Balthazar,2006, 9-15

runs. Senator Glass proposed to build a “Chinese wall” between the banking and securities industries, to avoid deposit-taking institutions being hurt by any new stock market crash. Banks had to choose between *commercial* banking and *investment* banking activities: Chase National Bank and City Bank dissolved their securities business, Lehman Brothers stopped collecting deposits, JP Morgan became a commercial bank but some managers left to create the investment bank Morgan Stanley.

These famous measures are known as the Glass–Steagall Act and the separation of banking and securities business was peculiar to the US. Similar measures were adopted in Japan after the Second World War, but Europe kept a long tradition of universal banks.

1930s In the 1930s and 1940s, several different solvency ratios were tried by US federal and states’ regulators. Capital: deposits or capital:assets ratios were discussed, but none was finally retained at the country level because all failed to be recognized as effective solvency measures (FDIC, 2003a).

1944 After the war, those responsible for post-war reconstruction in Europe considered that floating exchange rates were a source of financial instability which could encourage countries to proceed towards devaluations, which then encouraged protectionism and were a brake on world growth. It was decided that there should be one reference currency in the world, which led to the creation of the *BrettonWoods* system.

The price of a US dollar (USD) was fixed against gold (35 USD per ounce) and all other currencies were to be assigned an exchange rate that would fluctuate in a narrow 1 percent band around it. The International Monetary Fund (IMF) was created to regulate the system.

1954 In the Statement of Principles of the American Bankers Association (ABA) of that year, the use of regulatory ratios for prudential regulation was explicitly rejected (FDIC, 2003a). This illustrates the fact that until the 1980s, the regulatory framework was mainly based on a case by case review of banks. Regulatory ratios, which were to later become the heart of the Basel 1 international supervisory framework, were considered inadequate to capture the risk level of each financial institution. A (subjective) individual control was preferred.

1957 Treaty of Rome. This was the first major step towards the construction of a unique European market. It was also the first stone in the construction of an integrated European

banking system.

1973 A pivotal year in the world economy. This was the end of the "golden 1960s." The Bretton Woods system was trapped in a paradox. As the USD was the reference currency, the US was supposed to defend the currency–gold parity, which meant having a strict monetary policy. But at the same time, they had to inject high volumes of USD into the world economy, as that was the currency used in most international payments. The USD reserves that were owned by foreign countries went from 12.6 billion USD in 1950 to 53.4 billion USD in 1970, while the US gold reserves went, over the same period, from 20 billion USD to 10 billion USD. Serious doubts arose about the capacity of the US to ensure the USD–gold parity. With the Vietnam War weighing heavily on the US deficit, President Nixon decided in 1971 to suspend the system, and the USD again floated on the currency markets. The BrettonWoods system was officially wound up in 1973.

In the same year, the European Commission issued a new Directive that was the first true step in the deregulation of the European banking sector. From that moment, it was decided to apply "national treatment" principles, which meant that all banks operating in one country were subject to the same rules (even if their headquarters were located in another European country), which ensured a "level playing field." However, competitions remain limited because regulations on capital flows were still strict.

1974 The Herstatt crisis. The Herstatt bank was a large commercial bank in Germany, with total assets of 2 billion DEM (the thirty-fifth largest bank in the country), with an important business in foreign exchange. Before the collapse of Bretton Woods, such business was a low-risk activity, but this was no longer the case, following the transition to the floating-exchange rate regime. Herstatt speculated against the dollar, but got its timing wrong. To cover its losses, it opened new positions, and a vicious circle was launched. When rumors began to circulate in the market, regulators made a special audit of the bank and discovered that while the theoretical limit on its foreign exchange positions was 25 million DEM, the open positions amounted to 2,000 million DEM, three times the bank's capital. Regulators ordered the bank to close its positions immediately: final losses were four times the bank's capital and it ended up bankrupt. The day the bank was declared bankrupt, a lot of other banks had released payments in DEM that arrived at Herstatt in Frankfurt but never received the corresponding USD in New York, and because of time

zone difference (this has since been called the "Herstatt risk"). The whole débâcle shed light on the growing need for harmonization of international regulations.

1977 A second step in European construction of the banking sector was the new Directive establishing the principle of home-country control. Supervision of banks that were operating in several countries was progressively being transferred from the *host* country to the *home* country of the mother company. (5-8)

1979 In the US, the OCC began to worry about the amounts of loans being made to developing countries by large US commercial banks. It imposed a limit: the exposure on one borrower could not be higher than 10 percent of its capital and reserves.

