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ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

PERFORMANCE COMPARISON OF PARTICIPATION BANKS AND DEPOSIT BANKS: THE IMPACT OF HIGH DEPOSIT RATES ON PROFITABILITY, LIQUIDITY AND NON-PERFORMING LOANS

KATILIM BANKALARI VE MEVDUAT BANKALARININ PERFORMANS KARŞILAŞTIRMASI: YÜKSEK MEVDUAT FAİZLERİNİN KARLILIK, LİKİDİTE VE TAKİPTEKİ KREDİLERE ETKİSİ

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Abstract

Participation banks and deposit banks operate under fundamentally distinct philosophies. However, the financial literature analyzes whether the different philosophies of participation banks and conventional banks are reflected in practice. Additionally, the hypothesis that participation banks can be an alternative to conventional banking and perform differently during financial crises, high interest rates, epidemics and political crises is also investigated. This research compares the effectiveness of participation banks and deposit banks in Turkey regarding liquidity, non-performing loans, and profitability. For this purpose, T-Test is implemented to the data collected for the period 01.2008-08.2024. In addition, T-Test is performed by limiting the analysis period for the period 05.2020-08.2024, when deposit interest rates increased. Empirical findings show that participation banks have higher liquidity ratios and stronger return on equity ratios than deposit banks during 05.2020-08.2024.

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However, during periods of high deposit rates, deposit banks tend to have higher ratios of non-performing loans. The average ROA of the two types of banks does not show a statistically significant difference.

Keywords: Financial Markets and Institutions, Participation Banks, Deposit Banks.

Jel Classifications: G10, G21, E43.

Öz

Katılım bankaları ve mevduat bankaları teorik olarak farklı felsefelere sahiptir. Ancak finans literatürü katılım bankaları ve konvansiyonel bankaların farklı felsefelerinin uygulamada karşılık bulup bulmadığını analiz eder. Ayrıca, katılım bankalarının finansal krizler, yüksek faizler, salgın hastalık ve siyasi krizler döneminde konvansiyonel bankacılığa alternatif olabileceği ve farklı performans göstereceği hipotezi de araştırılır. Bu çalışma Türkiye'de katılım bankaları ve mevduat bankalarının performanslarını likidite, takipteki krediler ve kârlılık açısından analiz eder. Bu amaçla 01.2008-08.2024 dönemi için toplanan verilere T-Testi uygulanmıştır. Ayrıca analiz dönemi mevduat faizlerinin yükseldiği 05.2020-08.2024 dönemi için sınırlanarak yeniden T-Testi uygulanmıştır. Ampirik bulgular yüksek mevduat faizleri döneminde katılım bankalarının daha yüksek likidite oranına sahip olduğunu ve özkaynak kârlılığı oranının mevduat bankalarına göre daha kuvvetli olduğunu gösterir. Ancak, mevduat bankaları yüksek mevduat faizi dönemlerinde daha yüksek takipteki kredi oranına sahiptir. İki banka türünün ortalama ROA'sı istatistiksel olarak anlamlı bir farklılık göstermemektedir.

Anahtar Kelimeler: Finansal Piyasalar ve Kurumlar, Katılım Bankaları, Mevduat Bankaları.

Jel Kodları: G10, G21, E43.

1. Introduction

A key component of the financial system is banks. Banks are financial institutions that transform the funds they collect from real and legal persons into investment and consumption through loans. Banks also contribute to wealth maximization through the financial services they provide (Kirimi et al., 2020 p. 62).

Participation banks and conventional banks are two key components of the banking industry. The primary distinction between participation and conventional banks is the financial principles on which they operate. Participation banks operate based on interest-free banking and follow the rules of Islamic finance. These banks provide financing through methods such as profit-loss sharing, murabaha (cost plus profit) and rent instead of interest. Conventional banks, on the other hand, operate on interest, paying interest to depositors and charging interest to borrowers. Participation banks limit their investments and financial transactions to sectors that comply with Islamic rules, while conventional banks are not subject to such restrictions (Bozkurt et al., 2020).

