An Analysis on the Performance of the Participation Banks in Turkey

Aydin Karapinar[1] & Ismail Cagri Dogan[2]

[1] Faculty of Economics and Administrative Sciences, Gazi University, Ankara, TURKEY

[2] Business School, Yildirim Beyazit University, Ankara, TURKEY

Correspondence: Aydin Karapinar, Faculty of Economics and Administrative Sciences, Gazi University, Ankara, Turkey Tel: 90-312-213-6060. E-mail: aydinkarapinar@gmail.com

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Abstract

Interest-free banking practice in Turkey commenced in 1983 and was integrated within the framework Banking Regulation and Supervision Agency (BRSA-BDDK) in 2005. These banks name's had been changed as participation banks. With these changes, participation banks were treated with the same legal regulations as commercial banks; therefore, it is worth investigating their comparative performance under the new conditions. To do this, the CAMELS approach was employed for the comparison of the performances and determination of the differences between the two types of banking practices.

Our analysis shows that, compared to the regular banks, the participation banks performed well with respect to their sensitivity to the market risks. On the other hand, they appear to have done poorer in terms of liquidity and management within the period of 2006-2011. Taking into consideration the pros and cons, the participation banks in Turkey may be suggested as effective as the commercial banks.

Keywords: Interest-Free banks, Participation banks, Banking, Islamic banks, Performance analysis, CAMELS analysis, Turkish banking system

1. Introduction

Interest-free banking emerged as a novel idea about fifty years ago and became an economic tool in the 1970s. The first example was implemented in Dubai in 1975 (Ab-rahim, Kadri and İsmail, 2013). The assets of these banks in circulation as of 2010 reached 826 million dollars (Wahidudin, Subramaniam and Kamaluddin, 2012). This type of banking have been successful in attracting those customers unwilling to engage in interest banking into the financial system thereby making an important contribution to the economy by activating idle sources. Interest-free banking has gradually been common not only in the Middle East Countries but also in many other countries like USA and UK and they are doing well.

Interest-free banking began in Turkey in 1983 through a legislative decree under the name of the so-called Private Finance Houses (Özel Finans Kurumları, ÖFK). At the beginning, the prime purpose appeared to be facilitating a flow of capital from the oil-rich Middle Eastern Countries into the country. However as a result of a code that took effect in 1999, these corporates were included into the scope of the banking regulations. After another change in 2005, Private Finance Houses became 'Participation Banks' (Özsoy, 2009, p.22-23).

Nowadays, banking sector has grown into a competitive market where foreign banks as well as the domestic ones trade. Meanwhile, in the prevailing stage of economic stability, the financial activities of participation banks appear to grow more soundly (Özgür, 2008, p.173). After all these developments, the financial data from the participation banks have become as subject of performances analysis by relevant institutions. Although there are a number of techniques for the analysis of the abovementioned data, the CAMELS analysis developed in USA in the 1970s appears to be the most used one in commercial banks. In this study, CAMELS analysis was applied to participation banks. In the analysis the six criteria of Capital, Assets, Management, Earnings, Liquidity and Sensitivity are taken as the basis of analysis (Sezgin, 2003, p.26).

In the first part of this study, a general description of participation banking is given. The second part is devoted to the structure of the CAMELS analysis. In the third part, CAMELS analysis is applied to participation banks and in the final part, the data obtained are commented on.

2. Participation Banks and Interest-Free Banking

Participation banking is a banking model that stems from a non-usury approach and makes use of any banking activity in conformity with this approach; that is, funding on the basis of profit-and-loss-sharing and lending through trade, partnership and leasing methods.

In the literature, Islamic banks are defined as "those institutions founded to carry out banking and investment business under the principles laid and/or affirmed by the religion of Islam" (Schacht, 1982, p.9). As is evident from the definition, these banks must work in any kind of activity under the Islamic principles. The first emergence of banking activities occurred in the Abbasid era; but the Islamic banking in its modern sense is rather new. The idea of Islamic banking as an economic tool was implemented only in 1950's (Karapınar, 2003, p.13).

From 1960 onward, interest-free banking entered into the global agenda and in Turkey. The first practice of the system, a state-run enterprise namely, DESİYAB (State Industrial and Workers Investment Bank) was put into effect in 1975. This first enterprise was equipped with a legislative choice of switching to ordinary banking practice when desired and somehow, this institution gave up interest-free banking practice in the due course, so the first trial was not successful (Karapınar, 2003, p.14-15). The foundation of a successful and lasting interest-free banking was laid in 1983 under the name of Private Finance Houses. Some legislative amendments were made in 1999 and 2001. The final code relating to these corporates came into effect at the beginning of 2006. In accordance with this legislation, the name of the banks became Participation Banks. As of November 2013, there are four active participation banks with 873 branches all together.