1980 This was the beginning of the US Savings and Loans (S&L) crises that would last for ten years. S&L institutions developed rapidly after 1929. Their main business was to provide long-term fixed-rate mortgage loans financed through short-term deposits. Mortgages had a low credit risk profile, and interest rate margins were comfortable because a federal law limited the interest rate paid on deposits. But the troubled economic environment of the 1970s changed the situation. In 1980, the effective interest rate obtained on a mortgage portfolio was around 9 percent while the inflation was at 12 percent and government bonds at 11 percent. Money market funds grew from 9 billion USD in 1978 to 188 billion USD in 1981, which meant that S&L faced growing funding problems. To solve this last issue, the regulators removed the maximum interest rate paid on deposits. But to compensate for more costly funding, S&L had to invest in riskier assets: land, development, junk bonds, construction …

1981 Seeing the banking sector deteriorating, US regulators for the first time introduced a capital ratio at the federal level. Federal banking agencies required a certain level of leverage ratio on primary capital (basically equity and loan loss reserves: total assets).

1982 Mexico announced that it was unable to repay its debt of 80 billion USD. By 1983, twenty-seven countries had restructured their debt for a total amount of 239 billion USD. Although the OCC had tried to impose limits on concentration, a single borrower was defined as an entity that had its own funds to pay the credit back. But as public entities' borrowers were numerous in developing countries, consolidated exposures on the public sector for many banks were far beyond the 10 percent limit (some banks had exposure equal to more than twice their capital and reserves). The US regulators decided not to

oblige banks to write off all bad loans directly, which would have led to numerous bankruptcies, but the write-off was made progressively. It took ten years for major banks completely to clear their balance sheets of those bad assets.

1983 The US International Lending and Supervisory Act (ILSA) unified capital requirements for the various bank types at 5.5 percent of total assets and also unified the definition of capital. It highlighted the growing need for international convergence in banking regulation. The same year, the Rumasa crisis hit Spain. The Spanish banking system had been highly regulated in the 1960s. Interest rates were regulated and the market was closed to foreign banks. In 1962, new banking licenses were granted: as the sector was stable and profitable, there were a lot of candidates. But most of the entrepreneurs that got licenses had no banking experience, and they often used the banks as a way to finance their industrial groups, which led to a very ineffective financial sector. Regulation of doubtful assets and provisions was also weak (Basel Committee on Banking Supervision, 2004a), which gave a false picture of the sector's health. When the time for deregulation came, the consequences were again disastrous. Between 1978 and 1983 more than fifty commercial banks (half of the commercial banks at the time) were hit by the crisis. Small banks were the first to go bankrupt, then bigger ones, and in 1983 the Rumasa group was severely affected. Rumasa was a holding that controlled twenty banks and several other financial institutions, and the crisis looked likely to have systemic implications. The crisis was finally resolved by the creation of a vehicle that took over distressed banks, absorbed losses with existing capital (to penalize shareholders), then received new capital from the government when needed. There were also several nationalizations. The roots of the crisis were economic weakness, poor management, and inadequate regulation.

1984 The Continental Illinois failure – the biggest banking failure in American history. With its 40 billion USD of assets, Continental Illinois was the seventh largest US commercial bank. It had been rather a conservative bank, but in the 1970s the management decided to implement an aggressive growth strategy in order to become Number One in the country for commercial lending. It reached its goal in 1981: specific sectors had been targeted, such as energy, where the group had significant expertise. Thanks to the oil crises, the energy sector had enjoyed strong growth, but at the beginning of the 1980s, energy prices went down, and banks involved in the sector began to experience losses. An

important part of Continental's portfolio was made up of loans to developing countries, which did not improve the situation. Continental began to be cited regularly in the press. The bank had few deposits because of regulation that prevented it from having branches outside its state, which limited its geographic expansion. It had to rely on less stable sources of funding and used certificates of deposits (CDs) on the international markets. In the first quarter of 1984, Continental announced that its non-performing loans amounted to 2.3 billion USD. When stock and rating analysts began to downgrade the bank, there was a run because the federal law did not protect international investors' deposits. The bank lost 10 billion USD in CDs in two months. This posed an important systemic threat as 2,299 other banks had deposits at Continental (of which 179 might have followed it into bankruptcy if it had been declared insolvent following a FDIC study). It was decided to rescue the bank: 2 billion USD was injected by the regulators, liquidity problems were managed by the FED, a 5.3 billion USD credit was granted by a group of twenty-four major US banks, and top management was laid off and replaced by people chosen by the government. The total estimated cost of the Continental case was 1.1 billion USD, not a lot considering the bank's size, thanks to the effectiveness of the way the regulators had handled the case.

