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# IMPACT OF ECONOMIC CRISES ON BANKING SECTOR PERFORMANCE- A COMPARATIVE ANALYSIS OF CONVENTIONAL AND ISLAMIC BANKS ACROSS OIC COUNTRIES

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***Abstract***

*This study investigates the impact of three significant economic crises—the Eurozone Debt Crisis (2010-2012), the COVID-19 Pandemic (2020-2021), and the Post-Pandemic Economic Recovery (2021-2022)—on the performance of conventional and Islamic banks in Organization of Islamic Cooperation (OIC) countries. Using a dataset of 4,381 observations from 34 OIC countries, panel regression techniques are employed to evaluate the influence of these crises on key financial performance metrics: Return on Shareholders' Funds (ROSF), Profit Margin (PM), Return on Total Assets (ROA), Current Ratio (CR), and Solvency Ratio (SR). The analysis reveals that while the Eurozone Debt Crisis did not significantly affect bank performance, the COVID-19 pandemic led to a notable decline in profitability but an improvement in liquidity.*

*The results highlight that during the COVID-19 pandemic, banks faced substantial challenges in maintaining profitability, as evidenced by the significant decrease in PM. However, the improvement in CR suggests that banks enhanced their liquidity management strategies to cope with the crisis. The Post-Pandemic Economic Recovery phase brought positive changes in both profitability and liquidity, demonstrating the ability of banks to adapt and thrive as economic conditions stabilized. Macroeconomic variables, such as GDP growth and inflation, played crucial roles, with GDP growth positively affecting ROSF and inflation negatively impacting PM.*

*These findings underscore the importance of a diversified banking system, including both conventional and Islamic banks, to enhance financial stability. Policymakers and financial regulators should consider the unique strengths of Islamic banking principles in regulatory frameworks and prioritize sound macroeconomic policies to promote stability and resilience in the banking sector. Future research should further explore the long-term impacts of economic crises on bank performance across different regions and banking models, as well as the interaction between regulatory environments and bank resilience.*

# DAMPAK KRISIS EKONOMI TERHADAP KINERJA SEKTOR PERBANKAN- ANALISIS PERBANDINGAN BANK KONVENSIONAL DAN SYARIAH DI NEGARA-NEGARA OKI

Kata Kunci: Krisis ekonomi, kinerja bank, bank konvensional, bank Islam, negara OKI, pandemi COVID-19, Krisis Utang Zona Euro, pemulihan pasca-pandemi, stabilitas keuangan, faktor makroekonomi.

**Abstrak**

Penelitian ini menyelidiki dampak dari tiga krisis ekonomi utama—Krisis Utang Zona Euro (2010-2012), Pandemi COVID-19 (2020-2021), dan Pemulihan Ekonomi Pasca-Pandemi (2021-2022)—terhadap kinerja bank konvensional dan bank Islam di negara-negara Organisasi Kerja Sama Islam (OKI). Dengan menggunakan data dari 4.381 observasi di 34 negara OKI, teknik regresi panel digunakan untuk menilai pengaruh krisis ini terhadap metrik kinerja keuangan utama: Return on Shareholders' Funds (ROSF), Profit Margin (PM), Return on Total Assets (ROA), Current Ratio (CR), dan Solvency Ratio (SR). Analisis menunjukkan bahwa Krisis Utang Zona Euro tidak berpengaruh signifikan terhadap kinerja bank, sementara Pandemi COVID-19 menyebabkan penurunan profitabilitas yang signifikan namun meningkatkan likuiditas.

Selama Pandemi COVID-19, bank menghadapi tantangan besar dalam mempertahankan profitabilitas, yang terlihat dari penurunan PM yang signifikan. Namun, peningkatan CR menunjukkan bahwa bank meningkatkan manajemen likuiditas mereka untuk mengatasi krisis. Fase Pemulihan Ekonomi Pasca-Pandemi membawa peningkatan dalam profitabilitas dan likuiditas, menunjukkan kemampuan bank untuk beradaptasi dengan kondisi ekonomi yang membaik. Variabel makroekonomi seperti pertumbuhan PDB dan inflasi juga berperan penting, dengan pertumbuhan PDB berdampak positif pada ROSF dan inflasi berdampak negatif pada PM.

Temuan penelitian ini menekankan pentingnya sistem perbankan, baik konvensional maupun syariah, untuk meningkatkan stabilitas keuangan. Pembuat kebijakan dan regulator keuangan harus mempertimbangkan keunikan atau keunggulan dari prinsip-prinsip perbankan Islam dalam regulasi dan memprioritaskan kebijakan makroekonomi yang stabil untuk mendukung ketahanan sektor perbankan. Penelitian selanjutnya perlu mengeksplorasi dampak jangka panjang krisis ekonomi pada kinerja bank di berbagai wilayah dan model perbankan, serta interaksi antara lingkungan regulasi dan ketahanan bank.

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## INTRODUCTION

Economic crises pose substantial challenges to the global financial system, impacting various sectors with varying degrees of severity. Financial institutions, particularly banks, play a crucial role in maintaining economic stability during such periods. As intermediaries, banks facilitate capital flow and credit allocation, which are

essential for economic growth and development. However, during economic crises, banks face heightened risks, including increased loan defaults, liquidity shortages, and market volatility, which can undermine their stability and performance. Understanding how banks respond to and recover from economic crises is critical for policymakers and financial regulators aiming to ensure a resilient banking sector.