3. Literature Review

In a study by Mokhtar, Abdullah and Alhabshi (2007), the activities of all the full-fledged Islamic banks in Malaysia were investigated from an economic and Islamic perspective. The technique of Data Envelopment Analysis (DEA) was the method of choice. The authors reported that in the period of 1997-2003, the commercial activities of the banks were in a constant increase but, they were not as successful as commercial banks in this respect.

Another work by Sarker (2008) focused on the validity of the CAMELS standards put forward by Basel Committee on Banking Supervision. This study was the first of its kind trying to evaluate the comments and propositions of Islamic clerics and Islamic banking experts as well as his own. In that study, auditors were given six criteria of CAMELS plus an Islamic criteria to evaluate the Islamic financial institutions which meant the author proposed to add a seventh point of view, an Islamic one, to the existing six criteria of CAMELS. Sarker pointed out that addition of the seventh criteria -S to denote 'Shariah'- would create a new paradigm which would strengthen the trust of the investors.

Dash and Das (2009) made a CAMELS analysis of the domestic and foreign banks in India and came to the conclusion that private/foreign banks performed better than their domestic and state-run counterparts. The better performance of private/foreign banks was based on the two criteria, management and earnings. The authors pointed out that for the public banks to compete with the private/foreign counterparts, it was imperative for them to adapt themselves to the ever changing market conditions. With regard to this remark, the public banks should change their landing policies for the betterment of their assets and earnings. The authors also pointed out that these banks should keep a record of yearly income of their customers to decrease their risks stemming from the poor income of the borrowers.

Viverita (2010) aimed at analyzing the Islamic banks in Indonesia in the period 2004-2008. He also used the data within his reach to compare the performances of Islamic and commercial banks. He concluded that Islamic banks increased their efficiencies in terms of cost and revenues which indicated that, despite their limited experience, Islamic banks were capable of producing more value and more profit. The paper also asserts that compared to commercial banks, Islamic banks could and do have higher earnings and higher rate of profit.

Ika and Norhayati (2011) reported a study which investigates the financial performances of Indonesian commercial banks before and after the enforcement of the Islamic banking code of the country and compares it with that of the Islamic banks. The data analyzed covers the period 2000-2007. This study shows no differences between the Islamic and the commercial banks in all terms excluding the liquidity and Islamic banks appear to have done better in terms of liquidity.

Laghari, Jalbani and Rani (2011) reported a study of CAMELS analysis on National Banks of Pakistan (NBP) and Muslim Commerce Bank (MCB). Various data collected from NBP and MCB were analyzed in terms of a number of criteria. The study showed that, in terms of liquidity position, these banks suffer from a low asset ratio and higher debts. The liquidity measurement was done on the basis of three ratios, namely, assets/cash assets, deposit/debt and

return of investment. The study showed that the in both NBP and MCB, deposits were in a rise while the investments were in a decrease.

Akther, Raza, Oragzab and Akram (2011) also worked in the Pakistani banking system to compare the efficiency of Islamic banks to those of commercial counterparts. The authors worked on the bases of nine financial ratios; defined on profitability, risk of liquidity and credit risk. The analysis showed no meaningful difference between the commercial and Interest-free banks.

Zeitun (2012) reported a study in the Gulf Collaboration Council (GCC) countries within the period 2002-2009. The study focused on issues like foreign ownership, banking parameters and macroeconomic factors and made use of a cross sectional time series (panel data) for analysis. In total, 38 commercial and 13 Islamic banks were investigated. The results showed that equity capital was a determining factor for only the profitability of the commercial banks. In addition it showed that the cost of earnings had an adverse effect. In a general sense, a rise in GNP appeared to have a positive impact on the profitability of the banks and high inflation appeared to have an adverse relationship with profitability.

Kouser and Saba (2012) made a comparison between commercial, Islamic and mixed-type banks using a CAMELS analysis. The authors considered the CAMELS analysis as a simple and suitable tool for the evaluation of the management-wise and financial performances of the banks. The study showed that, compared to the other banks, the Islamic banks had a more sufficient capital and better assets quality. What is more, Islamic banks appeard appeared also to have a better management quality. Interestingly, the interest-free branch of mixed-type banks performed better in terms of profits, compared to interest-free and commercial banks.

