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# IMPACT OF NON-FINANCING INCOME ON ISLAMIC BANKING PERFORMANCE: EVIDENCE FROM GCC ISLAMIC BANKS

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## Abstract

This research examines the impact of non-financial income on performance and risk in 23 Islamic banks in the Gulf Cooperation Council countries from 2011 to 2020, using dynamic econometric data. The results show a noticeable shift towards non-financial income in GCC banks, which prompted a re-evaluation of the benefits and risks of diversification. A significant negative impact on assets (ROA) indicates challenges to returns. However, the correlations with ROE, RAROA, and RAROE were not statistically significant, highlighting the unique structure of Islamic banks. Regarding risk, the non-significant negative relationship between non-finance income and the Z-score indicates a limited impact on the stability of Islamic banks. The study emphasizes the need to consider diverse operating models and regulatory environments when evaluating income diversification strategies in Islamic banks.

**Keywords:** Non-financing income, Islamic bank performance, GCC countries.

## Introduction

Islamic banks are financial institutions that carry out financial operations by Islamic law (Sharia), which prohibits the use of interest (Roy, 1991). The income of Islamic banks consists of financing income and non-financing income. Financing income consists of profit and loss sharing (PLS), which comes from Mudaraba (profit sharing) and Musharaka (joint partnership). As for non-profit sharing income (non-PLS), it comes from From Murabaha (excess cost), Ijarah, Bai' al-Majil (sale with deferred payment), Bai' al-Salam (future sale), and Istisna' (manufacture based on a contract)" (Grassa, 2012).

On the other hand, non-financing income is generated from fees and commissions, trading income, and other sources of income such as investments held by banks (Molyneux & Yip, 2013). Recently, the income structure of banks has changed rapidly, with interest income (called financing income in Islamic bank) increasing faster than non-interest income (called non-financing income in Islamic bank). Consequently, the great financial crisis of 2007-2009 resulted in a decline in interest income (Hidayat et al., 2012). Moreover, bank managers tend to develop and create new fee income services to improve their profitability and reduce their risks.

Islamic banks have been successful in achieving rapid economic growth, with total assets increasing significantly between 2011 and 2020, with the Gulf Cooperation Council (GCC) countries being the main players, representing 68.71% of total Islamic assets, with Saudi Arabia contributing with 33% of the total assets of Islamic banks globally, followed by the United Arab Emirates with 15.4% of the total assets of Islamic banks globally. Kuwait and Qatar contribute 10.1% and 8.1% respectively to the total assets of Islamic banks globally. Finally, Bahrain contributes 1.6% of the total assets of Islamic banks globally (Ernst & Young, 2014). In order to remain in the competitive banking industry, Islamic banks have begun to diversify their income into non-financing sources and increase the share of non-financing income. Given the importance of the Islamic banking industry and the contribution of the GCC countries, some may be surprised that Islamic banks have been largely ignored in the review of existing literature, in addition to a small number of studies (Molyneux and Yip, 2013; Isa et al. (2018) and related studies. The structure of income and its potential impact on bank risks in the Gulf Cooperation Council countries. Therefore, this research aims to highlight the evidence available in the Gulf Cooperation Council regarding this issue, during the period from 2011 to 2020.

### **Literature Review**

Over the last twenty years, the banking industry and policy makers have witnessed great emphasis on analyzing the income structure and achieving a balance between interest income (traditional activities) and non-interest income (innovative activities) in the banking sector. Many studies have been conducted to explore the impact of income structure on the risk level and performance of banks, and contradictory results have emerged in this context (Grassa, 2012; Solovjova et al. (2018); Naji & Boughrara, 2024)

Research by Lee et al. (2014), (Rupeika-Apoga & Saksonova (2018), and Ammar & Boughrara (2019) find that non-benefiting activities have relatively increased banks' performance and reduced risk levels. While other studies such as those conducted by Stiroh & Rumble (2006) and Kajola et al., (2019), indicated that non-benefiting activities may increase the level of risk and affect performance. DeYoung & Roland (2001) study of commercial banks in the United States during the time period from 1988 to 1995 indicated that banks' reliance on non-interest activities may lead to less use of capital, and increased operating and financial leverage, which increases their risk. On the other hand, Saunders et al. (2020) report an opposite effect for US banks, where non-interest activities reduce their risk.

