Analyzing The Working Capital Structure and Profitability of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

57

Doç. Dr. Bayram TOPAL
Sakarya Üniversitesi, İşletme Fakültesi,
İşletme Bölümü - btopal@sakarya.edu.tr

Yrd. Doç. Dr. Hakan TUNAHAN
Sakarya Üniversitesi, İşletme Fakültesi,
Uluslar Arası Ticaret Bölümü - htunahan@sakarya.edu.tr

Yrd. Doç. Dr. Ahmet Selçuk DİZKIRICI
Sakarya Üniversitesi, İşletme Fakültesi,
Uluslar Arası Ticaret Bölümü - asdizkirici@sakarya.edu.tr

Abstract

This study aims to find out if any relationship exists between the selected financial ratios of the firm groups traded in Istanbul Stock Exchange Trade Index (BIST XTCRT) by regression and t-test analyses.

Regression analysis shows that Return on Equity (ROE) and Return on Assets (ROA) have relationships with both Current Ratio and Inventory Turnover Ratio. Additionally; a relation is observed between Return on Sales (ROS) and Inventory Turnover Ratio besides another relation exists between Gross Margin Return on Inventory (GMROI) and Inventory Turnover Ratio for the group of companies of supermarket chains. T-test analysis indicates that Current Ratios, Inventory Turnover Ratios, Receivables Turnover Ratios and GMROI differ from supermarket chains and other trade firms groups listed in BIST XTCRT significantly.

SÜPERMARKET ZİNCİRLERİNİN ÇALIŞMA SERMAYESİ YAPILARI VE KARLILIKLARININ ANALİZİ: BORSA İSTANBUL TİCARET ENDEKSİ ÖRNEĞİ

Özet

Bu çalışma Borsa İstanbul Ticaret Endeksi'ne (BIST XTCRT) kote firma gruplarının seçilmiş finansal oranlarının arasında herhangi bir ilişkinin olup olmadığını regresyon ve t-testi analizleri vasıtasıyla bulmayı amaçlamaktadır. Regresyon analizine göre Özkaynak Karlılığı ile Toplam Varlık Karlılığının hem Cari Oran hem de Stok Devir Hızı ile ilişkisi mevcuttur. Buna ilaveten süpermarket zinciri işletmeler grubu için Satış Karlılığı ile Stok Devir Hızı arasında ayrıca Brüt Stok Karlılığı ile Stok Devir Hızı arasında

ilişki bulunmuştur. T-testi analizine göre Borsa İstanbul Ticaret Endeksi'ne kote süpermarket zinciri ve diğer firma grupları için Cari Oran, Stok Devir Hızı, Alacak Devir Hızı ve Brüt Stok Karlılığı oranları anlamlı oranda farklılık arz etmektedir.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

58

Introduction

Retailing includes all activities related to the sale of products or services directly to final consumers for personal use and not commercial. A retailer or a retail store is any business enterprise whose revenue comes primarily from the sale of small lots at retail (Kotler, 2000: 105). Retail sector is being effective in figuring the consumer choices, changing the consumption forms, raising the awareness of and informing the consumers, coloring the social events and life, thus on the consumer behavior (Altunışık and Mert, 2001: 145).

The total size of the retail sector (organized and unorganized) in Turkey is estimated to have reached US$300 billion in 2012 and is expected to grow with a CAGR (Compound Annual Growth Rate) of 10% between 2013 and 2017. According to The Interbank Card Center, the total value of credit / debit card transactions in supermarkets and shopping centers grew with a CAGR of 12% in the last six years and reached US$28 billion in 2012 (Deloitte, 2013: 4).

The significance of retail sector has risen more due to the change in demand and supply conditions in 1970's in developed countries and 1990's in developing countries, by the booming of modern channel that contains big retailers basically acting in the form of chain stores and named as organized retail. It can be observed that organized retailing has quite increased its emphasis also in our country in the last two decades parallel to the trend in developed countries. (Turkish Competition Authority, 2012: 1).