Wahududin, Subramaniam and Kamaluddin (2012) worked on Islamic banks scattered all around Asia and compared them with the commercial banks to find out the factors influencing the profitability. In this study various banks were analyzed in terms of short term fund management, source management, liquidity, macroeconomic situation. The equity capital was found to be important in the profitability of the two kinds of banks. In addition, operational costs and the cost of management decisions were found to be closely related to profitability.

Ab-Rahim, Kadri and Ismail (2013) reported on their investigations on the full-fledged Islamic banks in Malaysia from the viewpoints of assets, deposits and total funding covering the working period. Data Envelopment Analysis was used to show that the efficient allocation of sources was the prime factor to determine cost efficiency of the domestic and foreign-owned Islamic banks in Malaysia. In addition, foreign-owned Islamic banks were found to be more efficient than the domestic ones.

4. Performance Analysis

4.1 Method

The technique of CAMELS we employed in this work was devised by USA banking authorities for the *in-situ* supervision of the banks (Kaya, 2001). The initials CAMELS stand for Capital, Assets, Management, Earnings, Liquidity and Sensitivity (Sarker, 2008, p.6). In fact, there used to be only five initials up to 1997 and the last initial standing for Sensitivity was added in that year as a complementary.

The data on which the CAMELS analysis is to be based on are collected from mutually independent sources to insure the credibility. The sources could be balanced sheet, financial sources, nation-wide and global macroeconomic figures, budget and cash-flow projections, a banking authority, etc. (Babar and Zeb, 2011, p.4).

In the USA, the Federal Deposit Insurance Corporation Improvement Act of 1991 made it imperative that a CAMELS analysis should be done on the data of any bank. Broadly speaking, the CAMELS analysis was devised to reflect the overall financial stand, the extent of law-obedience, management quality and internal supervision system of the banks. It is a system of rating developed by the central banking authorities to detect the overall financial stand of commercial banks from a distance. Today CAMELS analysis in its final shape is used by international rating institutions as well as national supervision authorities. The international rating institutions make assessments on the banks companies and financial institutions and countries in terms of domestic and foreign currencies and also short term and long term responsibilities (Sakarya. 2010, p.13).

The original CAMEL version began in the early 1990s. In that system, the supervisory authorities used to make use of on-site investigations and also data analysis relating to the bank to assign a risk rating. This rating was made known to the bank management so as to facilitate a course of action to evade a possible risk (Sezgin, 2003).

The final version, CAMELS was completed at the end of 1996 and put into effect in early 1997. This final version makes use of many ratios one set of which are given in table 1. In case the bank being rated is an interest-free bank, the interest is replaced by the so called 'profit share'.

Table 1. CAMELS Component (Kaya, 2001)

	Short Name	Variables	Weight		Relationship
	C	**CAPITAL**	**Overall Weight: 0.20**		
1	CASR	Capital Adequacy Standard Ratio	0.40		+
2	ETL	Equity /Total Liabilities	0.25		+
3	EL	Equity /Loans	0.25		+
4	PCE	Paid-up Capital /Equity	0.10		+
	A	**ASSET**	**Overall Weight: 0.20**		
5	LTA	Loans /Total Assets	0.20		+
6	IATA	Immovable Assets /Total Assets	0.20		-
7	NLGTL	Non-performing Loans (Gross) /Total Loans	0.30		-
8	NLRTL	Non-performing Loans Reserves /Total Loans	0.15		+
9	BATA	Bearing Assets /Total Assets	0.15		+
	M	**MANAGEMENT**	**Overall Weight: 0.10**		
10	NLTL	Non-performing Loans /Total Loans	0.30		-
11	NIPB	Net Income Per Branch	0.20		+
12	NIPE	Net Income Per Employee	0.20		+
13	NITA	Non-interest Income /Total Assets	0.15		-
14	NIINIE	Non-interest Income / Non-interest Expenses	0.15		+
	E	**EARNINGS**	**Overall Weight: 0.15**		
15	ROA	Net Profit /Total Assets	0.20		+
16	ROE	Net Profit /Equity	0.20		+
17	NIINIE	Non-interest Income /Non-interest Expenses	0.15		+
18	TIIBA	Total Interest Income /Bearing Assets	0.15		+
19	TIECL	Total Interest Expenses /Costly Liabilities	0.15		-
20	NIM	Net Interest Margin	0.15		+
	L	**LIQUIDITY**	**Overall Weight: 0.25**		
21	LATA	Liquid Assets /Total Assets	0.30		+
22	LATFL	Liquid Assets /Total Foreign Liabilities	0.25		+
23	DEEQ	Deposits /Equity	0.20		-
24	FMLAFML	Foreign Money Liquid Assets / FM Liabilities	0.25		+
	S	**SENSITIVITY**	**Overall Weight: 0.10**		
25	SPTA	Securities Portfolio /Total Assets	0.25		-
26	BACL	Bearing Assets /Costly Liabilities	0.25		+
27	NICTA	Net Interest Income /Total Assets	0.25		+
28	FCTAFMT	Foreign Currency Total Assets /FM Total Liabilities	0.25		-