1985 In Spain, following the crises of 1983, a new regulation was issued: criteria of experience, independence, and integrity were introduced for the granting of new banking licenses; the rules for provisions and doubtful assets were reviewed; and the old regulatory ratio of equity: debt was abandoned in favor of a ratio of equity: assets weighted in six classes by function of their risk level, three years before Basel 1. In Europe, a White Paper from the European Commission was issued on the creation of a Single Market. Concerning the banking sector, there was a call for a unique banking license and a regulation made from the home country and universally recognized.

1986 The riskier investments and funding problems that began to affect the S&L in 1980 steadily eroded the financial health of the sector. In 1986, a modification of the fiscal treatment of mortgages was the final blow. The federal insurer of S&L went bankrupt: 441 S&Ls became insolvent, with total assets of 113 billion USD; 553 others had capital ratios under 2 percent for 453 billion USD assets. Together, they represented 47 percent of the S&L industry. To deal with the crisis, the regulators assured depositors that their deposits

would be guaranteed by the federal state (to avoid bank runs) and they bought the distressed S&Ls to sell them back to other banking groups. Entering the 1990s, only half of the S&Ls of the 1980s were still there. In the UK, the Bank of England was supervising banks while the securities market was largely self-regulating. The Financial Service Act (FSA) changed the situation by creating separated regulatory functions.UK regulation was thus deviating from the continental model to become closer to the US post-Glass–Steagall framework.

1987 Crash on the stock exchange. The Dow Jones index lost 22.6 percent in one day (Black Monday) – its maximum one-day loss in the 1929 crash had been 12.8 percent. (But this was far from being as severe as in 1929, as five months later the Dow Jones had already recovered.) In Paris, the CAC40 lost 9.5 percent and in Tokyo the Nikkei lost 14.9 percent. Japan had fared relatively well in the 1970s crises. In 1988 its GDP growth was 6 percent with inflation at only 0.7 percent. Its social model was very specific (life-long guaranteed jobs in exchange for flexibility for wages and working time). The Japanese management style was cited as an exemplar and Japanese companies, including banks, rapidly developed their international presence. Japanese stock and real estate markets were growing, and there were strong American pressures to oblige Japan to open its markets, or even to guarantee some market share for American companies on the domestic market (in the electronic components industry, for example).

1988 Amajor Directive on the construction of a unique European market for the financial services industry: the Directive on the Liberalization of Capital Flows. Calls for the creation of unified international legislation were finally resolved by a concrete initiative. The G10 countries (in fact eleven countries: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the UK, and the US) and Luxembourg created a committee of representatives fromcentral banks and regulatory authorities at a meeting at the Bank for International Settlements (BIS) in Basel, Switzerland. Their goal was to define the role of the different regulators in the case of international banking groups, to ensure that such groups were not avoiding supervision through the creation of holding companies and to promote a fair and level playing field. In 1988, they issued a reference paper that, a few years later, became the basis of national regulation in more than 100 countries: the 1988 Basel Capital Accord.

1989 Principles defined in 1985 in the European Commission White Paper were incorporated in the second Banking Directive. It ignored the need for national agreement on opening branches in other countries; it reaffirmed the European model of universal banking (no distinction between securities' firms and commercial banks); it divided the regulatory function between home country (solvency issues) and host country (liquidity, advertising, monetary policy). The home-country principle allowed the UK to maintain its existing dual system.

1991 In Japan, the first signs of inflation appeared in 1989. The Bank of Japan (BoJ) had reacted by increasing interest rates five times during 1990. The stock market began to react and had lost 50 percent by the end of 1990, and the real estate market began also to show signs of weaknesses, entering a downward trend that would last for ten years. In 1991 the first banking failures occurred, but only small banks were concerned and people were still optimistic about the economy's prospects. The regulators adopted a "wait-and-see" policy. In Norway, the liberalization of the 1980s had led the banks to pursue an aggressive growth strategy: between 1984 and 1986 the volume of credit granted grew 12 percent per year (inflation-adjusted). In 1986, the drop in oil prices (since oil was one of the country's main exports) hit the economy. The number of bankruptcies increased rapidly and loan losses went from0.47 percent in 1986 to 1.6 percent in 1989. The deposits insurance system was used to inject capital into the first distressed banks, but in 1991 the three largest Norwegian banks announced important loan losses and an increased funding cost. The insurance fund was not enough to help even one of those banks: the government had to intervene to avoid a collapse of the whole financial system. It injected funds in several banks and eventually controlled 85 percent of all banking assets. The total net cost (funds invested minus value of the shares) of the crisis was estimated at 0.8 percent of GDP at the end of 1993. Sweden followed a similar pattern: deregulation, high growth of lending activity (including mortgage loans), and an asset price bubble on the real estate market. In 1989 the first signs of weakness appeared: over the following two years the real estate index of the stock exchange dropped 50 percent. The first companies that suffered were NBFIs that had granted a significant level of mortgages. Due to legal restrictions they were funded mainly through short-term commercial paper, and when the panic gripped the market, they soon ran out of liquidity. The crisis was then propagated to banks because they had important exposures to finance companies without knowing what they had in their