The food retailing market that is the subject of this study is a derivative of Fast-Moving Consumer Goods retail sector. The food retailing market in Turkey is composed of multi-format retailers, regional supermarkets, discount retailers and convenience stores. As a consequence of the high degree of disorganization, the market is very fragmented and the total market share of the four largest players does not exceed one fifth of the total revenues. The largest players in the multi-format segment are MİGROS (919 stores, 6 formats), CARREFOUR (243 stores, 3 formats) and TESCO KİPA (187 stores, 5 formats). As of 2012, MİGROS stands as the largest multi-format retailer in Turkey with a revenue of TL 6,5 billion. The discount retailing market in Turkey is composed of hard and soft discount retailers which are distinguished from each other with respect to the number of stock keeping units (SKUs) they carry, the share of private label products in their total revenues and whether they have shelf layouts or not. As a hard discount retailer, BİM generated 66% of its revenue through private label products whereas its nearest competitor A101 remains at 35% (Deloitte, 2013: 4).

This study, motivated by the fast development of the retail sector in Turkey as mentioned above, aims to find out if any relationship exists between the selected

financial ratios of the firm groups traded in Istanbul Stock Exchange Retail Trade Index (BIST XTCRT) by regression analysis and t-test.

I. Literature Review

Before searching the literature on the relations between financial ratios related with working capital and profitability of retail sector, it will be useful to see how this relation is available in all sectors. Literature findings are as follows:

Goddarda, Tavakolib and Wilson (2005) investigated the determinants of profitability for manufacturing and service sector firms in Belgium, France, Italy and the UK for the period 1993–2001, find out that firms with higher liquidity tend to be more profitable.

The study of Karacaer and Kapusuzoğlu (2008) observes by using the Discriminant Analysis that each ratio (variable) has a significant effect on the financial positions of businesses with differing amounts and that along with the liquidity ratios in the first place, profitability ratios also play an important role in the financial positions of the firms.

According to Albayrak and Akbulut (2008) liquidity ratios (only for operating profit margin), capital structure, size of firm and inventory turnover are among the most important indicators to define the profitability structures of the companies operating in industry and service sectors listed in Istanbul Stock Exchange.

Ekşi and Akçi (2009) finds out significant differences between food, textile and stone industry via ratio analysis by using Anova and Tukey tests for 158 firms in manufacturing sub-sectors of Istanbul Stock Exchange.

Kiracı (2009) aiming to reveal the relationship between inventory management and profitability ratios of the businesses from manufacturing industry traded in Istanbul Stock Exchange in 2002-2006 period via regression and correlation analyses; his findings shows that inventory turnover rate has a negative relationship with gross profit ratio while a positive relationship exists with net profitability ratios.

Gill, Biger and Mathur (2010) determines statistically significant relationship between the cash conversion cycle and profitability on the data of 88 American firms listed on New York Stock Exchange for a period of 3 years from 2005 to 2007.

Coşkun and Kök (2011) observe that cash conversion cycle, accounts receivable period and inventory period denotes a negative relationship with profitability besides a positive relationship between profitability and accounts payable period has been determined.

Charitou, Lois and Santoso (2012) finds out that the cash conversion cycle and net trade cycle are positively associated with the firm's profitability.

Ashraf (2012) examines the relationship between working capital efficiency and profitability of 16 firms from Bombay Stock Exchange in 2006-2011 period by using descriptive and regression analyses. The results display that there is a strong negative relationship between variables of the working capital management and profitability of

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

59

the firm except the sales. Besides; a positive relationship between size of the firm and its profitability is found while a significant negative relationship exists between debt used by the firm and its profitability.

Quayyum (2012) finds out a significant level of relationship in various levels between working capital management and profitability of manufacturing corporations listed in Dhaka Stock Exchange.

