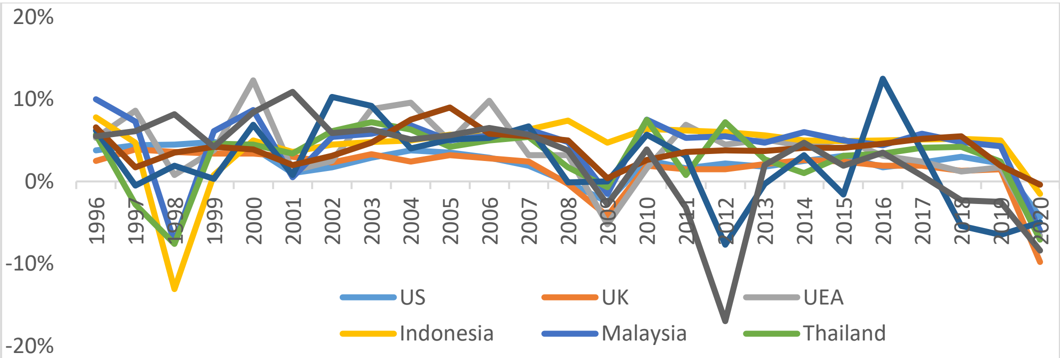
CHAPTER 1

INTRODUCTION

A. BACKGROUND

History records that the financial crisis in the world continues to occur repeatedly. In the last two decades, the Global Financial Crisis (GFC) and the Asian Financial Crisis (AFC) were the most prominent financial crises to be a concern and the worst crises since the Great Depression of 1929-1939 (Dymski, 2010; Smolo & Mirakhor, 2010). Crisis like this urges economists to understand the nature of the crisis and how to strengthen the financial system to withstand when the crisis comes. The recurring phenomenon of the financial crisis indicates that the current financial system is unstable (Berry et al., 2015).

Asian Financial Crisis in 1998 and Global Financial Crisis in 2008 directly impacted economic stability in a way that led to financial crisis and economic recession. Economic recovery due to the crisis requires a large cost and a long time to restore the confidence of market participants, especially in the intermediation process (Claessens & Van Horen, 2015). Amid, the Covid-19 Crisis that significantly impacts the whole world across industries, sectors, and communities, the stability of Islamic banking and finance industry compared to its conventional counterpart remains a debate.



Source: IMF (2021)

FIGURE 1. 1.

Economic Growth during AFC, GFC, and Covid-19 Pandemic in Selected Countries

Figure 1.1 helps in understanding the condition of the world economy when the crisis occurs. In 1998 during AFC, Indonesia recorded economic growth of -13.1% Malaysia -7.4%, and Thailand -7.6%. The global financial crisis of 2008 led many countries to experience negative economic growth, at that time the world economy grew negatively by -0.1%. The shocks that have occurred due to the recent Covid-19 pandemic have made world economic growth predicted to grow -4.4 and for Indonesia is predicted to be -1.5 while Malaysia -6. This is the result of a decrease in the quality and quantity of various economic sectors which in turn leads to increased poverty (IMF, 2021).

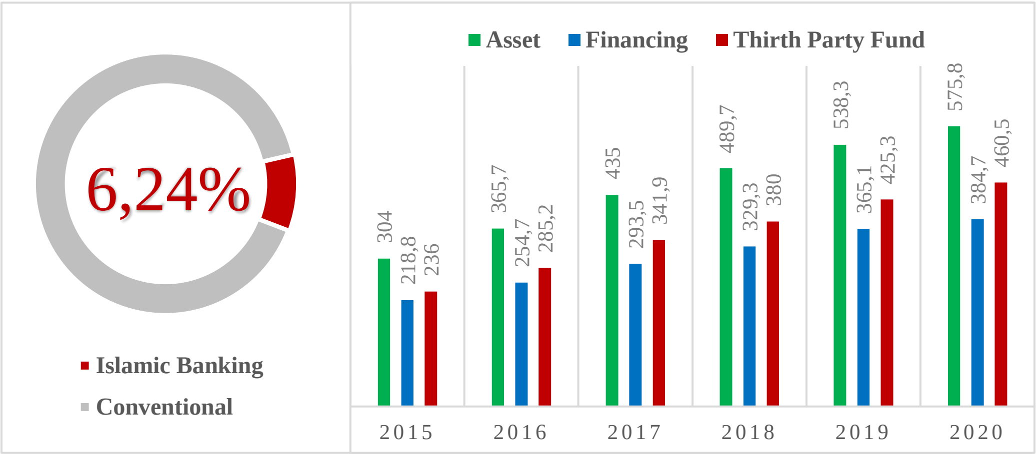
The global financial crisis and the Asian financial crisis brought the Islamic financial industry especially banking into the limelight as possible alternatives to commercialize globally. Islamic banking was developed to serve two objectives: first, to replace an interest-based loan system with a profit and loss sharing investment (PLS) scheme, and second, to promote equity in resource allocation (Siddique, 2021). Islamic banking concept highly upholds justice and avoids all forms of fraud such as interest (riba), uncertainty (gharar), and gambling (maysir). The principle of justice as stated in the holy book Al-Quran in surah An-Nisa-29 instructs not to make transactions in an illegal (batil) with others.

