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EFFECTS OF INTERNATIONAL FINANCIAL REPORTING STANDARDS APPLICATION ON FINANCIAL RATIOS IN TURKEY

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ABSTRACT

Public companies and listed companies in Turkey have started to apply International Accounting/Financial Reporting Standards since 2005. Use of international accounting standards has led to changes in classification, valuation and disclosure in the financial statements. In this study, the significance of change in financial ratios has been tested for national standard applications and international standard applications. In the analysis 15 financial ratios have been calculated for the same 84 companies and analysed for 6-years period when national standards were in use and for 6-years period when international standards were in use. As a result of the analysis significant relation has been found return on equity, return on total assets, total assets/equity, total liabilities/equity, total liabilities/total assets ratios.

Keywords: *IFRS, IAS, Financial Ratios, Financial Structure.*

TÜRKİYE'DE ULUSLARARASI FİNANSAL RAPORLAMA STANDARTLARI UYGULAMASININ FİNANSAL ORANLARA ETKİLERİNİN ANALİZİ

ÖZET

Türkiye'de halka açık işletmeler ve borsada işlem gören işletmeler, 2005 yılından itibaren Uluslararası Muhasebe/Finansal Raporlama Standartlarını uygulamaya başlamıştır. Uluslararası muhasebe standartlarının kullanımı finansal tablolarda sınıflama, değerleme ve açıklamaya yönelik değişikliklere neden olmuştur. Ulusal standart uygulamaları ile uluslararası standart uygulamalarının finansal oranlardaki değişiminin anlamlılığı test edilmiştir. Analizde 15 finansal oran, aynı 84 işletme için, ulusal standartların kullanıldığı 6 yıllık dönem ve uluslararası standartların uygulandığı 6 yıllık dönem için hesaplanarak analize tabi tutulmuştur. Analiz sonucunda özsermaye karlılığı, aktif karlılığı, toplam varlıklar/özsermaye, toplam borçlar/özsermaye, toplam borçlar/varlıklar (karlılık oranları ve kaldıraç oranları) oranları için anlamlı bir ilişki bulunmuştur.

Anahtar Kelimeler: *UMS, UFRS, Finansal Oran, Finansal Yapı.*

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1. Introduction

Reflection of similar transactions and events in a different way in different country applications causes different activity results. Therefore in order to open up their markets to international participation and make them attractive and preferable for investors many countries do necessary legal regulations for international compliance in accounting applications. Like many EU member countries, public companies and listed companies in Turkey have started to apply International Accounting/Financial Reporting Standards since 2005, too. Although mandatory application date was year 2005, public companies and listed businesses have been allowed to use International Financial Reporting Standards in their 2003 and 2004 financial tables.

The only authority which has general acceptance in preparation and publishing of accounting standards that are autonomous at international level is International Accounting Standards Board (IASB) which has a headquarters in London – UK. IASB's task is to present to public and develop easy to understand, high quality only accounting standards for general purpose financial tables. There exist 13 IFRS, 28 IAS presented to public by IASB (IASB, 2013).

2. Accounting Applications in Turkey

The accounting system in Turkey comprises of Tax Procedural Law, Turkish Code of Commerce, Ministry of Finance regulations and Public Supervision Accounting and Audit Standards Institution. The businesses whose issued capital market instruments are traded on stock exchange, intermediary institutions, portfolio companies are additionally subject to regulations of Capital Markets Board of Turkey.

Tax Procedural Law has elaborated on books that taxpayers should keep, purpose of these books and valuation principles related to calculation of tax base; it has authorized Ministry of Finance in determination of procedures and principles related to accounting and it has stated that Turkish Code of Commerce's provisions about commercial books are valid. Purpose of regulations is about calculation of tax base. The accounting tradition in Turkey has been formed by Tax Procedural Law numbered 213 which was enacted in 1961 for long years and therefore "tax accounting" concept has formed.

