PROFITABILITY ANALYSIS OF STATE-OWNED AND PRIVATELY-OWNED BANKS DURING THE PERIOD 2001-2010 IN TURKEY[1]

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Abstract

Turkish banking sector has had a swift recovery after the 2001 crisis that was experienced in Turkey and there has been observed a great increase at assets size of the sector, credits, deposits and net profit. 169 billion TL assets size in 2001 increased to 961 billion TL in 2010. Whereas the net profit was -11 billion TL in 2001, it increased to 21 billion TL in 2010. Using panel regression analysis, this study seeks to determine whether there have been significant differences between the ratios acquired from financial statements of 3 public banks and 11 private banks operating in Turkish banking sector between 2001 and 2010.

According to this, it was analyzed whether profitability ratios of the banks that represent a balanced panel feature can be explained in terms of other ratios as a dependent variable or not. Profitability ratios from the dependent variables have been taken into consideration as Net Profit (Loss) / Total Assets (KAR1), Net Profit (Loss) / Shareholder's Equity (KAR2), Pre-Tax Profit / Total Assets (KAR3). The purpose of this study is to look for an answer to the question "Is there a significant difference between the years 2001 and 2010 for State-Owned and Privately Owned Banks in terms of ratios that explain dependent variables?" Moreover, there has also been revealed whether explanatory variables have differentiated or not.

Consequently, according to the balanced panel regression results that have been performed in state-owned banks, ratios that can explain those ratios at 1% significance level when we perform regression analysis to KAR1, KAR2 and KAR3 ratios separately at a fixed effect are: Total Operating Income / Total Assets (FR1) and (Personnel Expense + Severance payment) / Total Assets (FR3) ratios. When this same analysis has been performed to the private sector banks, there has been analyzed that ratios of Shareholder's Equity / (Deposits + Non-Deposit Resources) (SY3) and Total Deposits / Total assets (BY1) along with the explanatory variables of the state-owned banks can be explained at 1% significance level. Stata 11software was used for the analysis, effect models Hausman test for the panel have been performed. F-test of all models that have been set are significant and explanation rates have shown change.

Keywords: *Profitability, stated owned banks, privately owned banks*
JEL Classification: *G21, C 33*

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1. Introduction

The Banking sector acts as the life blood of modern trade and commerce to provide them with a major source of finance. This increasing phenomenon of globalization has made the concept of efficiency more important both for the non-financial and financial institutions and banks are a part of them. Banks largely depend on competitive marketing strategy that determines their success and growth (Gul, et al., 2011; 62). An understanding of determinants of their profitability is essential and crucial to the stability of the economy.

The banking industry in general has experienced some profound changes in recent decades, as innovations in technology and the inexorable forces driving globalization continue to create both opportunities for growth and challenges for banking managers to remain profitable in this increasingly competitive environment. Most of the studies concerning bank profitability to date, have employed different linear models to estimate the impact of various factors that could be significant in terms of explaining profits (Scott and Arias, 2011; 209).

Most of the studies in the existing literature on the intensity of competition in Turkish banking carried out using cross-section or panel data concludes that Turkish banking industry is characterized with the oligopolistic market structure. However, competition process and profitability are dynamic process and static measures of concentration cannot represent competition intensity adequately. Competitive dynamics may be better captured by undertaking time series analysis of corporate rates of returns using the well-established methodology of 'the persistence of profitability' (PP) studies in industrial organization (Kaplan and Çelik, 2008, 158).

Turkish banking sector has had a swift recovery after the 2001 crisis that was experienced in Turkey and there has been observed a great increase at assets size of the sector, credits, deposits and net profit. 169 billion TL assets size in 2001 increased to 961 billion TL in 2010. Whereas the net profit was -11 billion TL in 2001, it increased to 21 billion TL in 2010.

Using panel regression analysis, this study seeks to determine whether there have been significant differences between the ratios acquired from financial statements of 3 public banks and 11 private banks operating in Turkish banking sector between 2001 and 2010.

2. Literature

Miller and Noulas (1997) observed the factors that affected the profitability of banks in USA for the period of 1985 to 1990 in which the size of the banks was found to be negatively related with profitability. The negative relationship of the size indicates the diseconomies of scale.

Ali, Akhtar and Ahmed (2011) reported the significant role of capital adequacy ratio, operating efficiency, asset management and GDP that are influencing the profitability of commercial banks in Pakistan while studying the impact of bank-specific and macro-economic factors on profitability.

Guru et al. (2002) investigate the determinants of bank profitability in Malaysia, using a sample of 17 commercial banks during the 1986 to 1995 period. The profitability determinants are divided into two main categories, namely, the internal determinants (liquidity, capital adequacy and expenses

management) and the external determinants (ownership, firm size, and economic conditions). Their findings reveal that efficient expenses management is one of the most significant factors explaining high bank profitability. Among the macro indicators, a high interest ratio is associated with low bank profitability and inflation is found to have a positive effect on bank performance (Sufian, 2011; 45-46).