4.2 Data

This study covers the analysis of 28 ratios collected from Turkey's participation banks and commercial banks trading in Turkey between 2006 and 2011. The ratios were categorized into six different classes each class being attributed to one of the six criteria of CAMELS analysis. The weighting factors of individual CAMELS criteria for the overall assessment of the performance in each class were shown Table 1. Fourth Column, the set of ratios was assigned a 'weighting factor'. Weighting factors are fractions between 0.1-0.4. The sums of individual weighting factors in classes were always bound to be unity (Table 1, fourth column). Weights inspired by the BRSA data are organized.

The row data were obtained from the annual reports of Banking Regulation and Supervision Agency (BRSA-BDDK), Participation Banks Association of Turkey (PBAS-TKBB) and the Banks Association of Turkey (BAT-TBB) and from the financial reports issued for public by the banks studied. The annual averages of 32 commercial and 4 participation banks were taken.

The first step in the analysis was the estimation of 28 different ratios realized by the participation banks in the period. This set of ratios was called 'attained ratios'. As similar set of ratios were then estimated for the commercial banks and the set was called 'reference ratios'. In the second step, individual ratios relating to participation banks were divided by the corresponding ratio relating to commercial banks and then fractions obtained were multiplied by 100 and the result was called the 'index value'. In cases where the index value is positively proportional to the performance of the participation banks, the relationship was assigned a positive (+) sign; and in cases where this relation was a negative indicator, a negative (-) sign was assigned (Table 1, fifth column).

In the third step, a subtraction operation was carried out between each individual index value and the standard value of 100. If a positive relation was assigned beforehand, the number 100 was subtracted from the index value and vice versa if a negative relation was assigned. The results of the subtraction operation were called 'discrepancy'. If the sign of the discrepancy was the same as the sign assigned to the ratio in consideration, this was regarded as a better performance of the participation banks compared to commercial counterparts; in the case of opposite signs, it was the vice versa. The discrepancy values relating to individual row ratios were multiplied by the weighting factor assigned for that ratio and result was called 'CAMELS value'. Thereby a CAMELS value was obtained for each component ratio and individual CAMELS values within each class were summed to obtain the within-class CAMELS sum.

In the last steps, the so called 'within-class CAMELS sums' were multiplied by the weighting factor of the class concerned to obtain the 'yearly CAMELS value'.

Example:

Short Name	Variables	Relationship	Weight	Participation 2006	Commercial 2006	Index Value	Discrepancy Value	CAMELS Value
LTA	Loans /Total Assets	+	0,20	ABC	KLM	100*(KLM/ABC)=X	X-100=T	T*0,20
IATA	Immovable Assets /Total Assets	-	0,20	DEF	PRS	100*(PRS/DEF)=Y	100-Y =Z	Z*0,20

4.3 Analysis Results

The annual average values of the six CAMELS components are summarized on graphs in figure 1. This figure shows the participation banks value according to commercial banks. (The annual CAMELS values relating to individual component ratios are included in Appendix 1.)