Islamic and conventional banks operate under different principles and regulatory frameworks, which might influence their performance during economic crises. Conventional banks operate on interest-based lending, aiming for profit maximization, while Islamic banks adhere to Sharia principles, prohibiting interest (riba) and emphasizing risk-sharing and ethical investments. These fundamental differences in operations can lead to varying resilience levels during economic downturns. Previous studies suggest that Islamic banks might exhibit more stability during financial crises due to their risk-sharing mechanisms and avoidance of speculative activities (Beck, Demirgüç-Kunt, & Merrouche, 2013).

The Eurozone Debt Crisis (2010-2012) was a significant financial event that affected many countries within the European Union and beyond. This crisis led to a loss of investor confidence, increased borrowing costs, and significant economic contractions in affected countries. The European banking system was strained, requiring extensive intervention by the European Central Bank (ECB) and International Monetary Fund (IMF). This period saw global trade and investment flows being severely impacted, highlighting the interconnectedness of global financial markets and the vulnerability of banking sectors to external shocks (Beck et al., 2013).

The COVID-19 pandemic (2020-2021) caused unprecedented disruptions across all economic sectors, leading to a severe global recession. Many countries experienced double-digit GDP contractions, soaring unemployment rates, and disrupted global supply chains. Governments implemented unprecedented fiscal and monetary measures to mitigate the economic impact, resulting in increased government debt and changes in monetary policy frameworks. This period tested the resilience of banking sectors worldwide, with banks having to navigate increased credit risk, operational challenges, and market uncertainty (Alqahtani, Mayes, & Brown, 2017).

The post-pandemic economic recovery (2021-2022) presented a unique set of challenges and opportunities for banks. Persistent supply chain issues, surging inflation due to increased demand and supply constraints, and monetary policy shifts, including interest rate hikes by central banks to combat inflation, characterized this period.

Additionally, geopolitical tensions, such as the conflict between Russia and Ukraine, further added to global economic uncertainty, affecting energy prices and trade flows. Understanding the performance of conventional and Islamic banks during this recovery phase is crucial for developing strategies to enhance banking sector resilience in future crises (Iqbal & Mirakhor, 2011).

This study aims to answer the following research questions: (1) How do economic crises impact the performance of commercial and Islamic banks? (2) Are there significant differences in resilience between these banking models during economic crises? By addressing these questions, the study seeks to provide insights that will help policymakers and financial regulators develop strategies to enhance the stability and resilience of the banking sector during periods of economic uncertainty.

## LITERATURE REVIEW

The performance of banks during economic crises has been a subject of extensive research, particularly focusing on the resilience and stability of different banking models. Conventional banks, which operate on an interest-based system, tend to face significant challenges during financial downturns due to their exposure to interest rate fluctuations and credit risks. Islamic banks, in contrast, operate on principles of profit and loss sharing, asset-backed financing, and prohibition of speculative activities, which theoretically could make them more resilient during crises (Beck, Demirgüç-Kunt, & Merrouche, 2013).

Studies have shown mixed results regarding the performance of Islamic banks during crises. Beck et al. (2013) found that Islamic banks were less affected by the 2008 financial crisis compared to conventional banks, primarily due to their unique risk-sharing mechanisms and the prohibition of interest, which reduced their exposure to toxic assets. Similarly, Alqahtani, Mayes, and Brown (2017) observed that Islamic banks in the Gulf Cooperation Council (GCC) countries exhibited greater stability during periods of economic turmoil, highlighting their lower risk profiles and conservative lending practices.

However, some research points to potential vulnerabilities in Islamic banking. For instance, Čihák and Hesse (2010) argued that while Islamic banks are less prone to liquidity crises, they might face challenges in profitability and growth during extended periods of economic downturn due to their reliance on asset-backed financing. Additionally, the smaller size and market share of Islamic banks compared to conventional banks might limit their ability to absorb large economic shocks,

suggesting that their resilience could vary depending on the market context and regulatory environment.

The Eurozone Debt Crisis (2010-2012) provided a unique context to study the impact of a regional financial crisis on banks operating in interconnected global markets. This crisis highlighted the vulnerability of European banks to sovereign debt risks and the subsequent contagion effects on global financial systems. Research by Demirgüç-Kunt and Huizinga (2010) indicated that banks with higher exposure to European sovereign debt experienced significant declines in profitability and stability during this period. The crisis underscored the importance of understanding the specific risk exposures of banks and their implications for financial stability.

The COVID-19 pandemic (2020-2021) presented unprecedented challenges for the global banking sector, with widespread economic disruptions and heightened uncertainty. Studies by Goodell (2020) and Elnahass, Trinh, and Li (2021) examined the immediate and long-term impacts of the pandemic on bank performance, revealing significant declines in profitability and increases in credit risks. The rapid implementation of fiscal and monetary measures by governments worldwide aimed to stabilize the economy, but also resulted in increased government debt and potential long-term inflationary pressures, posing further risks to bank stability.

The post-pandemic economic recovery (2021-2022) has been characterized by persistent supply chain disruptions, inflationary pressures, and shifts in monetary policy. Research by Barua and Barua (2021) highlighted the challenges faced by banks during this recovery phase, including managing inflation risks and navigating geopolitical tensions. The performance of banks during this period provides critical insights into their resilience and adaptability in the face of ongoing economic uncertainties and evolving market dynamics.

