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# The Impact of Inflation on Bank Risk: A Study of Islamic Banks

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**Abstract:** Risk is the one thing that the financial system anticipates more than any other issue. In 2001, a failure in bank risk management occurred at Bank Imar in Turkey, which led to losses that reached around \$7.2 billion due to shareholder corruption and coordinated criminality (Mukminin, 2018). The research objective is to investigate the extent to which inflation and business risk are related in Islamic banks operating in the 26 countries covered in the study. Based on the findings of this study, it can be concluded that the inflation proxy does not, in any meaningful sense, have a constructive effect on inflation. That is to say, the business risk in Islamic banks will not be affected in any way by any changes that take place in inflation, regardless of whether those changes result in a rise in value or a loss in value. The use of variable proxies will likely result in some limitations being imposed on this study, which will, in turn, have an effect on the conclusions of the research. In following research, macroeconomic indicators like gross domestic product (GDP) and exchange rates could potentially serve as test subjects for examination.

Keywords: Inflation; Business Risks; Islamic Banks; Macroeconomic Indicators; Financial System

#### Introduction

In the past three decades, the Islamic banking sector has experienced remarkable expansion. The rapid growth of Islamic banking can be attributed to the global financial crisis of 2007-2009, increasing uncertainty, and the ongoing process of globalization. The global assets of Islamic banking experienced a notable growth trajectory, rising from USD \$1.3 trillion in 2012 to USD \$1.76 trillion in 2018. Projections indicate that these assets are anticipated to further expand, reaching USD \$2.175 trillion by the year 2024 (Bilgin, et al., 2021; ICD-REFINITIV, 2020). The banking system anticipates risk more than any other

factor. This is one of the most important components for measuring systemic risk and stress testing financial vulnerabilities, which is very beneficial for developing macro - prudential oversight in the financial system (Nursechafia & Abduh, 2014). Unmanaged bank risk will result in losses and the inability of the bank to perform its functions. As occurred in 1995 at the Dubai Islamic Bank, where embezzlement involving unlawful transactions totalling US\$300 million caused financial losses (Rajhi & Hassairi, 2011). Then, in 2007, a Dubai-based corporation experienced a financial irregularity involving over US\$1 billion, of which US\$501 million occurred in Dubai Islamic Bank (DIB) within one year (Odeh, 2012).

A failure in bank risk management also happened at Bank Imar in Turkey in 2001, resulting in losses reaching around US\$7.2 billion owing to shareholder corruption and coordinated crime (Mukminin, 2018). In 2013, three bank officials at Bank Syariah Mandiri (BSM) perpetrated a fictional credit scandal originating from a failure of the bank to cope with governance and operational issues, resulting in fraud. In addition, BSM was implicated in a money laundering case in 2014. The game is packaged with the gold investment goods GTIS (Golden Traders Indonesia Syariah) and GBI (Gold Bullion Indonesia), as well as a March 2017 fake mining finance scam involving Islamic banks totalling IDR 100 billion (Sadikin, 2022; Hozi, 2022).

Banks play a pivotal role in driving the economic progress of nations on a global scale. The degree of focus within the banking sector has a significant role in fostering economic expansion. Furthermore, the economic growth is influenced in varying ways by different types of banks, namely conventional banks, and Islamic banks, due to the distinct principles and laws that govern their operations (Isik, 2018). The implementation of Islamic banking policies has been found to have a positive impact on macroeconomic stability in both developed and developing countries. It has been observed that Islamic banks play a significant role in fostering economic growth. Hence, Islamic banks have a favourable impact on economic growth in relation to financial deregulation (Bendriouch, Satt, & M'hamdi, 2020).