Religious sensitivities, attracting savings to the system and the crises experienced in the conventional financial system enable participation banking to be considered as an alternative (Arzova & Şahin, 2021). The performance of Islamic banks in the macroeconomic landscape surprisingly contrasts with what one would anticipate regarding their technical efficiency in a microeconomic context. One might assume that Islamic banks would demonstrate lower technical efficiency compared to conventional banks for several reasons. Firstly, the stringent enforcement of Shariah

laws results in many Islamic banking products being customized, which leads to higher operational expenses (Johnes et al., 2014). Secondly, Islamic banks tend to be smaller than conventional banks, and research indicates that technical efficiency tends to improve as bank size increases (Xiaogang et al., 2005) Finally, Islamic banks are typically owned by domestic entities, and studies indicate that banks owned by foreign investors tend to demonstrate higher levels of technical efficiency compared to those owned domestically (Sturm & Williams, 2004).

During times of elevated interest rates, traditional banks might gain from broader interest rate margins, as they can impose higher rates on loans while offering lower rates on deposits, potentially enhancing their profitability. Nevertheless, the demand for loans could decline as borrowing costs increase, possibly hindering growth. Participation banks, which adhere to Islamic banking principles and do not impose interest, may struggle to attract customers looking for returns from conventional interest-bearing savings options. Conversely, participation banks might be viewed as more appealing by individuals desiring interest-free alternatives, which could assist them in maintaining or expanding their market presence during these periods (Beck et al., 2013).

The impact of interest rate fluctuations on banking performance is a critical issue in financial economics, particularly in distinguishing the operational dynamics of participation banks (interest-free banks) and deposit banks. Conventional deposit banks rely heavily on interest income, and during high-interest periods, they benefit from wider interest margins, leading to higher profitability and liquidity. In contrast, participation banks operate under Sharia-compliant principles, utilizing profit-loss sharing, murabaha (cost-plus financing), and other interest-free financing mechanisms, which react differently to interest rate fluctuations. Theoretically, Modigliani-Miller's capital structure theory suggests that the cost of capital increases for conventional banks in high-interest environments, whereas participation banks, which do not rely on interest-based funding, may face different financial constraints (Ismail & Pratomo, 2007; Salman, 2023).

Moreover, moral hazard and adverse selection theories imply that higher interest rates may increase credit risk for deposit banks, as they might extend riskier loans to maintain profitability. Since participation banks adopt alternative financing mechanisms, their exposure to credit risk may differ from conventional banks, potentially leading to varying financial performances (Wan Ibrahim & Ismail, 2015).

Analyzing whether there is a significant difference between the financial performance of participation banks and deposit banks during high-interest rate periods offers both theoretical and practical contributions to the banking and financial literature. This analyze contributes to finance theory by examining how participation and deposit banks respond differently to high-interest rate periods, extending interest margin, Modigliani-Miller, and risk management theories. While deposit banks benefit from higher interest margins and profitability, participation banks rely on alternative financing mechanisms, leading to distinct performance patterns. Integrating moral hazard and adverse selection theories, the study also highlights differing credit risk dynamics. Practically, the

findings offer insights for policymakers and regulators, supporting risk management, financial stability, and monetary policy tailored to both banking models.

This research seeks to examine how interest affects participation banks and conventional banking systems. For this purpose, the financial ratios of 01.2008 – 08.2024 period for participation banks and conventional banks in Turkey is investigated with T-Test analysis. There is a large literature comparing the performance of participation banks and conventional banks (Kevser, 2021; Johnes et al., 2014). However, studies analyzing this comparison based on high-interest rate periods are limited. The study's framework seeks to add to the existing literature by approaching the problem from this standpoint. For this purpose, analysis period is limited to 05.2020-08.2024.

This study tests the following hypotheses:

H1: H_0= There is no significant difference between participation banks and deposit banks during high-interest rate periods. If the null hypothesis is rejected, the results indicate that there is a significant difference between the performance of the two types of banks.

H2: H_0= Deposit banks cannot show a better financial performance in periods of high interest rates. If the null hypothesis is rejected, this result implies that deposit banks are more profitable and highly liquid during high-interest rate periods.