balance sheets (because they were competing, little information was disclosed by finance companies). Loan losses reached 3.5 percent in 1991, then 7.5 percent in the last quarter of 1992 (twice the operating profits of the sector). Real estate prices in Stockholm collapsed by 35 percent in 1991 and by 15 percent in the following year. By the end of 1991, two of the six largest Swedish banks needed state support to avoid a financial crisis. The crisis in Switzerland from 1991 to 1996 was also driven by a crash of the real estate market. The Swiss Federal Banking Commission (SFBC) estimated the losses at 42 billion CHF, 8.5 percent of the credits granted. By the end of the crisis, half of the 200 regional banks had disappeared.

1992 The Basel Banking Accord, which was not mandatory (it is not legally binding) was transposed into the laws of the majority of the participating countries (Japan requested a longer transition period).

1994 The Japanese financial sector situation did not improve as expected. Bankruptcies hit large banks for the first time – two urban cooperative banks with deposits of 210 billion JPY. The state guaranteed deposits to avoid a bank run and a new bank was created to take over and manage the doubtful assets.

1995 The *Jusen* companies in Japan had been founded by banks and other financial companies to provide mortgages. But in the 1980s they began to lend to real estate developers without having the necessary skills to evaluate the risks of the projects. In 1995 the aggregated losses of those companies amounted to 6.4 trillion JPY and the government had to intervene with taxpayers' money. In the same year, Barings, the oldest merchant bank in London, collapsed. The very specific fact about this story, in comparison to the other failures, is that it can be attributed to only one man (and to a lack of rigorous controls). The problem here was not credit risk-related, but market and operational risk-related (matters not covered by the 1988 Basel Accord). Nick Leeson was the head trader in Singapore, controlling both the trading and the documentation of his trades, which he could then easily falsify. He made some operations on the Nikkei index that turned sour. To cover his losses, he increased his positions and disguised them so that they appeared to be client-related and not proprietary operations. In 1995 the positions were discovered, although the real amount of losses was hard to define as Leeson had manipulated the accounts. The Bank of England was called upon to rescue the bank. After some discussion

with the sector, it was decided that although it was large, Barings was not causing systemic risk. It was decided not to use taxpayers' money to cover the losses, which were finally evaluated at 1.4 billion USD, three times the capital of the bank.

1997 In Japan, Sanyo Securities, a medium-sized securities house, filed an application for reorganization under the Insolvency Law. It was not psychological impact on the inter-bank market. The inter-bank market quickly became dry and three weeks later Yamaichi Securities, one of the four largest securities houses in Japan, became insolvent. There were clearly risks of a systemic crisis, so the authorities provided the necessary liquidity and guaranteed the liabilities. Yamaichi was finally declared bankrupt in 1999.

1998 The bankruptcy of the Long-Term Credit Bank (LTCB) was the largest in Japan's history: the bank had assets for 26 trillion JPY and a large derivatives portfolio. An important modification of the legislation, the "Financial Reconstruction Law," followed.

1999 Creation of the European Single Currency. With an irrevocably fixed exchange rate, the money and capital markets moved into the euro. (9-15)

:

Appendix 2. A Chronology Of Market Rısk Regulatıon 1922–1998[14]

1922 Before 1933, US securities markets were largely self-regulated. In 1922, the New York Securities Exchange (NYSE) was already imposing capital requirements on its members. **1933** After the 1929 stock market crash, the Glass–Steagall Act divided the industry into commercial banks (bearing essentially credit risk) and securities firms (also called investment banks, bearing essentially market risk) (see Chapter 1). In 1933, the Securities Act improved the quality of disclosed information on publicly offered securities on the primary market. **1934** The US Securities Exchange Act was passed to ensure that brokers and dealers were really acting in the interest of their clients and created the Securities and Exchange Commission (SEC) as the primary regulator of the US securities market.

1938 The Securities Exchange Act was modified to allow the SEC to impose its own capital requirements on securities firms.