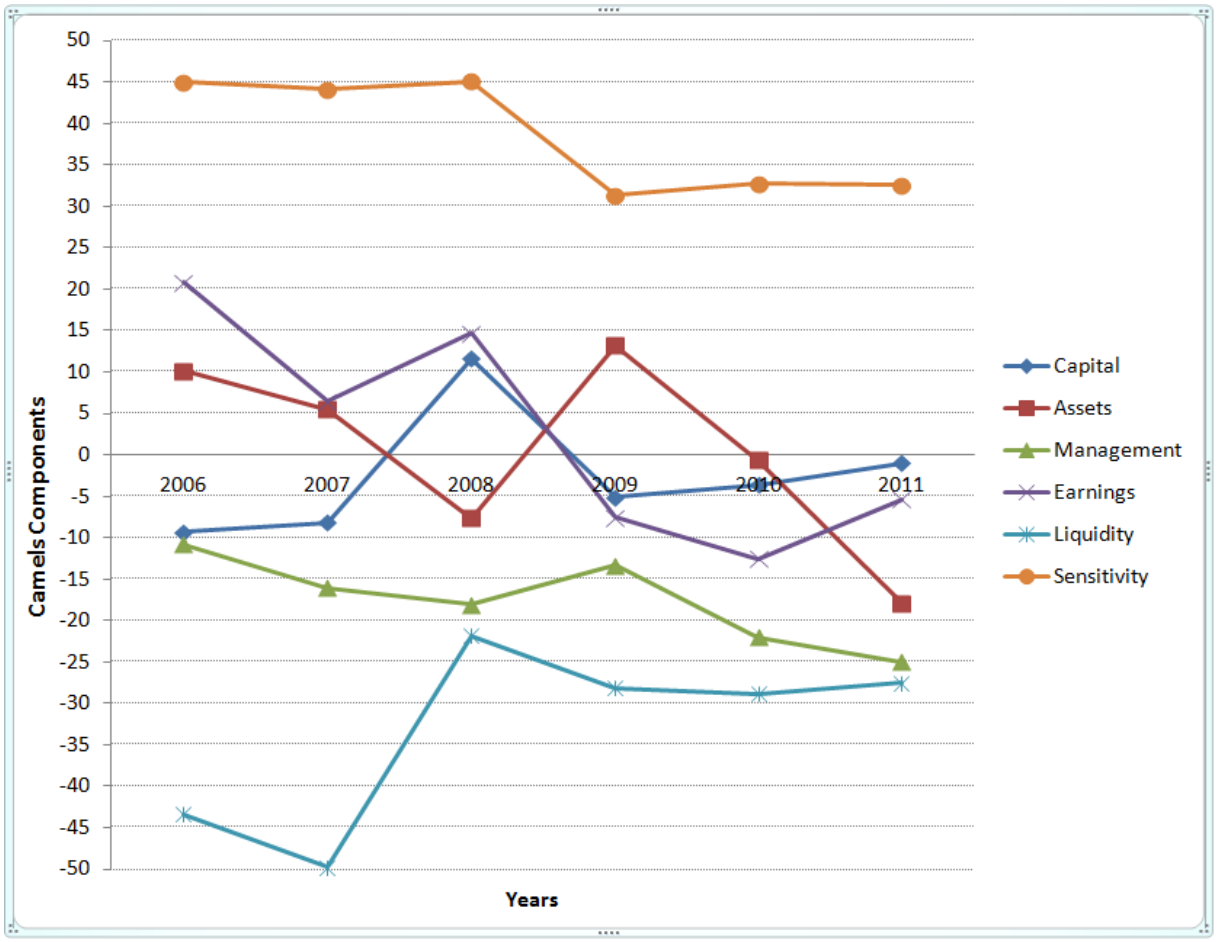

Figure 1. CAMELS Components' Yearly Values (That's figure shows the comparison)

4.3.1 The Performance in Relation to Capital

The average of annual CAMELS values for capital between 2006 and 2011 was found to be -2.60. In the year 2008, the yearly CAMELS value was positive whereas in other years it was negative. The special case in 2008 was attributed to the ETL VE EL components. These two components rose sharply in the year 2008 causing a positive CAMELS value. It so appears that crises in that year had a positive impact on the capital performance of participation banks. It is also worth remarking that in the years 2010 and 2011, the capital component was only slightly negative indicating a relatively reasonable performance.

As far as a comparison between individual ratios is concerned, ETL and PCE appear to be the best ones. These ratios have always been positive in the period studied. Meanwhile the PCE ratio has risen sharply after the year 2007 and the overall improvement is nearly 100 percent.

The CASR ratio has the biggest weighting factor among those contributing to capital assessment and this ratio appears to be the most responsible component for the negative outcome of the CAMELS value relating to capital. The yearly CASR CAMELS value has always been negative the average of six years being -5.17.

Similarly, the EL ratio appears to have taken negative values within the period studied. Although its weighting factor is less than that of CASR, the EL ratio appears to be second to CASR in reducing the CAMELS value of the component, capital. The best value of EL was realized in 2008, namely –0.21. The average of the whole period is -5.82 indicating that EL is the worst component in the capital assessment.