H3: H_0= Participation banks do not show a more successful financial performance in periods of high interest rates. If the null hypothesis is rejected, this result indicates that participation banks are a useful alternative to deposit banks during high-interest rate periods with profit-loss sharing based financial instruments.

The paper is organized as follows: Section 2 examines the theoretical background, Section 3 presents the literature, Section 4 describes methodology and data, Section 5 deals with the empirical results, and Section 6 concludes the study.

2. Theoretical Background

The study can be based on some finance theories. The theoretical background between interest rates and the banking system is the basis of the working model. Since most of the income of conventional banks is based on interest income, these banks can earn higher profits during periods of high interest rates thanks to widening interest margins. However, since participation banks operate in line with interest-free banking principles, changes in interest rates may change the demand for profit-loss sharing, murabaha (profit-sharing sales) and other interest-free financing methods of these banks (Wan Ibrahim & Ismail, 2015). Besides, during periods of high interest rates, the risk management strategies of conventional banks become more important because fluctuations in interest rates affect credit risk and the value of bond portfolios. Since participation banks use interest-free instruments,

they do not face interest rate risk directly; therefore, risk management and portfolio theories can be applied to analyze how the performance of participation banks varies. (Nair et al., 2014; Ismal, 2014).

As stated in the Modigliani and Miller (1958) capital structure irrelevance theorem, changes in the cost of capital due to different interest rate situations can impact the funding structures of banks, with traditional banks usually gaining from larger interest margins in times of high rates (Gropp & Heider, 2010). Moral Hazard and Adverse Selection theory also attempt to explain interest rates and bank performance. High interest rates can increase credit risk for conventional banks and increase the likelihood of lending to riskier borrowers. Participation banks, on the other hand, manage credit risk in different ways by sharing risk through systems such as profit-loss sharing. These theories can be used to examine how interest rates lead to different performance risks in the two banking models (Salman, 2023). There are studies in the literature that try to explain bank performance, interest rate movements and investors' preferences between bank types with theory Moral Hazard and Adverse Selection theory (Wheelock & Kumbhakar, 1995; Berndt & Gupta, 2009; Suzuki et al., 2020).

This study measures the effect of interest rate on the performance of participation banks and conventional banks in Turkey and investigates whether there is a significant difference between their financial ratios in accordance with the theories.

3. Literature Review

The literature analyzes the comparison of participation banks and conventional banks in different dimensions. This Section reviews domestic and foreign literature. Table 1 presents the Türkiye sample.

Table 1: Türkiye Sample

Authors	Issue	Results
Saraç, & Zeren (2015)	The reliance of Islamic banking rates on conventional bank interest rates.	The findings indicate that interest rates of conventional banks have a statistically significant effect on participation performance.
Toraman et al., (2015)	Comparison of financial ratios.	Research findings indicate that deposit banks possess greater total assets and liquid assets in comparison to participation banks and exhibit a more robust capital adequacy structure.
Yurttadur & Demirbaş (2017)	Comparison of financial between two bank types.	Participation banks demonstrate greater profitability compared to deposit banks. When it comes to liquidity, it has been found that they possess higher liquidity, particularly regarding short-term obligations of liquid assets, whereas participation banks exhibit a more leveraged structure in terms of debt.
Çağıran Kendirli et al., (2019)	Comparison of banks during the financial crisis.	Commercial banks demonstrated strong financial performance both before and after the crisis periods, while participation banks performed well specifically during the global crisis.
Tunalı & Pekcoşkun (2019)	Comparison of efficiency	CAMELS indicators show that conventional banks with high deposit ratios have a better performance.

Kevser (2021)	Comparison of financial ratios.	Participation banks have a higher ratio of net non-performing loans to total assets compared to commercial banks.
Gürçay & Dağıdır (2022)	Financial performance of two bank types during COVID-19.	According to the T-Test result, the only difference between banks in the COVID-19 period is asset quality.
Bektaş (2022)	Comparison of efficiency.	The efficiency of participation and conventional banks from 2005 to 2020 is assessed using data envelopment analysis. The findings indicate that participation banks were more efficient.
Yumurtacı (2023)	Comparison of financial performance.	Findings show the CAMELS results of conventional banks surpasses that of participation banks for the years 2010 to 2021.