In the past several years, a significant lot of attention has been paid to three lines of research in the field of bank risk. The first component examines macroeconomic issues as a possible risk factor for banks. The majority of empirical studies investigate the impact of the macroeconomic climate on Islamic bank risk. Specifically, Lin et al., (2016) investigated the effect of macroeconomic factors on credit risk in conventional and Islamic banks in Indonesia. The second body of previous research emphasizes the influence of bank-specific characteristics on bank risk. According to Fakhrunnas et al., (2018), macroeconomic factors include inflation, the gross domestic product, and exchange rates. Then, for specific banks, capital sufficiency and bank size are incorporated as considerations. There has previously been empirical research on the effect of bank-specific characteristics on bank risk. In earlier empirical studies, such as research on Islamic banking in Indonesia, Malaysia and Qatar, there were constraints in terms of the research objects (Haryono et al., 2016; Waemusta & Sukri, 2015; and Nair et al., 2014).

The purpose of this research examines the relationship between inflation and the business risk in Islamic banks. This research offers research from 133 Islamic banks in the world. Most of the previous research on the same topic in the context of Islamic banks in the world. This research is based on operational Islamic banks on the 26 countries.

## Literature Review

#### Inflation

One definition of inflation is a sustained increase in the overall level of prices, while another defines it as a fall in the value of money over a period of time. Inflation is sometimes interpreted by some economists as an increase in the total amount of money that is in circulation. Many different schools of economic thinking have contributed to the proliferation of debates over the factors that bring about inflation and inflation uncertainty (Umar, et al., 2014). Inflation is a phenomenon that is commonly seen by the public in their daily lives. The fluctuating levels of inflation periodically give rise to disruptions, despite the varying degrees of reduction or escalation. Coibion, et al., (2020) asserts that within the monetary science literature, inflation is already endowed with a clearly defined significance. In essence, inflation refers to a range of circumstances characterised by a persistent rise in the aggregate price level. The concept of inflation, as defined above, should not be conflated with the transient and momentary swings in the overall price level. The phenomenon of inflation has the potential to impact various aspects of an economy, including the distribution of income, the allocation of inputs of production, and the overall national population. The phenomenon that pertains to the distribution of income is commonly referred to as the equity effect, whilst the impact on the allocation of sources of production and national income is denoted as the efficiency and output effects, correspondingly (Boons, et al., 2020).

Customers may have difficulty repaying financing funds to the bank if there is an increase in the overall price level. This is because customers may utilise the money that should be used for instalments to instead purchase essentials whose costs have climbed. One of the external elements that can lead to difficulties in financial management is inflation. Because people's purchasing power will fall as a result of rising inflation, the likelihood of people having trouble financing their activities will increase. A decrease in people's purchasing power will have an effect on the income of producers. Because of this, it will be difficult for producers to make their monthly payments towards their finance. (Auer, et al., 2019; Iddrisu & Alagidede, 2020; Almansour, etl., 2021). Inflation is measured by adding up the prices of various marketable items over time. A consumer price index is a tally of the average cost of all consumer purchases. Using data from the consumer price index, economists may estimate the rate of inflation over time (Billi & Kahn, 2008).

#### Islamic Bank Risk

Early studies concentrated their attention on the inherent dangers of Islamic banks and frequently made comparisons between the dangers faced by Islamic banks and those faced by conventional banks. Research such as Abedifar et al., (2013) and ihák & Hesse (2010) applied regression models in comparing the solvency of the two banking systems and concluded that small Islamic banks' default risk is lower than the conventional counterparts. The findings were published in studies. On the other hand, larger conventional banks have a lower probability of going bankrupt compared to larger Islamic banks. These conclusions were refuted by Beck et al. (2013), who used a more extensive data set in their investigation. Subsequent research, including that conducted by Pappas et al. (2014) and Ben Jedidia & Hamza (2014), has also concentrated on the survival rates of Islamic and conventional banks. These researchers concluded that the failure rate of

Islamic banks is significantly lower compared to that of conventional banks that are otherwise comparable. In addition, the default rate for Islamic small company loans is far lower than that of conventional banks, which is around fifty percent (Mairafi, et al., 2018).