**Hypothesis 1: The Eurozone Debt Crisis (2010-2012) had a significant negative impact on the profitability and stability of conventional banks, while Islamic banks exhibited greater resilience due to their risk-sharing mechanisms and lower exposure to interest rate fluctuations.**

The Eurozone Debt Crisis provided a unique context to study the impact of a regional financial crisis on banks operating in interconnected global markets. This crisis highlighted the vulnerability of European banks to sovereign debt risks and the subsequent contagion effects on global financial systems. Research by Demirgüç-Kunt and Huizinga (2010) indicated that banks with higher exposure to European sovereign debt experienced significant declines in profitability and stability during this period. The

crisis underscored the importance of understanding the specific risk exposures of banks and their implications for financial stability. Given the risk-sharing and interest-free principles of Islamic banks, it is hypothesized that they exhibited greater resilience during this crisis.

**Hypothesis 2: The COVID-19 pandemic (2020-2021) significantly affected the profitability and liquidity of both conventional and Islamic banks, but conventional banks experienced more severe declines in performance due to higher exposure to credit risks and market volatility.**

The COVID-19 pandemic caused unprecedented disruptions across all economic sectors, leading to a severe global recession. Many countries experienced double-digit GDP contractions, soaring unemployment rates, and disrupted global supply chains. Governments implemented unprecedented fiscal and monetary measures to mitigate the economic impact, resulting in increased government debt and changes in monetary policy frameworks. Studies by Goodell (2020) and Elnahass, Trinh, and Li (2021) examined the immediate and long-term impacts of the pandemic on bank performance, revealing significant declines in profitability and increases in credit risks. These findings suggest that conventional banks, with their higher exposure to credit risks and market volatility, faced more severe declines in performance compared to Islamic banks.

**Hypothesis 3: During the post-pandemic economic recovery (2021-2022), conventional banks faced greater challenges in managing inflationary pressures and supply chain disruptions compared to Islamic banks, which benefitted from their asset-backed financing and ethical investment principles.**

The post-pandemic economic recovery presented a unique set of challenges and opportunities for banks. Persistent supply chain issues, surging inflation due to increased demand and supply constraints, and monetary policy shifts, including interest rate hikes by central banks to combat inflation, characterized this period. Additionally, geopolitical tensions, such as the conflict between Russia and Ukraine, further added to global economic uncertainty, affecting energy prices and trade flows. Research by Barua and Barua (2021) highlighted the challenges faced by banks during this recovery phase, including managing inflation risks and navigating geopolitical tensions. Islamic banks, with their focus on asset-backed financing and ethical investment principles, are hypothesized to have managed these challenges better than conventional banks.

**Hypothesis 4: GDP growth and inflation rates have significant impacts on the performance metrics (ROSF, PM, ROA, CR, SR) of banks, with variations between**

**conventional and Islamic banks due to their differing operational and financial structures.**

Economic indicators such as GDP growth and inflation rates are critical determinants of bank performance. GDP growth indicates the overall health of the economy, which influences the demand for banking services and the ability of borrowers to repay loans. Inflation rates affect the cost of borrowing and the value of financial assets. Research has shown that these macroeconomic factors significantly impact bank performance metrics such as profitability, liquidity, and solvency (Borio, Gambacorta, & Hofmann, 2017). Given the operational and financial differences between conventional and Islamic banks, it is expected that these indicators will have varying impacts on their performance metrics.

**Hypothesis 5: Bank-specific characteristics such as total assets, return on total assets, and solvency ratios significantly influence the performance of banks during economic crises, with conventional banks showing greater sensitivity to these factors compared to Islamic banks.**

Bank-specific characteristics, including size (total assets), profitability (return on total assets), and solvency ratios, are important determinants of bank performance during crises. Larger banks may have more diversified portfolios and better access to liquidity, but they may also be more exposed to systemic risks. Profitability and solvency ratios reflect the financial health and stability of banks, influencing their ability to withstand economic shocks. Research by Čihák and Hesse (2010) and Abedifar, Molyneux, and Tarazi (2013) suggests that these characteristics play a crucial role in determining bank performance during crises, with conventional banks generally showing greater sensitivity to these factors due to their riskier asset profiles and higher leverage.

**Hypothesis 6: The interaction terms between crisis periods and bank type (conventional vs. Islamic) are significant predictors of bank performance, indicating differential impacts of economic crises on these two banking models.**

Understanding the differential impacts of economic crises on conventional and Islamic banks requires analyzing the interaction terms between crisis periods and bank type. These interaction terms capture the unique effects of crises on each banking model, considering their operational differences. Studies by Beck et al. (2013) and Alqahtani, Mayes, and Brown (2017) highlight the importance of these interaction effects in explaining the varying resilience and performance of conventional and Islamic banks during economic downturns. It is hypothesized that these interaction terms will

be significant predictors of bank performance, reflecting the distinct responses of the two banking models to economic crises.

**METHODOLOGY**

This study employs a quantitative research design to investigate the impact of economic crises on the performance of conventional and Islamic banks across Organization of Islamic Cooperation (OIC) countries. The analysis is based on secondary data obtained from the OSIRIS database, which provides comprehensive financial and economic information on banks worldwide. The study covers the period from 2010 to 2022, encompassing three major economic crises: the Eurozone Debt Crisis (2010-2012), the COVID-19 Pandemic (2020-2021), and the Post-Pandemic Economic Recovery and Inflation Concerns (2021-2022).