The literature on Turkey mainly compares the financial ratios, but most studies do not focus on specific contexts such as economic crises, pandemics, or political crises. Furthermore, no study to date has examined the performance of participation and deposit banks during high-interest rate periods.

Table 2: Other Samples

Authors	**Issue**	**Results**
Ika & Abdullah (2011)	Comparison of financial performance of two bank types.	Apart from liquidity ratios, there is no significant difference between participation banks and conventional banks. Participation banks are notably more liquid.
Hamid & Azmi (2011)	Comparison of financial performance.	The findings show that participation banks performed differently from conventional banks during the 2008 crisis. Participation banks' asset growth and loan growth increased during the crisis period.
Hasan & Dridi (2011)	Financial performance of banks during financial crisis.	The findings indicate that although there is no difference in profitability between the banks, participation banks have higher liquidity.
Kouser & Saba (2012)	Comparison of financial performance of two bank types in Pakistan.	Islamic banks generally maintain strong capital reserves and exhibit higher asset quality compared to both Islamic branches within conventional banks.
Youssef & Samir (2015)	Comparison of financial performance of two bank types.	There is no substantial difference between banks.
Haddad et al., (2019)	Financial stability analysis of two types of banks	The findings claim that traditional banks did better than participation banks throughout the period of financial stability.
Hidayat et al., (2021)	Comparison of risk, efficiency and financial performance in the GCC banking industry.	The findings show no differences in efficiency, risk, or profitability levels.

The international literature approaches the issue from different perspectives compared to studies focused on Turkey. Research examines the performance of participation and conventional banks in the context of financial crises, the COVID-19 pandemic, and various financial variables.

4. Data and Methodology

This study analyzes participation banks and conventional banks in terms of profitability, liquidity and non-performing loans. For this purpose, average profitability, liquidity and non-performing loans variables of participation banks and deposit banks in Turkey are analyzed with T-Test. Data are obtained from the Banking Regulation and Supervision Agency (Banking Regulation and Supervision Agency, 2024). Due to data availability, monthly data for the period 01.2008-08.2024 are analyzed. The independent two-sample t-test is employed to assess differences between participation banks and deposit banks. The analysis time period is split into two intervals: from 01.2008 to 04.2020, and from 05.2020 to 08.2024, based on interest rates, with a comparison of bank performances during high and low interest periods. Table 3 presents the list of variables.

Table 3: Variable List

Variable Name	Abbreviations	Definition
Return on Assets	ROA	Net Income / Average Total Assets (%)
Return of Equity	ROE	Net Income / Average Shareholder's Equity (%)
Non-Performing Loans	NPL	Non-Performing Loans (Gross) / Total Cash Loans (%)
Liquidity Requirement Ratio	LR	Assets maturing within one month / Liabilities maturing within one month

Profitability, liquidity and non-performing loan variables in participation banks and deposit banks are compared with T-Test. The t-test is a parametric statistical method used to compare the means of two groups to determine if a significant difference exists between them. This analysis is particularly effective when evaluating whether an observed variance in sample means is likely due to random chance or indicative of a genuine difference in the populations under investigation (Kiziloglu et al., 2023). The theoretical foundation of the t-test relies on the Central Limit Theorem (CLT), which ensures that as the sample size increases, the sampling distribution of the mean approach's normality, even if the original data is not normally distributed. Additionally, the test assumes homogeneity of variance (homoscedasticity) between groups when applying the independent samples t-test, a condition that can be assessed using Levene's test (Levene, 1960). To assess the assumption of homogeneity of variance between groups, Levene's test is conducted for each dependent variable. The results indicate that statistical values of the variables are below %5. This finding suggests that the equal variances assumption is met. Reporting these diagnostic tests improves transparency and ensures that the statistical conclusions are robust to variance heterogeneity.