Moreover, Hidayat, et al. (2021) stated that There is no difference between conventional and Islamic banks in terms of the levels of profitability, risk, or efficiency; rather, the difference is in the ways in which risk and efficiency effect financial performance. It is consistent with the risk-sharing aspect of Islamic finance that Islamic banks are shown to be less impacted negatively by the adverse consequences of credit risk. Iqbal (2011) asserts that Islamic financial institutions are exposed to a number of hazards, including sharia risk and reputation risk. At both the institutional and the systemic level, the structure and function of the sharia board are directly tied to the sharia risk. This danger can be broken down into two categories: the first is caused by non-standard practises that are connected to various agreements in various nations, and the second is caused by a failure to comply with Sharia. Variations in the translation of Sharia can have repercussions for how financial data is reported, audited, and accounted for in different jurisdictions. There are a variety of viewpoints regarding what constitutes an appropriate business practise, the risk faced by the bank is greater in non-binding cases, and the failure to complete the transaction may result in legal action being taken against the bank.

#### The Relationship between the Inflation and Bank Risk

Inflation is the persistent and widespread rise in an economy's overall price level. Deflation is the opposite phenomenon and occurs when the value of one unit of money decreases relative to other money while purchasing goods and services. If the price of only a few items goes up, but the price of most other items also goes up, we cannot call it inflation. To put it simply, inflation lowers people's purchasing power by eating away at the value of their wealth and real income (Purnamasari & Ramavanti, 2020). A rise in inflation can make it more difficult for borrowers to repay loans to the bank when the money they had set aside for repayment is instead spent on needs whose costs have gone up. One of the external elements that can affect a company's ability to raise capital is inflation. High inflation raises the possibility of money issues because it reduces people's purchasing power. Produced goods revenue will suffer when consumers' purchasing power decreases. Inflation is characterized by a persistent and ongoing increase in the general level of prices. Inflation denotes a persistent and general tendency to increase the overall price level. Inflation is not deemed to occur when there is a restricted price increase observed solely in one or two commodities, unless it then extends to and elevates the prices of a significant majority of other goods. Inflation, as defined by Kalalo (2016), does not encompass price rises resulting from seasonal reasons or isolated occurrences that do not have any further influence.

Islamic economists are unanimous in their view that inflation is disastrous for the economy. At the outset, it dampens people's desire to save and their attitudes towards doing so (decreasing marginal propensity to save). Second, an elevated propensity to buy, particularly of secondary and deluxe items (increased marginal propensity to consume). Third, eschew productive investment in favour of accumulating wealth (property, buildings, precious metals, foreign currency), especially if this wealth is held offshore. Inflation is measured in terms of an index number, which is arrived at by adding up the prices of various marketable items. The term "consumer price index" refers to the

compiled index number that accounts for all goods purchased by consumers at their respective costs. Increases in general costs can be estimated over time using data from the consumer price index (Naibaho & Rahayu, 2018). As an industry, banking faces more complicated forms of risk than any other sector (Anounye, et al., 2020). An unpredictable future might bring both benefits and costs to a financial institution. Uncertainty creates hazards for financial institutions (Fakhrunnas, 2019). Therefore, Ashraf, et al., (2020) stated that banks can lose money on risks, but they can't gain a lot of money if they don't take any. Islamic banks confront significant dangers, which are credit risk.

Therefore, the hypothesis for this study is as follows:

H1: Inflation has a considerable effect on Islamic bank risks H0: Islamic bank risks is only marginally affected by inflation.

## Methods

This study employed a quantitative approach to research. Quantitative research is research that utilises numerical data. Based on the level of explanation, this research is categorised as associative. The challenge of associative research is the relationship between two or more variables. The study's variable relationship is a causal relationship, specifically a causal link. In this study, the independent variable is inflation, and the dependant variable is business risk from Islamic banks on the 26 countries. The measurement of business risk in this research focuses on the credit risk faced by Islamic banks (Ashraf, et al., 2020).