يَـٰٓأَيُّهَا ٱلَّذِينَ ءَامَنُوا۟ لَا تَأْكُلُوٓا۟ أَمْوَٰلَكُم بَيْنَكُم بِٱلْبَـٰطِلِ إِلَّآ أَن تَكُونَ تِجَـٰرَةً عَن تَرَاضٍ مِّنكُمْ ۚ وَلَا تَقْتُلُوٓا۟
أَنفُسَكُمْ ۚ إِنَّ ٱللَّهَ كَانَ بِكُمْ رَحِيمًا

Meaning:

O, believers! Do not devour one another's wealth illegally (batil), but rather trade by mutual consent. And do not kill "each other or˺ yourselves. Surely Allah is ever Merciful to you (QS. An-Nisa 29).

Islamic banking is rapidly spreading not only to fledged sharia-based but also through the integration of sharia banking services within conventional banks or also known as the “Islamic banking window”. Recorded Islamic banking assets globally in 2012 reached 1.5 trillion USD and continued to rise more than 1.9 trillion USD in 2019, this data makes the Islamic banking sector controls 69% of the total Islamic financial asset (ICD, 2019).



Source: OJK, 2020

FIGURE 1. 2.

Market Share of Islamic Banking in Indonesia

Indonesia has a relatively small market share of only 6.24% in 2020 increase from 5.9%. The majority of the market share in the banking sector is currently controlled by conventional banking. However, the Islamic banking industry continues to show an increase every year. Islamic banking assets recorded at 304 trillion in 2015 increased to 575.8 trillion in 2020. Financing increased to 384.7 trillion in 2020, with the majority of 45.80% murabahah and 45,05% musharaka financing contracts distributed to the household 40.49%, trade and MSMEs 10.44%. Meanwhile, in terms of usage, the majority is still for consumption 46.39% for working capital 31.03%, and investment 22.58. Third-party funds increase to 460.5 trillion in 2020 with 51.85% deposit instruments, 32.31% savings, and 15.85% current accounts. Along with the increasing size of Islamic banking, it is very vulnerable to shocks and has the potential to lead to bank failure (Hashem & Abdeljawad, 2018; Safiullah & Shamsuddin, 2017; Wiranatakusuma & Duasa, 2017)

There is an example of potential bank failures in Indonesia recently. Bank Muamalat has been experiencing capital problems since 2015. Based on the bank financial statement, the capital adequacy ratio decreased to 11.58% under the minimum CAR based on Basel III 12%. Low capital adequacy certainly has the potential not to absorb countercyclical risk. The bank's performance was exacerbated by a spike in non-performing financing, the gross NPF of bank Muamalat rose to 5,22% from 3,87%. Net profit also fell by 94,07% in January-August 2019 that is 6,57 billion from the previous year 110,9 billion. Income after profit-sharing distribution fell to 415,57 billion from 857,27 billion. Operating income was 698,85 billion, whereas the operating expenses were 1.08 trillion which was dominated by labor expenses (OJK, 2021a). Incidents like this certainly do not put the bank in a healthy position and will become worse if shocks come.

In the case of the bank failure, Frydl (1999) stated that the losses incurred were enormous. For example, the banking crisis 1991 in the United States due to deposit failure estimated USD 180 million or 3.2 of GDP. Finland in 1993 bank failure due to bad loans and share investment take cost around 8% of GDP. Malaysia in the 1998 Asian Financial Crisis cost about 19.5 of GDP resulting in negative economic growth. As for Indonesia, it is around 34.5% of GDP and takes more than a decade to return as before the crisis (Bank Indonesia, 2014). Two factors affect the banking system. First, exogenous factors are derived from outside the banking system, and second, endogenous factors that come from inside the banking system (Blancher et al., 2013). Banking system performance results affect the financial system and be transmitted to macroeconomic performance and re-influencing the banking system to form a cycle. Unnatural turmoil in one of the elements will affect the smoothness of the cycle (Bank Indonesia, 2014).