Essential characteristics of the T-test include its requirement for normally distributed data, meaning that the values in each group should closely follow a normal distribution. The T-test has several variations: the independent two-sample T-test evaluates the means of two separate groups, whereas the paired T-test focuses on the means from the same group measured at different points in time. The outcome of the test provides a p-value, which determines the statistical significance, with a commonly accepted threshold set at 0.05 (Aktaş & Kargın, 2007). The paired t-test is

used for dependent or matched samples and considers differences between paired observations $(D_i = X_{1i} - X_{i2})$ as a single sample, using:

$$t = \frac{D}{\frac{s_D}{\sqrt{n}}}$$

D represents the mean of the differences, and s_D is the standard deviation of the differences.

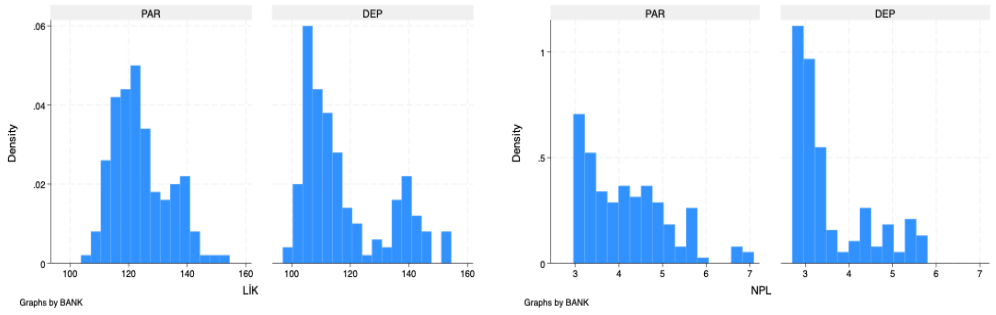
5. Empirical Results

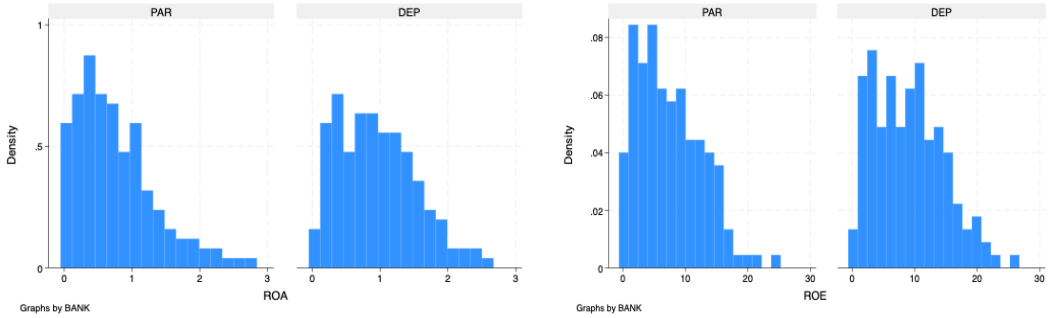
The independent two-sample t-test is employed to assess differences between participation banks and deposit banks. The analysis time period is split into two intervals: from 01.2008 to 04.2020, and from 05.2020 to 08.2024, based on interest rates, with a comparison of bank performances during high and low interest periods. Table 4 presents the descriptive statistics for 01.2008-04.2020.

Table 4: Descriptive Statistics (01.2008-04.2020)

Variable	Obs	Mean	Std. Dev.	Min.	Max.
LR	296	120.94	12.58	96.98	154.44
NPL	296	3.86	0.96	2.69	7.09
ROA	296	0.86	0.59	-0.05	2.84
ROE	296	8.25	5.42	-0.62	25.24

According to the descriptive statistics, the difference between the minimum and maximum values in ROE is remarkable. The maximum and minimum value of ROE is observed in participation banks. The lowest liquidity requirement ratio is observed in deposit banks and the highest liquidity requirement ratio is observed in participation banks. Minimum and maximum values of non-performing loans are seen in participation banks. The lowest value of ROA is recorded in participation banks and the highest value is recorded in deposit banks. To examine the distribution of variables according to bank types, histogram graphs are analyzed. Graph 1 shows histograms.





