THE EARNINGS PER SHARE AND INVENTORY TURNOVER RATIOS IN THE GLOBAL FINANCIAL CRISIS: A COMPARATIVE STUDY FOR FOOD AND TEXTILE SECTORS IN ISTANBUL STOCK EXCHANGE

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- Abstract -

The ongoing financial crisis in the global markets, which originated in the US subprime mortgage segment (real estate) and quickly spread into other market segments and countries, is already seen today as one of the biggest financial crises in history. Underlying the subprime crisis had essentially two interrelated factors; the boom in US real estate markets, and the high liquidity demand in the global financial markets. The later period was, in turn, fuelled by the significant easing of US monetary policy over an extended period of time and by the additional boost to global liquidity as many emerging markets had tied their exchange rates to the US dollar and therefore had to match the expansive US monetary policy. The occurrence of market crash or financial crisis is possible key factor of earning per share (EPS) and inventory turnover ratios (ITR) inefficiency. This paper empirically investigates that the effects of the current financial crisis on the efficiency -earning per share (EPS) and inventory turnover ratios- listed food and textile companies in Istanbul Stock Exchange (ISE). The EPS and inventory turnover ratios, applying the multivariate test statistics for the two sub-periods of pre-crisis and the crisis time. The article proceeds in the following manner. Firstly, the study will explain main reasons of global financial crises. Secondly the study will analyze all EPS and inventory turnover ratios changing are of related companies. Finally, that will be argued for adjustment of related ratios of sectors.

Key Words: *Financial Crises, Earnings Per Share, Inventory Turnover Ratio*

JEL Classification: G - Financial Economics; G01 - Financial Crises

1. The Global Financial Crisis: A Preliminary Evaluation

1.1 Reasons and Impacts of Crisis

Underlying the subprime crisis were essentially two interrelated factors: on the one hand, the boom in US real estate markets, and on the other hand, the high liquidity in the global financial markets. The latter was, in turn, fuelled by the significant easing of US monetary policy over an extended period of time and by the additional boost to global liquidity as many emerging markets had tied

their exchange rates to the US dollar and therefore had to match the expansive US monetary policy (Eren et al., 2009: 4). Today's disastrous financial and economic problems had their origins in a steep contraction in credit, full effect of which started to be felt in August 2007. It has since metastasized into what is now arguably the direst financial and economic crisis the world has experienced since the 1930s. However, the roots of the crisis can be traced further back, to the deflation of the high-tech bubble of a decade ago. When the stock markets began a steep decline in 2000 and the global economy started to slide into a recession, the United States Federal Reserve and other central banks sharply lowered interest rates to limit the economic damage. The sustained lower interest rates fuelled a mortgage-borrowing boom, while also encouraging millions of homeowners to refinance their existing mortgages. A financial innovation that separated mortgage origination from lending decisions added to the mix, with half a million independent American mortgage brokers being paid commissions to prospect for homebuyers on behalf of mortgage lenders, with those commissions based solely on the number of clients they brought to the lenders. The ability of the customer to repay the mortgage was of no concern, because of yet another innovation.

The current market turbulence, it is useful to recall, was preceded by a period of unusually benign macroeconomic conditions marked by strong growth and low inflation. This translated in equally benign conditions for the global banking system, with low default rates, high profitability, strong capital ratios, rapid growth in business volumes and strong innovations. While these factors combined meant that the global banking system had entered the crisis in a position of unusual strength, the favorable environment may also have contributed to the crisis in that it led to overconfidence and dulled the risk consciousness on the part of at least some actors (Ackermann, 2008:330).

The financial crisis is having repercussions on economies throughout the world and is likely to be the most severe global crisis since the Great Depression of the 1930s.The crisis represents a major shake-up in the way global business is conducted. No sector has been spared from the turmoil, which has already caused a substantial slowdown in most industrialized countries. The financial crisis has gripped each and every business sector. Governments around the world are trying to contain the crisis and its effects. Stock markets are down more than 40% from their recent highs. Investment banks have collapsed, rescue packages have been drawn up involving more than a trillion US dollars, and interest rates have been cut around the world. Leading indicators of global economic activity, such as shipping rates, are declining. The International Monetary Fund has recently projected world growth to fall to just 0.5% in 2009, its lowest rate in 60 years.