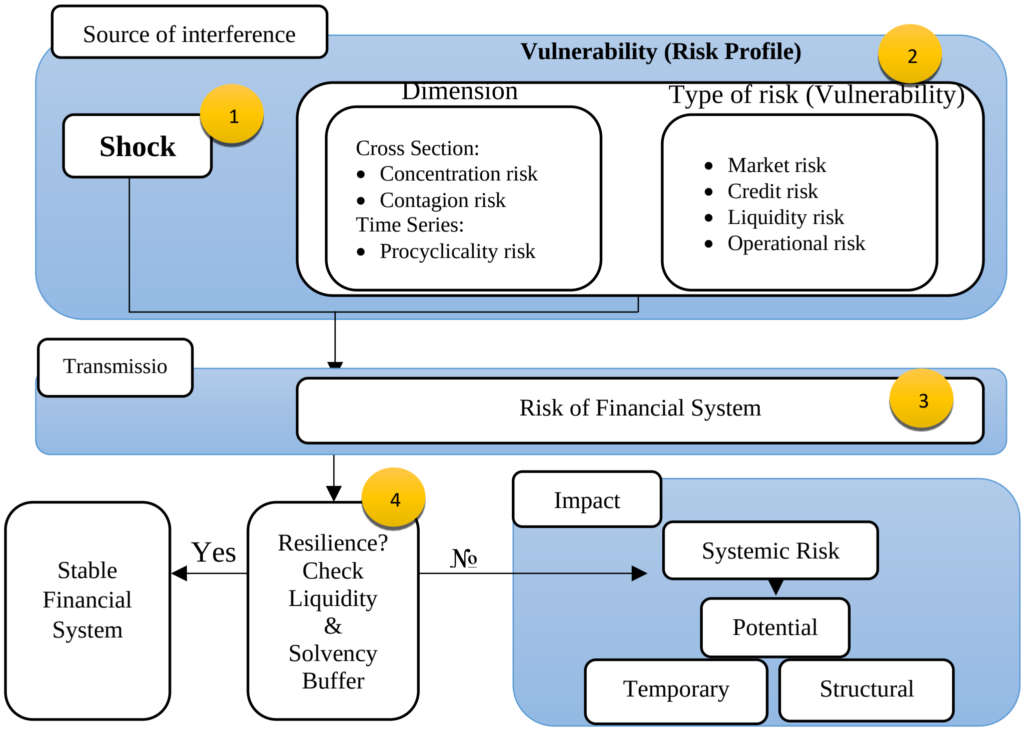
Assessment by IMF, (1998) related leading macroeconomic indicators of banking crisis show that banking distress is associated with a largely contemporaneous fall in real GDP growth, boom-bust cycles in inflation, credit expansion, and capital inflows, rising real interest rates, and a declining incremental capital-output ratio, a sharp decline in the exchange rate, and an adverse trade shock.

Gross Domestic Product (GDP) will represent the economic condition and income per capita. The sharp depreciation in GDP indicates that there is a decline in performance for households and the corporate sector. If this happens, it will affect banks through turmoil in the intermediation process. Exchange rate movements significantly affect aggregate demand, aggregate supply, and prices. When domestic real interest rates rise, domestic dollar deposits become more attractive, causing an increase in the value of dollar deposits compared to deposits in other currencies (dollar appreciation). A higher value of the domestic currency makes domestic goods more expensive than foreign goods, leading to a decrease in net exports and an increase in imports. The inflation aspect will affect people's purchasing power. The condition when the price of goods rises, consumption will be suppressed and purchasing power will decrease. This will affect banks in terms of financing to the public. The capital market also affects terms of how banks get funds quickly (capital inflow) to fulfill bank operations and liabilities (Mishkin, 1995). In macroeconomic theory, weaker macroeconomic conditions reduce business (including bank) income and profits and household income, resulting in a lower net worth of households and businesses. The additional implication of reduced business premises and household profits is that it increases the probability of borrower default, which in turn has implications for bank losses (Basel Committee on Banking Supervision, 2011)

Endogenous factors are also referred to as vulnerability factors that inherent in an Islamic bank. This endogenous factor is an indicator of banking performance which can be seen through financial ratios such as profitability ratios, liquidity ratios, and solvency ratios. Islamic banking is considered vulnerable when it cannot manage risk and does not place financial ratios at their optimal portion. The situations when shocks come and vulnerability will increase market risk, credit risk, and liquidity risks while creating systemic risks that disrupt the functioning of the financial system in intermediation. (Wiranatakusuma et al., 2020).