Graph 1: Histograms of Variables (01.2008-04.2020)

Histogram analyses indicate that participation banks exhibit greater variability in liquidity ratios, with higher values suggesting more conservative liquidity management. In contrast, deposit banks show a tighter distribution centered on lower liquidity ratios, reflecting more uniform but potentially less flexible funding strategies. These differences may stem from distinct business models and risk preferences. When examining credit quality and profitability, participation banks exhibit broader ranges in their NPL, ROA, and ROE ratios, which points to both increased potential returns and greater variability. In contrast, deposit banks show more focused distributions with marginally higher average NPLs and steadier but lower profitability. This indicates that the two banking models employ different strategies for risk management and balance sheet management.

Table 5: T-Test Results (01.2008-04.2020)

Variables	Mean-Participation Banks	Mean-Deposit Banks	T-Value	P-Value
LR	124.16	117.72	4.56	0.00
NPL	4.17	3.55	5.81	0.00
ROA	0.76	0.95	-2.88	0.00
ROE	7.46	9.04	-2.53	0.01
Df	294			

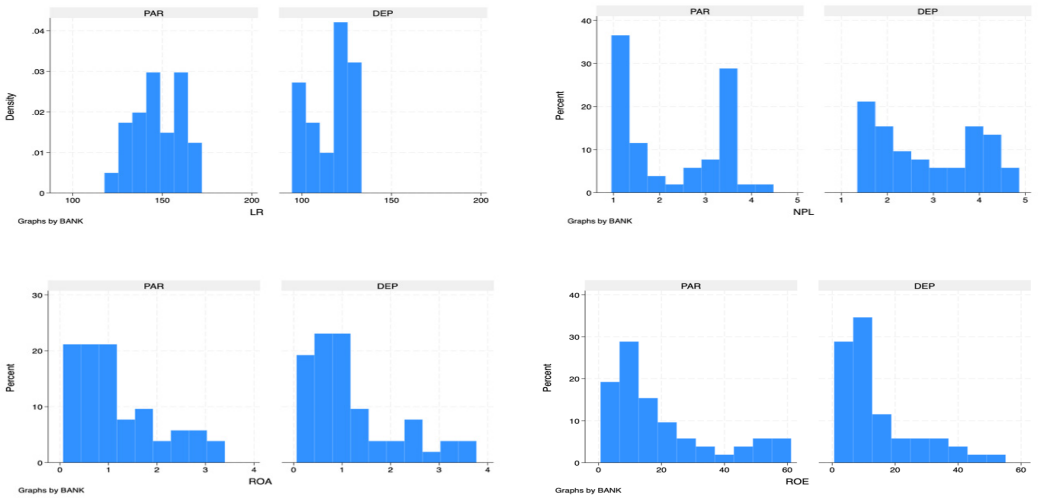
The independent two-sample t-test assessing liquidity (LR) ratios between participation banks and deposit banks produced a t-value of 4.546 with 294 degrees of freedom. The p-value for the two-tailed analysis is below 0.001, indicating a statistically significant difference at the 1% threshold. Participation banks exhibited a higher average liquidity ratio (124.16) in comparison to deposit banks (117.72), implying that participation banks maintain healthier average liquidity positions throughout the examined period. The independent two-sample t-test that assessed the non-performing loan (NPL) ratios for participation banks and deposit banks yielded a t-value of 5.812 with 294 degrees of freedom. The p-value for the two-tailed test was below 0.001, demonstrating a statistically significant difference at the 1% significance level. Participation banks had a higher average NPL ratio (4.17) compared to deposit banks (3.55), indicating that participation banks encountered, on average, increased credit risk exposures during the analyzed period.