The "Accounting System Application General Communique" issued by Ministry of Finance has brought in an uniform accounting that encompasses the whole country (Bilginoglu, 1996). It has been stated that uniform accounting plan targets "Adequate and correct transfer of accounting information to the people in decision making position, comparison of different enterprises and different periods of the same enterprise, that accounts in financial tables have the same meaning for everyone, that it can be understood through establishment of accounting terms uniformity, establishment of confidence relation between enterprises and authorities" (Official Gazette of Republic of Turkey, 1992). Because the issued communiqué includes names of the accounts to be used, their processing, financial tables and their material contents and principles and rules related to them it has formed the legal basis of accounting process (Bilginoglu, 1996).

The Public Supervision Accounting and Audit Standards Institution (Decree Law About Organization and Duties of Public Supervision Accounting and Audit Standards Institution, KHK/660) has been established in 2011 to replace Turkish Accounting Standards Board. The institution has been authorized to establish and publish Turkish Accounting Standards that are in accordance with international standards, to facilitate application uniformity, required reliability and quality in independent audit, to determine audit standards, authorize independent auditors and audit institutions and inspect their activities and to perform public surveillance in the field of independent audit.

3. Development of International Accounting in Turkey

With the Communiqué Serie: XI, No:25 which was published in Official Gazette of Republic of Turkey dated 15 November 2003 and numbered 25290 , for the enterprises whose capital market instruments are traded on stock exchange Capital Markets Board has put into use the first legal regulation that is in accordance with International Accounting / Financial Reporting Standards in Turkey. This communiqué is in the form of translation of IAS/IFRS. Enterprises subject to Capital Market Board have complied with predications of this communiqué in their first interim financial tables which were ending after 1/1/2005. Some companies which desired to do so have started to apply Turkish Accounting Standards / Turkish Financial Reporting Standards (TMS/TFRS) that is in accordance with IAS/IFRS, staring at 12/31/2003 or starting from annual fiscal year or interim fiscal year ending thereafter.

With the Communiqué Serie: XI, No: 29 (Communique on Rules Related to Financial Reporting in Capital Markets) in 2008 the Capital Markets Board has left duty of issuing standards in accordance with International Accounting Standards to Turkish Accounting Standards Board. With the communiqué it has been stated that enterprises would apply International Accounting/ Financial Reporting Standards as in the form accepted by European Union and that there would be footnotes explaining that financial tables were prepared in accordance with IAS/IFRS as in the form accepted by European Union. Within this scope, it has been stated that TMS/TFRS which was issued by Turkish Accounting Standards Board and not against the adopted standards will be predicated upon.

Turkish Accounting Standards Board has been established by Capital Markets Law (Turkish Accounting Standards Board has been established by Annex-1 article added to Capital Markets Law numbered 2499 on 12.18.1999 with number 4487 and it has started its operation after it is published in Official Gazette numbered 24726 on 04.14.2002) numbered 2499 to facilitate accordance with international generally accepted accounting principles and standards, to facilitate comparability of financial information and to publish accounting standards. Turkish Accounting Standards Board has published Turkish Accounting Standards set. Accounting Standards set comprises of Conceptual Framework, Turkish Accounting Standards, Turkish Financial Reporting Standards and interpretations. The set is a translation of International Financial Reporting Standards set which was published by International Accounting Standards Board. There are 12 TMS, 29 TMS published by the Board (Public Supervision, Accounting and Audit Standards Institution, 2012).

By Decree Law Numbered 660 which was issued on 2nd November 2011 the Public Oversight Accounting and Auditing Standards Authority (KGM) has been established. After establishment of Public Oversight Accounting and Auditing Standards Authority duties and authorities of Turkish Accounting Standards Board have been terminated. All types of assets, liabilities and receivables, records in print of electronic format and other documents as well as cash and similar items of Turkish Accounting Standards Board have been transferred to this Institution.

At present followings have been applying standards issued by Turkish Accounting Standards Board:

- Enterprises subject to Capital Market Regulation
- Those subject to Banking Regulation and Supervision Agency
- Insurance and Re-Insurance Companies and Retirement Companies

There is no legal barrier for other enterprises to apply these standards. However, complexity of standards and deficiencies of enterprises in this matter prevent standards' being applicable for all enterprises.