The existence of financial ratios is very important in assessing the performance of Islamic banking. The ratios commonly used to measure bank financial performance are the solvency ratio (capital adequacy), profitability ratios, and liquidity ratios. In the concept of banking stability, there are three important indicators, namely pressure indicators that describe the asset side in strengthening financial resilience, balanced financial intermediation indicators, and improved financial efficiency indicators. Financial ratios that describe the asset side or those that influence it, including *Non-Performing Financing, Capital Adequacy Ratio, Classified Earning Assets to Earning Assets,* and *Investment Proportion Ratio*. In the process of intermediation, equilibrium can be analyzed with the ratio of *Financing to Deposits Ratio, Liquid Asset Ratio, Non-Core Deposit,* and *Net-Profit Margin*. Meanwhile, to increase efficiency and competitiveness can use indicators of *Return on Assets, Net Operating Margin, Cost Income Ratio,* and *Potential Losses from Profit Loss Sharing*. The variables above are related to a reflection of banking resilience from the credit, capital, profitability, and liquidity risks. The selection of weights for the banking side is determined by statistical calibration and ratio (Gunadi et al., 2013).

Islamic banks play an important role in the financial system because have a strong influence on capital allocation and risk equity. Most banks still dominate the financing market for economic activities, especially in developing countries, while other financing alternatives such as financial markets and non-bank financing are not yet fully developed (IFSB, 2020). Sharing the function of banks encourages economic activities that can improve the welfare of the community. Banking has a critical role in supporting economic growth and improving people's welfare. The dominance of banks in the financial system has an impact on the influence of the sector on financial system stability. The AFC's experience is proof that banking failures result in a financial system crash that boils down to the national economy because of the systemic risk that resulted (Triggs et al., 2019).



Source: Bank Indonesia (2014)

FIGURE 1. 3.

Transmission of Shock and Vulnerability to Systemic Risk

Figure 1.3 describes the transmission of shocks through the Islamic banking system. Technically, shock transmission will trigger risk exposure in the banking sector if banks are vulnerable. These vulnerabilities then spread throughout the financial system and pose systemic risks. However, the level of systemic risk depends on the level of resilience of the banking system (Dua & Kapur, 2018; Nouaili et al., 2015; Wiranatakusuma & Duasa, 2016).

The systemic risk due to external shock and internal vulnerabilities in Islamic banking has a negative impact on Islamic banking. Blancher et al. (2013) outline four possibilities when both interact: (i) There is no potential systemic risk when there are no vulnerability problems and no external shocks, (ii) There is an increased likelihood of systemic risks when Islamic banking is vulnerable but there are no shocks, (iii) Increased likelihood of systemic risks when Islamic banking has resilience but there are external shocks, (iv) Systemic risks arise when Islamic banking is vulnerable and external shock occur.

VULNERABILITY

		№	**Yes**
SHOCK	**№**	No Systemic Shock	Probability of systemic risk
	Yes	Probability of systemic risk	Systemic risk potential appears

Source: Blancher et al. (2013)

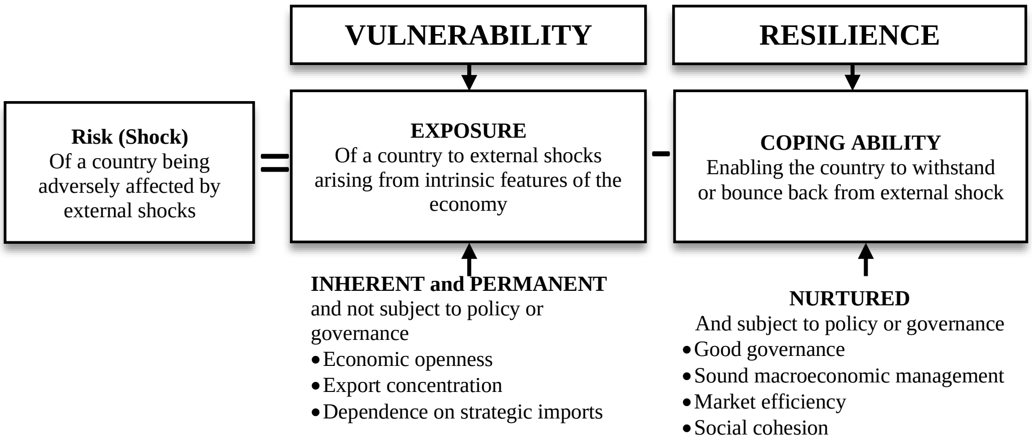
FIGURE 1. 4.