Regarding European banks, a study by Busch & Kick (2021) conducted on German banks showed that non-interest activities may increase risk levels. Mercieca et al. (2007) showed that non-interest activities in small European financial institutions increased risk levels over the period from 1997 to 2003. Other studies such as those by De Jonghe (2010) and Maudos (2017) confirm similar findings for European banks During different time periods. For Asian banks, research by Hsieh and colleagues (2013) and Lee and colleagues (2014) indicates that the level of banking risk decreases as non-interest income increases. Hidayat et al. (2012) found lower risk levels for Indonesian banks, while Lin and colleagues (2005) showed that non-interest income reduces the risk of banks in Thailand. In the context of other Asian

countries, showed that the risks of Indian banks decreased with non-interest income, while Li & Zhang (2013) noted that non-interest income increased risk levels in Chinese banks.

In the GCC context, Ashraf and colleagues (2016) and Naji & Boughrara (2024) study indicate that a decrease in the level of banking risk coincides with an increase in non-interest income. With regard to Islamic banks, Grassa (2012) and Daradkah & Al-Sayyah (2020) analyzed the impact of sharable and non-sharable income on the performance and risks of banks in the Gulf Cooperation Council countries during the period from 2002 to 2008, where the results indicated an increase in the risk levels of Banks and insolvency levels due to shareable income activities.

On the other hand, Molyneux and Yip (2013) compared the effect of diversification and non-interest income on the performance and risk levels of Islamic and conventional banks in the countries of Malaysia, Saudi Arabia, Kuwait, the United Arab Emirates, Bahrain and Qatar, and during the period from 1996 to 2009 the results showed better performance and stability of Islamic banks. and traditional related to non-interest income. In their study, Isa et al. (2018) examined the impact of non-sharable interest income on Islamic banks in Indonesia over the period from 2009 to 2013, and found that non-sharable interest income reduced risk levels. In general, the empirical literature shows strength in support of the importance of non-sharable income and its impact on banks' performance and risk levels. However, most of these studies to date have been mainly focused on conventional banks, and Islamic banks have been largely ignored. Therefore, this study attempts to fill this gap in the literature by exploring the same issue in the GCC countries during the period from 2011 to 2020.

### **Motivation and Research Questions:**

Non-finance income has become a vital strategy for banks operating in mature markets, as a result of tightening capital regulations and intense competition (Sagna and Wolf, 2011). In response to these challenges, banks have aggressively sought to develop non-traditional financial products, such as securities, insurance, trusts, and various fee-based services, with the aim of generating new sources of income. Over time, these unconventional activities have evolved into major sources of revenue for banks, often exceeding traditional interest income. A desire to search for diverse sources of income led to the blurring of the boundaries of separation between banks and other financial institutions. As resources are allocated to more profitable activities and greater leverage is used, banks are exposed to idiosyncratic and systemic risks, leading to inefficiency in resource channeling (Elsas et al., 2010) and (DeYoung & Torna, 2013). This behavior, which is based on limited liability, motivates bank managers and shareholders to direct their portfolios towards related assets, without taking into account the risks of common failure in the banking system resulting from increased exposure to common sources of risk (Wagner, 2010a). However, excessive banks' orientation towards linked assets may harm the stability and efficiency of the broader financial system by making institutions more similar and exposing them to the same risks, increasing the likelihood of co-occurring failure (Acharya et al., 2006). As a result, in the wake of the global financial crisis in 2008, the international banking industry and regulators took action to promote more prudent management of non-finance businesses (Wan et al., 2016).

While conventional banking systems in developed countries have been studied extensively, here there is a significant gap in research regarding developing economies, especially in the GCC countries as well as Islamic banking systems. Given the size of the Gulf Cooperation Council countries and the 60% that these banks constitute of global Islamic banks, it is important that we comprehensively study the impact of non-financing income on Islamic banks' performance and risks in this region. This study seeks to provide a clearer understanding of the consequences of non-financing income on profit generation from Islamic finance-free operations and its impact on overall bank performance and risk. Therefore, one of the most prominent questions for this paper is what is the impact of the trend towards returns from non-Islamic financing on both performance and risks in banks operating in the Gulf Cooperation Council countries for the period from 2011 to 2020.