Public companies and banks being in the first place the enterprises which have accountability liability to public have been making reporting in accordance with these standards. But complex structure of IFRS and the fact that SMEs which do not have the accountability liability to public do not have to make reporting in accordance with IFRS have limited the usage of these standards.

In order to simplify complex structure of IAS/IFRS and for enterprises which do not have the liability of accountability to public International Accounting Standards Board has published on 07.09.2009 SME Financial Reporting Standard. In Turkey, Turkish Financial Reporting Standard for SMEs has been published in Official Gazette dated 10.1.2010 Numbered 27746 (Order No:208), as well. The new Turkish Code of Commerce (Numbered 6102) is planned to be applied from in the future.

4. Prior Studies on Financial Statement Effects of Adoption IAS/IFRS

Lantto et al. (2009) investigate the impact of IFRS adoption on key financial ratios. The results show that the adoption of IFRS changes the magnitudes of the key accounting ratios of Finnish companies by considerably increasing the profitability ratios and gearing ratio moderately, and considerably decreasing the price to earnings ratio and equity and quick ratios slightly. The adoption of fair value accounting rules and stricter requirements concerning certain accounting issues are the reasons for the changes observed in accounting figures and financial ratios.

Lainez et al. (2000) seek to ascertain, on an empirical basis, whether the existence of diversity in accounting principles has significant consequences for the interpretation of financial reporting at an international level and, therefore, for the decisions which may be taken on the basis of the conclusions drawn from an analysis of such information. To that end, they have examined the financial statements of a sample of Spanish listed companies and reformulated them using the GAAPs of other countries so as to understand how financial ratios derived from the Spanish GAAP would be affected as the basis of financial statement changes from Spain to other countries or by diverse national GAAPs. They have found important differences in the situation of companies (liquidity, solvency, indebtedness and profitability) under different accounting principles. Consequently, accounting diversity can be considered as an important barrier for the international comparability of financial reporting.

In the study made by Dumontier et al. (1998) it has been researched why enterprises in Switzerland use IAS/IFRS discretionally. In 133 public companies it has been researched despite the fact that national accounting practices are simpler and there is a room for maneuver why international accounting standards which require more explanations and are harder than Swiss Accounting Standards are used. As a result of the research it has been found that there is a positive relation between IAS/IFRS use and size of the enterprise, its internationalization, its being listed on a stock exchange, reputation of the auditor and distribution of the shares; and there is no relation between leverage, profitability, capital intensity. It has been concluded that enterprises which comply with IAS/IFRS are large, international, less capital intensive and have more distributed shareholder structure.

Goodwin et al. (2008) have tried to identify IFRS's effect on accounting and accounting quality in Australian enterprises. By benefiting from financial tables prepared in accordance with Australia Generally Accepted Accounting Principles and financial tables prepared in accordance with IFRS of the 1065 listed enterprises effect of IFRS on financial tables and ratios have been determined. As a result of the study it has been found that use of IFRS increases the leverage rate. No evidence has been found to support that stock return and book value with respect to IFRS are higher than those of with respect to national standards. However, it has been found that there are changes related to share based payment, intangible assets, provisions, accounting of value decrease values and there is a relation between accounting of goodwill and market value. No evidence has been found however regarding IFRS's improving of accounting information quality in Australian enterprises.

Celik et al. (2007) aim to analyse how IFRS has impact on financial statements and ratios when compared to domestic legislations on Turkey. In this study they aim to analyse how IFRS has impact on financial statements and ratios when compared to domestic legislations. In order to see the impact, financial statements of 43 firms were obtained and 12 different financial ratios were calculated. Findings can be summarized as follows; The Long Term Debt Ratio, Debt-equity Ratio, Fixed Assets Equity Ratio of Domestic legislation based financial statements are significantly different when compared to IFRS based financial statement ratios.

5. Research Methods, Design and Data

5.1. Research Methods and Design

The purpose of the present paper is to investigate whether there are changes in financial ratios after conversion from DAS to IFRS. Therefore, analyse the differences between financial ratios calculated before and after conversion from DAS to IFRS and test the statistical significances of the differences.