The dataset includes 4,381 observations from 34 OIC countries, with information on various financial performance indicators, macroeconomic variables, and bank-specific characteristics Table 1).

**Table 1: Variables Definition and Measures**

| Variable | | Definition | Measure |
|---|---|---|---|
| **Dependent Variables** | | | |
| | ROSF | Return on Shareholders' Funds | Percentage (%), calculated as $\frac{Net\ Income}{Shareholders'Equity} \times 100$ |
| | PM | Profit Margin | Percentage (%), calculated as $\frac{Net\ Income}{Total\ Revenue} \times 100$ |
| | ROA | Return on Total Assets | Percentage (%), calculated as $\frac{Net\ Income}{Total\ Assets} \times 100$ |
| | CR | Current Ratio | Percentage (%), calculated as $\frac{Current\ Assets}{Current\ Liabilities} \times 100$ |
| | SR | Solvency Ratio | Percentage (%), calculated as $\frac{Shareholders'Equity}{Total\ Assets} \times 100$ |
| **Independent Variables** | | | |
| | Crisis1 | Eurozone Debt Crisis | Dummy variable (1 = 2010-2012, 0 = otherwise) |
| | Crisis2 | COVID-19 Pandemic | Dummy variable (1 = 2020-2021, 0 = otherwise) |
| | Crisis3 | Post-Pandemic Economic Recovery | Dummy variable (1 = 2021-2022, 0 = otherwise) |
| **Control Variables** | | | |
| GDP_Growth | GDP_Growth | GDP Growth | Annual percentage growth rate |
| | GDP_Cap | GDP per Capita | Current US dollars |
| | Inf_CPI | Inflation (CPI) | Consumer Price Index (percentage change) |
| | log_TA | Log of Total Assets | Natural logarithm of total assets |

| Variable | | Definition | Measure |
|---|---|---|---|
| | type | Bank Type | Dummy variable (1 = Conventional, 0 = Islamic) |
| | Crisis1_Conventional | Interaction between Crisis1 and Conventional Banks | Dummy variable (Crisis1 ×\times× type) |
| | Crisis2_Conventional | Interaction between Crisis2 and Conventional Banks | Dummy variable (Crisis2 ×\times× type) |
| | Crisis3_Conventional | Interaction between Crisis3 and Conventional Banks | Dummy variable (Crisis3 ×\times× type) |

This study employs panel regression techniques to analyze the impact of economic crises on the performance of conventional and Islamic banks across OIC countries. The choice of model—Pooled Least Squares, Fixed Effects, and Random Effects—was determined through several diagnostic tests to identify the most appropriate specification. Initially, a pooled least squares model was considered, which assumes that there are no individual-specific effects and that data can be pooled across banks and over time without any differentiation. This model is a simple approach but often unrealistic due to ignoring heterogeneity across banks ((Baltagi, 2008, Wooldridge, 2010).

Next, the fixed effects model was evaluated. The fixed effects model controls for time-invariant characteristics of the banks by allowing each bank to have its own intercept, focusing on within-bank variations over time. This approach captures the unique attributes of each bank that do not change over the study period. The appropriateness of the fixed effects model was confirmed through the Hausman test, which compares the fixed and random effects models. The test results indicated that the fixed effects model is more suitable for our data as it accounts for the correlation between the regressors and the individual effects (Hausman, 1978).

The random effects model, which assumes that individual bank effects are random and uncorrelated with the regressors, was also considered. This model is suitable when the variation across entities is assumed to be random and uncorrelated with the predictor variables (Baltagi, 2008). The Sargan-Hansen test further validated the use of the fixed effects model over the random effects model, supporting the presence of correlation between the individual effects and the regressors (Sargan, 1958).

After conducting all steps of the panel regression analysis and considering the results of various diagnostic tests, the fixed-effects model was chosen as the most appropriate for this study. The general form of the fixed-effects regression model used is:

$$Performance_{it} = \alpha + \beta_1 Crisis1_t + \beta_2 Crisis2_t + \beta_3 Crisis3_t + \beta_4 GDP\_Growth_{it} + \beta_5 Inf\_CPI_{it} + \beta_6 \log\_TA_{it} + \beta_7 Crisis1\_Conventional_{it} + \beta_8 Crisis2\_Conventional_{it} + \beta_9 Crisis3\_Conventional_{it} + \epsilon_{it}$$

where:

- $Performance_{it}$ represents the financial performance metrics (ROSF, PM, ROA, CR, SR) for bank iii in year ttt.

- $Crisis1_t$ , $Crisis2_t$ , and $Crisis3_t$ are binary variables indicating the Eurozone Debt Crisis, COVID-19 Pandemic, and Post-Pandemic Economic Recovery periods, respectively.
- $GDP\_Growth_{it}$ and $Inf\_CPI_{it}$ are the macroeconomic control variables for GDP growth and inflation, respectively.
- $log\_TA_{it}$ is the control variable for bank size.
- $Crisis1\_Conventional_{it}$, $Crisis2\_Conventional_{it}$ , and $Crisis3\_Conventional_{it}$ are interaction terms between the crisis periods and conventional bank type.
- $\epsilon_{it}$ is the error term.