Chantapong (2005) investigates the performance of domestic and foreign banks in Thailand during the period 1995-2000. All banks are found to have reduced their credit exposure during the crisis years and have gradually improved their profitability during the post-crisis years. The result indicates that foreign bank profitability is higher than the average profitability of domestic banks. This is in spite of the gap between foreign and domestic bank profitability having been closed in the post-crisis period, implying that the financial restructuring program has yielded some positive results.

Sufian and Habibullah (2009) have investigated the determinants of profitability of Chinese banking sector during the post-reform period of 2000-2005. They find that liquidity, credit risk, and capitalization have positive impacts on the state-owned commercial banks' profitability, while the impact of overhead cost is negative. They suggest that the joint stock commercial banks with higher credit risk tend to be more profitable, while higher cost result in lower joint stock commercial banks' profitability levels. They find that size and cost result in the lower profitability of city commercial banks' while the more diversified and relatively better capitalized city commercial banks exhibit higher profitability levels. The impact of economic growth is positive, while the growth of Money supple is negatively related to the stated-owned commercial banks' and city commercial banks' profitability levels.

3. Model and Results

Panel data have both cross-sectional and time series dimensions, the application of regression models to fit econometric models are more complex than those for simple cross-sectional data sets. A panel is described as balanced if there is an observation for every unit of observation for every time period, and as unbalanced if some observations are missing. In this study we use strongly panel data sets.

Using panel regression analysis, this study seeks to determine whether there have been significant differences between the ratios acquired from financial statements of 3 public banks and 11 private banks operating in Turkish banking sector between 2001 and 2010.

The main goal of this study is to determine whether or not profitability ratios of the banks that represent a balanced panel feature can be explained in terms of other ratios as a dependent variable.

For this purpose we obtain a data like panel structure. Also, we analyzed panel regression with Stata v.11. Profitability ratios from the dependent variables have been taken into consideration as Net Profit (Loss) / Total Assets (KAR1), Net Profit (Loss) / Shareholder's Equity (KAR2), Pre-Tax Profit / Total Assets (KAR3).

The purpose of this carried out study is to look for an answer to the question of "Is there a significant difference between the years 2001 and 2010 for State-Owned and Privately Owned Banks in terms of ratios that explain dependent variables?" Moreover, there has also been revealed whether explanatory variables have differentiated or not.

Table I: Result of Regression for KAR1 Ratio in State Owned Bank

Variables	Coef.	T	P Value
Sy1	3.706836	0.99	0.339
Sy2	-3.340845	-0.92	0.370
Sy3	-.1651119	-0.33	0.748
By1	.1182352	1.27	0.224
By2	-.0343174	-0.23	0.819
Ak1	.020983	0.93	0.369
Ak2	-.0440968	-0.37	0.714
Ak3	-3.104382	-0.84	0.415
Ly1	.0025578	0.09	0.932
Fr1	**.8129747**	**6.89**	**0.000**
Fr2	.0003692	0.01	0.989
Fr3	**-3.835773**	**-3.36**	**0.004**
_Constant	-10.41417	-1.27	0.223
R sq : 0. 8315		F (12,15) :	17.82
		Prob F :	0.000

Results of KAR2 and KAR2 are same. Therefore FR1 and FR3 are statistically significant variables for this analysis. Also we use Hausman Test for select the effect test. Result of Hausman test accepted fixed effect.

Table II: Result of Regression for KAR1 Ratio in Privately Owned Bank

Variables	Coef.	t	P Value
Sy1	-4.264638	-0.97	0.337
Sy2	4.833697	1.09	0.277
Sy3	**-.2584305**	**-6.25**	**0.000**
By1	**-.1810681**	**-3.13**	**0.002**
By2	**-.1353467**	**-2.08**	**0.040**
Ak1	.0047316	0.15	0.879
Ak2	.0177515	0.50	0.620
Ak3	4.946827	1.12	0.265
Ly1	-.0311484	-1.13	0.262
Fr1	**.5679263**	**5.74**	**0.000**
Fr2	-.0070835	-1.21	0.230
Fr3	**-5.042221**	**-9.60**	**0.000**
_Constant	**16.7643**	**3.20**	**0.002**
R sq : 0. 8582		F (12,81) :	64.56
		Prob F :	0.000

Table II represents results of regression analysis for KAR1. Therefore SY3, BY1, BY2, FR1, FR3 and constant are statistically significant also. These results show that results of privately owned banks differ from state owned banks' results. Using the Hausman Test for select the effect test is fixed effect. KAR3 results are the same.

4. Conclusion

As a result, according to the balanced panel regression results that have been performed in state-owned banks, ratios that can explain those ratios at 1% significance level when we perform regression analysis to KAR1, KAR2 and KAR3 ratios separately at a fixed effect are: Total Operating Income / Total Assets (FR1) and (Personnel Expense + Severance payment) / Total Assets (FR3) ratios.

When this same analysis has been performed to the private sector banks, there has been analyzed that ratios of Shareholder's Equity / (Deposits + Non-Deposit Resources) (SY3) and Total Deposits / Total assets (BY1) along with the explanatory variables of the state-owned banks can be explained at 1% significance level.

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