Delen, Kuzey and Uyar (2013) used financial ratios to determine firm performance via a two-step analysis methodology. Exploratory factor analysis, predictive modeling methods and decision tree algorithms are benefited to investigate the impact of financial ratios on firm performance. Finally; earnings before tax-to-equity ratio and net profit margin indicated to be two most important variables.

When the retail companies and production companies are compared, a quite big difference can be seen in their market structure and financial characteristics. These differences can be handled in the frame work of (1) the form of trading the goods/services that are being marketed, (2) uncertainty of demand, (3) pricing and (4) cost structure (Külter and Demirgüneş, 2007: 447).

When the retail companies ara taken in to the account from the finance perspective, it is obvious that they tend to have much higher turnover ratios, much lower profitability on sales and much shorter operating cycles than primary manufacturing companies. Their asset structures also differ considerably, with retail firms having proportionately more current assets and proportionately less fixed assets than manufacturing firms. So, retail firms and manufacturing firms can therefore be thought of as being at opposite ends of the spectrum of these financial characteristics (Gombola and Ketz, 1983: 46).

Also, the small retailers are considerably more liquid, moderately leveraged and more profitable, earning its owners a substantially bigger return on equity capital, that is commonly observed by financial researchers and writers (Droms, Miller and Lacerte, 1979: 44). Actually, Phillips (2008) finds out that size, as measured by total sales, is a critical factor in the behavior of the financial performance of small, privately-held service and retail companies. Specifically, the largest and smallest firms exhibit significant differences in their respective liquidity, activity, leverage, and profitability ratios for firms in the retail sector.

Cronin's study (1985) concludes that increase in market share, capital-to-labor ratios, and the average inventory level are keys to evaluating and selecting retail marketing strategies which promise high profitability.

Chen and Sternquist (1995) observe no significant differences in sales productivity, profitability and growth ratios between those Japanese stores who expanded overseas and those who did not.

Matsumoto, Shivaswamy and Hoban (1995) finds out in their study used a survey to gain insights into which financial ratios security analysts perceive as important for retailers that inventory turnover ratios and receivables turnover ratios rank ahead of cash flow ratios and dividend ratios.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

60

Külter and Demirgüneş (2007) observe as the result of "pooled regression" analysis by using the data regarding Istanbul Stock Exchange (ISE) listed retailing firms in the period of 1997-2006, and conclude that profitability of the retailing firms has decreased due to firm size and borrowing and has increased due to working capital investments and market share.

According to Kolias, Dimelis and Filios (2011) inventory turnover ratio is negatively correlated with gross margin in retail sector. Choudhary and Tripathi (2012) in a study including Indian organized retail industry claim that There are large differences in the inventory positions of companies and an inverse relationship between inventory days and the financial performance ratios.

Abdou et al. (2012) claim that net profitability and the depreciation-to-sales ratio are key determinants of capital structure in retail sector in the study based on General Regression Neural Network (GRNNs), while two more variables are added in the multiple regressions, namely size and quick ratio.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

61

II. Data and Methodology

The analysis of the companies from the view of liquidity, financial structure, activity and profitability is essential to show a firm's financial performance and the process is defined as ratio analysis. The ratios such as Current, Cash, Inventory Turnover, Receivables Turnover, Return on Equity (ROE), Return on Assets (ROA), Return on Sales (ROS) and Gross Margin Return on Inventory (GMROI) are some of the most commonly used ones and benefited for the analyses in the literature. Owing to the fact that Current, Cash, Inventory Turnover and Receivables Turnover ratios are included in the working capital structure concept; this study aims to investigate whether or not any relationship exists between the mentioned ratios and selected profitability rates via regression and t-test analysis.

There are 18 firms listed on Istanbul Stock Exchange Retail Trade Index (BIST XTCRT) and 8 of them are the supermarket chains as ADESE, BİM, BİZİM, CARREFOUR, KİLER, MİGROS, TESCO KİPA and UYUM. The rest are the trading companies such as BİMEX, BOYNER, DOĞUŞ OTO, INTEMA, MİLPA, SANKO, SELÇUK ECZA, VAKKO, TEKNOSA and TGS.