Furthermore, classical assumption tests were conducted to ensure the validity of the regression results. Multicollinearity was checked using variance inflation factors (VIF) to ensure that the predictor variables were not highly correlated with each other (Gujarati & Porter, 2009). Heteroskedasticity was tested using the Breusch-Pagan test to ensure that the variance of the residuals was constant across observations. Autocorrelation was assessed using the Durbin-Watson test to detect any correlation between the residuals of different observations.

Diagnostic tests, including the Lagrange Multiplier (LM) test, Chow test, and Hausman test, were employed to choose the most appropriate model and ensure the robustness of the findings. The LM test was used to determine the presence of random effects in the model (Breusch & Pagan, 1980). The Chow test checked for structural breaks or differences in model parameters across different periods or groups (Chow, 1960). The Hausman test was used to choose between fixed effects and random effects models, ensuring that the model used provided consistent and efficient estimates (Hausman, 1978).

In short, the methodology employed by this study provides a comprehensive framework for analyzing the impact of economic crises on the performance of conventional and Islamic banks in OIC countries. By utilizing panel regression techniques and robust statistical methods, the analysis aims to offer nuanced insights into the resilience and vulnerabilities of different banking models during periods of economic uncertainty. These insights are valuable for policymakers and financial regulators in developing strategies to enhance the stability and resilience of the banking sector.

## RESULTS

The statistical description of the variables provides an essential overview of their distribution and central tendencies, offering insights into the dataset's characteristics before delving into more complex analyses. Table 2 summarizes the key descriptive statistics for the main variables used in this study.

**Table 2: Descriptive Statistics**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| ROSF | 4,381 | 13.45772 | 25.34790 | -942.53 | 296.50 |
| PM | 4,381 | 33.92585 | 21.40330 | -98.53 | 99.71 |
| ROA | 4,381 | 1.66705 | 2.91505 | -22.45 | 78.21 |
| TA | 4,381 | 1.50e+07 | 2.73e+07 | 18594.57 | 3.27e+08 |

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| CR | 4,381 | 26.63881 | 15.84443 | 1.96 | 98.31 |
| SR | 4,381 | 12.92841 | 9.34386 | -97.27 | 99.27 |
| GDP_Growth | 4,381 | 3.57882 | 4.68620 | -26.339 | 63.36844 |
| Inf_CPI | 4,381 | 8.41848 | 22.78671 | -3.74915 | 359.093 |

The mean ROSF (Return on Shareholders' Funds) is 13.46%, with a significant standard deviation of 25.35%, indicating considerable variability in profitability among banks. The Profit Margin (PM) has an average of 33.93%, suggesting that, on average, banks retain a third of their revenue as profit. The average Return on Assets (ROA) is relatively low at 1.67%, reflecting moderate efficiency in using assets to generate earnings. The Total Assets (TA) of banks exhibit substantial variation, with a mean of approximately 15 million USD, highlighting differences in bank sizes. The Current Ratio (CR) and Solvency Ratio (SR) averages are 26.64% and 12.93%, respectively, indicating overall liquidity and financial health of the banks. The average GDP Growth across the sample is 3.58%, with a notable variation, while the average Inflation (CPI) is 8.42%, also showing substantial variability.

The correlation matrix in Table 3 provides insights into the relationships between key variables. Positive correlations indicate that as one variable increases, the other tends to increase as well, whereas negative correlations suggest an inverse relationship.

**Table 3: Correlation Matrix**

| | ROSF | PM | ROA | TA | CR | SR | GDP Growth | Inflation CPI |
|---|---|---|---|---|---|---|---|---|
| ROSF | 1.0000 | | | | | | | |
| PM | 0.3849 | 1.0000 | | | | | | |
| ROA | 0.4319 | 0.4880 | 1.0000 | | | | | |
| TA | 0.0328 | 0.1854 | 0.0123 | 1.0000 | | | | |
| CR | 0.0130 | 0.0519 | 0.1205 | -0.0300 | 1.0000 | | | |
| SR | -0.0331 | 0.1001 | 0.1884 | -0.0516 | 0.1982 | 1.0000 | | |
| GDP_Growth | 0.0459 | 0.0618 | 0.0278 | 0.0062 | -0.0358 | 0.0173 | 1.0000 | |
| Inf_CPI | 0.0031 | -0.0215 | -0.0156 | 0.0338 | 0.0147 | -0.0450 | -0.1649 | 1.0000 |

The correlation matrix shows moderate positive correlations between ROSF and PM (0.3849) and between ROSF and ROA (0.4319), indicating that higher profitability and asset returns are associated. Interestingly, TA (Total Assets) has a weak positive correlation with PM (0.1854) and a very weak correlation with other performance metrics, suggesting that bank size does not strongly influence profitability or asset returns. The negative correlation between SR and ROSF (-0.0331) implies that higher solvency might be slightly associated with lower returns to shareholders, potentially due to the conservative risk profiles of more solvent banks.

The regression results provide detailed insights into the differential impacts of the three economic crises on the performance of conventional and Islamic banks. Table 4 presents the results of the fixed-effects regression models for ROSF, PM, ROA, CR, and SR.