4.3.2 The Performance in Relation to Assets

Among the components with positive values, the set of ratios under the criteria 'assets' appear to be indicative of the worst performance. This component appears to take negative values in 2008, 2010 and 2011, the value in 2010 being only slightly negative; indicating almost equal performances in the years 2006, 2007 and 2009 the assets component was found to be positive. The best performance appears to have been realized in the year 2009 with a

CAMELS value of 13.22. It is also worth pointing out that, on the year by year basis, the assets assessment results in a widely changing CAMELS value.

The most important contribution to the asset component appears to be by LTA ratio; the average CAMELS value being 8.70. On the other hand NLRTL and BATA ratios appear to have always taken negative values. The ratio BATA appear to be less effective in reducing the assets performance, because it has an average value of -0.75, which is so close to zero. The ratio IATA gave a positive CAMELS value in 2006 but switched to negative in 2008. From then on the CAMELS values relating to this ratio appears to have worsened year by year. Somewhat similarly, the ratio NLGTL was found to give negative CAMELS values in all the years but in 2009 and 2010.

4.3.3 The Performance in Relation to Management

The component management for the participation banks appears to be one of the two worst components contributing to their negative assessment. The CAMELS value of the component appears to have worsened year by year except for the year 2009; and the year 2011 the negative contribution is discernable in the CAMELS value of -25.02. The average of this figure is also high at -17.56.

Among the individual ratios contributing to assets performance, the component NIINIE is the only one with the positive average CAMELS value; but it is only slightly positive as far as average of 1.53 is concerned. This ratio have taken a positive value of 7.18 in 2006, but decreased steadily and it also gave negative result in 2010 and 2011.

The component NLTL ratio gives a near-to-zero CAMELS value of -0.56 and in the years 2009 and 2010 it was found to be positive, notwithstanding with other years slightly. The components NIPB NIPE and NITA appear to have remained negative at all times. These three are the prime reason for the overall negative result of the assets assessment.

4.3.4 The Performance in Relation to Earnings

This criteria of CAMELS is second to sensitivity in contributing to the positive performance assessment of the participation banks. The overall CAMELS figure for earnings is 2.75 on the average. Although the average is not so high, the figure shows a wide fluctuation from year to year. It was found to be 20.84 in 2006 and -12.58 in 2010. Interestingly, the figure concerned was positive in the first three years and negative in the last three.

The component earnings comprise six ratios. Broadly speaking, each year, two of these components appear to have taken negative CAMELS values whereas the other four being positive with individual components interchanging in different years. Despite the positive CAMELS value of four components, the overall CAMELS value is not a high positive figure, because the positive individual contributions are not of high figures.

4.3.5 The Performance in Relation to Liquidity

Participation banks in general were found to perform worse than the commercial ones in terms of liquidity. The average CAMELS figure was -33.25 for the liquidity. The worst value (-43.42) was seen in the 2006 and the best (-21.85) in 2008.

Among the four components contributing to liquidity the LATA ratio appears to be most responsible. The average CAMELS value of this component was -11.44 and steadily persisted around this value in each year. Again, with their weighting factors of 0.25, the components LATFL and FMLAFML were also responsible for the poor performance of the participation banks. The average CAMELS values of these components were -9.43 and -9.75 respectively.

The component DEEQ ratio appears not to be as bad as the other three, but this component has also a negative average CAMELS value (-2.63) and it took a positive value (+3.1) only in 2008.

4.3.6 The Performance in Relation to Sensitivity

Sensitivity assessment of the participation banks appears to be taking the highest CAMELS value (best performance) among the six criteria. The average figure for this component is 38.45 and yearly figures never took negative values.

Among the component ratios contributing to good performance in sensitivity, SPTA and FCTAFMT ratios are dominant with the average values of 23.54 and 12.26 respectively. Year by year figures did not fluctuate so much and appear to show little change.

Of the other two components contributing to sensitivity, BACL ratio has taken the value of 1.84 and never reached above 2.33 indicating that it is not as important as the above components. The ratio of NICTA was found to have an average CAMELS of 0.81 and this ratio was negative in 2009 and 2010 (-2.01 and -2.39 respectively).

4.3.7 General Assessment

Our analysis shows that, in the general sense, the participation banks in Turkey performed slightly worse than the commercial counterparts in the period of 2006-2011. However, in the 2008 crisis, the commercial banks appear to have been affected worse than the participation banks. Interestingly, 2008 is the only year in which the participation banks appear to have done better than the commercial banks.