1969 From 1966, there was an important increase in trading volumes on the NYSE, as illustrated by Figure 2.1, showing the Dow Jones Industrial Average (DJIA) from 1960 to 1974. Securities firms were not prepared and had a lot of back-office problems. This led to "paperwork crises." The NYSE had to decrease the number of trading hours and even closed one day per week. In 1969, while securities firms had started to invest heavily to face this problem, the trading volume decreased and the exponential growth was over. As a consequence, revenues went down while costs went up; twelve companies went bankrupt and seventy were forced to merge with others. In response, the US Congress founded the Securities Investor Protection Corporation (SIPC) to insure the accounts of securities firms' clients.

1975 The SEC implemented the Uniform Net Capital Rule (UNCR), whose main target was to ensure that securities firms had enough liquid assets to reimburse their clients in case of any problem.

1980s In the 1970s and 1980s, European and US banks came to carry more and more market risk. In Europe, the collapse of Bretton Woods and the economic crises led to much more volatile exchange and interest rates. The increased competition following

[14] Obtained directly from Balthazar,2006, 24-26

deregulation also pushed the banks to invest in new businesses, and they turned to investment banking. In the US, the Glass–Steagall Act was being undermined as exchange rate activities were allowed for commercial banks (the Act preceded the collapse of the fixed-exchange rate system), and international commercial banks became active in investment banking outside the US domestic market. At the same time, securities firms were increasingly active on Over The Counter (OTC) derivatives markets, which are less liquid (which meant they were now also facing credit risk). This highlighted the growing need for international rules that could be applied to all types of banks: the main reasons were the need for a more secure financial system and a more level playing field.

1986 In the UK, as in continental Europe, there had been no distinction between commercial banks and investment banks. In 1986, the Financial Services Act (FSA) changed this by establishing separated regulatory functions.

1989 In Europe, the second Banking Coordination Directive that harmonized European regulatory frameworks was issued. It fixed the principle of home-country supervision which allowed continental banks to pursue investment banking activities in the UK while the UK could maintain a separate regulatory framework for its non-bank securities firms.

1991 The Basel Committee began to discuss with the International Organization of Securities Commissions (IOSCO) how to develop a common market risk framework. At the European level, people were also working on such an initiative, with the goal of creating a new Capital Adequacy Directive (CAD) to incorporate market risk. The European regulators hoped that the two initiatives could be completed simultaneously.

1993 The CAD and Basel–IOSCO amendments were very similar. The new CAD was issued because Europe had fixed 1992 as a deadline for reaching agreement on significant Single Market legislation. Unfortunately, the Basel–IOSCO initiative ran into trouble because the adoption of the proposal would have meant that the SEC had to abandon its UNCR, which determined capital for securities' firms, in favor of weaker requirements. A study of the SEC showed that it would have translated globally into a capital release of more than 70 percent for the US securities' firms sector (see Holton, 2003). After the failure of the joint proposal, the Basel Committee released a package of proposed amendments to the 1988 Accord. Banks were to identify a "trading book" where market risk was mainly concentrated and capital requirements had to be calculated using a crude

The simple VAR model proposed recognized hedging but not diversification. Comments received on the proposal were very negative as banks had already been using more advanced VAR models for some years, and it was considered a backward step.

1994 JP Morgan launched its free Riskmetrics service, intended to promote the use of VAR among the firm's institutional clients. The package included technical documentation and a covariance matrix for several hundred key factors updated daily on the Internet.

1995 An updated proposition of the Basel Committee was issued, proposing the use of amore advanced standard VAR model and, more importantly, allowing banks to use their internal VAR models to compute capital requirements (if they satisfied a set of quantitative and qualitative criteria).

1996 After having received the comments of the sector, the final text was issued. The same year, the European Commission released a new Capital Adequacy Directive "CAD 2", that was similar to the Basel proposal.