The essential data to calculate the ratios mentioned above are acquired from the balance sheets and income statements belonged to the firms listed on Istanbul Stock Exchange Retail Trade Index for the period of 2009-2012 from the web page of Public Disclosure Platform denoted as www.kap.gov.tr and the companies' web sites. Afterwards; the gathered data are used for the analyze in SPSS 18 software program

To this end; it is asked whether or not any relationship exists between the profitability rates and the other financial ratios of supermarket chains. Hence; ROE, ROA, ROS and GMROI are analyzed together with Current, Cash, Inventory Turnover and Receivables Turnover ratios, respectively. Finally; all of the financial ratios belonged to supermarket chains and other firms groups traded in Istanbul Stock Exchange Retail Trade Index (BIST XTCRT) are tested via t-test to indicate the differences between the two groups.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

62

Existence of Relationships between the Profitability Rates and Other Ratios of Supermarket Chains

First of all; the correlation between the ratios of supermarket chains are shown in Table 1.

Table 1: Correlation between the Ratios of Supermarket Chains

		ROE	ROA	ROS	GMROI
Current	Pearson Correlation	,117	,090	,139	-,312*
	Sig. (2-tailed)	,523	,625	,449	,082
Cash	Pearson Correlation	,012	,007	,114	,222
	Sig. (2-tailed)	,947	,971	,534	,222
Inventory Turnover	Pearson Correlation	,721**	,722**	,395*	,754**
	Sig. (2-tailed)	,000	,000	,025	,000
Receivables Turnover	Pearson Correlation	-,425*	-,355*	-,205	-,229
	Sig. (2-tailed)	,015	,046	,261	,208

***: Correlation is significant at the 0.01 level (2-tailed)
**: Correlation is significant at the 0.05 level (2-tailed)
*: Correlation is significant at the 010 level (2-tailed)

Probable relationships between Return on Equity (ROE) and other financial ratios for supermarket chains are searched and it is found that ROE has relationship with Inventory Turnover Ratio and Current Ratio as it is indicated in the Table 2 below.

Table 2: Coefficients and Significance Levels for ROE

Coefficients[a]				t	Sig.	Std. Error of the Estimate	Adjusted R Square	F (Sig)	Durbin-Watson
Model	Unstandardized Coefficients		Standardized Coefficients						
	B	Std. Error	Beta						
(Constant)	-,485	,130		-3,739	,001	,15251	,547	19,736	2,453
Current Ratio*	,211	,107	,241	1,968	,059				
Inventory Turnover Ratio***	,031	,005	,760	6,207	,000			,000[b]	

[a] Dependent Variable: Return on Equity (ROE)
[b]. Predictors: (Constant), Inventory Turnover Ratio, Current Ratio
*: 10% significance level, **: 5% significance level, ***: 1% significance level

As it is seen by Table 2; ROE has a relationship with Inventory Turnover Ratio in 1% significance level while significance level of the relationship between ROE and Current Ratio is weaker. Multiple regression model formed for ROE via current ratio and inventory turnover ratio variables is significant due to F (19,736), Probability (0,000) and explanatory power of the model (%54,7) values. Coefficients display that 1 unit-increase in current ratio causes 0,211 unit increase and 1 unit-increase in Inventory Turnover Ratio causes 0,031 unit increase in ROE.

Similarly; ROA has relationship with Inventory Turnover Ratio and Current Ratio, too.