### **Data collection and Methodology**

The study sample consists of 23 Islamic commercial banks, distributed over five countries in the Gulf Cooperation Council, namely the Kingdom of Saudi Arabia, Bahrain, the State of Qatar, the United Arab Emirates, and Kuwait, in addition to the Sultanate of Oman, for the period from 2011 to 2020, according to Table 1.

Table 1 GCC Islamic banks

Country	Number of Islamic banks
<i>SAUDI ARABIA</i>	5
<i>BAHRAIN</i>	6
<i>QATAR</i>	2
<i>UNITED ARAB EMIRATES</i>	6
<i>KUWAIT</i>	2
<i>OMAN</i>	2
<i>SUM</i>	23

Sources: The study uses secondary data, where data were drawn from the annual reports of Islamic banks from GCC during the period from 2011 to 2020.

- **The dependent variables:** in this study represent diverse indicators of profitability and banking risks. Several accounting-based indicators are employed to assess the bank's performance:

**Return on Assets (ROA):** ROA is a ratio that measures the profitability of a bank relative to its total assets. It indicates how efficiently a bank utilizes its assets to generate profits. A higher ROA indicates better asset utilization and profitability.

**Return on Equity (ROE):** ROE measures the profitability of a bank relative to its shareholders' equity. It indicates the return generated on the shareholders' investment. A higher ROE signifies that the bank is effectively utilizing its equity to generate profits.

**Risk-Adjusted Return on Assets (RAROA):** RAROA adjusts the ROA by taking into account the risk associated with the bank's assets. It considers factors such as credit risk, market risk, and operational risk. RAROA provides a more accurate measure of the bank's profitability, considering the level of risk taken

**Risk-Adjusted Return on Equity (RAROE):** RAROE combines the profitability of a bank with the risk it takes to generate those returns. It adjusts the ROE by incorporating risk factors.

Overall, the tables provide insights into the NON levels of IBs in the GCC countries. The data suggests that IBs tend to be more NONersified in their operations compared to CBs. These statistics are crucial for understanding the characteristics and performance of banks in the GCC countries and can inform further analysis and research in the banking sector.

Table 2 Descriptive statistic GCC IBs from 2011 to 2020

VARIABLE	No	Mean	Median	Min	max	STD
NON	230	0.5487143	0.5643871	0.0268183	0.9943148	0.232173
ROA	230	0.0122064	0.0128873	-0.0120269	0.0433295	0.0105588
ROE	230	0.078915	0.0887823	-0.0642001	0.177177	0.0619166
Z-score	230	28.44087	10.39633	-0.388656	120.134	38.4941
SIZE	230	21.64681	21.85505	17.59776	25.73322	2.573112
ETA	230	0.1650021	0.1401177	0.0824769	0.6636015	0.0964011
CIR	230	0.4285927	0.4223193	0.1054313	1.067459	0.2006164
LR1	230	0.5155084	0.582302	0.0178933	1.710281	0.2717114
NPL	230	0.0291938	0.0120019	0.0012917	0.1325887	0.0351241

## Hypothesis Testing

### The Multivariate Empirical Analysis

This study's Multivariate Empirical Analysis, viewed through an accounting perspective, examines the link between banking NON and key accounting indicators, primarily focusing on return on equity (ROE) and return on assets (ROA), along with their risk-adjusted counterparts, RROE and RROA. The analysis incorporates control variables like bank size, cost-to-income ratio, leverage, loan growth, non-performing loans, equity-to-assets ratio, inflation, and GDP. Concentrating on banks listed in the GCC stock market from 2011 to 2020 and using STATA 16 for data analysis, the study employs methods like linear regression and correlation analysis. Results are presented in tables, highlighting the correlation's strength and nature between NON and banking performance and risk measures, providing insights into how NON impacts the GCC banking sector's performance and risk.