As to the six CAMELS components, the area the participation banks appear to have done worst is the liquidity component. The fact that the liquid assets in the assets structure of the participation banks is of a lower level compared to commercial banks appears to have been the prime factor for the poor assets performance. Furthermore, the ratio of foreign currency liquid assets to foreign liabilities is explicitly lower in participation banks and this could be another significant contribution.

Another component that appears to be problematic with the participation banks is the management quality. The profit per employee figures for the participation banks are lower compared to the commercial banks and this may be an indication of the poor management. In addition, non-premium incomes of the participation banks appear to be lower than the non-interest income of the commercial banks, which is another indication of the poor performance in management. On the other hand participation banks appear to have done better than the commercial ones in terms of sensitivity to market risk. The main reason to this superiority could stem from the fact that the item of securities portfolio has a higher share in total assets however the ratio of foreign currency total assets to foreign liabilities is higher in the participation banks and this another element contributes to their better sensitivity. Broadly speaking, the commercial banks appear to have higher market risks than the participation banks.

Apart from the components mentioned above, the participation banks appear to have done slightly worse in terms of Capital and slightly better in terms of assets and earnings.

5. Conclusion

A CAMELS analysis of participation banks in terms of six components comprising of 28 ratios and comparison with the corresponding figures relating to commercial banks indicates that the two types of banks performed differently from the viewpoint of management, liquidity and sensitivity. Participation banks appear to have done worse in management and liquidity and better in sensitivity.

Our tentative suggestion is that the participation banks investigated must reduce their total of non-performing loans for any significant improvement in the management component. Strategies to increase efficiency per employee and the ratio of liquid assets to total assets could also contribute to improve this component.

Liquidity stands as the major problem of the participation banks investigated. These banks are likely to raise the value of this component if they increased the ratio of liquid assets to assets.

Apparently, for the participation banks, sensitivity to market risks is a more serious issue than it is for commercial counter parts. The fact that in the year 2008, all the sensitivity assessment results of the participation banks are the best for the whole period and better than that of commercial banks appears to be a clear indication that these banks are notably sensitive to risks. The reason resides in the fact that the participation banks trade on tangible assets and promise only a fair share from the earnings realized rather than a fixed interest as the commercial banks do.

It is also worth noting that although the CAMELS values of the capital component of these banks are low, it shows steady improvement in consecutive years. However these improvement earnings actually appear to be in a steady decrease. The overall assets quality for the participation banks does not appear to be so different from the commercial banks and the yearly CAMELS values fluctuate within the large margin. The participation banks could be expected to improve their performance with respect to this component by establishing more intimate knowledge-sharing sessions with their customers.

This study aims to make a comparison between two types of banks and having assessed commercial banks to be ‘better’ than the participation banks may not necessarily mean that the former have done very well. As far as the reliance of a bank’s standing is concerned, we do not have reference CAMELS values to judge whether a bank will be safe or not in the long term future. Even the last CAMELS component, sensitivity, can only give comparative –and not solid- indications about the future of a bank.

This study covers only Turkish banks’ financial information related to a specific period of time. Results may change if the CAMELS analysis is applied to another country or another time period. It should be noted that CAMELS analysis is not only one option to analyze bank’s performance.

It should also be kept in mind that the set of 28 ratios we worked on is by no means the only alternative raw data to work on. A more rigorous assessment may contain components relating, for example to the owners, country and the spectrum of borrowers. It appears that even the banking regulators are yet to develop assessment tools that can possibly foresee the future of a bank.

It will be helpful to make a comparison between development and investment banks (which is another kind of banking system in Turkey) and participation banks to understand deeply the performance of participation banks. However, investigation between Turkish participation banks and interest free banks in another country will be beneficial to policy makers.