1998 The new market risk rules were incorporated in most national legislation. (24-26)

Appendix 3 Carrefoursa Carrefour Sabancı Ticaret Merkezi A.Ş. Balance Sheet

Period	**31.12.2012**	**31.12.2013**	Period	**31.12.2012**	**31.12.2013**
Reporting Unit	TRL	TRL	Reporting Unit	TRL	TRL
ASSETS			**LIABILITIES**		
CURRENT ASSETS	**408,257,002**	**470,642,379**	**Short term liabilities**	**512,679,084**	**715,313,609**
Cash and cash Eq.	197,580,993	161,450,714	Current Borrowings	5,833,220	3,798,961
Trade Receivables	12,514,082	28,248,489	Current parts of long term liabilities	675,477	860,316
- From related parties	4,122,787	10,457,638	Trade payable	381,479,754	499,430,729
-From unrelated parties	8,391,295	17,790,851	- From related parties	8,956,138	9,539,319
Other receivables	205,900	7,880,425	- From unrelated parties	372,523,616	489,891,410
- From unrelated parties	205,900	7,880,425	Payebles from benefits for employee	17,514,849	21,175,486
Inventories	184,875,990	262,835,840	Other Liabilities	9,329,507	10,557,669
Prepaid Expenses	11,080,037	10,226,911	- From related parties	1,012,373	3,251,794
Deferred tax payment			- From unrelated parties	8,317,134	7,305,875
Others	2,000,000	0	Current provisions	91,429,656	175,519,887
NON-Current Assets	**1,057,125,225**	**1,096,323,587**	Other current liabilities	6,416,621	3,970,561
Other Receivables	19,170,037	22,791,782	**LONG TERM LIABILITIES**	**43,771,496**	**42,953,316**
- From related parties			Long term borrowings	13,841,966	17,374,369
- From unrelated parties	19,170,037	22,791,782	Trade payables	5,390,395	0
Derivatives			- From related parties	5,390,395	0
Biological Inventories			Long term provisions	24,539,135	25,578,947
Non-Current Assets held for sale	233,735,940	302,420,597	**EQUITY**	**908,931,647**	**808,699,041**
Tangibles	478,438,733	448,799,960	Parent company equity	908,931,647	808,699,041
Intengibles	263,147,696	247,597,339	Paid in capital	113,421,625	113,421,625
- Goodwill	249,569,246	238,516,963	Infilation adjustments on equities	678,006,480	678,006,480
- Other non-current Assets	13,578,450	9,080,376	Share premiums/discounts	34,691,309	34,691,309
Prepaid expenses	13,437,665	2,554,190	Other income and expenditure	4,681,753	5,204,939
Deferred tax payment	46,695,154	69,659,719	Resitricted reserves appropriated from profits	237,505,467	217,850,924
Other non current assets	2,500,000	2,500,000	Prior incomse/losses	-149,018,602	-139,720,444
			Current year net profits/losses	-10,356,385	-100,755,792
TOTAL ASSETS	**1,465,382,227**	**1,566,965,966**	**TOTAL LIABILITIES AND EQUITIES**	**1,465,382,227**	**1,566,965,966**

Appendix 4 Carrefoursa Carrefour Sabancı Ticaret Merkezi A.Ş. Income Statement

Period	2012	2013
Unit of Account	TRL	TRL
Revenue	2,551,253,267	2,600,533,776
Cost of sales (-)	-1,943,994,072	-1,981,477,106
Gross profit gains (losses)	607,259,195	619,056,670
Revenues of financial operations		
Cost of financial sector operations (-)		
Gross profits (losses) from financial operations		
GROSS PROFITS (LOSSES)	**607,259,195**	**619,056,670**
General administrations expenses (-)	-85,430,649	-93,034,505
Marketing expenses (-)	-484,672,674	-501,903,064
Resarch and development expenses (-)		
Operating income	18,121,906	19,136,232
Operating expenses (-)	-54,209,670	-156,935,371
Operating profit/ losses	1,068,108	-113,680,038
Incomes from investments		
Expenses from investiments (-)	-801,031	-1,648,052
Gains (losses) before financing expenses	267,077	-115,328,090
Financing expenses (-)	-10,518,195	-8,523,063
Income befor taxes	-10,251,118	-123,851,153
Tax expenses	-105,267	23,095,361
- Taxes expentditures	0	0
- Deferred assets of taxes	-105,267	23,095,361
Profits/Losses	**-10,356,385**	**-100,755,792**
Closed parts profits/ losses		
Profit/ Loss	**-10,356,385**	**-100,755,792**
Distiribution of profits/ losses	-10,356,385	-100,755,792
- Minority interest		
- Parent company owning	-10,356,385	-100,755,792

Appendix 5 New Procedure Output for Carrefoursa Carrefour Sabancı Ticaret Merkezi A.Ş

Inventories of liquid asset	442,712,956.38
LCR	**1.15**

adapted eqıity	590,848,117.00
Credit risk	71,701,797.00
Operational risk	1,552,674,976.25
Foreign exchange risk	38,044,150.00
asset for investmentes	277,085,512.00
tangible assets	369,877,867.00
Interest rate risk	17,374,369.00
Inventory loss provision	0.00
stock pricing risk	0.00
risk of decrease of value	238,516,963.00
Market risk	940,898,861.00