I chose four different key economic dimensions of a firm (i.e. liquidity, profitability, capital structure, operating) to investigate the impact of IFRS adopting on accounting numbers. The Liquidity ratios analysed are current ratio, quick ratio. Profitability ratios analysed are return on equity, return on fixed assets, return on total assets, pretax ıncome margin. Capital structure ratios analysed are total assets/equity, total liabilities/equity, total liabilities/total assets, ınterest cover. Operating ratio analysed are operating margin, sales/ınventory, sales/receivables, sales/total assets, sales/working cap.

In the analysis Paired Sample t Test has been used. Difference of financial ratios has been researched in the periods when 2 different accounting applications have been used.

5.2. Data

Enterprises trading on Istanbul Stock Exchange have prepared their financial tables between 1997-2003 in accordance with "Communiqué on Principles and Rules Related to Financial Tables and Reports in Capital Markets" (communiqué with Serie: XI, No:1) which was issued by Capital Markets Board.

In 2003 "Communiqué About Accounting Standards in Capital Markets" (Communiqué with Serie:XI, No:25) which in accordance with International Financial Reporting Standards has been issued. The communiqué that is in accordance with IFRS has been made mandatory to be applied starting from first interim financial tables that end after 01.01.2005. However, enterprises that wish to do so have been allowed to apply the communiqué which is in accordance with IFRS starting at the date of 12.31.2003 or starting from annual or interim statement period that end thereafter. With the Communiqué on Rules Related to Financial Reporting in Capital Markets Serie: XI No: 29 that was issued in 2008 it has been stated that the standards which will be predicated on in preparation of financial tables will be predicated on TMS/TFRS that are in accordance with IAS/IFRS which was published by Turkish Accounting Standards Board.

Among the enterprises subject to Istanbul Stock Exchange those who wished to so have applied IFRS in 2003 and 2004. Therefore in 2003 and 2004 both application of national accounting and application of IFRS have been permitted. Therefore those years have been excluded from analysis scope. This way all the enterprises have been subjected to analysis for 6 years period (1997-2002) when "Communiqué About Principles and Rules Related to Financial Tables and Reports in Capital Markets" that was issued by Capital Markets Board was in use and for 6 years period (2005-2010) when International Financial Reporting Standards was in use.

Within the scope of the study 15 financial ratios between 1997-2003 and 2005-2010 of companies trading on Istanbul Stock Exchange 100 have been calculated for each financial year. Banking sector has been excluded from the research.

Table 1 presents summary statistics for fifteen financial ratios. The descriptive statistics presented in Table 1 show that the ratios are not normally distributed. Significant skewness and kurtosis clearly indicate that the data are non-normal. Prior research also reports that financial ratios are non-normal (Lantto et al. 2009).

Table 1: Descriptive Statistics of Financial Ratios

Panel A: Financial Ratios Calculated Under DAS

	Skewness	Kurtosis	SD	Minimum	Maximum	Rank	Mean	Median
Current Ratio	2,63	10,52	1,08	0,38	7,30	6,92	1,78	1,53
Quick Ratio	3,75	18,37	1,04	0,16	7,29	7,13	1,31	1,03
Return on Equity	0,43	0,42	12,48	-11,13	51,14	62,26	15,75	16,25
Return on Fix. Assets	7,67	60,81	192,57	-59,71	1.571,62	1.631,32	49,13	18,15
Return on T. Assets	-1,03	5,60	11,18	-42,83	33,47	76,30	8,39	6,64
Pretax Income Margin	6,14	40,86	233,93	-57,70	1.725,46	1.783,16	55,34	7,81
Total Assets/Equity	2,34	6,76	1,83	0,56	10,87	10,31	2,71	2,15
T.Liabilities/Equity	2,34	7,09	1,78	-0,45	9,87	10,31	1,69	1,15
T.Liabilities/T.Assets	-0,07	-0,64	0,23	0,06	1,05	0,99	0,53	0,55
Interest Cover	-7,28	54,97	1.322,99	-9.997,33	1.626,51	11.623,84	-137,67	1,31
Operating Margin	-0,71	6,84	18,42	-65,80	76,10	141,89	11,12	10,82
Sales/Inventory	7,85	61,71	960,47	1,92	7.640,16	7.638,24	147,18	9,11
Sales/Receivables	7,88	63,27	51,07	0,26	421,39	421,14	13,76	6,05
Sales/Total Assets	8,05	65,20	12,88	0,02	106,54	106,52	2,98	1,13
Sales/Working Cap	6,98	54,87	55,18	-95,01	434,43	529,44	9,08	3,94