The type of data that is employed in this investigation is known as secondary data. Data gathered through secondary sources, such as records, archives, journals, and reports written by researchers from other institutions. This research makes use of a dataset that was gathered from Moody's Analytics Bank Focus and Thomson Reuters Eikon. This dataset covers the years 2011-2022 and includes data from 133 different banks located across 26 different countries.

This study examines 527 Islamic banks around the globe. The sample for the study was determined by non-probability sampling using the purposive sampling approach, i.e., the sample was determined with a specific objective in mind (Lê & Schmid, 2022). Sampling is based on Islamic bank operations in countries with lucrative Islamic banking growth and full disclosure of financial statements for at least four years of research (unbalanced panel data). Based on these considerations, the study's sample was comprised of 133 Islamic banks hailing from 26 nations throughout the period 2011-2022.

# Findings

The results of the t test are presented in table 1, which may be accessed here. If the probability count (given in Prob.) of -0.969 and the significance level of 0.343 are both higher than the error rate (alpha) of 0.05, then it is possible to assert that the inflation variable does not have a substantial adverse influence on the business risk of Islamic banks.

Table 1. t-test Coefficients <sup>a</sup>										
	Coefficients		Coefficients			Statistics				
Model	В	Std.Error	Beta	t	Sig	Tolerance	VIF			
1										
(Constant)	45303.342	18099.022		2.503	.020					
Inflation	-3351.767	3460.309	202	969	.343	1.000	1.000			

DependentVariable: Business Risk

The value of R in table 2 is 0.202, which indicates that the proportion of the influence of inflation on business risk in Islamic banks is 20%. This is indicated by the fact that the value of R is 0.202. This indicates that inflation exerts a proportional influence on the risk that businesses face equal to 20% of the total, while the remaining 80% is determined by factors that were not taken into account in this study.

	Table 2. $\mathbf{R}^2$ test										
Model Summary <sup>b</sup>											
				Std Error of							
				Adjusted R	the	Durbin-					
	Model	R	R Square	Square	Estimate	Watson					
1		.202ª	.041	-003	28311.402	.559					
a.	Predictors: (	Constant), Inflation									

DependentVariable: Business risk b.

The findings of this research base on table 1 and 2 are consistent with the findings of an empirical study conducted by Lin et al., (2016), which demonstrates that inflation does not have a significant effect on credit risk, as well as the findings of research conducted by Martínez-Malvar & Baselga-Pascual, (2020), which states that inflation does not influence credit risk. This can be linked to the fact that one of the financing options in Islamic banking, for example, is profit-sharing financing such as musyarakah and murabaha financing. This is the case since these financing options are available.

When using *musyarakah* or *murabaha* financing, revenues are split according to a *nisbah* that was determined beforehand. So, the value of payments that consumers are required to make to banks does not alter as a result of inflation. As a consequence of this, there will be no impact on the total amount owed even if there is a rise in the rate of inflation. In addition, the customer pays the original amount plus a profit margin that was agreed upon by both parties, and the payment is consistent from the beginning all the way through the end of the *murabahah* financing arrangement. As a result, the hypothesis for this piece of study is that inflation does not have a substantial influence on the risk that Islamic banks face.

## Conclusion

The purpose of this research examines the relationship between inflation and the business risk in Islamic banks on the 26 countries. The result of this research denotes the inflation proxy, to a certain extent, does not have a positive influence on credit risk. That is to say, any changes that take place in inflation, whether it be an increase in value or a decrease in value, will not have any impact on the business risk in Islamic banks. This research presents bank-specific characteristics as well as macroeconomic variables that are shown to have an impact on the business risks faced by participating banks. This study makes use of both macroeconomic factors and variables that are special to banks. In this situation, Islamic banking is seen as vital since it takes all of these factors into consideration.

The use of proxies in this research to assess the independent variable (macroeconomic) and the dependent variable is problematic for a number of reasons (risk of Islamic banks). The restrictions imposed on this study by the use of variable proxies will undoubtedly have an effect on the findings of the research. In subsequent research, macroeconomic variables like gross domestic product (GDP) and exchange rates may be examined as test subjects.

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