The independent two-sample t-test comparing return on assets (ROA) between participation banks and deposit banks yielded a t-value of – 2.882 with 294 degrees of freedom. The p-value for the two-tailed test was 0.0042, indicating a statistically significant difference at the 1% level. Participation banks exhibited a lower mean ROA (0.76) compared to deposit banks (0.95), suggesting that deposit banks achieved higher average asset profitability during the period analyzed. ROE between participation banks and deposit banks yielded a t-value of – 2.528 with 294 degrees of freedom. The p-value for the two-tailed test was 0.012, indicating a statistically significant difference at the 5% level. Specifically, participation banks exhibited a lower mean ROE (7.46) compared to deposit banks (9.04), suggesting that deposit banks achieved higher average return on equity during the analyzed period.

Tablo 6: Descriptive Statistics (05.2020-08.2024)

Variable	Obs	Mean	Std. Dev.	Min.	Max.
LR	104	131.94	20.33	94.47	172.09
NPL	104	2.57	1.14	0.96	4.87
ROA	104	1.18	0.91	0.06	3.77
ROE	104	17.25	15.07	0.62	61.15

Table 6 shows that the highest liquidity value is seen in participation banks and the lowest liquidity value is observed in deposit banks. Reversely, the highest non-performing value is seen in deposit banks and the lowest non-performing value is observed in participation banks. While minimum values of profitability ratios are seen in participation banks, maximum values are observed in participation banks. Graph 2 shows the histograms for the analysis period.



Graph 2: Histograms of Variables (05.2020-08.2024)

Both types of banks have a liquidity requirement ratio between 100 and 200, but their distribution differs. While the liquidity ratio of participation banks is concentrated in the range of approximately 130-170, the liquidity ratio of deposit banks is more concentrated in a narrower range (110-150). This shows that deposit banks have a more concentrated and stable structure in liquidity performance, while participation banks have a wider variation in liquidity ratios. Participation banks' NPL ratios are mainly concentrated around 1% and 3%. There is a particularly high concentration at 1%, indicating that a significant portion of these banks have low NPL ratios. The NPL ratios of deposit banks, show a wider distribution and are concentrated between 1% and 4%. Deposit banks are more concentrated around 2%, but NPL ratios can be as high as 4%. Thus, NPL ratios of deposit banks vary more than participation banks and have higher NPL ratios, while participation banks are generally concentrated in lower NPL ratios.

Participation banks' ROA ratios are predominantly concentrated in the range of 0% to 1%, indicating a low level of return. Similarly, the ROA ratios of deposit banks have a high concentration in the 0% to 1% range but are distributed over a wider range compared to participation banks. Particularly, it is observed that deposit banks have a higher number of observations above 1%. This shows that deposit banks have a wider range of performance in terms of return on assets than participation banks and in some cases, they can achieve higher returns. In the histogram of the ROE variable, the data of both bank types are concentrated between 10% and 20%. However, participation banks have an ROE of 50%-60% in some periods. Therefore, participation banks have a wider and higher potential ROE distribution. Table 7 presents the T-Test for the period 05.2020-08.2024.

Table 7: T-Test Results (05.2020-08.2024)

Variables	Mean-Participation Banks	Mean-Deposit Banks	T-Value	P-Value
LR	147.82	116.06	12.79	0.00
NPL	2.24	2.90	-3.08	0.00
ROA	1.17	1.19	-0.14	0.89
ROE	20.14	14.37	1.98	0.04

Empirical findings show that there is a significant difference between the liquidity performance of participation banks and deposit banks. In addition, participation banks have higher liquidity. Non-performing loans averages are also statistically different for the two bank types. Deposit banks have higher non-performing loans in the analysis period. The P value of the ROA variable is above 5%. Therefore, the difference between the averages is statistically insignificant. Finally, participation banks have a higher ROE ratio, and this difference is statistically significant.

According to the T-Test results, deposit banks have a stronger financial performance than participation banks in the period 01.2008-04.2020. However, higher profitability and liquidity are observed in participation banks during high-interest rate periods. Studies supporting the findings are available in the literature. There are studies find that deposit banks outperform participation banks in periods when risks such as financial crises, high interest rates and epidemics do not

affect financial markets (Safiullah, 2010; Doğan, 2013). Nevertheless, there are also studies show that participation banks are less risky in financial crises and high interest rates periods (Minny & Görmüş, 2013; Çağıran Kendirli et al., 2019).