CAR	**0.23**

Appendix 6 MİGROS TİCARET A.Ş. Annual Balance Sheet

Period	31.12.2012	31.12.2013	Period	31.12.2012	31.12.2013
Reporting Unit(TRY)	1,000	1,000	Reporting Unit(TRY)	1,000	1,000
ASSETS			**LIABILITIES**		
CURRENT ASSETS	**1,908,550**	**1,980,727**	**Short term liabilities**	**1,875,140**	**2,360,669**
Cash and cash Eq.	1,040,867	1,038,329	Curr. parts of l. t. liabilities	146,261	491,973
Financial Investment	0	9,726	Trade payable	1,554,044	1,685,963
Trade Receivables	47,345	48,395	- From related parties	1,251	734
- From related parties	52	55	- From unrelated parties	1,552,793	1,685,229
-From unrelated parties	47,293	48,340	Payebles employee ben.	29,496	34,909
Other receivables	1,233	1,050	Other Liabilities	1,701	2,574
-From related parties			- From unrelated parties	1,701	2,574
- From unrelated parties	1,233	1,050	Derivatives	20,063	0
Derivatives	15	879	Deferred income	3,266	3,612
Inventories	786,036	851,243	Corporate tax payables	8,473	18,327
Biological assets			Current provisions	64,735	75,007
Prepaid Expenses	29,992	28,635	Other current liabilities	47,101	48,304
Others	3,062	2,470	**LONG TERM LIABILITIES**	**2,487,129**	**2,605,742**
NON-Current Assets	**3,715,795**	**3,815,908**	Long term borrowings	2,340,110	2,440,568
Financial Investment	1,695	1,695	Trade payables	2,967	3,244
Other Receivables	1,302	1,434	Derivatives	1,279	869
- From related parties			Deferred incom	321	2,250
- From unrelated parties	1,302	1,434	Long term provisions	35,834	43,954
Derivatives	241	70	Deferred tax payables	106,618	114,857
Non-Current Assets held for sale	45,777	46,267	**EQUITY**	**1,262,076**	**830,224**
Tangibles	1,142,342	1,233,665	Parent company equity	1,261,554	829,533
Intengibles	2,499,937	2,501,008	Paid in capital	178,030	178,030
- Goodwill	2,251,427	2,251,427	Add. Eq. for aquisition	27,312	27,312
- Other non-current Assets	248,510	249,581	Share premiums/discounts	678,233	678,233
Prepaid expenses	24,501	31,769	Other income and expenditure	-13,844	-12,839
			Other income and expenditure	10,973	41,122
			Res. Rrv. App.from profits	385,856	385,856
			Prior incomse/losses	-92,704	-4,641
			Current year net profits/losses	88,063	-463,175
			Minority interests	522	691
TOTAL ASSETS	**5,624,345**	**5,796,635**	**TOTAL LIABILITIES AND EQUITIES**	**5,624,345**	**5,796,635**

Appendix 7 MİGROS TİCARET A.Ş Income Statement.

	2012	**2013**
Unit of account Profits or Losses	1,000	1,000
Revenue	6,482,402	7,126,925
Cost of sales (-)	-4,777,773	-5,232,223
Gross profit gains (losses)		
GROSS PROFITS (LOSSES)	**1,704,629**	**1,894,702**
General administrations expenses (-)	-232,161	-252,983
Marketing expenses (-)	-1,202,795	-1,350,279
Resarch and development expenses (-)		
Operating income	53,744	54,846
Operating expenses (-)	-125,853	-110,244
Operating profit/ losses	197,564	236,042
Incomes from investments	2,106	1,650
Expenses from investiments (-)	-5,224	-7,405
Gains (losses) before financing expenses	194,446	230,287
Financing income	133,502	114,568
Financing expenses (-)	-199,038	-729,572
Income befor taxes	128,910	-384,717
Tax expenses	-40,774	-78,416
- Taxes expentditures	-36,506	-70,938
- Deferred assets of taxes	-4,268	-7,478
Profits/Losses	**88,136**	**-463,133**
Closed parts profits/ losses		
Profit/ Loss	**88,136**	**-463,133**
Distiribution of profits/ losses	88,136	-463,133
- Minority interest	73	42
- Parent company owning	88,063	-463,175

Appendix 8 New Procedure Output for Migros Ticaret A.Ş

Inventories of liquid asset	1,935,336.80
LCR	**1.52**

adapted eqıity	444,368.00
Credit risk	111,283.00
Operational risk	4,033,841.46
Foreign exchange risk	2,573,800.00
asset for investmentes	46,267.00
tangible assets	736,845.00
Interest rate risk	2,330,692.00
Inventory loss provision	0.00
stock pricing risk	9,726.00
risk of decrease of value	2,253,122.00
Market risk	7,950,452.00

CAR	**0.04**

Appendix 9 Annual Balance Sheet for Kiler Alışveriş Hiz. Gıda San. ve Tic. A.