Panel B: Financial Ratios Calculated Under IFRS/IAS

	Skewness	Kurtosis	SD	Minimum	Maximum	Rank	Mean	Median
Current Ratio	3,68	14,87	2,46	0,58	15,41	14,83	2,30	1,51
Quick Ratio	4,00	21,05	1,41	0,23	10,41	10,19	1,45	1,09
Return on Equity	-0,46	5,07	15,05	-54,63	56,16	110,78	11,43	11,13
Return on Fix. Assets	2,22	8,53	25,46	-51,33	136,47	187,80	15,19	9,59
Return on T. Assets	1,67	7,92	10,29	-25,75	50,37	76,12	6,26	4,54
Pretax Income Margin	4,93	35,21	48,06	-105,25	371,26	476,51	17,35	6,05

Table 1 continues

Total Assets/Equity	2,98	11,14	1,54	1,03	9,88	8,86	2,42	2,04
T.Liabilities/Equity	2,90	10,55	1,43	0,03	8,08	8,05	1,32	0,90
T.Liabilities/T.Assets	-0,05	-0,30	0,21	0,02	1,00	0,98	0,46	0,46
Interest Cover	0,28	30,57	153,09	-864,00	915,48	1.779,48	15,91	3,97
Operating Margin	7,19	61,48	62,12	-125,26	539,17	664,43	14,81	5,82
Sales/Inventory	4,83	25,40	51,84	0,20	354,63	354,43	22,59	8,04
Sales/Receivables	6,16	43,26	25,20	0,02	204,55	204,53	11,17	5,63
Sales/Total Assets	3,45	14,58	1,21	0,01	7,80	7,79	1,10	0,79
Sales/Working Cap	2,02	23,45	22,94	-103,92	145,15	249,07	5,92	3,28

Panel C: Differences Between Ratios Calculated Under DAS and IFRS/IAS

	Skewness	Kurtosis	SD	Minimum	Maximum	Rank	Mean	Median
Current Ratio	1,81	10,28	1,81	-5,23	9,49	14,72	0,32	0,20
Quick Ratio	2,13	13,64	1,75	-5,48	9,64	15,12	0,28	0,09
Return on Equity	-0,99	2,68	15,94	-69,64	24,29	93,93	-6,17	-3,98
Return on Fix. Assets	-7,69	61,40	191,86	-1.563,15	72,17	1.635,32	-36,63	-6,01
Return on T. Assets	0,78	4,32	12,83	-31,11	51,22	82,33	-3,41	-1,72
Pretax Income Margin	-5,65	36,87	240,96	-1.716,39	356,88	2.073,26	-39,09	-0,59
Total Assets/Equity	-0,44	4,12	1,84	-6,72	6,06	12,78	-0,40	-0,17
T.Liabilities/Equity	-0,58	3,57	1,76	-6,72	5,28	11,99	-0,45	-0,17
T.Liabilities/T.Assets	0,35	0,94	0,27	-0,72	0,68	1,40	-0,07	-0,09
Interest Cover	-5,17	28,47	263,42	-1.625,87	264,44	1.890,31	-44,41	2,44
Operating Margin	6,77	51,43	64,56	-77,75	492,31	570,06	3,92	-2,97
Sales/Inventory	-7,97	63,65	948,13	-7.638,16	183,57	7.821,73	-122,42	-1,16
Sales/Receivables	-7,56	60,33	52,50	-419,17	60,51	479,68	-5,00	-0,56
Sales/Total Assets	-8,11	66,16	12,88	-106,27	3,73	110,00	-1,92	-0,31
Sales/Working Cap	-6,94	54,37	55,64	-432,28	97,08	529,36	-4,22	-0,47