### Income NON and Banks Performance

We first consider the following main hypothesis:

**H1:** Income NON has a significant effect on GCC IBs performance as measured by the Accounting Indicator (AI where  $AI \in \{ROA, ROE, ROAA, ROEA\}$ ).

We start by running of ROA, ROE, RAROA and RAROE as proxies for the dependent variable. Table (3) presents the results of the estimates regression for the whole sample banks over the 2011-2020 period. The results (see Table 3) highlight the significance of DIV as a key factor influencing banks' performance. Through the use of SYS-GMM estimations, we observe that the ties between the income NON indicator and the performance indicators are far from being strong. The regression analysis reveals a negative and significant relationship (-0.008,  $p < 0.05$ ) between return on assets (ROA) as a proxy for the dependent variable and NON. Whereas the linkages between NON and the remaining proxies (i.e., ROE, RAROA and RAROE) are missing in the sense that they are not statistically significant. It worth noting the coefficient associated to NON is negative (when the dependent variable is ROA) and positive the dependent variable is proxied by RAROA and RAROE. The value of the coefficient of determination (R-square) is (0.19), meaning that the DIV variance explains (19%) of the variance in the return on equity in IBs of the GCC countries. This result is consistent with the findings of Lepetit et al. (2008), Mercieca et al. (2007), Köhler (2014) and Qu (2018).

Table 3. NON income and performance for GCC IBs, 2011 to 2020

VARIABLES	(1) ROA	(2) ROE	(3) RAROA	(4) RAROE
NON	-0.00828*** (0.00290)	-0.0218 (0.0172)	0.749 (0.881)	0.330 (0.902)
SIZE	-0.000559** (0.000274)	-0.00188 (0.00163)		-0.267*** (0.0834)
CIR	-0.0121*** (0.00342)	-0.0415** (0.0203)	-3.171*** (1.063)	-4.715*** (1.036)
ETA	0.00481 (0.00825)	-0.112** (0.0490)	5.692** (2.656)	6.379*** (2.184)
LR1	0.00702** (0.00288)	0.0877*** (0.0171)	-0.777 (0.983)	
INF	-6.76e-05 (0.000439)	0.000279 (0.00261)	0.0727 (0.139)	-0.0134 (0.136)
RGDP	0.000740*** (0.000253)	0.00405*** (0.00150)	0.0203 (0.0798)	0.0522 (0.0770)
NPL			-26.09*** (6.398)	
Constant	0.0282*** (0.00680)	0.113*** (0.0404)	4.506*** (0.891)	10.10*** (1.990)
Observations	230	230	230	230
R-squared	0.210	0.190	0.114	0.138
F-test	0.000	0.000	0.000	0.000
Sargan test	0.489	0.579	0.498	0.120
AR2	0.315	0.143	0.884	0.283

The Control variables in study include Bank size (**SIZE**) is a Logarithm of total assets. cost to income ratio (**CIR**), (**ETA**) is Equity to total assets, non-performing loan to total loan are expressed (**NPL**), current assets / current liabilities (**LR**), (**INF**) refer to inflation and (**RGDP**) is gross domestic product. To test the validity of our instrument selection, we utilize the Sargan test, which examines the null hypothesis that the instruments used are not correlated with the residuals. We also employ the Arellano-Bond test (AR (2)) to assess second-order autocorrelation in first differences. The standard error is presented in brackets. Statistical significance is denoted by \*\*\*, \*\*, and \*, indicating significance at the 1%, 5%, and 10% levels, respectively.

Note: The table was compiled by the researcher utilizing STATA16.

Moreover, the analysis shows that there is a positive and non-significant relationship ( $P > 0.05$ ) between risk-adjusted return on assets (RAROA) and NON of income (NON) in IBs in the GCC countries. The value of the coefficient of determination (R-square) is (0.11), meaning that the value of NON explains (11%) of the adjusted return on assets, and this result is consistent with the results of the study. Likewise, the statistical analysis in Table (3) reveals

a positive and insignificant relationship ( $p > 0.05$ ) between risk-adjusted return on equity (RAROE) and income NON in IBs in the GCC countries.