**Table 4: Fixed-Effects Regression Results**

| Variable | ROSF (b/se) | PM (b/se) | ROA (b/se) | CR (b/se) | SR (b/se) |
|---|---|---|---|---|---|
| Crisis1 | -2.527 (2.52) | -0.396 (1.60) | -0.181 (0.20) | -0.313 (1.46) | 0.717 (0.81) |

| Variable | ROSF (b/se) | PM (b/se) | ROA (b/se) | CR (b/se) | SR (b/se) |
|---|---|---|---|---|---|
| Crisis2 | -1.378 (1.58) | -4.389* (2.10) | 0.987 (0.66) | 3.565* (1.72) | 0.419 (0.79) |
| Crisis3 | -0.215 (1.21) | 4.278* (2.17) | -0.149 (0.14) | 3.033* (1.39) | 1.053 (0.85) |
| GDP Growth | 0.128* (0.06) | -0.021 (0.07) | -0.002 (0.01) | -0.034 (0.06) | 0.018 (0.03) |
| Inflation CPI | 0.003 (0.01) | -0.026* (0.01) | -0.002 (0.00) | -0.012 (0.02) | -0.006 (0.01) |
| Return on Shareh. Funds | - | 0.144** (0.05) | 0.041** (0.02) | -0.007 (0.01) | -0.002 (0.01) |
| Return on Total Assets | 3.601*** (0.95) | 2.373*** (0.58) | - | -0.022 (0.15) | 0.225 (0.18) |
| Current Ratio (%) | -0.027 (0.05) | 0.025 (0.04) | -0.001 (0.01) | - | 0.035 (0.02) |
| Solvency Ratio (%) | -0.025 (0.12) | 0.083 (0.08) | 0.032 (0.02) | 0.110 (0.07) | - |
| log_TA | 1.272 (0.69) | 2.100*** (0.41) | 0.017 (0.06) | -1.107* (0.48) | -1.757*** (0.43) |
| Crisis1_Conventional | 2.699 (2.58) | 0.873 (1.76) | 0.476* (0.23) | 0.567 (1.60) | -0.799 (0.91) |
| Crisis2_Conventional | 1.305 (1.81) | -0.036 (2.26) | -0.969 (0.68) | 0.840 (1.84) | -0.295 (0.86) |
| Crisis3_Conventional | 0.711 (1.36) | -1.300 (2.18) | 0.173 (0.15) | 0.098 (1.56) | 0.027 (0.84) |
| constant | -11.585 (10.91) | -5.779 (6.73) | 0.409 (1.07) | 41.517*** (7.66) | 38.594*** (6.75) |
| R-squared | 0.151 | 0.235 | 0.160 | 0.053 | 0.068 |
| dfres | 336 | 336 | 336 | 336 | 336 |
| BIC | 39261.9 | 36057.6 | 19601.6 | 33091.6 | 28084.1 |

* p<0.05, ** p<0.01, *** p<0.001

The regression results indicate that the Eurozone Debt Crisis (Crisis1) did not have a statistically significant impact on the financial performance metrics of both conventional and Islamic banks, with the coefficients being generally insignificant across ROSF, PM, ROA, CR, and SR. The coefficient for ROSF was -2.527 ($p > 0.05$), indicating a non-significant negative effect. Similarly, PM and ROA were affected minimally, with coefficients of -0.396 and -0.181, respectively (both $p > 0.05$).

In contrast, the COVID-19 pandemic (Crisis2) had a more pronounced impact. The Profit Margin (PM) significantly decreased by 4.389 percentage points ($p < 0.05$), reflecting the substantial adverse effect of the pandemic on bank profitability. However, the Current Ratio (CR) increased by 3.565 percentage points ($p < 0.05$), suggesting that banks improved their liquidity positions during the pandemic. This mixed impact indicates that while profitability was challenged, banks maintained or enhanced their liquidity, possibly through strategic adjustments to cope with the crisis.

The Post-Pandemic Economic Recovery (Crisis3) showed a positive impact on Profit Margin (PM), which increased by 4.278 percentage points ($p < 0.05$), and Current Ratio (CR), which increased by 3.033 percentage points ($p < 0.05$). This suggests that banks experienced improved profitability and liquidity during the recovery phase. The impact on Solvency Ratio (SR) was positive but not statistically significant.

Macroeconomic variables also influenced bank performance. GDP Growth had a positive and significant effect on ROSF (0.128, $p < 0.05$), indicating that economic growth supports shareholder returns. However, GDP Growth's impact on other performance metrics was not significant. Inflation (CPI) negatively affected PM, with a coefficient of -0.026 ($p < 0.05$), reflecting the adverse effects of rising prices on bank profitability.

Bank-specific characteristics such as Return on Total Assets (ROA) and log of Total Assets (log_TA) were significant predictors for multiple performance metrics. ROA positively influenced ROSF and PM, highlighting the importance of profitability. Specifically, a one-unit increase in ROA resulted in a 3.601 percentage point increase

in ROSF ($p < 0.001$) and a 2.373 percentage point increase in PM ($p < 0.001$). The log of Total Assets had a positive effect on PM (2.100, $p < 0.001$) but negative effects on CR (-1.107, $p < 0.05$) and SR (-1.757, $p < 0.001$), indicating that larger banks had better profit margins but faced challenges in maintaining liquidity and solvency ratios.

The interaction terms between crisis periods and conventional bank type (Crisis1_Conventional, Crisis2_Conventional, Crisis3_Conventional) were generally not significant, suggesting that the differential impacts of economic crises on conventional and Islamic banks were not strongly pronounced in this analysis. For example, the coefficient for Crisis1_Conventional was 2.699 ($p > 0.05$) for ROSF and 0.873 ($p > 0.05$) for PM, indicating no significant differential impact.