Reporting Unit (TRL)				1,000	
Period	**31.12.2012**	**31.12.2013**	**Period**	**31.12.2012**	**31.12.2013**
ASSETS			**LIABILITIES**		
CURRENT ASSETS	**491,889**	**449,157**	**Short term liabilities**	**485,414**	**504,672**
Cash and cash Eq.	43,016	36,360	Current Borrowings	178,157	222,617
Financial Investment		184	Current parts of long term liabilities	56,817	22,277
Trade Receivables	32,367	3,701	Trade payable	208,677	229,583
- From related parties	29,284	1,827	- From related parties	5,331	5,443
-From unrelated parties	3,083	1,874	- From unrelated parties	203,346	224,140
Rec.from finance operations			Payebles from benefits for employee	7,744	8,273
- From related parties			Other Liabilities	21,190	9,706
- From unrelated parties			- non tradeble liabilities from unrelated parties	630	3,970
Other receivables	79,311	47,094	Other liabilities from unraleted parties	20,560	5,736
-From related parties	77,747	45,149	Current provisions	9,894	9,606
- From unrelated parties	1,564	1,945	Defered income	151	55
Derivatives			Other current liabilities	2,935	2,610
Inventories	317,926	345,843	**LONG TERM LIABILITIES**	**85,682**	**45,160**
Prepaid Expenses	17,784	15,225	Long term borrowings	56,713	19,563
Deferred tax payment			Trade payables	681	
Others	1,485	750	- From unrelated parties	681	
Sum	**491,889**	**449,157**	Other long term liabilities	5,688	
Tangible assets for ready to sale			- From unrelated parties	5,688	
NON-Current Assets	**298,054**	**293,800**	Long term provisions	6,572	7,708
Financial Investment	54	54	- Provisions from benefits for employee	6,572	7,708
Biological Inventories			Deferred tax payables	16,028	17,889
Non-Current Assets held for sale	58,241	65,851	**EQUITY**	**218,847**	**193,125**
Tangibles	152,155	140,683	**Parent company equity**	**218,384**	**192,843**
Intengibles	73,566	71,041	Paid in capital	134,620	134,620
- Goodwill	72,985	70,509	Share premiums/discounts	66,150	66,150
- Other non-current Assets	581	532	Other income and expenditure	17,003	16,758
Prepaid expenses	2,493	1,716	Prior incomse/losses	-6,003	636
Deferred tax payment	11,545	14,455	Current year net profits/losses	6,614	-25,321
			Minority interests	463	282
TOTAL ASSETS	**789,943**	**742,957**	**TOTAL LIABILITIES AND EQUITIES**	**789,943**	**742,957**

Appendix 10 Income Statement of Kiler Alışveriş Hiz. Gıda San. ve Tic. A.Ş

Period	**01/01/2012-31/12/2012**	**01/01/2013-31/12/2013**
Unit of account	1,000	1,000
Revenue	943,573	1,014,228
Cost of sales (-)	-692,606	-751,187
GROSS PROFITS (LOSSES)	**250,967**	**263,041**
General administrations expenses (-)	-37,790	-35,829
Marketing expenses (-)	-179,486	-185,333
Operating income	2,189	3,298
Operating expenses (-)	-9,145	-31,297
Operating profit/ losses	26,735	13,880
Incomes from investments	5,910	9,511
Expenses from investiments (-)	-639	-2,792
Gains (losses) before financing expenses	32,006	20,599
Financing income	24,323	10,468
Financing expenses (-)	-46,850	-57,553
Income befor taxes	9,479	-26,486
Tax expenses	-2,966	992
- Taxes expentditures	-293	
- Deferred assets of taxes	-2,673	992
Profits/Losees	**6,513**	**-25,494**
Closed parts profits/ losses		
Profit/ Loss	**6,513**	**-25,494**
Distiribution of profits/ losses	6,513	-25,494
- Minority interest	-101	-173
- Parent company owning	6,614	-25,321

Appendix 11 New Procedure Output for Kiler Alışveriş Hiz. Gıda San. ve Tic. A.Ş

Inventories of liquid asset	384,480.77
LCR	**2.13**

adapted eqıity	193,125.00
Credit risk	67,736.00
Operational risk	570,485.00
Foreign exchange risk	100,310.00
asset for investmentes	
tangible assets	151,501.00
Interest rate risk	
Inventory loss provision	0.00
stock pricing risk	0.00
risk of decrease of value	70,563.00
Market risk	322,374.00

CAR	**0.20**

CURRICULUM VITAE

Date of Birth	03.08.1983	
Place of Birth	İstanbul	

Education

High School	2001	Kartal Anatolian High School
BS	2003-2007	METU / Economics
MS	2013-2015	Doğuş University / Financial Economics

Career

	2007- …	T.İş Bank A.Ş.