The Sargan test is used to test the validity of instruments in an instrumental variable regression. In this case, the instruments used are related to the variables ROA, ROE, RROA and RROE. Since  $P < 0.05$  for all the variables (RAOA, OE, RAROA, and RAROE), it suggests that the instruments used in the regression are valid. This means that the instruments are not correlated with the residuals, which is a critical assumption for instrumental variable regression to produce unbiased and consistent estimates. Therefore, the Sargan test results support the validity of the instruments and strengthen the reliability of the instrumental variable regression model used in the analysis.

Based on the analysis and results in Table 3 Hypothesis 1.2 suggesting that income NON significantly impacts the performance of Islamic Banks in GCC countries as measured by accounting indicators is **not fully accepted** This aligns with (Paltrinieri et al., 2021) study on Islamic banks in OLC countries which found that increased NON reduces banking performance in Islamic banks The conclusion comes from mixed results in Table 4.12 including a negative significant relationship between return on assets and the income NON index NON showing that NON negatively affects ROA in Islamic banks contrary to the hypothesis's positive expectation The correlations between NON and other performance indicators like ROE RAROA and RAROE are not statistically significant meaning that income NON does not have a significant impact on these metrics in GCC Islamic Banks The negative effect on ROA and lack of significant relationships with ROE RAROA and RAROE suggest that Hypothesis 1.2 cannot be fully accepted as the influence of income NON on Islamic banks in the GCC seems nuanced and possibly influenced by factors not included in the model Therefore while the data supports some aspects of the hypothesis the overall hypothesis cannot be definitively accepted based on these findings.

### **NON income Bank Risk**

In the previous section, we considered testing the potential effects of NON on accounting indicators. In the same spirit, we consider assessing the influence of NON on Bank Risk. To this end, we formulate the second main hypothesis as follows:

H2: Income NON has a significant effect on GCC IBs performance as measured by Z-score

Table 4 Non- Financing income and GCC Islamic Bank Risk 2011 to 2020

VARIABLES	(IBs) B-Z_score
NON	-0.156 (0.119)
SIZE	0.283*** (0.0320)
CIR	-0.186 (0.373)
ETA	-1.678* (0.938)

LR1	0.184 (0.344)
NPL	-4.445* (2.290)
INF	0.0286 (0.0480)
RGDP	-0.000201 (0.0275)
Constant	-3.456*** (0.815)
Observations	230
R-squared	0.385
Sargan test	0.745
AR2	0.316

The dependent variables Bank Risk **Z-score** =  $(ROA + ETA)/SDROA$ . Independent variable (**NON**) We measure income (**NON**) non-financing income, controlling variables as a Bank size (**SIZE**) is a Logarithm of total assets. cost to income ratio (**CIR**), (**ETA**) is Dividing Equity by total assets, non-performing loan to total loan are expressed (**NPL**), current assets / current liabilities (LR), (**INF**) refer to inflation and (**RGDP**) is gross domestic product. To test the validity of our instrument selection, we utilize the Sargan test, which examines the null hypothesis that the instruments used are not correlated with the residuals. We also employ the Arellano-Bond test (AR (2)) to assess second-order autocorrelation in first differences. The standard error is presented in brackets. Statistical significance is denoted by \*\*\*, \*\*, and \*, indicating significance at the 1%, 5%, and 10% levels, respectively

Note: The table was compiled by the researcher utilizing STATA16.

Table (4) presents the results of a regression analysis that examines the relationship between banking risk (measured by the B-Z score) and the independent variables for IBs, the results showed that there is a Negative sign, but the result is positive and non-significant relationship ( $-0.15$   $p > 0.05$ ) between the Z-score and the NON of income according to non-financing sources of income in IBs. In general, the result indicates that the NON of income sources for IBs in the GCC countries, with a special focus on non-interest income, positively affects their stability. This finding contrasts with research by DeYoung and Torna (2013) and AlKhouri & Arouri (2019), which suggest that the benefits of banking NON are diminished when engaging in volatile unconventional activities, which leads to decreased stability.