The results demonstrate that economic crises have varied impacts on the performance of conventional and Islamic banks. The COVID-19 pandemic had the most pronounced negative effect on profitability, while the post-pandemic recovery phase showed improvements in profitability and liquidity. Macroeconomic conditions and bank-specific characteristics played significant roles in determining bank performance during these periods. These findings provide valuable insights for policymakers and financial regulators in developing strategies to enhance the stability and resilience of the banking sector.

## DISCUSSION

The primary aim of this research was to investigate the impact of major economic crises on the performance of conventional and Islamic banks across OIC countries, focusing on the Eurozone Debt Crisis (2010-2012), the COVID-19 Pandemic (2020-2021), and the Post-Pandemic Economic Recovery and Inflation Concerns (2021-2022). This study sought to understand how these crises affected various performance metrics, including Return on Shareholders' Funds (ROSF), Profit Margin (PM), Return on Total Assets (ROA), Current Ratio (CR), and Solvency Ratio (SR). Furthermore, the study aimed to compare the resilience of conventional and Islamic banks during these turbulent periods.

### Impact of the Eurozone Debt Crisis

The results of this study indicate that the Eurozone Debt Crisis did not significantly impact the financial performance of either conventional or Islamic banks. This finding does not support Hypothesis 1, which posited that the Eurozone Debt Crisis would have a significant negative impact on bank performance, particularly for conventional banks. This result aligns with some previous studies, such as Beck, Demirgüç-Kunt, and Merrouche (2013), which found that the impact of the Eurozone Debt Crisis was more pronounced in European banks, while banks in OIC countries were relatively insulated from its direct effects. The resilience observed in both banking models during this crisis could be attributed to the limited exposure of OIC banks to European sovereign debt and their relatively conservative risk profiles.

### Impact of the COVID-19 Pandemic

In contrast, the COVID-19 pandemic had a significant negative impact on the Profit Margin (PM) of banks, supporting Hypothesis 2. This aligns with the findings of Alqahtani, Mayes, and Brown (2017), who documented severe disruptions in the banking sector during economic downturns, leading to decreased profitability. However, the positive impact of the pandemic on the Current Ratio (CR) suggests that banks improved their liquidity positions, possibly by conserving cash and reducing lending activities. This trend is consistent with previous research by Demirgüç-Kunt et

al. (2020), which noted that banks globally adopted more cautious liquidity management strategies during the pandemic to mitigate uncertainties.

**Impact of the Post-Pandemic Economic Recovery**

The Post-Pandemic Economic Recovery phase had a significant positive impact on the Profit Margin (PM) and Current Ratio (CR) of banks, supporting Hypothesis 3. This indicates that banks experienced improved profitability and liquidity as economic conditions began to stabilize, consistent with findings from studies such as Iqbal and Mirakhor (2011), which highlight the resilience of Islamic banks during recovery phases due to their risk-sharing principles and conservative lending practices. The observed improvements in these performance metrics suggest that both conventional and Islamic banks were able to adapt to the new economic environment, leveraging the recovery to enhance their financial positions.

**Role of Macroeconomic Variables**

The results also show that macroeconomic variables played a crucial role in determining bank performance. GDP Growth had a positive and significant impact on ROSF, supporting Hypothesis 4 and confirming that economic growth enhances shareholder returns. This finding supports the general economic theory that bank performance is closely tied to macroeconomic conditions, as noted by Levine (2005). However, the negative impact of Inflation (CPI) on Profit Margin underscores the challenges banks face in maintaining profitability during periods of rising prices, echoing the concerns raised by Fischer (1993) regarding the detrimental effects of inflation on financial stability.

**Influence of Bank-Specific Characteristics**

Bank-specific characteristics, such as Return on Total Assets (ROA) and log of Total Assets (log_TA), were significant predictors of performance metrics, supporting Hypothesis 5 and highlighting the importance of internal efficiency and scale. The positive influence of ROA on ROSF and PM suggests that banks with higher asset returns are better positioned to deliver shareholder value and maintain profitability. This supports the findings of Athanasoglou, Brissimis, and Delis (2008), who emphasized the critical role of bank-specific factors in determining profitability. Larger banks, despite facing challenges in maintaining liquidity and solvency ratios, benefit from economies of scale that can enhance their profit margins.

**Interaction Between Crisis Periods and Bank Type**

The interaction terms between crisis periods and conventional bank type were generally not significant, suggesting that the differential impacts of economic crises on conventional and Islamic banks were not strongly pronounced in this analysis. This finding does not support Hypothesis 6 and contrasts with some studies, such as Abedifar, Molyneux, and Tarazi (2013), which reported that Islamic banks were more resilient during financial crises due to their unique operational principles. However, it aligns with other research, such as Chong and Liu (2009), which found no significant performance differences between conventional and Islamic banks during crises. This discrepancy highlights the need for further research to explore the conditions under which Islamic banking principles may provide a comparative advantage in crisis resilience.

The primary aim of this research was to investigate the impact of major economic crises on the performance of conventional and Islamic banks across OIC countries, with a focus on the Eurozone Debt Crisis (2010-2012), the COVID-19 Pandemic (2020-2021), and the Post-Pandemic Economic Recovery and Inflation Concerns (2021-2022). This study sought to understand how these crises affected various performance metrics, including Return on Shareholders' Funds (ROSF), Profit Margin (PM), Return on Total Assets (ROA), Current Ratio (CR), and Solvency Ratio (SR). Furthermore, the study aimed to compare the resilience of conventional and Islamic banks during these turbulent periods.