Table 3: Coefficients and Significance Levels for ROA

Coefficients[a]						Std. Error of the Estimate	Adjusted R Square	F (Sig)	Durbin-Watson
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.				
	B	Std. Error	Beta						
(Constant)	-,155	,044		-3,480	,002	,0522715	,535	18,818	2,511
Current Ratio*	,063	,037	,213	1,714	,097				
Inventory Turnover Ratio***	,011	,002	,756	6,091	,000			,000[b]	

[a] Dependent Variable: Return on Assets (ROA)
[b] Predictors: (Constant), Inventory Turnover Ratio, Current Ratio
 *: 10% significance level, **: 5% significance level, ***: 1% significance level

Table 3 shows that the relationship between ROA and Inventory Turnover Ratio having 1% significance level besides significance of the other relationship between ROA and Current Ratio is in 10 % level.

Multiple regression model formed for ROA via current ratio and inventory turnover ratio variables is significant due to F (18,818), Probability (0,000) and explanatory power of the model (%53,5) values. Coefficients display that 1 unit-increase in current ratio causes 0,063 unit increase and 1 unit-increase in Inventory Turnover Ratio causes 0,011 unit increase in ROA.

Table 4 indicates the characteristics of the relationship between ROS and Inventory Turnover Ratio having a 5 % significance level for supermarket chains.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

63

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

64

Table 4: Coefficients and Significance Levels for ROS

Coefficients[a]						Std. Error of the Estimate	Adjusted R Square	F (Sig)	Durbin-Watson
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.				
	B	Std. Error	Beta						
(Constant)	-,028	,013		-2,163	,039	,0318338	,128	5,557	
Inventory Turnover Ratio**	,002	,001	,395	2,357	,025			,025[b]	2,137

[a]. Dependent Variable: Return on Sales (ROS)
[b]. Predictors: (Constant), Inventory Turnover Ratio
*: 10% significance level, **: 5% significance level, ***: 1% significance level

Multiple regression model formed for ROS via inventory turnover ratio displays that F value is 5,557, Probability is 0,025 and explanatory power of the model is %12,8. Coefficients display that 1 unit-increase in Inventory Turnover Ratio cause 0,002 unit increase in ROA. Finally; it is indicated below that GMROI has a relationship with Inventory Turnover Ratio in 1% significance level:

Table 5: Coefficients and Significance Levels for GMROI

Coefficients[a]						Std. Error of the Estimate	Adjusted R Square	F (Sig)	Durbin-Watson
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.				
	B	Std. Error	Beta						
(Constant)	,767	,259		2,957	,006	,6396279	,554	39,539	
Inventory Turnover Ratio***	,132	,021	,754	6,288	,000			,000[b]	2,458

[a]. Dependent Variable: Gross Margin Raturn on Inventory (GMROI)
[b]. Predictors: (Constant), Inventory Turnover Ratio,
*: 10% significance level, **: 5% significance level, ***: 1% significance level

Multiple regression model formed for GMROI via inventory turnover ratio variable is significant due to F (39,539), Probability (0,000) and explanatory power of the model (%55,4) values. Coefficients display that 1 unit-increase in Inventory Turnover Ratio causes 0,132 unit increase in GMROI.

Finally; it is seen that ROE and ROA have relationships with Current and Inventory Turnover Ratios in 10% and 1% significance levels, respectively. Besides; ROS has a relationship only with Inventory Turnover Ratio in 5% significance level and GMROI has the same relationship in 1% significance level. So; any relationship does not exist between the Profitability rates and Cash & Receivables Turnover ratios. Because of the fact that mentioned firms run as trading companies; Inventory Turnover Ratio's

existence in the process for supermarket chains is quite reasonable as well as expressive.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

65

Testing Financial Ratios of Supermarket Chains and Other Firms Traded in Istanbul Stock Exchange Retail Trade Index (BIST XTCRT) via t-test

All of the financial ratios belonged to the groups as supermarket chains and other firms traded in Istanbul Stock Exchange Retail Trade Index (BIST XTCRT) are tested via t-test to indicate the differences between the two groups and the results are shown in Table 6, below:

Table 6: Comparing the Ratios of Supermarket Chains with Other Firms' Rates via t-test