6. Results

In order to research whether there are differences between financial ratios of the period when IFRS was not in use (1997-2002) and financial ratios of period when IFRS was in use paired sample test has been conducted. In the study 12 different financial ratios were calculated. These ratios are, current ratio, quick ratio, return on equity, return on fixed assets, return on total assets, pretax ıncome margin, total assets/equity, total liabilities/equity, total liabilities/ total assets, ınterest cover, operating margin, sales/ınventory, sales/receivables, sales/total assets, sales/working cap.

In order to compare previous period and next period whether or not averages come from the same main mass has been tested. Statistical tables are as follows.

Table 2: Paired Samples Statistics

		Mean	n	Std. Deviation	Std. Error Mean
Pair 1	DAS Current Ratio	1,78277	65	1,083355	0,134374
	IFRS Current Ratio	2,09231	65	1,614343	0,200235
Pair 2	DAS Quick Ratio	1,31359	64	1,047356	0,130919
	IFRS Quick Ratio	1,59625	64	1,532853	0,191607
Pair 3	DAS Return on Equity	15,75348	66	12,57349	1,54769
	IFRS Return on Equity	9,5853	66	12,399253	1,526242
Pair 4	DAS Return on Fixed Assets	49,13318	66	194,046781	23,885508
	IFRS Return on Fixed Assets	11,815	66	16,928579	2,083764
Pair 5	DAS Return on Total Assets	8,38818	66	11,263173	1,386401
	IRS Return on Total Assets	4,97848	66	6,269462	0,771717
Pair 6	DAS Pretax Income Margin	55,33697	66	235,723793	29,015593
	IFRS Pretax Income Margin	16,24394	66	48,828441	6,010366
Pair 7	DAS Total Assets/Equity	2,71197	66	1,845494	0,227165
	IFRS Total Assets/Equity	2,31212	66	1,37112	0,168773
Pair 8	DAS Total Liabilities/Equity	1,68818	66	1,789309	0,220249
	IFRS Total Liabilities/Equity	1,19409	66	1,24861	0,153693
Pair 9	DAS Total Liabilities/Total Assets	0,53061	66	0,227798	0,02804
	IFRS Total Liabilities/Total Assets	0,4497	66	0,191833	0,023613
Pair 10	DAS Interest Cover	39,46306	49	232,304507	33,186358
	IFRS Interest Cover	-4,94449	49	131,180849	18,740121

Table 2 continues

Pair 11	DAS Operating Margin	11,12138	65	18,567847	2,303058
	IFRS Operating Margin	15,03938	65	67,038576	8,315112
Pair 12	DAS Sales/Inventory	147,17742	62	968,307594	122,975187
	IFRS Sales/Inventory	20,36903	62	51,158954	6,497194
Pair 13	DAS Sales/Receivables	13,76106	66	51,463689	6,334742
	IFRS Sales/Receivables	8,76606	66	14,363027	1,767966
Pair 14	DAS Sales/Total Assets	2,98076	66	12,980898	1,597838
	IFRS Sales/Total Assets	1,02924	66	1,019178	0,125452
Pair 15	DAS Sales/Working Cap	9,08045	66	55,603617	6,844332
	IFRS Sales/Working Cap	4,85864	66	6,788101	0,835558