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Appendices 1

	Short Name	Variables	Relationship	Weight	2006	2007	2008	2009	2010	2011	Average
	C	**CAPITAL**		**0.20**	**-9.34**	**-8.14**	**11.62**	**-5.1**	**-3.59**	**-1.02**	**-2.60**
1	CASR	Capital Adequacy Standard Ratio	+	0.40	-6.8	-2.86	-3.24	-8.32	-6.02	-3.79	-5.17
2	ETL	Equity /Total Liabilities	+	0.25	1.47	0.59	9.35	2.08	0.53	0.11	2.36
3	EL	Equity /Loans	+	0.25	-8.2	-7.91	-0.21	-7.31	-6.56	-4.7	-5.82
4	PCE	Paid-up Capital /Equity	+	0.10	4.19	2.03	5.72	8.44	8.47	7.36	6.04
	A	**ASSET**		**0.20**	**10.16**	**5.47**	**-7.68**	**13.22**	**-0.67**	**-17.93**	**0.43**
5	LTA	Loans /Total Assets	+	0.20	11.52	9.95	7.69	10.61	7.69	4.74	8.70
6	IATA	Immovable Assets /Total Assets	-	0.20	3.05	2.09	-3.33	-0.03	-7.01	-13.7	-3.16
7	NLGTL	Non-performing Loans (Gross) /Total Loans	-	0.30	-0.06	-0.06	-6.98	6.42	1.93	-4.6	-0.56
8	NLRTL	Non-performing Loans Reserves /Total Loans	+	0.15	-4.29	-5.58	-4.74	-2.96	-2.47	-2.8	-3.81
9	BATA	Bearing Assets /Total Assets	+	0.15	-0.06	-0.93	-0.31	-0.81	-0.82	-1.57	-0.75
	M	**MANAGEMENT**		**0.10**	**-10.82**	**-16.08**	**-18.05**	**-13.38**	**-22.01**	**-25.02**	**-17.56**
10	NLTL	Non-performing Loans /Total Loans	-	0.30	-0.06	-0.06	-6.98	6.42	1.93	-4.6	-0.56
11	NIPB	Net Income Per Branch	+	0.20	-5.25	-5.86	-2.3	-8.03	-8.56	-7.41	-6.24
12	NIPE	Net Income Per Employee	+	0.20	-5.16	-7.01	-3.59	-9.24	-9.92	-8.77	-7.28
13	NITA	Non-interest Income /Total Assets	-	0.15	-7.53	-4.41	-6.5	-4.29	-4.28	-3.07	-5.01
14	NIINIE	Non-interest Income / Non-interest Expenses	+	0.15	7.18	1.25	1.32	1.76	-1.18	-1.18	1.53
	E	**EARNINGS**		**0.15**	**20.84**	**6.42**	**14.65**	**-7.52**	**-12.58**	**-5.34**	**2.75**
15	ROA	Net Profit /Total Assets	+	0.20	6.13	1.87	8.97	-2.47	-4.09	-2.38	1.34
16	ROE	Net Profit /Equity	+	0.20	4.67	1.36	1.1	-3.81	-4.41	-2.45	-0.59
17	NIINIE	Non-interest Income /Non-interest Expenses	+	0.15	7.18	1.25	1.32	1.76	-1.18	-1.18	1.53
18	TIIBA	Total Interest Income /Bearing Assets	+	0.15	-0.9	-1.36	-0.88	0.47	-0.02	0.14	-0.43
19	TIECL	Total Interest Expenses /Costly Liabilities	-	0.15	1.61	2.39	1.77	-2.27	-1.45	0.41	0.41
20	NIM	Net Interest Margin	+	0.15	2.15	0.9	2.37	-1.21	-1.43	0.12	0.48
	L	**LIQUIDITY**		**0.25**	**-43.42**	**-49.75**	**-21.85**	**-28.16**	**-28.84**	**-27.49**	**-33.25**
21	LATA	Liquid Assets /Total Assets	+	0.30	-14.37	-15.2	-9.04	-11.69	-10.07	-8.28	-11.44
22	LATFL	Liquid Assets /Total Foreign Liabilities	+	0.25	-11.88	-12.63	-6.73	-9.56	-8.34	-7.44	-9.43
23	DEEQ	Deposits /Equity	-	0.20	-4.31	-3.68	3.1	-3.24	-3.88	-3.74	-2.63
24	FMLAFML	Foreign Money Liquid Assets / FM Liabilities	+	0.25	-12.86	-18.24	-9.18	-3.66	-6.55	-8.03	-9.75
	S	**SENSITIVITY**		**0.10**	**44.96**	**44.13**	**45.06**	**31.28**	**32.73**	**32.55**	**38.45**
25	SPTA	Securities Portfolio /Total Assets	-	0.25	24.97	24.94	24.92	22.71	22.27	21.45	23.54
26	BACL	Bearing Assets /Costly Liabilities	+	0.25	2.27	2.33	2.15	1.49	1.36	1.45	1.84
27	NICTA	Net Interest Income /Total Assets	+	0.25	3.56	1.5	3.98	-2.01	-2.39	0.2	0.81
28	FCTAFMT	Foreign Money Total Assets /FM Total Liabilities	-	0.25	14.15	15.36	14.01	9.08	11.48	9.45	12.26
		TOTAL			**-4.15**	**-9.21**	**0.22**	**-4.75**	**-8.88**	**-10.71**	**-6.25**