	Firms (mean)		t-test for Equality of Means				
	Supermarket Chains	Other Firms	Mean Difference	Std. Error Difference	t	df	Sig. (2-tailed)
Current Ratio*	,978900	1,998110	-1,0192093	,5164246	-1,97	39,617	,055
Cash Ratio	,258061	,217120	,0409414	,0517615	,791	70	,432
Inventory Turnover Ratio*	11,149845	33,282863	-22,133017	12,6294537	-1,75	39,463	,087
Receivables Turnover Ratio***	78,768175	16,317725	62,4504505	13,5533593	4,608	38,749	,000
Return on Equity (ROE)	,071270	,106320	-,0350501	,0661849	-,530	70	,598
Return on Assets (ROA)	,024581	,011355	,0132257	,0168788	,784	70	,436
Return on Sales (ROS)	-,000533	-,158709	,1581764	,1394734	1,134	39,146	,264
Gross Margin Return on Inventory (GMROI)	2,234196	2,115369	,1188268	,4101817	,290	53,816	,773

*: 10% significance level, **: 5% significance level, ***: 1% significance level

As it is understood from Table 6; Current, Inventory Turnover and Receivables Turnover Ratios differ from the other group. Hence; supermarket chains and other firms are defined to have not similar current, inventory and receivables turnover ratios. Current and inventory turnover ratios of supermarket chains are calculated as fewer besides receivables turnover ratio of supermarket chains is more than the other firms.

Herein; it is surprising to find out that inventory turnover ratio of the supermarkets chain group is fewer than the others' by contrast with the retail sales concept.

Therefore; the same transactions are made by excluding the firms abbreviated as INTEMA and SANKO due to their tremendous effects on Inventory Turnover Ratios and Gross Margin Returns on Inventory (GMROI); hence, the new results are shown below in Table 7.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

66

Table 7: Comparing the Ratios of Supermarket Chains with Other Firms' Rates (excluding INTEMA and SANKO) via t-test

	Firms (mean)		t-test for Equality of Means				
	Supermarket Chains	Other Firms	Mean Difference	Std. Error Difference	t	df	Sig. (2-tailed)
Current Ratio*	,978900	2,124833	-1,1459321	,6421532	-1,78	31,317	,084
Cash Ratio	,258061	,258061	,0397850	,0558337	,713	62	,479
Inventory Turnover Ratio***	11,149845	5,118181	6,0316639	1,1631345	5,186	53,743	,000
Receivables Turnover Ratio***	78,768175	19,415409	59,3527668	13,9219917	4,263	42,200	,000
Return on Equity (ROE)	,071270	,136207	-,0649379	,0727294	-,893	62	,375
Return on Assets (ROA)	,024581	,011980	,0126005	,0187882	,671	62	,505
Return on Sales (ROS)	-,000533	-,200004	,1994712	,1740520	1,146	31,074	,261
Gross Margin Return on Inventory (GMROI)***	2,234196	1,117552	1,1166444	,2196429	5,084	62	,000

*: 10% significance level, **: 5% significance level, ***: 1% significance level

At the end of the same process excluding the mentioned 2 firms; inventory turnover ratio decreases to 5,11 from 33,28 besides GMROI diminishes to 1,11 from 2,11 as the most remarkable ratios. Additionally; t-test results prove that inventory and receivable turnover ratios of supermarket chains are determined to be very high comparing to the other firms' rates as it is estimated before. Thus; Current, Inventory Turnover, Receivables Turnover Ratios and GMROI differ from the other group with higher significance levels comparing to the first process.

Analyzing The
Working Capital
Structure And
Profitability Of
Supermarket
Chains: An
Evidence From
Istanbul Stock
Exchange Trade
Index

67

Results and Conclusion

Ratio Analysis within Liquidity, Financial Structure, Activity and Profitability Rates indicate firms' financial statement. Current Ratio, Cash Ratio, Inventory Turnover Ratio, Receivables Turnover Ratio, Return on Equity (ROE), Return on Assets (ROA), Return on Sales (ROS) and Gross Margin Return on Inventory (GMROI) are the most common rates for ratio analyses. As working capital structure concept contain Current, Cash, Inventory Turnover and Receivables Turnover; the mentioned 7 ratios are used at the beginning of the study while working capital structure of supermarket chains is analyzed via regression analysis.