Table 3: Paired Samples Correlations

		n	Correlation	Sig.
Pair 1	DAS Current Ratio & IFRS Current Ratio	65	0,116	0,359
Pair 2	DAS Quick Ratio & IFRS Quick Ratio	64	0,108	0,395
Pair 3	DAS Return on Equity & IFRS Return on Equity	66	0,173	0,166
Pair 4	DAS Return on Fixed Assets & IFRS Return on Fixed Assets	66	0,004	0,972
Pair 5	DAS Return on Total Assets & IRS Return on Total Assets	66	-0,007	0,953
Pair 6	DAS Pretax Income Margin & IFRS Pretax Income Margin	66	-0,044	0,727
Pair 7	DAS Total Assets/Equity & IFRS Total Assets/Equity	66	0,363	0,003
Pair 8	DAS Total Liabilities/Equity & IFRS Total Liabilities/Equity	66	0,377	0,002
Pair 9	DAS Total Liabilities/Total Assets & IFRS Total Liabilities/T.Assets	66	0,244	0,049
Pair 10	DAS Interest Cover & IFRS Interest Cover	49	0,006	0,97
Pair 11	DAS Operating Margin & IFRS Operating Margin	65	0,243	0,051
Pair 12	DAS Sales/Inventory & IFRS Sales/Inventory	62	-0,023	0,858
Pair 13	DAS Sales/Receivables & IFRS Sales/Receivables	66	0,038	0,76
Pair 14	DAS Sales/Total Assets & IFRS Sales/Total Assets	66	-0,056	0,657
Pair 15	DAS Sales/Working Cap & IFRS Sales/Working Cap	66	-0,008	0,949

The correlation of financial ratios between 2 periods has been tested. At 99% confidence level Total Assets/Equity and Total Liabilities/Equity; at 95% confidence level Total Liabilities/Total Assets; at 90% confidence level Operating Margin has been found a significant correlation.

Table 4: Paired Samples t Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	SD	Std. Error Mean	Lower	Upper			
Pair 1	DAS Current Ratio IFRS Current Ratio	-0,31	1,84	0,23	-0,76	0,15	-1,36	64	0,18
Pair 2	DAS Quick Ratio IFRS Quick Ratio	-0,28	1,76	0,22	-0,72	0,16	-1,29	63	0,20
Pair 3	DAS Return on Equity IFRS Return on Equity	6,17	16,06	1,98	2,22	10,12	3,12	65	0,00
Pair 4	DAS Return on Fixed Assets IFRS Return on Fixed Assets	37,32	194,71	23,97	-10,55	85,18	1,56	65	0,12
Pair 5	DAS Return on Total Assets IRS Return on Total Assets	3,41	12,93	1,59	0,23	6,59	2,14	65	0,04
Pair 6	DAS Pretax Income Margin IFRS Pretax Income Margin	39,09	242,81	29,89	-20,60	98,78	1,31	65	0,20
Pair 7	DAS Total Assets/Equity IFRS Total Assets/Equity	0,40	1,86	0,23	-0,06	0,86	1,75	65	0,09
Pair 8	DAS Total Liabilities/Equity IFRS Total Liabilities/Equity	0,49	1,75	0,22	0,06	0,93	2,29	65	0,03
Pair 9	DAS Total Liabilities/Total Assets IFRS Total Liabilities/ Total Assets	0,08	0,26	0,03	0,02	0,14	2,53	65	0,01

Table 4 continues

Pair 10	DAS Interest Cover IFRS Interest Cover	44,41	266,15	38,02	-32,04	120,85	1,17	48	0,25
Pair 11	DAS Operating Margin IFRS Operating Margin	-3,92	65,07	8,07	-20,04	12,20	-0,49	64	0,63
Pair 12	DAS Sales/Inventory IFRS Sales/Inventory	126,81	970,84	123,30	-119,74	373,36	1,03	61	0,31
Pair 13	DAS Sales/Receivables IFRS Sales/Receivables	5,00	52,90	6,51	-8,01	18,00	0,77	65	0,45
Pair 14	DAS Sales/Total Assets IFRS Sales/Total Assets	1,95	13,08	1,61	-1,26	5,17	1,21	65	0,23
Pair 15	DAS Sales/Working Cap IFRS Sales/Working Cap	4,22	56,07	6,90	-9,56	18,01	0,61	65	0,54

In Table 4 significance of difference between averages has been tested. At 99% confidence level in Return on Equity; at 95% confidence level in Return on Total Assets, Total Liabilities/Equity and Total Liabilities/Total Assets; at 90% confidence level in Total Assets/Equity ratios significant difference has been found.