1. 2 The Crisis' Effects on Financial Ratios

The occurrence of market crash or financial crisis is possible key factor of share and other financial ratios inefficiency. So that this paper is examining how the global financial crisis has affected Turkish food and textile sectors. For this purpose, we study 38 publicly traded firms from food and textile sectors. We discuss to effects of the current financial crisis on the efficiency of the earnings per share (EPS) and inventory turnover ratios (ITR) of listed textile and food companies. Turkey experienced a currency crisis in 1994, a bank crisis in 2001. While struggling with the negative effects of this crisis's, global crisis hit Turkey's economy, which are infected by

"pure" contagion through (1) foreign trade channels, (2) real exchange rates, (3) real interest rates, (4) contracting domestic demand. So that, we developed Hypothesis 1

H1: There is very important difference in earnings per share and inventory turnover ratios of listed textile and food companies for pre-crisis and crisis timing.

The effects of financial crises had argued various scholar studies, financial crises have alternatively been attributed to monetary policy (e.g., Aghion et al., 2001), coordination problems among investors (e.g., Chang and Velasco, 1999), the activity of large traders and speculators (e.g., Brown et al., 2000; Kaminsky et al., 2003, 2004; Kyle and Xiong, 2001; Kim and Wei, 2002; Kodres and Pritsker, 2002; Corsetti et al., 2004), herding (e.g., Chari and Kehoe, 2004), the interaction of stock and foreign exchange markets (Corsetti et al., 1999).

2. Analysis and Empirical Results

2.1 Study's Sample

Our sample consists of 38 manufacturing firms whose shares are actively traded in Istanbul Stock Exchange. The source of the financial data is Istanbul Stock Exchange's Online Database These companies were selected from textile and food industries and have following distribution to industries. The listed companies are seen appendix 1.

Textile Industry - 17 companies

Food Industry - 21 companies

Textile industry together with ready-made garment industry has a very important position in Turkish economy. Textile industry accounts for 25-30 percent of Turkish exports, employs about two millions workers, 21 percent of the industrial labor force. Food industry is another locomotive industry in the Turkish economy, however, more domestic-oriented and heterogeneous than textile industry.

2.2 Methodology and Data Analysis

The analysis is based on the two sub- period data from 1Jan. 2007-31 Dec. 2007 (pre-crisis) with 1 Jan. 2008- 31 Dec. 2008 (crisis time). Since financial ratios calculated from yearly income statement and balance sheet tables are comparable. Testing for hypothesis used to Paired-Samples T test. This test utilize to compare two differ time. For example pre crisis and after crisis. While the first period (pre-crisis) is come into existence for 12 months (pre-crisis), second period (crisis timing) is consisting of 12 months. The Table 1 reflects results of paired samples test for companies.

Table 1: Compare of Means Food Sector' Earnings per Share (FEPS)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	FEPS1	-,01651695	21	,165769523	,037067192
	FEPS2	-,02024705	21	,220120925	,049220535

According to Table 1, the mean of earnings per share of food industry is -,01651695 at pre crisis. On other hand mean of crisis time is -0,02024705. Due to mean of pre-crisis isn't bigger than mean of crisis period. A same result gathers from table 2. Table 2 reflects paired samples correlations between FEPS pre-crisis and FEPS crisis time. In significance level 0,05; Sig. value of Pair 1 is ,022. This results show up a very important difference pre crisis and crisis time. Because, significance level of Pair 1 is more little than 0,05.

Table 2: Samples Correlations Pre Crisis and Crisis During (EPS of Food Companies)

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	FEPS1 & FEPS2	21	,557	,022

Table 3: Paired Differences Food Industry

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	FEPS1 FEPS2	-,036764000	,223290601	,049929296	-,141267218	,067739218	-,736	19	,0471

The relationship in table 2 can be provided from table 3' Sig. column.

Table 4: Compare of Means Textile Sector' Earnings Per Share (TEPS)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TEPS1	-,08965500	17	,224325948	,059953632
	TEPS2	-,16158786	17	,325654425	,087034806

The mean of earnings per share of textile sector stay in table 4. Second period (crisis time) values (-,16158786) are very negative than first period values (-,08965500). Because of, the global financial crisis had effect Turkish Textile companies' earning per share. This result can be seen Table 5 and Table 6 for α= 0,05 levels. Significance level of textile sector is more little than α= 0,05 levels. On account of , there is a very important difference between pre-crisis and crisis during in Turkish Textile Companies' EPS.

Table 5: Samples Correlations Pre Crisis and Crisis During (EPS of Textile Companies)

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	TEPS1 & TEPS2	17	,569	,0194

Table 6: Paired Differences Textile Industry

Paired Samples Test									
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	TEPS1 TEPS2	,071932857	,320088921	,085547362	-,112880983	,256746698	,841	13	,0416

When we look up to inventory turnover ratios (ITR) of food and textile companies which following results can be provided. Table 7, table 8 and table 9 reflect paired score of food companies' inventory turnover ratios. Industry average had reduced 4,9752 to 4,2790. This result defines a negative effect of crisis on Turkish Food Sector' inventory turnover ratio.