Thus; it is asked whether or not any relationship exists between the profitability rates (ROE, ROA, ROS and GMROI) and the other financial ratios (Current, Cash, Inventory Turnover and Receivables Turnover ratios) of supermarket chains. According to the multiple regression model generated; it is found that ROE and ROA has relationships with both Current Ratio and Inventory Turnover Ratio. Additionally; a relation is observed between ROS and Inventory Turnover Ratio besides another relation exists between GMROI and Inventory Turnover Ratio.

Furthermore; all of the financial ratios belonged to supermarket chains and other firms groups traded in Istanbul Stock Exchange Retail Trade Index (BIST XTCRT) are tested via t-test to find out the differences between the two groups. The analysis shows that Current Ratios, Inventory Turnover Ratios and Receivables Turnover Ratios differ from one another, significantly. But while the same analysis is performed by excluding INTEMA and SANKO as they have tremendous effects on Inventory Turnover Ratios and Gross Margin Returns on Inventory (GMROI); then, it is found out that both Inventory Turnover Ratio and GMROI of the other firms decrease and Current Ratios, Inventory Turnover Ratios, Receivables Turnover Ratios and GMROI differ in stronger significance levels.

Since the results obtained within Current Ratios, Inventory Turnover Ratios, Receivables Turnover Ratios and GMROI also t-test prove that inventory and receivable turnover ratios of supermarket chains are determined to be very high comparing to the other firms' rates as it is estimated before; results obtained are concluded to be normative due to the structure of retail working supermarket chains.

References

Abdou, H.A., Kuzmic, A., Pointon, J., Lister R.J., (2012). "*Determinants of Capital Structure in the UK Retail Industry: A Comparison of Multiple Regression and Generalized Regression Neural Network*", Intelligent Systems in Accounting, Finance and Management, 19, pp.151-169.

Albayrak A.S., Akbulut R., (2008). "*Karlılığı Etkileyen Faktörler: İMKB Sanayi ve Hizmet Sektörlerinde İşlem Gören İşletmeler Üzerine Bir İnceleme*", Sosyal Bilimler Dergisi, Cilt: 4, Sayı 7, pp. 55-83.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

68

Altunışık, R., Mert, K., (2001). "Tüketicilerin Alışveriş Merkezlerindeki Davranışları Üzerine Bir Saha Çalışması: Tüketiciler Kontrolü Yitiriyor mu?", *6. Ulusal Pazarlama Kongresi*, pp. 145-152, Erzurum.

Ashraf, C.K., (2012). "*The Relationship Between Working Capital Efficiency and Profitability*", *Advances In Management*, Vol. 5, No. 12, pp. 60-74.

Charitou, M., Lois, P., Santoso, H.B., (2012). "*The Relationship Between Working Capital Management And Firm's Profitability: An Empirical Investigation For An Emerging Asian Country*", International Business and Economics Research Journal, Vol. 11, No. 8, pp. 839-847.

Chaudhary, H., Tripathi, G., (2012). "*An Analysis of Inventory Turnover and Its Impact on Financial Performance in Indian Organized Retail Industry*", Journal of Services Research, Volume 12, Number 1.

Chen, Y.-F., Sternquist, B., (1995). "*Differences Between International and Domestic Japanese Retailers*", The Service Industries Journal, Volume 15, Issue 4, pp. 118-133.

Coşkun, E., Kök, D., (2011). "*Çalışma Sermayesi Politikalarının Karlılık Üzerine Etkisi: Dinamik Panel Uygulaması*", Ege Akademik Bakış, Cilt: 11, Özel Sayı, pp. 75-85.