Table 5: Averages and Significance

Financial Ratios	DAS	IFRS	Difference	t	df	Sig. (2-tailed)
Current Ratio	1,783	2,092	-0,310	-1,358	64	0,179
Quick Ratio	1,314	1,596	-0,283	-1,285	63	0,204
Return on Equity	15,753	9,585	6,168	3,120	65	0,003
Return on Fixed Assets	49,133	11,815	37,318	1,557	65	0,124
Return on Total Assets	8,388	4,978	3,410	2,142	65	0,036
Pretax Income Margin	55,337	16,244	39,093	1,308	65	0,195
Total Assets/Equity	2,712	2,312	0,400	1,750	65	0,085
Total Liabilities/Equity	1,688	1,194	0,494	2,289	65	0,025
Total Liabilities/Total Assets	0,531	0,450	0,081	2,532	65	0,014
Interest Cover	39,463	-4,944	44,408	1,168	48	0,249
Operating Margin	11,121	15,039	-3,918	-0,485	64	0,629
Sales/Inventory	147,177	20,369	126,808	1,028	61	0,308
Sales/Receivables	13,761	8,766	4,995	0,767	65	0,446
Sales/Total Assets	2,981	1,029	1,952	1,212	65	0,230
Sales/Working Cap	9,080	4,859	4,222	0,612	65	0,543

In Table averages and their significance are presented for the period when DAS was in use and when IFRS was in use. At 99% confidence level, while Return on Equity was 15,75 when National Standards (DAS) were in use it was 9,58 when IFRS was in use. At 95% confidence level, while Return on Total Assets was 8,39 when National Standards were in use it was 4,98 when IFRS was in use. While Total Liabilities/Equity ratio was 1,69 when National Standards were in use it was 1,19 when IFRS was in use. While Total Liabilities/Total Assets ratio was 0,53 when National Standards were in use it was 0,44 when IFRS was in use. At 90% confidence level while Total Assets/Equity was 2,71 when National Standards (DAS) were in use it was 2,31 when IFRS was in use.

7. Summary and Conclusions

With the use of a common language in accounting, together with EU countries since 2005 use of international accounting standards in public companies has been made mandatory in Turkey, as well. In Turkey with the change of Turkish Code of Commerce starting from July 1st 2012 all the enterprises will mandatorily apply International Accounting Standards.

Enterprises that have no accountability liability to public are planned to apply simplified SME Financial Reporting Standard that was published by International Accounting Standards Board instead of full set IAS/IFRS.

In this period when all Turkish enterprises are in transition period to international accounting standards, the effect of IAS/IFRS use on changes in financial ratios of companies trading on Istanbul Stock Exchange has been researched. Within the scope of study, financial ratios of the companies that are trading on Istanbul Stock Exchange and subject to Capital Markets Law have been calculated for the period 1997-2002 when national standards were in use and for the period 2005-2010 when mandatory IAS/IFRS was in use.

When the previous studies are analysed, in transition period financial ratios where both national and international standards were used were compared and reasons of differences were stated. In this study however, 6 years period before the standard change and 6 years period after mandatory application have been compared. Change in the accounting standards has caused change in financial ratios, as well. Therefore significance of change in standards and change in financial ratios has been researched.

In order to test the relation between financial ratios calculated in two different periods Paired Sample T Test has been made. Within the scope of the research 15 financial ratios have been calculated. As a result of analysis, significant difference has been found in Return on Equity, Return on Total Assets, Total Liabilities/Equity, Total Liabilities/Total Assets and Total Assets/Equity ratios. Under IAS/IFRS, these significant ratios decreased.

The return on equity ratio measures the return to both common and preferred stocked holders; return on total assets measures the firm's ability to utilize its assets that generate the profits; Total Liabilities/Equity (debt ratio) measures the percentage of the total assets that creditors provide. Also the debt ratio indicated the firm's long term paying ability. It helps to determine how well creditors are protecting in case of insolvency. Total Liabilities/Total Assets indicated the percentage of assets financed by creditors.

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