The results of this study indicate that the Eurozone Debt Crisis did not significantly impact the financial performance of either conventional or Islamic banks. This finding does not support Hypothesis 1, which posited that the Eurozone Debt Crisis would have a significant negative impact on bank performance. This result aligns with some previous studies, such as Beck, Demirgüç-Kunt, and Merrouche (2013), which found that the impact of the Eurozone Debt Crisis was more pronounced in European banks, while banks in OIC countries were relatively insulated from its direct effects.

In contrast, the COVID-19 pandemic had a significant negative impact on the Profit Margin (PM) of banks, supporting Hypothesis 2. This aligns with the findings of Alqahtani, Mayes, and Brown (2017), who documented severe disruptions in the banking sector during economic downturns, leading to decreased profitability. However, the positive impact of the pandemic on the Current Ratio (CR) suggests that banks improved their liquidity positions, possibly by conserving cash and reducing lending activities, a trend also observed in previous research by Demirgüç-Kunt et al. (2020).

The Post-Pandemic Economic Recovery phase had a significant positive impact on the Profit Margin (PM) and Current Ratio (CR) of banks, supporting Hypothesis 3. This indicates that banks experienced improved profitability and liquidity as economic conditions began to stabilize, consistent with findings from studies such as Iqbal and Mirakhor (2011), which highlight the resilience of Islamic banks during recovery phases due to their risk-sharing principles and conservative lending practices.

The results also show that macroeconomic variables played a crucial role in determining bank performance. GDP Growth had a positive and significant impact on ROSF, confirming that economic growth enhances shareholder returns. This finding supports the general economic theory that bank performance is closely tied to macroeconomic conditions, as noted by Levine (2005). However, the negative impact of Inflation (CPI) on Profit Margin underscores the challenges banks face in maintaining profitability during periods of rising prices, echoing the concerns raised by Fischer (1993) regarding the detrimental effects of inflation on financial stability.

Bank-specific characteristics, such as Return on Total Assets (ROA) and log of Total Assets (log_TA), were significant predictors of performance metrics, highlighting the importance of internal efficiency and scale. The positive influence of ROA on ROSF and PM suggests that banks with higher asset returns are better positioned to deliver shareholder value and maintain profitability. This supports the findings of Athanasoglou, Brissimis, and Delis (2008), who emphasized the critical role of bank-specific factors in determining profitability.

The interaction terms between crisis periods and conventional bank type were generally not significant, suggesting that the differential impacts of economic crises on conventional and Islamic banks were not strongly pronounced in this analysis. This finding contrasts with some studies, such as Abedifar, Molyneux, and Tarazi (2013),

which reported that Islamic banks were more resilient during financial crises due to their unique operational principles. However, it aligns with other research, such as Chong and Liu (2009), which found no significant performance differences between conventional and Islamic banks during crises.

The findings of this study have important implications for policymakers and financial regulators. The demonstrated resilience of both conventional and Islamic banks during certain crises suggests that diversified banking systems can contribute to overall financial stability. Policymakers should consider the unique strengths of Islamic banking principles, such as risk-sharing and ethical investments, in designing regulatory frameworks to enhance financial stability during crises. Additionally, the positive role of macroeconomic stability in supporting bank performance underscores the importance of sound economic policies that promote growth and manage inflation effectively.

## CONCLUSION

This study investigated the impact of three major economic crises—the Eurozone Debt Crisis, the COVID-19 Pandemic, and the Post-Pandemic Economic Recovery—on the performance of conventional and Islamic banks across OIC countries. By analyzing key financial indicators such as Return on Shareholders' Funds (ROSF), Profit Margin (PM), Return on Total Assets (ROA), Current Ratio (CR), and Solvency Ratio (SR), the study provided insights into how these crises affected bank performance. The findings revealed that the Eurozone Debt Crisis did not significantly impact bank performance, while the COVID-19 Pandemic significantly decreased profitability but improved liquidity. The Post-Pandemic Economic Recovery led to improvements in both profitability and liquidity.

The results showed that GDP Growth positively influenced ROSF, highlighting the role of economic growth in enhancing shareholder returns. Conversely, inflation negatively affected PM, indicating the challenges banks face in maintaining profitability during periods of rising prices. Bank-specific factors such as ROA and total assets were also significant predictors of performance metrics, emphasizing the importance of internal efficiency and scale.

These findings have important implications for policymakers and financial regulators. The resilience demonstrated by both conventional and Islamic banks during certain crises suggests that a diversified banking system can contribute to overall financial stability. Policymakers should consider promoting a mix of banking models and integrating the unique strengths of Islamic banking principles into regulatory frameworks to enhance financial stability during crises. Additionally, the positive role of macroeconomic stability in supporting bank performance underscores the importance of sound economic policies that promote growth and manage inflation effectively.

Future research should further explore the mechanisms driving the differential impacts of economic crises on bank performance and consider a broader range of economic crises and regions. Longitudinal studies and qualitative research involving interviews with banking professionals and regulators could provide deeper insights into the resilience strategies of banks. In summary, this study offers valuable insights into the differential impacts of economic crises on conventional and Islamic banks, aiding policymakers and financial regulators in developing strategies to enhance the stability and resilience of the banking sector.

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