The better financial ratios of participation banks compared to deposit banks during periods of high interest rates can be explained by the business model of participation banks based on interest-free financing principles. While collecting funds, participation banks offer customers the opportunity to earn based on profit-loss partnership instead of fixed interest rates, which can ensure that they are not directly affected by fluctuations in interest rates. During periods of high interest rates, deposit banks may be more limited in lending and providing liquidity due to increased borrowing costs, while participation banks can act more flexibly in fund raising and funding activities. Moreover, rising interest rates may increase the non-performing loans ratio in deposit banks by increasing credit costs, whereas participation banks' risk-sharing and project-based financing model may play a role in improving loan repayment performance. In conclusion, the more flexible and resilient structure of participation banks in a high-interest rate environment provides an advantage over deposit banks in liquidity, profitability and non-performing loans performance (Erol et al., 2014; Yüksel et al., 2017).

Participation banks based on interest-free banking principles can support financial stability by offering alternative financing opportunities to the economy during periods of rising interest rates. This situation allows participation banks to exhibit a more resilient structure against market fluctuations through risk sharing and asset-based financing structure. In addition, interest-free financing mechanisms can provide a more sustainable financial environment for the real sector by minimizing borrowing costs while providing resources for investments that will support economic growth. Thus, participation banks not only contribute to financial stability, but also stand out as an important balancing factor in the markets in terms of economic diversity and inclusion (Arzova & Sahin, 2021).

6. Conclusions

Participation banks are interpreted as an alternative to conventional banking with a philosophy based on profit-loss sharing. Studies analyze whether this difference in theory is reflected in financial performance. This study analyzes the comparison of participation banks and deposit banks in terms of liquidity, non-performing loans and profitability.

Empirical findings show that deposit banks have higher ROA and ROA during the period 01.2008-04.2020. Participation banks also have greater non-performing loans in this period. Participation banks perform better when deposit rates rise. In this period, liquidity and profitability of participation banks are high, while non-performing loans are lower.

Empirical findings reveal that participation banks perform better during periods of high deposit rates. The fact that participation banks show better financial performance than deposit banks during

periods of high interest rates has important implications for researchers, policymakers and banks. For researchers, this finding encourages a more in-depth examination of the responses of different banking models to economic fluctuations and the potential resilience of interest-free finance in times of crisis. For policymakers, this result may point to the need to further support and encourage participation banking to increase economic stability and financial inclusion. To contribute to the overall financial stability of the economy in high-interest rate environments, interest-free financial models can be supported to find a wider place in the banking sector. For banks, this finding provides a motivation to adopt the participation banking model or to develop diversification strategies to gain competitive advantage, especially during high-interest rate periods. Thus, the resilient structure and risk-sharing advantages offered by participation banks can form a basis for sustainable growth strategies.

The results support financial theories that describe the effect of interest rates on banking performance. Traditional banks gain from wider interest margins, leading to enhanced liquidity and return on assets (ROA), while participation banks, which operate without interest, respond to changes in demand for alternative financing options. The increased non-performing loans (NPLs) in participation banks illustrate concepts of moral hazard and adverse selection, as they utilize different credit risk management strategies through risk-sharing mechanisms. The stronger performance of participation banks during periods of elevated deposit rates can be associated with Modigliani-Miller's theory of capital structure, as their methods of financing diverge from those of traditional banks that are burdened with higher borrowing costs. Moreover, theories related to risk management and portfolio composition clarify how participation banks maintain liquidity and profitability, even though they do not directly confront interest rate risks. In summary, variations in interest rates present unique financial challenges and opportunities for each banking model, influencing their performance characteristics.

The study has some limitations. Firstly, the earliest data on participation banks is available in 2008. Future studies can analyze different periods. Secondly, this study focuses on financial performance. Analyzing managerial variables can contribute to the literature. Lastly, it is also crucial to reveal the determinants of the factors affecting financial performance between participation banks and deposit banks.

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