Table 7: Compare of Means Food Sector' Inventory Turnover Ratios (ITR)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	FITR1	4,9752	21	4,27788	,93351
	FITR2	4,2790	21	6,67031	1,45558

This effect can be seen on table 8' significance column. Significance level of Pair 1is more small than 0,05. Due to the global financial crisis has affect Turkish Food Companies' ITR since starting of crisis. Same results can be seen table 9' sig. column.

Table 8: Samples Correlations Pre Crisis and Crisis During (ITR of Food Companies)

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	FITR1 & FITR2	21	,886	,000

Table 9: Paired Differences Food Industry (Inventory Turnover Ratio)

Paired Samples Test									
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	FITR1 FITR2	-,30381	3,49797	,76332	-1,89607	1,28845	-,398	20	,695

Approximate results handing for textile companies, according to Table 10, Table 11 and Table 12. Table 10 reflects inventory turnover ratios of textile companies. Inventory turnover ratio was 4,0894 before crisis. But after starting crisis, this ratio had decreased to 4,0100. Consequently, inventory turnover of textile companies to be effected by global financial crisis. This results ratify our main hypothesis

1. Textile and food companies had been effected financial turmoil. Table 11 and Table 12 show to us same consequents.

Table 10: Compare of Means Textile Sector' Inventory Turnover Ratios (ITR)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TITR1	4,0894	17	2,58096	,62597
	TITR2	4,0100	17	3,92919	,95297

Table 11: Samples Correlations Pre Crisis and Crisis During (ITR of Textile Companies)

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	TITR1 & TITR2	17	,516	,0217

Table 12: Paired Differences Textile Industry (Inventory Turnover Ratio)

Paired Samples Test									
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	TITR1 TITR2	,05941	3,96169	,96085	-1,97750	2,09632	,062	16	,0051

Finally, we discussed which has sector been more effected by crisis. The EPS from point of view, the food sector had reduced approximately 46% (-0,1651695/-0,2024705). On other hand, the textile sector had reduced approximately 56% (-,08965500/-,16158786). So that textile sector is more sensitive than food sector. Same results can provided from ITRs of textile and food sector.

3. CONSLUSION

Globalization of the world economies makes them sensitive to the fluctuations to the other economies. There were many internal and external causes of global financial crisis. Global crisis has resulted in the huge devaluations in the crisis countries' currencies that led to the increased competitiveness power of those countries against remaining countries. Turkey did not devalue its currency to preserve its competitive position in its export markets. Turkey's competitive position may have weakened. In the other hand, global crisis has resulted in the significant amount of foreign capital outflows in Turkey. We are interested in the effects of the global economics crisis on the financial dimensions of the companies. Therefore, we should look whether pre-crisis and crisis during months are paired in terms of the earnings per share and inventory turnover ratios. Summarizing the results of the paired T test analysis of pre- and çrisis period for textile and food industry, the textile companies experienced sharp decline in EPS and ITR ratio. Food industry is likely affected in the same way as textile industry. However, food industry is more heterogeneous and this heterogeneity may blur the effects of the global crisis on the financial dimensions. In addition, food industry is more domestic-market oriented. Our study shows that EPS and ITR of export-oriented textile industry of Turkey declined in crisis months, however, more small change in more domestic-oriented industries, such as food industry is detected. This result suggests that the effects of the global crisis are rather felt through the weakened competitiveness power in international markets, which had down-pulling effects on prices hence the profitability margins as well as EPS and ITR.

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Appendix 1: Listed Food and Textile Companies (The Origin Language)

Turkish Food Companies	**Turkish Textile Companies**
ALTINYAĞ	AKAL TEKSTİL
ANADOLU EFES	AKIN TEKSTİL
BANVİT	AKSU İPLİK
COCA COLA İÇECEK	ALTINYILDIZ
ERSU GIDA	ARSAN TEKSTİL
FRİGO PAK GIDA	BOSSA
KENT GIDA	DERİMOD
KEREVİTAŞ GIDA	DESA DERİ
KONFRUT GIDA	GEDİZ İPLİK
KRİSTAL KOLA	İDAŞ
MERKO GIDA	KARSU TEKSTİL
PENGUEN GIDA	KORDSA
PINAR ET VE UN	LÜKS KADİFE
PINAR SU	MENDERES TEKSTİL
PINAR SÜT	METEMTEKS
ŞEKER PİLİÇ	SÖKTAŞ
T.TUBORG	YATAŞ
TAT KONSERVE	YÜNSA
TUKAŞ	
ÜLKER BİSKÜVİ	
VANET	