As for the size of the bank, the results of the analysis showed a positive relationship (0.283) and significant ( $p < 0.01$ ) between bank (**SIZE**) and stability of banks (Z-Score). These results reflect the relationship that banks with a larger volume may be more stable. This can be explained by the fact that banks with a large volume may enjoy advantages such as NON in sources of income and the ability to distribute risks better, and thus be less exposed to potential risks. Large NON banks carry systemic risk but remain more stable than smaller banks. In addition, the growth of banks positively affects the stability of GCC IBs. Moreover, our analysis showed a negative and weak relationship ( $p < 0.10$ ) between Ratio of shareholders to Assets (ETA) and the stability of IBs (Z-Score), meaning that the increase in



the shareholder ratio. This leads to the inability of the bank to face the risks it is exposed to, and thus has a negative impact on the stability of the Islamic bank. On the other hand, no statistically significant results were found between macroeconomic indicators (RGDP) and inflation (INF) and (Z-score).

As for the ratio of non-performing loans to total loans (NPL), the results indicated that there is a negative regression relationship (-4.445), significant ( $p < 0.10$ ) between the ratio of non-performing loans to total loans and the Z-Score value in IBs of the GCC countries. This means that an increase in the non-performing loan ratio correlates with a decrease in the Z-Score.

The negative regression coefficient for the non-performing variable indicates that higher levels of non-performing loans negatively affect the financial stability of banks operating in the GCC countries. Non-performing loans are loans that are in default or past due, indicating higher credit risk and potential financial difficulties for the bank.

A statistically significant coefficient indicates that the relationship between non-performing loans and Z-Score is not due to chance but has a strong statistical correlation. This finding highlights the importance of managing and reducing non-performing loans to improve financial stability and the health of banks.

Analyzing the data from Table 4, the hypotheses H2, H2.1, and H2.2 regarding the impact of income NON on bank risk, as measured by the Z-score, yield the following conclusions:

**H2: (Effect on Islamic Banks in GCC Countries):** The relationship between NON and the Z-score in Islamic Banks is negative, albeit not statistically significant. This implies that for Islamic banks, NON does not have a clear or significant effect on stability as measured by the Z-score. This finding resonates with the results of the study by (Paltrinieri et al., 2021), which observed similar outcomes. Due to this lack of a significant impact, H2.2 **cannot be conclusively accepted** based on the available data.

In summary, while H2 and H2.1 find support from the data, indicating that income NON positively impacts the stability of banks in the GCC region, H2.2 for Islamic banks does not garner sufficient evidence. This suggests that the influence of income NON on risk, measured by the Z-score, varies between conventional and Islamic banks in the GCC, with a pronounced positive effect seen in conventional banks but an unclear and non-significant effect in Islamic banks.

## Conclusion

The study focuses on income diversification in Islamic banks in the Gulf Cooperation Council countries, in line with the global trend of focusing on non-financing sources of income. The shift towards non-traditional activities poses challenges, raising significant debate about the benefits and risks of integrated integration strategies. The research explores the effects of non-finance income on the profitability and risk profile of 23 Islamic banks, providing a comprehensive case study within the GCC banking industry, a sector that is not well explored in the existing literature. The study reveals a significant negative effect of diversification on return on assets (ROA) in Islamic banks, indicating potential negative effects on asset returns. This underscores the unique operational and financial structure of Islamic banking. In addition, the correlations between income diversification and other

performance indicators such as return on equity (ROE), risk-adjusted return on assets (RAROA), and risk-adjusted return on equity (RAROE) were not statistically significant in Islamic banks. This indicates a less visible impact on these measures, due to the Sharia-compliant nature of their operations. The results also indicate that the effectiveness of income diversification in enhancing banking performance depends on the type of banking system. While it appears to be beneficial for conventional banks in the GCC, as it leads to increased profitability and efficient risk management, its impact on Islamic banks is less clear and perhaps less beneficial. The study also indicates that there is a statistically insignificant negative relationship between income diversification and the Z index, which indicates that diversification of income sources may not significantly affect the stability of Islamic banks. This highlights the need to consider distinct operating models and regulatory environments when assessing the impact of income diversification strategies across different types of banks.

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