Cronin Jr., J.J., (1985). "*Determinants of Retail Profit Performance: A Consideration of Retail Marketing Strategies*". Journal of the Academy of Marketing Science., Vol. 13 Issue 4, pp. 40-53.

Delen, D., Kuzey, C., Uyar, A., (2013). "*Measuring Firm Performance Using Financial Ratios: A Decision Tree Approach*", Expert Systems with Applications, Issue 40, pp. 3970-3983.

Deloitte, (2013). *Retail Sector Update*, June.

Droms, W.G., Miller, C.W., Lacerte, G.A., (1979). "*A Financial Profile Of Small Retailing Firms*", *American Journal of Small Business*, Volume III, Number 4, pp. 42-58.

Ekşi, İ.H., Akçi, Y., (2009) "*Sektör Farklılıklarının Finansal Oranlar Üzerindeki Etkileri: İMKB İmalat Sanayi Firmalarında Bir Uygulama*", Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, Cilt: 14, Sayı: 1, pp. 115-126.

Gill, A., Biger, N., Mathur, N., (2010). "*The Relationship Between Working Capital Management And Profitability: Evidence From The United States*", Business and Economics Journal, pp. 1-9.

Goddarda, J., Tavakolib, M., Wilson, J.O.S., (2005). "*Determinants of Profitability in European Manufacturing and Services: Evidence from a Dynamic Panel Model*", Applied Financial Economics, Issue 15, pp. 1269–1282.

Gombola M.J., Ketz J.E., (1983). "*Financial Ratio Patterns in Retail and Manufacturing Organizations*, Financial Management, pp. 45-56.

Karacaer, S., Kapusuzoğlu, A., (2008). "*An Analysis of the Effect of Financial Ratios on Financial Situation of Turkish Enterprises Resulting from their Annual Operations*", International Research Journal of Finance and Economics, Issue 19, pp. 139-150.

Kiracı, M., (2009). "*Stok Yönetimi ve Karlılık İlişkisinin Finansal Oranlar aracılığıyla İncelenmesi: İMKB İmalat Sektöründe Bir Arastırma*", ODTÜ Gelisme Dergisi, Sayı: 36, pp. 161-195.

Kolias, G.D., Dimelis, S.B., Filios, V.P., (2011). "*An Empirical Analysis of Inventory Turnover Behaviour In Greek Retail Sector: 2000–2005*", International Journal of Production Economics, Volume 133, Issue 1, pp. 143–153.

Kotler. P. (2000). "*Marketing Management: Editing the New Millennium*". 10th. Edition, New York: Prentice Hall.

Külter, B., Demirgüneş, K., (2007). "*Perakendeci Firmalarda Karlılığı Etkileyen Değişkenler: Hisse Senetleri İMKB'de İşlem Gören Perakendeci Firmalar Üzerinde Ampirik Bir Çalışma*", Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, Cilt 16, Sayı 1, pp. 445-460.

Matsumoto, K., Shivaswamy, M., Hoban, J.P.Jr., (1995). "*Security Analysts' Views of the Financial Ratios of Manufacturers and Retailers*", Financial Practice and Education, pp. 44-55.

Phillips, M.D., Volker, J.X., Anderson, S.J., (2008). "*A Behavioral Comparison of Financial Ratios for Different Size Privately-Held Retail and Service Businesses*", Journal of Behavioral Studies in Business, Vol.1, No.1, pp. 5-12.

Quayyum, S.T., (2012). "*Relationship Between Working Capital Management and Profitability in Context of Manufacturing Industries in Bangladesh*", International Journal of Business and Management, Vol. 7, No. 1, pp. 58-69.

Turkish Competition Authority, (2012). Türkiye Hızlı Tüketim Ürünleri Perakendeciliği Sektör İncelemesi Nihai Raporu.

Analyzing The Working Capital Structure And Profitability Of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index

69