Interaction Between Shock and Vulnerability in The Banking System

Benoit et al. (2017) define systemic risks as economic events that cause simultaneous severe losses for market participants who spread through the system so that the failure of one unit will damage the value of another unit. Blancher et al., (2013) define systemic risk as a risk that originates from within or spreads through the financial sector (for example, due to lack of solvency) with the potential for severe adverse effects on output and financial intermediation. Systemic risk consists of three phases:

1. *Buildup Phase*: The emergence of symptoms of financial systemic risks that accumulate over time stemming from vulnerabilities and shocks
2. *Shock materialization*: At this point, a crisis is about to occur. Excessive imbalances or risk-taking make the financial system fragile and vulnerable to exogenous shocks (e.g., GDP or fiscal shocks, exchange rate shocks, inflation or capital market shocks).

3. *Amplification and propagation:* The shock will affect the wider system including financial institutions, markets, and other sectors, and may even disrupt the financial system of other countries.



Source: Briguglio et al. (2009)

FIGURE 1. 5.

Risks Associated with being Adversely Affected by External Shocks

Figure 1.5 provides an overview of how external shocks, vulnerabilities, and resilience are associated. Resilience is the ability of a system to maintain its main functions and processes in the face of stress, while vulnerability is the characteristics and situation of objects that make them susceptible to the adverse effects of a hazard or the impact of something. The risk of having two elements, the first is associated with the inherent state of the country affected by external shocks, and the second is related to the way the system is developed in absorbing, overcoming, or rebounding from adverse shocks. Adverse risks due to external shock and vulnerability may be reduced by increased resilience. In this case, the sustainability of banking depends on the resilience of the banking itself (Briguglio et al., 2009).

The 2008 crisis underscored a series of weaknesses in the global economic system. Although there have been some marginal improvements since the 2008 crisis, without major structural changes strengthening the resilience of the existing financial and banking systems, the risk of future crises will remain (Berry et al., 2015). Given the importance of Islamic bank's position in the financial system, national economy, and conventional banking alternatives, the Islamic banking sector must have resilience in the face of vulnerability. Because we need the banking sector that capable to adapt in responding to the short-term and long-term economic conditions while at the same time carrying out its function in serving a fertile economy (Wiranatakusuma, 2018).

The performance of Islamic banking has an important role in determining whether a bank is in the vulnerable category or not. Vulnerability in Islamic banking will affect the financial system due to external shocks which will pose systemic risks and potentially create a crisis. Empirical evidence suggests that the costs resulting from the bank's failure and its recovery costs resulted in a large incision (Frydl, 1999). Therefore, it is important to assess and improve the resilience of Islamic banking in Indonesia to avoid failure when the shock comes.

B. LIMITATION OF THE RESEARCH PROBLEM

To maintain the quality and focus of discussion on research cases, this thesis provides the following limitations:

1. Focus on Islamic commercial banks and Islamic banking window in Indonesia.
2. The observation period is January 2010 to December 2020.

D. RESEARCH QUESTIONS

This study examines the resilience of Islamic banking in Indonesia. But specifically, this research seeks to answer the following research questions:

1. What are the leading macroeconomic indicators as a source of shock to Islamic banking in Indonesia?
2. How to measure the vulnerability of Islamic banking indicators in Indonesia?

3. How to measure the resilience of Islamic banking in Indonesia?

C. RESEARCH OBJECTIVES

Based on the description of the introduction and the formulation of the problems, the objective of this research is:

1. To identify the leading macroeconomic indicators as a source of shock to Islamic banking in Indonesia.
2. To measure the vulnerability of Islamic banking indicators in Indonesia.
3. To measure the resilience of Islamic banking in Indonesia.

D. BENEFITS OF THE RESEARCH

The results of this thesis are expected to provide benefits for several parties:

1. For policymakers such as Bank Indonesia (BI), the Financial Services Authority (OJK), the Deposit Insurance Corporation (LPS), and other parties, this research can be useful as information to make policies to maximize banking conditions. More than that, the results of this study can also be a master plan for the future growth of Islamic baking in Indonesia.
2. For Islamic bank stakeholders, this study can be a reference to design business and operational strategies to optimize bank performance.
3. For the authors, this research can encourage understanding and provide more insights related to Islamic banking in Indonesia.
4. It is expected that the results of this study can be a reference related to Islamic banking for other researchers.